

FINAL REPORT: YEARS FIVE AND SIX



**New Outcomes: Learning Improvement in Mathematics
Integrating Technology – NO LIMIT!**

An Enhancing Education Through Technology Project

**Prepared for the
Office of the Superintendent of Public Instruction
Olympia, WA**

Summer 2009

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Technology – NO LIMIT!**

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(2005-07)**

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Executive Summary

NO LIMIT! Project Description

NO LIMIT! (New Outcomes: Learning Improvement in Mathematics Integrating Technology) in Washington state was an initiative originally designed to enhance mathematics teaching and learning in the middle grades through integration of technology, alignment of pedagogical practice with NCTM standards, and strong mentorship of teachers. The initial annual \$4 million NO LIMIT! program was funded originally in Year One (2001-02) as a federal Technology Literacy Challenge Fund (TLCF) project and in later years through the Enhancing Education Through Technology (EETT) program. In Phase I (years one and two, 2001-2003), more than 200 teachers received technology hardware and software, mentor support, training, and opportunities to collaborate across grade levels. In Phase II (2003-2005), approximately 250 new teachers were involved. Though program funding was reduced (by 28%), approximately 325 teachers were involved in the first year of Phase III (2005-2006); though that number dropped back to 250 teachers in the second year of Phase III (2006-2007) after a further budget cut of 50%. In Phases I and II, this was a relatively modest program, with each teacher receiving approximately \$10,000 for equipment and software purchases over a two-year period. A crucial component was the mentorship provided (the equivalent of \$10,000 per teacher per year in Phases I and II). In Phases I and II, each of nine regions, or Educational Service Districts (ESDs) in Washington had technology and mathematics specialists (MISs) assigned to the grant, who spent approximately 80% of their time in the classroom with teachers and students. In Phase III, program funding was drastically reduced, resulting in the elimination of many MIS positions in the ESDs, and in a severe reduction in technology purchases (\$1500 per teacher in Year 5, and no funding for technology whatsoever in Year 6). In Phase III, ESD 189 dropped out of NO LIMIT! There were two additional components to the program; the Learning Disabled (LD) and the Network Learning Community (NLC). NO LIMIT! impacted approximately 24,000 students per year across the state; including those in urban and rural areas, from varied cultural, ethnic, and socioeconomic backgrounds, and also learning disabled children.

The success of the NO LIMIT! project depended upon the negotiation of many elements that continue to command keen interest in the education community. The project combined high stakes professional development and consequent teacher change, successful implementation of national and state standards in mathematics, with appropriate infusion of technology to improve student learning. It originally was a very ambitious project.

The focus of the NO LIMIT! project was to develop classroom models in which students experienced standards-based instruction, with the goal of improving student achievement in mathematics. Its initial implementation included working with teams of middle grade teachers to improve teaching practices in mathematics through the integration of technology and other research-based methodologies. This age span was extended in later years to include elementary and high school students, diluting the original clearer focus.

Mathematics at the middle grades was targeted due to the poor performance of students on standardized tests at this level. For example, in 2001, 43.4% of 4th grade students passed the

state assessment in mathematics, while only 27.4% passed at the 7th grade level. This situation is by no means unique to Washington, with national testing data following a similar trend.

NO LIMIT! targeted schools that had a demonstrated need based on socioeconomic status, technology level, and student achievement data, and that demonstrated readiness for additional assistance and support. Teachers worked in clusters from their schools and/or districts.

In Phase I, the following items constituted the primary goals of the project:

- Teachers will develop a better understanding of the relationship between classroom curriculum, Essential Academic Learning Requirements, the state’s learning goals, and technology;
- Teachers will develop the skills and confidence to use constructivist-teaching practices that foster mathematical thought, promote student understanding and achievement, and utilize technology;
- Teachers will select and use quality hardware, software and instructional materials that support problem-based learning and meet the needs of their classroom;
- To increase the understanding of the project goals and components in the building and district leadership, as well as the community; and
- Use assessment to increase program effectiveness, and to promote the use of classroom-based assessment strategies through the use of technology and data-driven decision-making.

In Phases II and III, only the last three goals (as stated in the [RFP](#)) were retained:

- Teachers will select and use quality hardware, software and instructional materials that support problem-based learning in the math classroom.
- To increase the understanding of the project goals and components in the building and district leadership, as well as the community.
- Use assessment to increase program effectiveness, and to promote the use of classroom-based assessment strategies through the use of technology and data-driven decision-making.

Originally, a team of Math Integration Specialists (MISs) from each of the state’s nine regional Educational Service Districts (ESDs) facilitated support for teachers each year through nine days of intense staff development and targeted support for each teacher. Approximately \$5,000 per year of hardware, software and other training allowances including instructional materials for each classroom was included. Districts were also expected to provide matching funds from other sources, such as Title II-A, II-D flow-through, and Title V monies. In addition, the NO LIMIT! program funded two non-traditional components, a Learning Disabled (LD) project (described and evaluated independently of NO LIMIT!), and a Network Learning Community (NLC). The NLC, originally designed to be an online version of NO LIMIT!, operated differently than the ‘traditional’ model. The LD project was an original component of the grant, but separated formally from NO LIMIT in Year Five; while the NLC made its debut in Year Three.

		Federal Funding Source	Funds distributed to:	Number of teachers (approx)	Components
Phase I	Year One 2001-02	TLCF	ESDs	200	Traditional, LD
	Year Two 2002-03	EETT	ESDs	200	Traditional, LD
Phase II	Year Three 2003-04	EETT	Districts	250	Traditional, LD, NLC
	Year Four 2004-05	EETT	Districts	260	Traditional, LD, NLC
Phase III	Year Five 2005-06	EETT	Districts	325	Traditional, NLC
	Year Six 2006-07	EETT	Districts	250	Traditional, NLC

Table 1. NO LIMIT! organizational data

PROFESSIONAL DEVELOPMENT ACTIVITIES

In Phase I, each ESD, with anywhere between 18 to 35 teachers in the project, made choices about how to deliver professional development. In Year Three, a change in budget procedures occurred in that the school districts received funding, but then were required by the state to contract with the ESDs to provide services (see [Appendix C](#) for the RFP), resulting in the districts having more control over the grant. In some cases, this procedural change had little impact on the professional development delivered; but in others the impact was substantial. The typical model had been to have three to four days of teacher training in the summer, with the remaining days dispersed throughout the year. Substitute teachers were provided through the grant along with required in-kind funding so that teachers could leave the classroom. This basic structure continued in Phases II and III, but in some cases the summer training was tailored to each individual district, with some ESDs providing up to four completely different sessions. In one ESD (ESD 101), in Phases II and III all the teachers from different districts never got together at any time for a professional development experience. Rather, the MISs traveled to each district to provide training.

Professional development activities for teachers varied across the state. Some ESDs heavily emphasized mathematics and pedagogy, while others focused on technology. A sampling of professional development sessions across the state includes everything from “Questioning Strategies in Mathematical Problem Solving,” to “Using PowerPoint in the Classroom.” Most MISs continued to see NO LIMIT! as a math program, funded through technology dollars, with the goal of increasing math achievement through good use of technology.

In addition, the MISs attempted to spend approximately 80% of their time in the school with teachers. This time existed in the form of single days, approximately once a month, or in multiple contiguous days, approximately once per quarter. Most ESDs had two or more Math Integration Specialists in Phases I and II, though many had other duties in addition to NO

LIMIT!. In Phase III, many ESDs were forced to eliminate MIS positions, resulting in some cases of one MIS working alone, and in others with multiple MISs, but each devoting only a small portion of their work time to NO LIMIT!. In some ESDs the MISs traveled to schools together, while others use the ‘divide and conquer’ approach, with each MIS responsible for one, two, or three clusters of teachers in the ESD. In many areas, the travel time for MISs was extensive. While in the school, the MIS performed a variety of services, including some of the following:

- observe, demonstrate, or team teach a lesson
- prepare a video of instruction
- work directly with students
- provide technical assistance and equipment
- provide administrative assistance and support
- provide curricular materials and support, including lesson planning, and data analysis
- facilitate cluster meetings

In order for this time to be effective, teachers had to trust the experience and advice from the MISs. As this was a new phase of NO LIMIT! (Phase III), MISs had to work on trust-building from the beginning of the first year. The MISs were welcomed by *most* teachers into the classroom during the year. The teachers in general reported valuing the efforts and expertise of the MISs (please see Teacher Log Summary for details).

In the first two phases of NO LIMIT!, teachers also were provided with funding (grant or in-kind) to attend professional conferences such as the Northwest Math Conference and the Northwest Council for Computer Education. Some teachers also presented their work at these and other conferences. In the last phase, most of this funding was eliminated.

Teachers were originally organized in clusters of four to eight members, which met regularly to discuss classroom practices, curriculum, technology, testing, grade articulation, etc. This support structure was intended to provide the teachers with a safe place to grow, giving many teachers the confidence to then act as leaders in their schools. The clusters were supported by the Math Integration Specialists, with the goal of these clusters continuing after the grant finished. Many grant programs provide a professional development experience in the summer and then limited follow-up during the year (the “spray and pray” model). Contrastingly, NO LIMIT! mentors were intended to serve as coaches, guides, technical and administrative support, and professional developers throughout the year. Also, some of those teachers who completed Phase I of NO LIMIT! went on to serve as mentors in their schools, often for teachers in Phases II and III. Also, in Phase III, the MISs decided to work with the clusters as Professional Learning Communities (PLCs), while also creating their own MIS PLC.

It is important to note briefly here the professional development activities of the Mathematics Integration Specialists themselves. Some MISs were with NO LIMIT! since its inception, and therefore brought years of experience with the grant. Many presented their NO LIMIT! work to school boards, and at regional and national professional conferences; such as NCSM, NCTM, NWMC, NCCE, and NECC.

The MISs continued to attempt to shape the grant through monthly videoconferences with OSPI participants and the evaluators. They also had other opportunities to meet face to face through the years, though in some cases MISs could not attend due to funding restrictions placed upon them by the ESDs. This problem became more pronounced in Phase II, with the dramatic decreases in funding for NO LIMIT! In Year Three, several MISs from different ESDs developed a support network among themselves, which was highly valued. In Year Four, that network became more organized, with a Steering Group of MISs being formed to coordinate the face to face MIS meetings throughout the year. This was a year in which the MISs asserted more control as the lack of leadership from the state level became more evident. There continued to be a strong desire among the MIS cadre for a more coherent NO LIMIT! program across the state, with more opportunity for shared goals and decision making. In Years Five and Six, the MISs continued to provide leadership for the program, but as the grant dwindled to a close in Year Six, with fewer MISs and less time, this leadership also diminished.

TECHNOLOGY

Over the first four years of NO LIMIT!, participants adopted a wide array of technology hardware and software, including, but not limited to:

- Macintosh and PC laptops, desktops, printers, scanners, etc.
- Wireless hubs, i.e. Airports™
- Graphing calculators
- Palm™ and other handheld computers
- LCD projectors
- Document cameras, such as the Elmo
- SmartBoards™
- Digital cameras (still and video)
- Software such as MathLab, Tom Snyder, and Geometer's Sketchpad

The customary model for Years Three and Four was for each teacher to receive a 'basic toolkit' of a laptop computer, document camera, and projector for their first year with the grant. It was found in Years One and Two that these three items allowed teachers to provide the basic technologically enhanced instruction prescribed by NO LIMIT!. Any additional equipment funding in Year Four was spent at the teachers' discretion. In their second year with the grant (Year Four), teachers had more freedom of choice in their purchases, with either individual teachers or each cluster deciding what to acquire. In Year Five, the first year of Phase III,, each teacher received \$1500 in funding for NO LIMIT!. This money was spent on the basic toolkit as described above. **No funding** for technology purchases was provided in Year Six.

MATHEMATICS

Districts involved with NO LIMIT! continued to use a variety of mathematics curriculum materials, ranging from the very traditional Saxon books to the more progressive *Connected Mathematics* (<http://www.math.msu.edu/cmp/>) and *Investigations*. However, the trend was most

definitely toward adoption of the latter materials, with more than half of NO LIMIT! districts eventually using *Connected Mathematics*. As the WASL became more established in NO LIMIT! and across the state, teachers worked with released items, both with their students and in professional development opportunities. Though many districts continued to emphasize basic math skills such as computation, more began to support the development of higher mathematical thinking skills, such as problem solving, reasoning and making connections, both within mathematics and with other fields.

Research Context: Professional Development, Mathematics and Technology

TEACHER CHANGE AND PROFESSIONAL DEVELOPMENT

Teacher change occurs as a result of the interaction between a teacher's beliefs and practices (Borko, Davinroy, Bliem, & Cumbo, 2000). At times a change in a teacher's practice leads to changes in beliefs, and sometimes change in practice is a result of a belief change. Borko and Putnam (1996) are direct:

The order in which beliefs and practices are addressed in staff development programs may not be that important. What is critical is that both practices and beliefs become the object of reflection and scrutiny. Meaningful change in one requires change in the other as well (p. 702).

Of course a person's beliefs are formed and re-formed during complex interactions of situational and personal factors. Professional development experiences that promote teacher change, therefore, take time. Change is unlikely unless teachers are "pushed" and "prodded" during long-term professional development (Borko et al., 2000). During this time teachers need to be made aware that alternatives to their current practice and beliefs will benefit student learning. The more things change, the more teachers must confront their beliefs about learning and the efficacy of their instructional activities. Technology can be the catalyst for that change (Dwyer, Ringstaff, & Sandholtz, 1991). Anderson (1989) suggests "if programs are to influence instructional practice, a case must be made that is convincing to teachers that alternatives to present practice exist and are worth trying" (p. 335). Teachers advance and retreat as they confront dilemmas and attempt to meet challenges posed by the new approaches to teaching for understanding. Overall, teachers' progress is not linear, as they move between new and old ideas and practices (Marx, Blumenfeld, Krajcik, & Solloway, 1997).

A critical part of professional development promoting teacher change is the opportunity for teachers to interact with other teachers in similar teaching situations. Frequent meetings/discussions and common planning time are two examples of how these professional interactions might occur (Knapp & Peterson, 1995). In other words, "[change] is a slow process, one that requires time, effort, and support during the transition years" (Borko et al., 2000). A number of researchers who study educational reform recognize the critical role of supporting teachers in this often extended change process (Borko & Putnam, 1996; Cohen & Ball, 1990). They contend that teachers need to be guided as they modify beliefs and practices so they construct new ideas that are based on their past experiences and valid practical knowledge, and are compatible with those advocated by the educational reform community (e.g., standards documents published by ISTE and NCTM).

The power of the classroom teacher is supported by recent research. Early studies showed a modest relationship of school resources and school structure to student outcomes. What seemed to matter was the SES level of the families in a school. This research, however, treated all types of resources as a single item. A recent large-scale study found that teachers contribute as much to student achievement as the students' SES and family background (Wenglinsky, 2002).

Furthermore, if teachers received inservice training on teaching higher order problem-solving skills their students benefited. Wenglinsky demonstrated what we would all hope to assume: teacher practice and schools matter.

Changes in teaching behavior depend partly on the nature of professional development they experience. But professional development is costly and time-consuming. The question emerges: Should districts offer less intense professional development to a broader audience or should they target more resources to fewer teachers? Recent evidence suggests that it is more productive to offer high quality, intense experiences to fewer teachers rather than to stretch professional development dollars across a large staff (Desimone, Porter, Garet, Yoom, & Birman, 2002). Professional development is more likely to change instructional practices when it includes several teachers from the same school, is coherent, and focuses on student work. Also, "...in schools where an informational and social support network is available and where a sufficient technological infrastructure is in place, computer use may be a powerful catalyst leading to more constructivist practices on the part of teachers" (Becker & Ravitz, 1999, p. 356).

MATHEMATICS TEACHING IN A STANDARDS-BASED ENVIRONMENT

Mathematics led the current wave of national standards with the 1989 release of the National Council of Teachers of Mathematics' *Curriculum and Evaluation Standards for School Mathematics*. Standards-based reform aims to improve student achievement. Student achievement depends on teacher knowledge, skills, and behavior, therefore changes in professional development are implied. Since the standards are developed at the national or state level there must be strong ties between the state, districts and, ultimately, the classrooms.

The standards-based reform initiatives must change the historically weak links between administration, policymakers, and the classrooms. This "loose-coupling" makes it difficult to direct changes in classroom instruction. In order to have more influence, recent efforts are more outcome-based than input-based. They provide accountability measures such as high school graduation tests and requirements for school performance on state tests. This has the potential to link student achievement, classroom instruction and policy in new ways (Swanson & Stevenson, 2002). Washington state exemplified this trend by instituting high stakes graduation requirements and other mechanisms designed to improve student achievement.

Swanson and Stevenson (2002) found a very modest relationship between state standards efforts and classroom instructional practice. The relationship is stronger where the state supports the professional development of teachers. The relationship is also stronger when the target domains are narrow rather than broad. NO LIMIT! is just such a project. The focus is narrowed: improvement of middle school mathematics through the integration of appropriate technology.

EDUCATIONAL TECHNOLOGY AND MATHEMATICS

Electronic technologies, such as computers and graphing calculators, are fundamental tools for learning and teaching mathematics (NCTM, 2000). These tools allow students and teachers to better visualize, organize, and analyze data, while also being able to focus more extensively on

reasoning and problem solving abilities. Technology fosters an active classroom environment where students not only solve problems, but also can find their own problems to explore (NRC, 2000). The use of content-specific tools, software, and simulations, such as graphing calculators, supports learning and research in the classroom (ISTE, 2000). Instructional technology has had a dramatic impact on teaching in many classrooms across the United States. However, despite a high rate of growth in access to computers in American schools, actual computer usage has remained low (Zhao, Pugh, Sheldon, & Byers, 2002).

Herman (1994) discusses the difficulty encountered in evaluating the impact of technology in the classroom. Some of the obstacles include; a) the imperfect research environment of the school with its confounding variables; b) not enough time for the project as it can take years for a teacher to become comfortable with technology, and then to change instruction; and c) difficulty in measuring gains as typical tests cannot assess skills such as “sophisticated problem solving, writing, collaborative learning, global awareness, independence and efficacy, engagement and motivation, as well as students’ specific technology skills” (p.150).

The relationships between the students and the teacher can change as technology is used effectively in the classroom. Roles can shift as the teacher becomes more of a guide as students work with their own data, compare results, and make conclusions (Westreich, 2000). A cooperative classroom where students of all abilities and the teacher work together towards solving problems is an effective learning environment (NRC, 2000).

A fundamental issue in the implementation of technology as a tool in mathematics classrooms is the development of judgment (Goldenberg, 2000), as “...the right questions about technology are not broad ones about which hardware or software to use, but about how each works in a certain curriculum, right down to how individual problems are posed to the student” (p. 1). This type of judgment extends beyond familiarity with the technology to an understanding of the curriculum, the learner, and how (or if) educational technology can facilitate understanding.

Development of such judgment is the goal of this project. Yet it is a difficult target. Many teachers want “stuff” in order to do their jobs more quickly but without attention to the needs of the mathematical task or the learners. Some teachers do not see a reason to change what or how they teach but rather want only to graft the new technology onto existing practice. They value student learning but are not convinced that they need to change how they teach. This frustrates the Math Integration Specialists who value the goals of the grant and are convinced that changes in how teachers teach are necessary to accomplish deeper student understanding. They are not convinced that more calculators or technology will, by themselves, lead to better teaching or improved learning. The availability of technology alone cannot do much to compel change (McCabe & Skinner, 2003). Instead, to raise student achievement, its use should be supported by other improvement efforts, such as sufficient technical support, teacher technology training, and long-term planning.

Evaluation Design and Procedures

The overarching goal of the NO LIMIT! evaluation was to examine its implementation, rather than to make value judgments about its teachers, students, or curricula. The evaluation was small-scale, with less than 5% of total grant funds devoted to it in Phases I and II, and less than 3% in Phase III. While there were broad similarities between ESDs, each ESD, as well as the LD and NLC components, continued to develop and implement its own version of the project. This considerably complicated data collection for the NO LIMIT! evaluation. In order to accommodate this variability, a multi-faceted evaluation was designed, as can be seen in Figure 1.

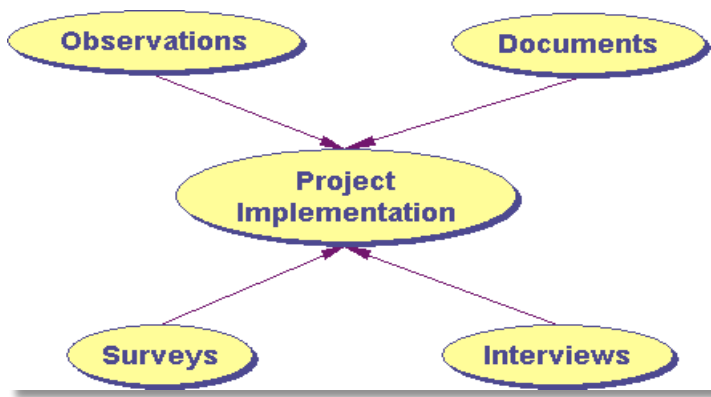


Figure 1. Evaluation design

Data from all districts and ESDs were collected throughout the years using surveys, interviews, observations, and test scores. Interviews with all of the Math Integration Specialists (MISs) were conducted as they entered and exited the program. Online and written [Teacher Surveys](#) were administered in the August workshops. Online [Teacher](#) and [MIS](#) Logs were conducted throughout the school year. These surveys and logs covered issues of pedagogy, mathematical content knowledge, and implementation/administrative issues. The evaluators attempted to use both existing and project-administered tests [i.e., the Washington Assessment of Student Learning (WASL) and Iowa Test of Basic Skills (ITBS)] to examine the effects of the project on student achievement. However, it was difficult to use testing data as it was not available at the student level, which is needed to directly compare any effects NO LIMIT! may have on test scores. We made attempts to compare at the classroom and/or teacher level, but again those data were not uniformly available. In some cases, ESD personnel and Mathematics Integration Specialists were able to negotiate with teachers and principals for access to testing data at the classroom level. However, we as evaluators did not have access. Due to these constraints, we ended the use of the ITBS as a comparison. We continued to negotiate for access to WASL data at the classroom/teacher level, but with little success.

In Phase I, there was a recognition by the ESDs that some conformity in goals and outcomes would improve their progress. To that end several classroom observation protocols were proposed as a template for common outcomes. This discussion helped to identify which teaching behaviors were a focus for the grant. Some ESDs began videotaping classrooms. This practice had tremendous potential if aspects of school culture and issues with storage and use of these tapes could have been resolved.

The size and scope of the project required the evaluators to develop survey tools and general data collection techniques. But to capture the smaller differences and details of implementation and effects, a different method was required. A series of case studies was developed in order to describe the implementation in more detail. Because of the intense nature of these case studies, not every ESD could be covered. In Phase I, four ESDs were chosen as case studies, while in Year Three of Phase II one traditional ESD model was retained, and the NLC model added as a case study. In Year Four of Phase II, we have added another of the more traditional ESDs. But in Phases III, we were forced to abandon case studies due to funding cuts. However, more formal attention was paid to the MIS Professional Learning Community. Evaluators continued to attend a few professional development sessions and PLC meetings, conducted interviews, and monitored electronic communication such as BlackBoard postings and e-mail messages. The professional development of professional developers continued to be a focus in the evaluation of NO LIMIT!

The evaluation was designed and interpreted through the context and research that pertains to the NO LIMIT! project. In this sense, the impact of the program depended upon on the appropriate design and implementation of the grant. This design and implementation differed at each ESD, thus raising the possibility that the successes and failures of the project were very local.

Summary of Goals for Phase III

In Phase III, the NO LIMIT! goals were reworked again, as stated in the [RFP](#). They now were listed as the following:

The approach to this project will include the following components:

1. *Providing, sustained, collegial, professional development focused on increasing the mathematical content knowledge of teachers, supporting the use of effective mathematics instructional strategies, and the appropriate use of technology in the classroom.*
2. *Providing educators and students with greater access to technology and materials that support effective mathematics teaching and learning.*
3. *Developing and supporting a professional learning community among teachers of mathematics in the building.*
4. *Implementing a strong evaluation that provides data about the progress being made in the improvement of teaching and learning through the NO LIMIT! Project.*

Other key elements of the project will be:

1. *Active administrative involvement, inclusion, and sustained support for the professional learning community.*
2. *Assisting educators to better understand the Grade Level Expectations (GLEs) and how to use them to improve instruction in their classrooms.*
3. *Training educators in use of document camera, projector, laptop computer, and other classroom materials to support project-based learning and other effective instructional strategies in a constructivist environment.*
4. *Assisting educators in meeting the needs of diverse learners.*
5. *Encouraging parental support and involvement.*

As mentioned in previous reports, the basic equipment ‘troika’ of a laptop, document camera and projector, if used appropriately, dramatically increases the level of discourse and teamwork in a mathematics classroom. Students are able to quickly and easily display and share their potential solutions to problems, with other students giving immediate feedback. In Year Five, the first year of Phase III, many of the teachers were new to NO LIMIT! Many teachers used this troika in ways similar to a traditional overhead projector. However, some teachers in Year Six began to use their document camera to promote student discourse. However, some teachers felt limited by their district mandated curriculum. For example, one teacher reported:

As can be seen in Table 2, the passing rate on the mathematics WASL has been generally increasing across all grade levels. It is difficult to attribute an increase in test scores to any single factor, though it is likely that the passing rate is improving due to the general increased emphasis on the WASL and the EALRs in the classroom. We as evaluators do not have access to WASL scores at the classroom level, therefore we cannot do any analysis of those scores as compared with non-NO LIMIT! classrooms. It is unfortunate that almost all of the participants in the NO LIMIT! project have changed in Phase II, and then again in Phase III. Just as positive student outcomes may be expected, the support of the program is removed. Though it was not in the

scope of our evaluation to continue to test past participants, it would have been interesting do so to see if the project had any lasting impact.

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
4th grade	43.4	51.8	55.2	59.9	60.8	58.9	58.1
7th grade	27.4	30.4	36.8	46.3	50.8	48.5	54.6
10th grade	38.9	37.3	39.4	43.9	47.5	51.0	50.4

Table 2. Mathematics WASL Pass Rate (percent) from <http://reportcard.ospi.k12.wa.us/>

Concluding Comments

NO LIMIT! provided beneficial professional development, innovative computer hardware and software, mentorship, and peer support for many teachers. The Teacher Logs are filled with comments about how NO LIMIT! has dramatically changed how teachers teach and how their students learn. However, close reading of the narrative comments also shows that many teachers see various components as unhelpful. Some ESDs provided a high level of MIS support, with visits to classrooms, collaboration with teachers, and structures to make PLC meetings more productive and beneficial. However, many MISs were stretched to provide the needed support, with teacher reporting only one or two MIS visits over the year. As in previous years, the PLC meetings were dramatically variable in their work. Many teachers discussed how important collegial support was, while others complained that colleagues came unprepared to meetings, or spent all of their time ‘complaining’ or ‘gossiping’. Also, the level and content of teacher training made available to teachers varied across the state. Some ESDs focused heavily on technology (e.g. ESD 113), while others emphasized math pedagogy (e.g. ESD 114), or fell somewhere in between. Teachers reported varying levels of satisfaction, which is often the case in group professional development, where all teachers cannot be made ‘happy’ all of the time.

The last phase III of NO LIMIT!, suffered a dramatic decrease in Year Five funding to only \$2.9 million. Equipment funding was reduced from \$5000 per teacher to \$4000; a relatively small reduction which still allowed each teacher to purchase the basic ‘troika’ of equipment. However, professional development funding was reduced to only \$10,000 to \$26,000 per building, depending on the number of participants. This meant that the level of MIS support for teachers was substantially smaller. Most MISs had to withdraw from an intensive mentoring role at the classroom level (those that had previously provided that level of support), and provided more ESD-level professional development. That meant that the PLC work at the building level was even more important, which was one of the less consistent aspects of NO LIMIT!

To try to address these shortcomings, the statewide MIS community decided to implement the precepts of the Professional Learning Community (PLC) as laid out by DuFour and others (DuFour & Eaker, 1998; DuFour, DuFour, Eaker & Karhanek, 2004). The MIS group also decided to work as a PLC. The structure provided by the PLC and associated protocols was crucial to the success of the NO LIMIT! program.

The increasing prominence of the MIS community as a guide for NO LIMIT! in the summer of 2005, was promising. With the continued lack of strong leadership provided by OSPI personnel, it was up to those who had been delivering the NO LIMIT! program to decide upon new and continued directions for the grant. This was a hopeful sign in times of reduced budgets and increasing demands placed upon teachers and their students. However, as expected the reduced cadre of MISs was overtaxed as it was with their ESD responsibilities. Though in many cases, the MISs delivered excellent professional development and support for their NO LIMIT! teachers, there was only limited time available for statewide leadership activities.

Then, in Year Six of NO LIMIT!, the statewide budget was again dropped to only \$1.5 million. This resulted in further cuts in the MIS staff, the loss of a number of NO LIMIT! teachers, and a reduction in evaluation activities. The evaluators were only able to continue data gathering via the Teacher and MIS Logs, and no longer were able to visit schools or PLC meetings.

The data from the Teacher Logs appear in the next section. First are the statewide data, which are followed by the data from each ESD. ESD personnel were solicited for summary data for each year, Year Five and Year Six. In some cases, the evaluation team did not receive summary data. In those cases, the Teacher Log data are presented, with comments from teachers included. In the interest of space and time, Years Five and Six have been combined for the Teacher Log data.

Years Five and Six Summary Overall Teacher Log and Survey Data

Overall Statewide Summary Log Data

NO LIMIT! teachers were offered the opportunity to complete online logs about their participation in the grant. These logs appeared five times during the school year 2005-06 (October, December, February, April, and late May), and four times during the year 2006-07 (October, December, February and late May). A sample of a teacher log appears in [Appendix C](#).

On average, approximately 72% of NO LIMIT! teachers completed the Log over the 2005-06, and 57% did so in 2006-07. That is a reasonably high completion rate for Year Five, but there was a significant drop in compliance in Year Six. In addition, we must remember that data from the Logs are self-reported. Teachers may have varying motivations for completing, or not completing, the Logs. The core Log questions remained consistent during the course of NO LIMIT! in order to allow change in responses to be seen over time. Also, some culminating-type questions were added for the late May Logs, in order to gather some cumulative data. To alleviate questioning fatigue, we only offered the Log a few times during the year, rather than every month.

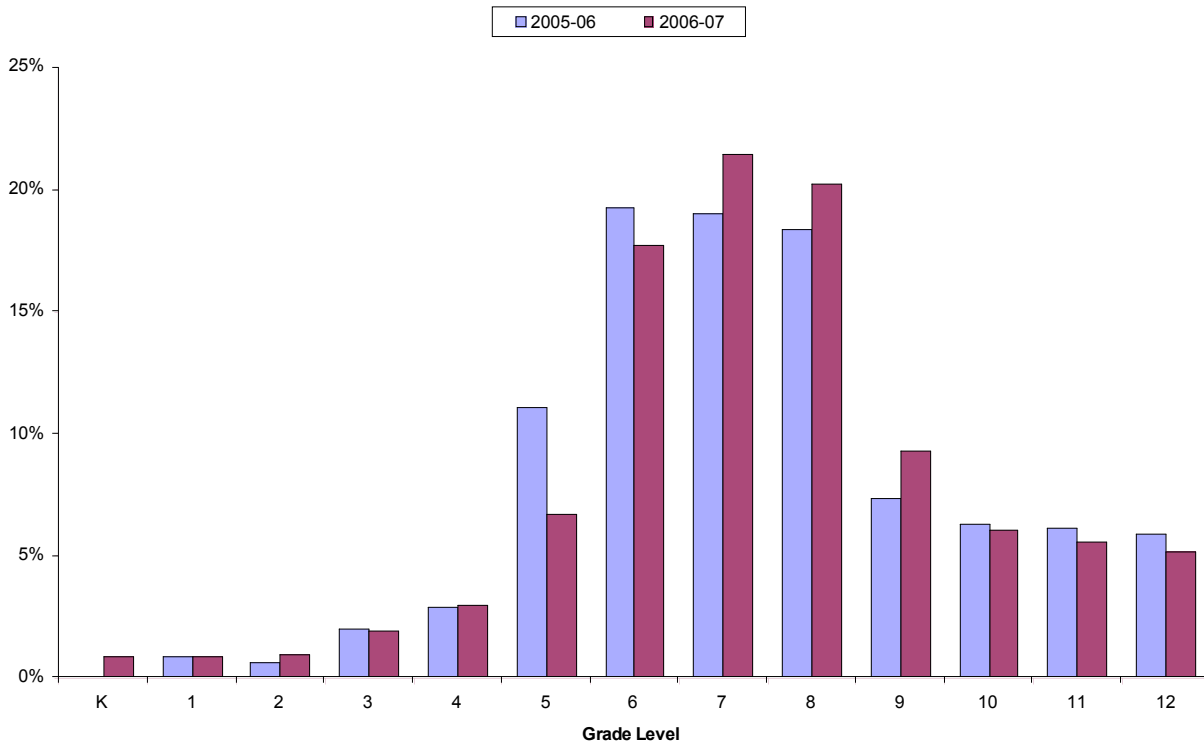
Following are the data from the Logs statewide, for all responding teachers. Each ESD's data appear later in this report after their summaries. Responses to each question have been tabulated and statistically analyzed in order to shine light upon various NO LIMIT! components. For each Log question, you will see a graphical representation of the responses, followed by *unedited* comments provided by the teachers on the Log. Though the graphs can be illuminating, it is often the comments which give more insight to the NO LIMIT! classroom and environment.

**Log Responses
NO LIMIT REGULAR GROUP
2005-2007**

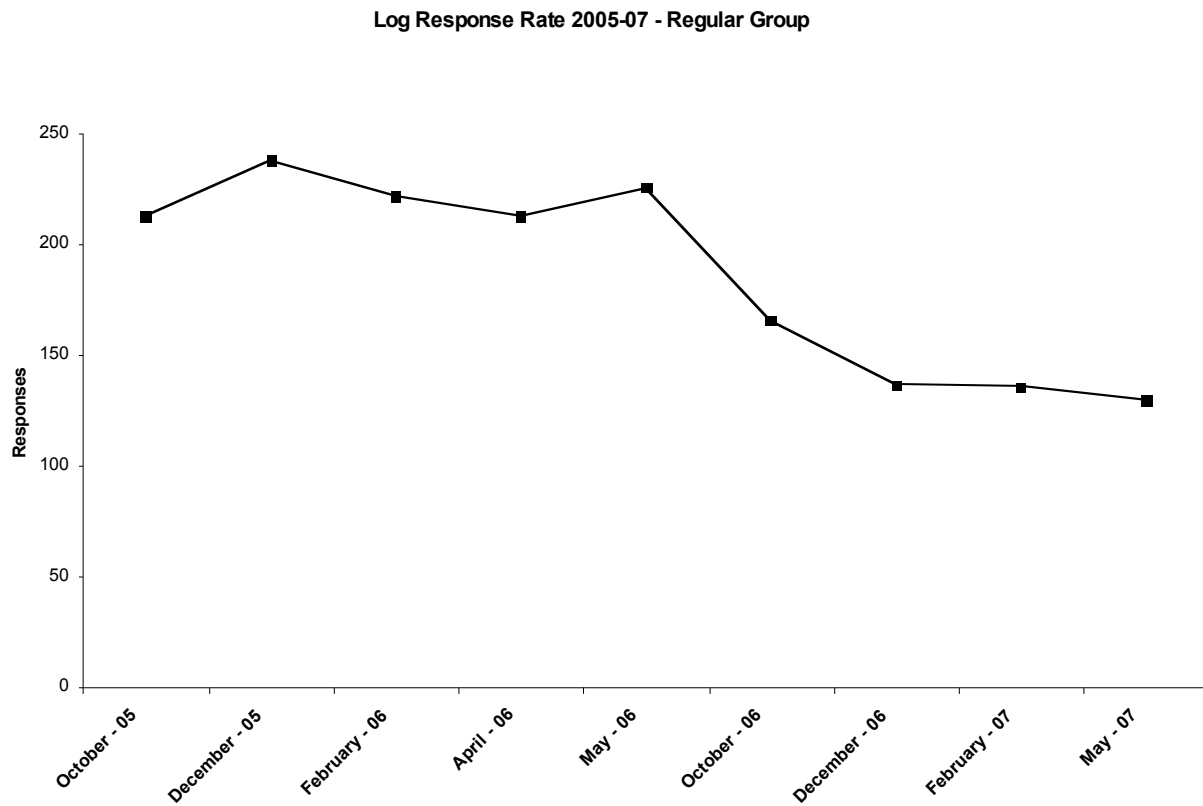
Item 6:

The grade levels you teach:

2005-07 Grade Level Participation - Regular Group



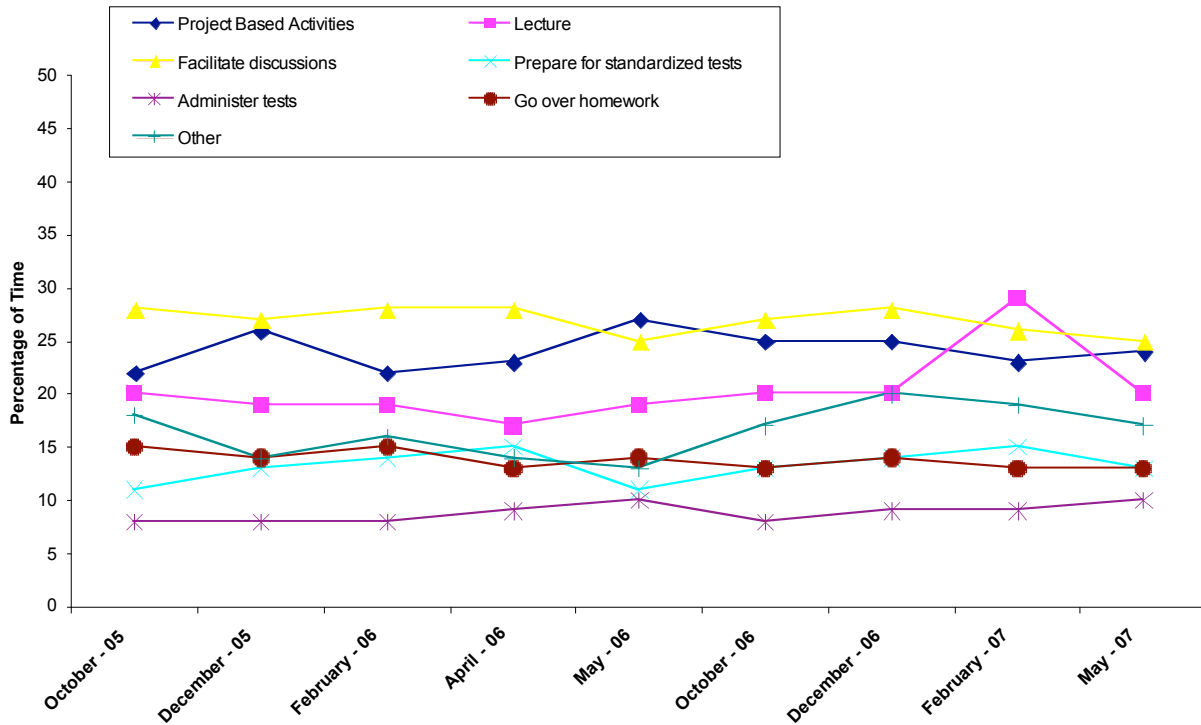
Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?

Classroom Activities in an Average Week - Regular Group



Other, please specify:

October - 05:

- I only teach math a couple of times a week. I am team teaching with another teacher who is the "Math Teacher"
- Time in class to work on assignments; computer time doing projects or working on practicing keyboarding skills; reading in class (either silent reading or me reading aloud); I am not clear if the above is referring to math or includes other subjects. I answered for all subjects considered together.
- Conferencing most often due to students in need (special Ed)
- These numbers vary with the concept difficulties.
- Some days we spend more days as a group problem solving than others!
- Self help skills
- Many of these overlap
- Hands on activities and manipulatives
- Because the connected mathematics curriculum is aligned with state standards, the work we do prepares students for the standardized test (WASL). We cover homework assignments in the student discussions.
- Talking about Grade Level Expectations, working on basic skills and working on critical thinking activities.
- Allowing time to work on assignments (group or individual).

- Things not having to do with math (assembly behavior, pictures, etc.)
- Resource Room requires LOTS of repetition, hence the 20%
- Estimate... it is hard as each week is different. This is for math only - other subjects are different.
- Student work time
- I am a math coach so my focus is on teacher development and support in the teaching of mathematics. I do that by providing material and instructional support. At times, this involves teaching in-services and/or classes of students, but none of this is really my focus during the week. Each day is a different experience and blocking in times is extremely difficult.
- Attendance, lunch count, athletic grade sheets signed, announcements, pledge of allegiance, behavior issues
- Community building activities
- Many of the projects I consider project based are through Connected Math.
- defending their work as they present it to the class
- Problem Solving/Journaling
- Individual instruction for four students.
- Bookkeeping, answer questions, motivational for other time spent
- Problem Solving
- Allowing work time/students to teach one another/monitor student activity
- Helping students one on one
- It depends on the time frame for the unit. I may not test at all one week but 2-4 days any other given week.
- I forgot one thing and it made me do the whole thing over!
- Roaming while students work, answering individual questions, being available for individual assistance.
- Yes, I know that my numbers add up to more than 100%. That is because some of the stuff I do
- Observing and talking with students as they work
- Grading all the above!
- Does not equal 100% as events and rationale overlap
- Other - facilitating individuals, pairs, and teams in exploration of mathematical concepts through various activities.
- Students involved in problem solving and investigatory based activities.
- Other=practice of math concepts
- 8th grade math focuses on our curriculum calendar of skills as well as WASL prep.
- We read math related literature, work on enrichment activities...
- Grading papers and entering them into the grade book
- A bit difficult to partition up the week this way... did my best.
- Using the text book and dealing with discipline problems
- Most of the time students are learning the subject matter that is related to the text.
- Warm-Up Activities(Basic Skills)
- Being an elementary teacher, the proportions of these fluctuate a lot from week to week.
- Students interacting with the mathematics - group problem solving, math games, contests, etc. All of my teaching helps to prepare students for the standardized tests they will take.

- Planning, making parent contacts, following up on attendance issues, etc. I teach in an alternative classroom for at-risk students who have a high rate of failure for the past two years.
- Wasted time due to tardiness, inappropriate behavior, interruptions
- Going over forms that will help with learning math and WASL
- I do all of these during the week, but it is hard to divide it up into percentages. What do you mean by "standardized tests"? Do you consider the WASL a standardized test? I answered this question with the WASL in mind.
- Some of these activities overlap, that is why it adds up to more than 100%. For example, facilitating student discussions might be happening while students are involved in a project based activity. Alternatively, I might lecture in a mini-lesson if kids are "stuck" and then we will get back to our project.
- Early Work
- Practice with calculation skills.
- I give time in class for students to work on their assignments so I can go around and help them with any questions they have.
- Math Pacing are entry task problems the first 5 minutes of class.
- The curriculum I use embeds preparing students for standardized tests into the instruction. I really do not need to come up with additional practice very often.
- Basic Skills Review and Problem Solving
- Re-teaching math number sense covering areas that students were not able to do, reviewing last year's concepts.
- Practicing math concepts in a game format.
- Teaching a values curriculum, for example Lion's Quest.
- personal relationship building and other school activities or announcements
- Was not sure if this was to be over math or all subjects - - Also did not know if it was suppose to add up to 100% or not. Hope it makes sense.
- The context of my students' home lives often precludes homework being completed or attempted; therefore, I often utilize class time assisting students to complete homework assignments.
- Varies
- Meeting with students individually or in small groups providing help and formative assessment
- I have two "regular" 7th grade math classes and one math lab class. The regular classes meet 46 minutes each day. The math lab class is 7th every other day, and eighth on the other days.
- Our program is Everyday Math, which dictates a set number of journal pages every day. Also included is a Math Box with review exercises, practice computations and preview items of future lessons. We go over these pages together depending on difficulty and I monitor their progress everyday.
- My feeling is that 90% of the subject matter we cover is somehow "preparing" students for upcoming WASL test (standardized)
- Rocket math.... skill review
- Administrative activities
- Guided practice
- I took this question to relate to math only. In Connected Mathematics, I feel the curriculum matches WASL questions, but that is not standardized tests.

- We spend a small amount of time going over how to read questions and interpret what is being asked. As well as spending some time reviewing some basic skills that we find students get sloppy with. We also spend some time looking at each others work as well as working on class problem solving activities

December - 05:

- Monitoring/troubleshooting student group/independent work on Connected Math curriculum.
- Group work, individual seat work, presentations
- Behavioral issues; classroom management; this is a big issue this year with my group; hard to keep them from blurting out, disrupting, interrupting, generally being off task
- Parent conferencing is based on daily phone calls.
- Math today is taught with different instructional strategies. Years ago, it was mostly lecture and homework discussions. This is such a stronger curriculum (CMP) today to better prepare students as to 'why' the math works, not just 'how.'
- Reading instruction/practice and writing instruction/practice.
- Teaching students to write in math
- Allowing time to work on individual assignments.
- 70% if project based activities is considered assignment and practice skills. 4% is conferencing with students individually about work progress
- I am hoping to collaborate with 8th English teacher to do project on stock market next semester
- Reviewing multiplication/division facts and graphing results
- Individual help
- Class interruptions such as; assemblies, testing, discussion of school issues.
- As we are learning by observing each other, this percentage thing is much more difficult than we originally thought. It really depends on what part of the day or book we are on as to how we are teaching. We really use a combination of everything.
- Coach teachers of mathematics - professional development, ongoing support, and model/co teach lessons, etc.
- All our activities are geared towards preparing them for the standardized tests by having them show work and justify their answers on a regular basis.
- Warm ups - reviewing concepts to make sure we do not forget what we have learned.
- Working on Basic arithmetic facts.
- Students working in partners or individually on solving problems
- Since attending the summer institutes in science (NCOSP) at Western, I have taught both math and science using a handles-on/inquiry method.
- Many things roll into one- for example- math concepts, test prep, and lecture tend to blend a lot.
- Facilitating student collaboration/group work
- 10% of class time is allotted to personal reflection and journaling about what we have learned. Students may write questions for the next class period as well.
- Entry Task
- Trying to build a bridge between classroom math and real world
- Allowing time to work in class when I can assist them - or they can work with their peers.
- This varies. Much depends on the topic being covered and how well it is facilitated by projects.

- Lots of public sharing of mathematical discoveries
- Assigning the homework and grade book work.
- Preparing students to take the WASL, which is not a standardized test... We spend time modeling and discussing communication of information in math as well as problem solving strategies and techniques. Maybe this fits in projects...
- I would love to spend more time in other areas besides the preparing of students to take a test.
- Due to the fact that we are teaching from the Connected math project, I feel all the work can be considered project based.
- The other is daily review activities and patterning.
- Collecting and passing out papers, review of tests, fire drills :)
- Working with students and student groups as they complete assignments
- Practicing Math Facts!, Entry Tasks- Reviewing concepts
- In my resource room most math kids get one-on-one math instruction and work at their own pace. Inclusion math kids get differentiated math curriculum.
- If games count as projects, increase project based activities to 60%
- 5% administrative - attendance, checking in with absent students, handing back papers/tests, 20% checking in with and guiding individuals and teams as they work on investigations/assignments
- Guiding student teams through a problem solving based curriculum.
- Student practice of concepts
- We read storybooks related to math topics, we write about problems we solved. We also spend time working on the computer with math activities.
- Our math curriculum is set up to deliver in student project based activities. There is little teacher lecture and much discussion.
- Math games and review
- Students working on individual or partner homework assignments.
- Computer based algebra program
- Work time in text book.
- We follow the text and improvise as we go through the text.
- Down time
- Working with students on the fundamentals of computer operations, using software, word, PowerPoint, Coaching teachers on technology, Troubleshooting
- Is the total supposed to add up to 100%? I feel they are not independent from each other. I can do parts of each category at the same time.
- Work on homework or other guided practice.
- Working on computer program in one of my classes
- Facilitating student work on real world, text based, multi-step problems via the incorporation of a variety of problem solving strategies.
- Facilitating literature discussions
- Practicing math concepts and problem solving
- Entry tasks
- 1 hour per week, Lion's Quest a program for values education
- Working with students struggling with a concept that was discussed the previous class

- The Investigations Math Curriculum is mostly project based student activities with sharing of strategies and mathematical discussions. Many other activities are also based on student sharing and reaching a consensus.
- The numbers do not add up to 100%. The way I structure class, facilitating discussions is part of learning about subject matter; they are inseparable, as is prepping for tests; we daily do entry items then discuss as part of our routine.
- (said this last time too) Not sure if this is needing to add up to 100%
- This has been a high activity month
- Student work time on assignments.
- Technology based activities
- Paper work, assemblies, conferring with students, discipline problems, talking with parents, meetings
- Students working on in class assignments
- Other includes time on Daily timed practice, roll assignments (i.e. quick problem solving) and other business.
- I teach other content areas.
- Classroom management, administrative activities, math fluency activities
- I am not counting WASL prep as standardized testing. It is in the "other"

February - 06:

- Classroom discipline discussions/reinforcement.
- Most of the discussion in class is based on most of the discussion in class is based on WASL format writing.
- Right now working on WASL math strategies is at a fever pitch.
- Reviewing materials covered previously/recently to assure mastery.
- Working in small groups.
- Two days this week was used up to administer the COGAT / ITBS tests for the HiCap Program in Middle School 2006-2007 school year. They wanted to have early identification, so gave it to fifth grade students. This is the first year that has happened and I am unsure if it will be given every year here out.
- I allow quiet or group time to work on projects.
- Other: basic skills and calculation. Review and spiral approach w/ extended response.
- I have been working Brent Howard, ESD 101 Math Specialist, to begin a project with my students using graphing calculators/spreadsheets.
- Material that is not covered in the book
- Practice skill work
- Guest speakers, non-math activities
- Student work time
- Extra practice on basic fundamentals in mad minute, or warm up activities.
- I spend too much time re-teaching the previous assignments.
- As the WASL nears more time is devoted to preparation.
- Review and entry tasks.
- WASL practice
- Time spent on remediation of basic skills, and or discipline.
- Peer Assessment

- Preparation for technology (lesson plans): taking students to computer lab for instance teaching them Excel (making graphs, tables, x and y, what type of graph, labeling).
- Every lesson is preparation for the WASL. The students also do Math Activities on the computer that are on line and published by our Every Day Math Curriculum.
- Work time, assisting students, ...
- Daily review is in the other category
- Entry Tasks - students work review problems and then we go over a real-life application of the math concepts we are currently covering.
- Teaching mathematical writing skills as part of No Limit project
- Working with students on questions and problems
- Reviewing or testing basic skills on a daily basis (flash cards, paper and pencil warm-ups)
- Many of these topics are interrelated and go hand-in-hand with each other. Perhaps it is my cluttered manner of delivery, but I find it difficult to categorize my teaching into such narrow fields.
- I am not a math teacher. I am a special education teacher so math is only a third of what I teach.
- Working with teams exploring Math concepts & problems
- Involving students (working in teams) in a problem solving based curriculum
- Writing
- Student work
- Students work on their assignments
- I know my percents do not add up!
- Bell work, attendance
- Computer program
- Skill review as an entry task. Use the textbook.
- I have a new group of students in the Learning Assistance Program; therefore, I have to work with them on effective skills for working in groups.
- The amount of time spent on project based activities and lecturing depends on the area of study... obviously take much longer and more group interaction such as finding area of an irregular object in math as oppose to practicing division
- Planning for improvement both alone and with team members
- Class behavior issues
- How do you use this stuff
- These do not add up to 100% because some activities overlap. For example, students have discussions whitt they are involved in project based activities.
- Other - while students work on assignments I make my way around the room to answer questions and check out who understands it and who does not.
- Discussion
- I work hard.
- Preparing materials.
- Provide class work time for students to work on the assignment.
- The total is more than 100% because there is lots of overlap in categories...
- Student work time on their assignments
- Math games/activities
- Other--variety of "roll" assignments/problem solving activities
- Remediation on math basics

- Using technology, extension of concepts to other fields, etc.

April - 06:

- The percentages are a little skewed right now as we are preparing for WASL.
- Videos, reading aloud, other activities too numerous to mention. We have been doing much testing since the last survey.
- This is based on a self-contained classroom, not on just math.
- Working with student teacher, preparing her for curriculum and Math WASL
- Using 6th grade sample math WASL
- Time is allowed to work independently or with a group each week.
- It is all about WASL right now.
- Accelerated Math and Connected Math
- Coaching teachers in mathematics
- My project-based learning experiences increase at this time of the year, as do discussions about problem solving and math concepts.
- Warm ups - review of previously learned concepts
- As we approach April, the month of income taxes and WASL testing, there is indeed a shift toward test taking strategies and preparation. It is interesting to see how much this takes away from engaging students in projects. Sad, is not it.
- Math games
- Letting students work on assignments in class.
- Discipline, rewards
- WASL Practice
- Reviewing other related items
- We are currently looking at WASL released items.
- I spend at least 10% of my time preparing for and setting up lessons.
- Allowing students to explore mathematical ideas, problem-solve and share findings.
- Most of our time is spent on the student discovering the math concept. We are doing CMP for the first time this year and it is somewhat hard for them. However, they are getting it. I am excited to see how this will carry over into next year.
- Too much time is spent in preparing for a test.
- Discussing applications and purpose of today's lecture
- Warm-ups, Misc. including standardized tests
- We have been WASL training for the last two weeks so haven't been doing our standard teaching routines
- Working with students as they work on assignments
- Monitoring group work 10%, clerical/managing behavior 5%
- Writing
- Students work on "partner" activities nearly every day.... I am not calling them "project based" because the activities can be completed in a single day.
- My job classification has changed significantly. I now do not teach in the regular classroom. I did have contact with kids in the above areas several times but it really was not regular.
- Much of the Math discussion comes from talking about the homework
- The curriculum if rich should do the preparation for any standardized test. You should not teach to a test. What does that tell about how good your curriculum is?
- Other is multi facts study and review; working in the textbook

- We are currently giving the WASL. On our days off we are discussing WASL sample tests.
- These don't add up to 100% because some overlap
- WASL PREP
- Working with students on practice problems.
- We do a lot of sharing of students works using the document camera
- Helping students engaged in assignments, such as fielding their questions (10%).
Administrative tasks, such as taking roll, entering grades, giving out progress reports, etc (10%).
- Completing class work assignment from the CMP text.
- Just socializing with students. Getting to know them and making them feel comfortable in my classroom.
- We have been getting ready for the WASL, so I have been giving WASL like assignments and we have been scoring them as a group.
- Problem solving strategies, writing about math, and how it all fits together.
- Puzzle problem solving fun activities
- Class interruptions for students to do other things; conferences so don't have the students for a full class period; "roll" assignment and discussion
- WASL Prep lessons and administering the WASL
- The closer we get to WASL season the more time devoted to reviewing and practicing math communication skills. We have been working on these all year but seems like the practice is intensifying!
- We also go over vocabulary and problem solving process

May - 06:

- Now that WASL is over I spend more time on homework discussions vs. WASL strategies.
- NO this does not add up to 100% - answer is based on average week
- WASL took approximately 16 hours for total of 3 weeks of testing. Math was not done as much as daily lessons, due to stress level upon kids during testing. Afternoons consisted of math games and art projects.
- We have spent more time the end of the year focusing on project based math. Our current curriculum does not support this, so it has been a challenge for me to develop or discover this type of math.
- Connected math-spend too much time on correcting.
- We have been doing a major project this past month, in which students have had to research and write about.
- Group work and student sharing
- Allowing time to work alone, with partners or in groups.
- Group Work
- Working with students on concept understanding
- Going over homework is done one on one looking at corrections from computerized program (Accelerated Math)
- Reviewing previous concepts and using technology for math activities.
- Students thrive when they are conducting a mathematical discussion instead of me doing it....
- Helping individuals and small groups work on projects or practice 22%. Whole class work through of projected math activities and their discussions e.g. Math Talk, How the West was 1+3X4 illuminations: 10%

- WASL testing prep was the big issue this last quarter.
- Student to Student discussions; Cooperative Learning activities
- Practicing routines and procedures.
- Review of concepts and preparing for a Unit test. Number Corner (part of Bridges) and Math Facts
- Self-Grading of extended response items and projects
- This varies throughout the year depending on the content and class.
- April was a busy WASL month. After WASL we get involved in a lot of activities to wrap up the end of the year. Science and Social studies top the charts for me. I am also doing a lot of DRA's (reading assessments) while the students are working on independent reading projects
- Testing time is more this period because of giving the WASL and several district assessments
- Entry task - real life application of the math concept.
- The last month our state administered the WASL. Much of the class period was spent preparing students with strategies and tips. I tried to do as much of this within the curriculum.
- Working with students individually as they work on assignments
- Using manipulatives to build structures and discuss surface area and volume
- Reviewing and applying
- Classroom management and behavior issues abound this time of year!
- I just realized that I have added these percentages wrong on all the other surveys!
- Computer and work time
- As we wrap up the school year, I am introducing mini-lessons on math concepts that are not in the book, but will be beneficial for my students to know next year. We are focusing on vocabulary and computations like finding percents from decimals, lots of problem solving from booklets, etc.
- Computer assignments, group work
- Working teachers and staff to integrate technology in their classrooms, troubleshooting, special projects
- As the year draws to a close I am spending more time using the camera and projector to go with group responses to the math question on the screen.
- Working on assignments together in groups or individually as I help them.
- Reading Response Sheets.
- Review of basic skills through entry tasks
- Using calculators and TI navigator to find deeper meaning of math topics
- Going over homework assignments are often student directed and discussed
- Supervising, redirecting students and creating lessons
- Dealing with disruptive off task students.
- Other interruptions and "moments" that take away from math time.
- Skill review. Working on basic facts, division, review work
- Working, re-teaching
- Working on assignments and giving individual or group help
- Students have time for independent work also.

October - 06:

- Overall I am just trying to make sure we cover all of the CMP lessons according to the pacing calendar.
- Homework assignments are rare in this book
- I am trying harder this year to have more student discourse and less teacher lecture.
- Helping students who need extra help.
- Silently Working on Individual Assignments
- Corrective Math direct instruction program
- Basic Facts work
- Math Games
- We are using Accelerated Math so we use some time for that.
- Math Facts; Problem Solving
- Remediation
- These all tend to bleed into each other.
- Student exploration and practice
- Independent help or small groups based on math content needs
- In my class, we have many discussions about math concepts; students are given protocols to follow to ensure that they know the benefits of listening and understanding different points of view
- Most of work has been start-up procedures and pre-testing
- Use of technology, going over real-life applications of math skills acquired
- Accelerated Math - class work discussions, conferencing with students
- We have adopted a supplemental math program, "Saxon Math". This program requires a lot of direct instruction, which lessens the time for student discussions.
- If the total is over 100%, it is simply because many of the categories overlap. For example, discussing a student's answers and solutions to homework is also facilitating discussions about mathematical concepts.
- Other involves a daily review paper; fact strategy study, fact practice and timings. I do not feel that all of my content work is project based, so part of the other is worksheets for reinforcement or assessment of concepts
- Homework time
- This year's class is very challenging with their inability to grasp concepts that require independent thinking. Projects are given, but I usually have to re-do them as a whole class.
- This question is difficult to answer. Too many of these tasks are done simultaneously to answer this accurately.
- Drill and practice of individual needs for specific students.
- We have a new curriculum
- Facilitating individual, pair, or small group inquiry of mathematical concepts
- Science Labs
- By project based I mean: Getting into groups and going through CMP investigations.
- discussing subject matter, having student led instruction
- Skill review per district requirements
- Housekeeping items
- We have implemented a new math curriculum - Saxon. VERY direct instruction. A lot of time spent with students working independently on their daily written practice. Integrating some CMP work into the curriculum where possible.
- Problem solving methods

- Students working on math assignment (usually with a partner or group).
- Independent practice within classroom; students working together to solve problems, student demonstrations using the document camera and Smart Board.
- Everyday math has games to use to reinforce skills
- Students work from individualized math packets from Accelerated Math
- Basic math facts practice and drill
- I teach math lab. We do not have homework or tests.

December - 06:

- Variety of activities; hard to give an exact % amount for the above categories; it changes from week to week as well.
- Some of the activities overlap
- CMP curriculum
- Showing other student work and working off of mistakes
- Accelerated Math, choral work
- I struggle with how to do project based activities and still cover the GLEs , item specs, test specs, Sample WASL test items and the Everyday Math curriculum we use in 5th grade. I would like to do more project based activities that are connected to GLEs instead of just projects for the sake of doing a project.
- Following directions to know EXACTLY what is being asked in the problem
- We spend about 10-15 minute daily doing Accelerated Math.
- Entry Tasks, Getting Started on Homework
- talking with students as they work in groups and individually
- New Math Program - Saxon - requires a lot more direct instruction
- We are starting fractions so we use a lot of manipulatives in determining equivalent fractions and even for adding and subtracting.
- Some of these activities overlap
- Students have individualized practice work that is based on skill need.
- Going over related mathematical topics -- fractions and Zeno's Paradox
- I am using the Connected Mathematics 2 Curriculum, which lends to a great deal of discussion and group activity. I also have students discuss and explain their work to the entire class. This leads to a deeper understanding of key concepts.
- Reviewing basics.
- Word problem and reading
- Allowing students time to complete assignment.
- Multiplication facts - drill and kill. Smart Board activities based on concept were on Individualized practice on skill. Group activities and games based on the concept
- We have a new activity based curriculum
- I combine homework assessment with discussions.
- Keeping my students organized with their portfolios and notebooks...many of my students loose points in class solely based on their lack of study skills and organizational skills.
- I use Accelerated Math in my remedial math teaching. Students work independently and make progress individually.
- Assessing reading
- Loving my job

- This year, I am not directly teaching math, but supporting the math classes as the specialist. I am supporting the special needs students who are experiencing project based activities in those classes. However, I am using some of the talk moves and student led learning within language arts.

February - 07:

- Working in groups, sharing ideas about mathematical concepts
- Allowing time for work.
- Hands on activities
- CMP and Accelerated Math
- Actually even our test prep is geared more towards our project based activities.
- Using technology to facilitate and promote student learning.
- Students explore problems and investigate concepts
- Everyday is prep for tests. If we just taught how to take a test, students would not learn the philosophy behind math!
- I honestly do not know if I am supposed to only address math instruction with regards to my percentages. can you please clarify this in the question.
- Entry Tasks and working the classroom on extensions to the lesson
- Working with individual students or partners
- This unit has a mystery story that goes along with the math, so we have spent time reading the story.
- Problem centered mathematics
- New Saxon Math this year, lots of direct instruction, requires some creativity for student engagement
- Study multi/div facts; review; worksheet practice
- I am finding that I still have to go through and review steps from one concept to another. That is why it seems like I am doing more "lecturing".
- I facilitate a computer Lab.
- Working during class w/ students that have difficulty with the basics
- Giving feedback from assessments
- Still wondering if this is needing to add up to 100%
- Review basic concepts, computation, WASL strategies
- I have a student teacher now for 3 of my classes
- These categories over lap
- Working on daily assignments/concepts.
- I use Accelerated Math, which is individualized instruction.
- I do not currently teach a math class, but enter the classroom and support the students served through LAP or Special Education.
- Drill and practice using Qwizdom. Individual paper pencil based on student need for IEP goal.

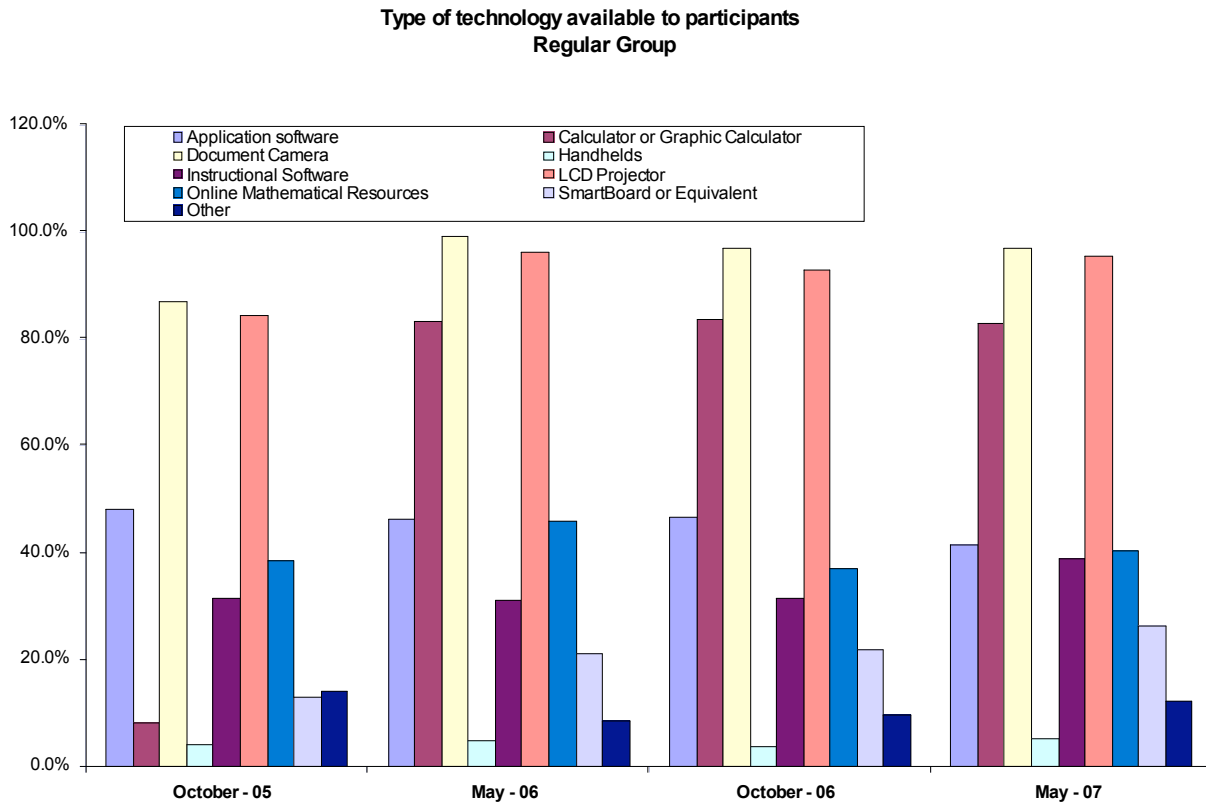
May - 07:

- Following curriculum plan.
- Learning new concepts using the Connected Math and the Dialogue that it gives
- On maternity leave during month of April

- We have just completed three weeks of WASL testing so the emphasis on test administration is high and we have cut way back on homework. I feel there is a huge disconnect in math learning for the duration of the WASL as well as the weeks preceding it as we "practice" for the WASL.
- Supporting students who are working on individualized material based on student need and IEP.
- Incorporating technology
- Individual/differentiated instruction for struggling students
- Exploring concepts and guided practice
- Entry Tasks
- Working with individual students
- Secondary Math curriculum was adopted this year. Saxon Math involves a lot of direct instruction. Have had to get creative with teaching this curriculum.
- We are preparing for the WASL this month
- We're spending more time on basic fact drill and reviewing basic operations of addition, subtraction, multiplication and division this last quarter
- Independent work
- Working with students so they can better understand their mistakes.
- Some of these overlap.
- Class assignments
- We have just begun a geometric project, so most of our time will be project-based.
- It will not accept my percentages above
- We have great discussions in Math regarding our openers
- Most of time is spent working on assignments out of CMP book
- Where in WASL prep/ online research
- Qwizdom, math activities/games/computational practice
- Administrative activities, especially in first period
- I use Accelerated Math so the majority of my time is spent in individualized instruction. I also spend time drawing concepts in cartoon form.
- Mandatory meetings

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.



Other:

October - 05:

- Digital camera, 14 students computer stations
- Computer/printer in the library
- Laptop
- Digital camera, scanner
- Overhead projector, 1 teacher comp.
- I do not have my technology yet.
- Smart tablet
- Laptop
- Aver media
- Digital camera
- 5 student computers
- Laptop, airliner
- Laptop
- Laptop, 10 student computers
- Document camera, but no projector yet
- Digital still & video cameras
- Cps remotes

- Projector
- Individual Whiteboards
- CBRs
- Digital Camera
- Digital video camera, scanner, overhead projector
- Overhead & computer to poster various things
- Laptop that is used with the projector
- Two computers available to students
- Accelerated Reader,
- 9 computers/26 students
- Computers
- Accelerated math

December - 05:

- 14 student computers
- Basic calculators
- Laptop with internet
- Digital camera
- Smart Wireless Slate
- Laptop
- Airliner
- 7 computers
- Aver media
- Printer, TV/VCR, speaker, DANA
- Airliner
- Digital camera,
- Laptop, 10 student computers
- Digital still & video cameras
- I have just received a Smartboard and it will be mounted next week.
- Digital Video, Video Editing software
- Digital camera, scanner
- Math Safari
- Laptop that is used with the projector
- Laptop
- Scanner
- PLATO computer lab
- Student laptops
- Overhead

February - 06:

- One computer and printer
- Digital camera
- Student computers and multi media computer
- Aver media

- CPS units
- Laptop
- Digital still & video cameras
- Cps remotes
- Whiteboards
- Teacher laptop
- TV/VCR/DVD
- Smart Board is mounted but not hooked up yet.
- Digital camera, laptop computer
- Video camera
- Laptop
- Scanner
- Laptops for student use

April - 06:

- Airliner
- Student computers
- Digital camera
- Airliner smart tablet
- Airliner
- Calculators are non-graphing
- Digital camera and video camera, wireless microphone, 13 desk top computers , printer, 30 Alpha Smarts,
- Digital camera
- 10 desktop computers
- Alphasmart
- Digital camera, video camera
- Digital still & video cameras
- Cps remotes
- Whiteboards
- Qwizdom
- Flashmasters
- Instruction CPS device
- Laptop computers
- Lap Top
- Accelerated math

May - 06:

- Laptop
- Airliner
- Digital cameras video cameras, Alphasmarts
- Digital camera
- I sometimes take my class to my Business Ed. computer lab
- Airliner

- 7 computers
- Braille materials, Pac-mate
- Alphasmarts
- Laptop
- Laptop
- Vernier sensors
- Qwizdom
- Digital Cameras, scanners
- TI Navigator
- Scanner, Laptop, iEnstruction CPS device, CBRRange Finders, Video Conference Camera
- Laptop computers
- Laptop
- Accelerated math

October - 06:

- Leapfrog
- Digital camera
- Digital Camera, Web Cam
- Qwizdom Interactive
- Qwizdom
- Hand held keyboard
- GPS, laptops
- Digital Cameras
- Qwizdom
- Qwizdom
- Linear data collection hardware to go with graphing calculators
- GPS Units w/ mapping software
- Instructional CD's
- Accelerated Math program
- Elmo
- Qwizdom

December - 06:

- Digital Camera, Web Cam
- Smart slate
- Aver media
- Camera, desk top computers,
- Video camera
- Qwizdom
- Digital Cameras
- Qwizdom
- Class set of laptops, Scanner, Printer and 9 desktop all connected to the internet, TV. and DVD player, speakers. What else is their, and I probably have it!
- Qwizdom

- Items checked are used within a reading and writing class
- Qwizdom technology

February - 07:

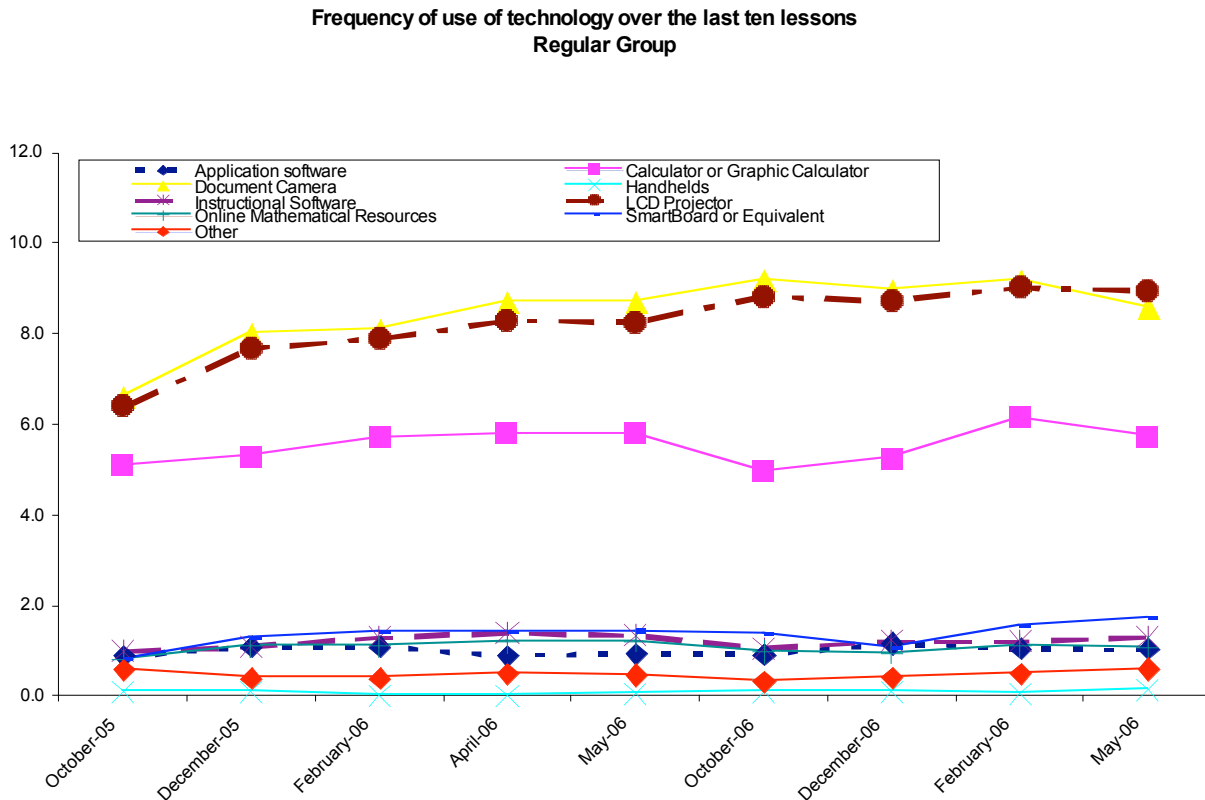
- Qwizdom
- Smart Slate
- Qwizdom Interactive
- Qwizdom
- Qwizdom
- Qwizdom
- Cps remotes
- Projector and document camera
- Digital Cameras, Video Editing Software
- Qwizdom
- Qwizdom
- Qwizdom
- Qwizdom

May - 07:

- Qwizdom
- Computers
- Qwizdom
- Qwizdom
- Accelerated math program and scanner
- Qwizdom
- Cps remotes
- Digital Cameras, Scanners
- Digital camera, TV., laptop, printer,
- Qwizdom
- Accelerated Math program
- Laptop
- Graphing calculators
- Qwizdom
- CPM

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.

**Item 11:**

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October – 05:

- We are using calculators in a stock market simulation project.
- Students bring their math work under the Elmo to share with other students to discuss their thoughts.
- A document camera was used by students to explain their work and to justify their answers.
- Sharing of their work using the document camera/projector. This stimulated discussion/changes/corrections among other students as work was shared in class.
- Students bring their work up to the document camera and share their thought process. Often we will work through a problem together on the document camera using manipulatives.
- Students conducting a statistical investigation to determine some typical characteristics of their surveys
- Gave WASL style questions, and then had them critique their work with the projector and help from the classroom. A very popular activity, even for the low kids.

- Students used the document camera and projector to share their thinking and the strategy they used to solve multiplication cluster problems. They talked about how to break numbers apart and the pattern they noticed with each cluster. Other class members also came up to discuss the same problem if they had a different strategy.
- My students are showing their work at the beginning of each class. We try to come up with as many ways to "solve" problems and then share them with the rest of the class.
- Explaining solutions to story problems to the group using document camera and LCD projector
- Students shared their work (graphs) with classmates using document camera and projector and used Microsoft Excel to show another resource for showing all types of graphs
- Use of calculators to check accuracy. Applets to visually understand concepts.
- Let me be honest, I am not sure exactly what you are looking for but I will try! On almost a daily basis, I have my students come up to the document camera with their work for the day and explain how they came up with the answer, or how they tackled the problem.
- We used the calculators during a math lesson
- Calculators for the Connected Mathematics Program
- Shared work under the document camera
- They brought up a paper that they finished a story problem on and explained to the class their thinking
- Students bringing work up front
- Comparing steps of how to multiply decimals. The students used paper, compared on doc camera, and used calculators to check
- They use computers to do Orchard Math.
- Students used NCTM Illuminations, Adventures in Multiplication Applet to learn more about rectangular arrays, multiples, products and factor pairs. We just got our technology hooked up and to answer the next question, we hope to do it weekly or even daily depending on the situation. Right now, it has been less than monthly due to technology clutches.
- Our students used excel spreadsheet to graph and organize the number of steps we logged in the last two weeks.
- Students present their work using the doc camera daily.
- Students share answers from their own paper every day in class. I rarely show my own work, instead I ask students to show and share theirs.
- Document camera is used when problems/issues arise that are better viewed by all using the camera, which makes manipulatives and written explanations easily visible to all.
- Sharing/correcting homework and other problem solving activities
- Students were to show the process they used to add and subtract integers. They used positive and negative symbols to demonstrate that when you add a positive and a negative numbers, a positive and a negative cancel each other, and when there no more of one (positive or negative) that is the answer.
- Document camera to explain and demonstrate problem solving strategies
- We use the document camera and projector for lectures in class. We also use the computer and power point for some lectures.
- Students use the document camera and digital projector to illustrate their understanding of a problem. They may also use it to show their work and show examples. I use the camera to list their ideas during a discussion and illustrate things they are explaining to me (record their thinking).

- Extended response WASL
- Applets: number crunching & decimal base block Doc camera: sharing process statements and ways got to answers on extended response. Power Point: to show how to know which operation to use in a word problem
- Use a graphing calculator to plot points on a graph, to find the y-intercept and to discover where two lines meet.
- They have not because I do not have my technology yet.
- Sharing/explaining work with document camera
- Using calculator to find factors and multiples of numbers.
- Students used computers to support the process of explaining their solutions on specific assignments.
- Showing and explaining work using document camera/projector
- Calculators to work with exponents, computers to find roman numerals and their equivalent numbers
- Sharing of thinking during discussion of strategies for addition - used document camera and projector to facilitate discussion. Also, used calculators to check responses.
- Slope patterns with graphing calculators
- Used an on-line spinner feature to enhance understanding of probability.
- Students are required to complete a math entry task. Each day a different student is called upon to show their answer and explain to the class their thinking
- Using the "Patch" applet to discuss symmetry
- Graphing systems of equations to find the solution and comparing that to using matrix operations to find the solution (also on the calculator)
- We used calculators to for algebra. We use the document camera and projector daily for lessons and student examples. We use computers daily for math games and lessons.
- Everyday I use the document camera to utilize students' work as examples of different ways of thinking and communicating thinking. Today, for example, I demonstrated a strategy for solving a problem on the document camera and the students saw the solution appear before their eyes with wonderment and appreciation for the process. It is like a live video and keeps their attention.
- Used the graphing feature on Geometer's Sketchpad to predict what absolute value graphs would look like.
- During the last two months and on a daily basis I present my math lessons using the doc cam and a projector. Most times the students are asked to use this technology to present their thoughts, questions, and learning to the rest of the class. Additionally, the doc cam has been used to further student's knowledge through various math websites.
- Students share their math journals using a document camera. I try to show different approaches used by students to solve problems. I am focusing my No Limit! Project on improving student writing in mathematics.
- The technology in my classroom is often used in the "Problem of the Day" group work activity.
- The base curriculum requires the use of calculators.
- I would have them show their answers to the warm-up problems daily on the document camera, when I get it fixed

- I will put a warm-up problem under the document camera. When students are done, I might ask a student to put theirs under the camera to show other students what they have as an answer.
- Students share their methods of solving problems in writing and with manipulatives under the document camera
- We show our work using the document camera and LCD projector.
- Using the document camera and LCD projector to compare a coordinate grid made through excel to ones that they have made on grid paper.
- We have done at least three released WASL questions in various ways over the last couple of weeks. On the AVERVISON camera, we have learned to grade with a rubric and create our own class rubrics. Later students have volunteered to share their responses on the document camera and have them graded. Almost every class period students share answers to questions on the document camera to show how they solved problems using different strategies that worked for them.
- Students used calculators working in Variables & Patterns CMP
- Document cameras to show work they had completed. Graphing calculators to confirm their paper graph.
- I use the document camera and LCD projector when lecturing and going over different types of problems. I will be having students use it to show some of the ways they solve problems in the future.
- graphing with graphing calculators to understand functions and how the graph relates to its equation and table
- We used the projector and document camera to learn how to graph in four quadrants on a coordinate graph.
- During use of applets and mathematical skill/concept games.
- Go Figure! Math Challenge at mathcounts.org
- Used the internet
- We had a problem on similar figures. The students had a great discussion using the SMART Boards about different ways that they saw the problem. There were a lot of "Oh, I get it" talk going on.
- My students use the document camera and projector to report their work and defend their thinking for the class.
- Projected student work on screen via document camera and lcd projector- student explained and showed solutions
- Show factoring of multiples of 10 using the document camera, calculators used extensively for multiples of 10 lesson, digital camera to document word problem posters
- Use of number cruncher applet
- I don't have all the technology items installed in my room yet ...
- Sharing work under the document camera.
- Students played a logic game as a whole class that was displayed using the LCD projector and an online math game. Some students got the game right away while others learned from the group the thinking strategies they were using. I just started using technology in this way and would like it to be on a weekly basis, but it is currently monthly.
- Kids constantly bring work to the cameral to show work. Applet
- We use the document camera daily to view various math lessons/papers, including student work. Use could be to explain a problem, discuss a result, model solving a problem

- We used the airliner and the Smartboard today to name multiples and factors. I just received these two pieces.
- Students showed examples of work and thought process to class
- Students shared work with document camera.
- Use document camera and LCD projector to share with classmates solutions to various problems.
- They have used calculator during their math lessons during the past week. They have to use calculator about twice weeks.
- When they were allowed to come up and explain their graphs.
- We use the document camera everyday to share different methods for solving problems
- The document camera is used to have students help share their solutions. In addition, this is great to discuss strategies being used to solve problems.
- The students work in groups to solve problems and defend their work using the document camera.
- Students are asked daily to present their work and answer questions from the class and instructor. We currently have a document camera, projector, and Smartboard.
- Presentations by students reviewing concepts for unit tests
- We have been using Geoboards for a geometry unit. Daily, my students use the doc camera and projector to share their math knowledge.
- When discussing problem -solving strategies, they projected their mathematical processes on the screen, and we discussed different ways to solve a problem.
- We use the document camera daily to display work and students use higher order thinking in adding to or taking away from the paper.
- Playing the Factor game during our discussion of multiples and factors.
- Students used the graphing calculators to compute problems. They used the document camera and LCD projector when showing the class their work.
- They used the document camera to look at different student's work to decide how to proceed with a problem.
- Using the document camera to show explanations of the process they went through to answer a question
- My students use the document camera to share how they have solved problems and to show their thinking.
- Using a spreadsheet to plot shots made in basketball to shot missed, then calculating the percentage.
- Sharing their work with graphing and analysis of graphs
- My students used the graphing calculators to look at graphs to find similarities and differences among them.
- Students constantly bring their math journals to the document camera to show and explain their thinking.
- We used our new document camera daily for two weeks, and it was fabulous, but I have 38 students now, and until we get an LCD projector, the TV screen is too small to be used effectively for our document camera. I cannot wait until we can use it again - it is like night and day for student led discussion.
- Students explain their graphs using document camera. Discuss why a graph increases at a greater slope and what that steepness means.

- Students used graphing calculators to explore the shifts of various functions (such as x^2 and x^3)
- Students used CPS remotes to score student work and discuss the values of various scoring rubrics
- Class discussions of graphs using the document camera and projector
- Comparing what adding a constant does to the position of a line.
- Problem-solving activities that require students to justify their solutions and explain their solutions.
- Our technology is new this year. I am still waiting for our comp tech person to run Internet line for classroom use....
- Students shared procedures to create a polygon on a grid using Geo-Logo commands. The procedures were shared visually using a document camera and LCD projector.
- Borrowed a document projector to show students' work and discussion
- They use Orchard math on a weekly basis
- Showing their work done in groups on the document camera; doing problems on the Smart Board.
- Showing various problem solving strategies on the overhead (my overhead cart has been on backorder for a few weeks now-- once it comes in we will be using the document camera instead).
- Sharing student work on the document camera
- Everyday we show student work under the document camera. Last week I used the doc. camera, laptop and LCD projector to teach the kids how to use an applet.
- Explaining how to select a strategy for solving a WASL type problem and showing how to use that strategy.
- I am just getting started and the students have only been really using the calculators... not the new technology yet.
- My students learned to link on website and collect data.
- Show student work and explain applet lesson
- Students used the document camera and projector to share graphs that they completed while doing a project. The class was able to discuss the graphs and any differences that arose.
- Students were examining conjectures. They used the Geosketchpad to establish that the midpoints of a quadrilateral always form a parallelogram.
- I gave an assessment on an algebraic problem that required a drawing as part of the solution. Then we used the document camera and projector for each person to share his or her solutions. I have also used technology for interpreting data from graph and charts in both science and social studies.
- Sharing work with the class using the document camera
- Using calculators to make sure they had their Venn Diagrams completed with all factors and multiples of various numbers.
- A student demonstrates to the rest of the class how he/she solved a math problem using the document camera/projector
- We use Autoskills Academy of Math for 1/2 of each period.
- Students in my target math class competed in a group problem-solving contest and shared their responses using the document camera. Other groups were allowed to ask questions and/or challenge the answers presented.

- In a "getting to know your calculator lesson, a student tried several options on her calculator, then explained how her calculator works in relation to order of operations, truncating, displaying decimal numbers, etc.
- Students sharing work using the document camera that is then discussed. Students who solved the problem differently then present their approach and explanation.
- I use the document camera and LCD projector to show solutions to problems. We also demonstrate and discuss various solutions.
- To work on recursive...and fractions for the other math class
- Our focus has been graphs/charts. Students have been constructing graphs with pencil/paper. Not much technology has been used other than the document camera to show student work recently.
- Have not used the equipment yet.
- I just got the camera and projector yesterday. The calculators will not come out until the next unit.
- Sharing their work on problem solving and discussing it with peers
- Using the projector and geometry sketchpad to predict absolute value graphs and checking our predictions
- calculators
- My students present their answers to class & or homework questions on a daily basis with aid from the LCD projector and the document camera.
- Connecting real-life problem to algebraic description (and solution) to graphical representations to relevant data tables (in any order)
- Students made estimations of answer and check accuracy of their guesses.
- I had students put samples of their work under the document camera and go over what they were showing with the class.
- We had graphs that we were working on and the students showed examples of their graphs on the document camera so we could compare and talk about what is best to do for representing data.
- We use the document camera almost every day to allow students to show their work and discuss different strategies for solving problems.
- We used the document camera to show student's strategies in solving problems. Specifically, we were working on drawing diagrams to help solve problems. The student would share their work with the class and we would comment on the different approaches to the same problem.
- We compared answers to problems by showing the class the work from students' notebooks and discussed their work.
- We just received this technology so I have not had a chance for students to use it very much.
- Students display their individual work that illustrates their solution to problem solving questions.
- Used document camera to show ways to graph prices of items, cuts of brownies and graph linear and non linear equations, and illustrate solutions to two-step equations.
- Sharing their thinking about how to interpret graphs.
- Each day during math, students use the document camera to share their homework or deskwork. They also model their examples showing their thinking strategies when problem solving.
- Sharing their work via document camera/projector on problem solving questions.

- Today the students took turns creating and solving number patterns with the document camera and projector.
- Discussing student work - having them explain their work
- Shared solutions to problems, and other classmates gave feedback.
- Compared data from a science investigation and conjectured why results between groups differed
- We have done some open-ended problem solving questions that students explain their reasoning and share them with the class via doc. cam
- When re-teaching the concept of factoring and greatest common factor, the class used a table inside an application, so they could visualize how each of the numbers had an effect on the number they were the factor of.
- Students use document camera to demonstrate their solution for problems. Students used websites to practice math facts.
- We have taken some parts of the book on scanned them into a power point presentation. This was done for a review session so that the students could discuss the section with the rest of the class.
- We just got our document camera and projector. The students have started using the document camera to show their work to the class as they explain how they got their answer and to explain their thinking.
- We went on NCTM website and played the factor game (we also played the paper version)
- They used the document camera to show their solution to problems and had an open discussion about their solutions.
- Our technology equipment has not yet arrived in our classrooms. A calculator is the only technology available right now.
- They used their calculators to figure out higher powers, such as eight to the fifth power.
- Students work produced from a class project were displayed under the document camera as students presented their results. Questions, comments, were addressed and discussion ensued.
- Presenting a problem to the class and answering student and teacher questions about how they arrived at their answer, justifying said answer, and ramifications of changes in the problem.
- My students have used the ELMO and projector to show the steps they took to solve a problem.
- We used the ELMO to show and discuss student work and explanations
- Used the camera and projector to display problem solving examples
- Applets to observe a race and make the connection to a graph.
- Graphing calculator
- They use calculators on a daily basis to check their thinking.
- Explaining answers to the class and explaining how they arrived at their answers
- Used the Smartboard to build a guess and check table that led to creating an equation to solve a word problem
- Explaining rounding rules, steps taken to solve a problem
- Graphing programs used on lcd project
- Students e-mail me with solutions/explanations to problems.
- Presentation of graphs to the whole class for evaluation. Use of ActivBoard to demonstrate a particular writing process for math.

- We used calculators to discuss and figure square numbers and square roots. We have used them for positive negative numbers and finding value of numbers with exponents. In addition, to get them more adept and using their calculators they trade papers and correct with them.
- We explored a math applet on-line together before breaking into small groups. I would like to find more computer programs and/or internet resources to support meaningful projects. With so much to teach it is hard to stray from designed curriculum prior to WASL in spring. If you place document camera in grouping of technology support. I use it EVERY day!
- Students use the document camera at least 2 times per week. I had student extend the area/ perimeter concept to figure out area and perimeter of our state by using both a map and the internet. We then made comparisons between answers (in kilometers and miles) and then discussed why it was difficult to get an exact answer.
- Looking at the thinking of other students.
- Students have been working with matrices, and entering them into the graphing calculator to computer squared matrices and cubic matrices.
- The development of the Pythagorean Theory. Students had to develop a length of a right triangle on grid paper of the route a helicopter would use in exercise 2.1 in the book looking for Pythagoras.
- Brain teasers- As an extension Illuminations- Showing fractions
- We use the document camera every day for students to share their work and thinking with the class.
- Using manipulatives and the document camera
- Explaining how they did a problem solving exercise
- In showing and explaining their work
- They presented a problem of the week and used the document camera
- Students share their work using the document camera and projector
- Groups sharing their answers with the class using the document camera
- Daily discussions using the doc camera.
- Students share their work that is done, in their composition books with rest of the class. (we use the document camera and projector)
- We used graphing calculators the overhead and document camera to discuss what was going on with systems of linear equations and how we could relate that to a company's growths and loss's.
- Students displayed their work using the doc camera and projector. Discussion followed.

December – 05:

- Online computer games and drills.
- Students get to share their thinking with classmates by using the document camera.
- They were rating each other's papers 1-4
- My students have used some pattern manipulatives on the NCTM Algebra Manipulatives websites in the last two weeks.
- Using the document camera to share their work with the class while explain exactly what they did and why.
- Sharing how they did a problem

- A fraction activity that utilized shapes to consider a different way of looking at fractions, especially the relationship of part to whole
- Solving math problems and presentation of their projects.
- Sharing of work during debriefing
- They were able to explain their thinking about partitioning numbers, while answering questions from me and the class.
- We used a negative numbers on-line electronic flash card activity. It charted answers correct / incorrect and was leveled.
- Students have used the document camera to demonstrate their different methods of solving story problems.
- Students use technology to share their work and discussions
- Most of the time, students present their work via the Elmo. Recently, we looked at an applet called Decimal Train. Students discussed their strategies and discoveries as a class.
- Using camera to demo problem solving methods
- Keeping in mind that I have the lowest math group, we use the document camera almost daily. The students use it to show their work and explain how they came up with their answer.
- Graphed $y=mx+b$ equations on calculators and create equations/tables and explain how the three are linked by slope and y-intercept.
- Just got it - am in the process of hooking it up
- My students share their entry tasks and homework with the document camera
- My students frequently use the document camera to show other students their strategies. We have been using it to show different angles and similar shapes in our current unit.
- My students brought up their math solution and shared how they got their answer with the class. My students spend time on a math computer program working on addition skills.
- Practice WASL prompt
- An assignment was not up to par and I brought an example of great work as a model of what to strive for.
- Graphed using excel, the results of survey
- Kids use the document camera and LCD projector daily to explain how they solved geometry problems. Daily used to share writing, and other examples by students. That technology is used a lot in my classroom.
- Our students used a spreadsheet to show how many steps the entire grade school took during the Health Challenge. We also showed the results using various graphs.
- My students recently completed a project. They asked a survey question and graphed the results. Many of them created graphs on computer.
- Sharing their ideas and thoughts with the document camera.
- We review story problem solving (review for WASL) once per week and discuss various strategies, which can be used to solve mathematical problems. Students share their knowledge using the document camera. Sometimes this involves use of the calculators as well.
- Use of the document camera to display methods developed by students. This allowed students to share ideas visually with all the students.
- Students demonstrated to the rest of the class how they were able to solve the problem. They showed and explained the steps they went through to reach their answer.
- Document camera and projector to share, explain, and support their solution to a problem.

- We did a math WASL and I had the students show their answers over the projector using the document camera. We discussed each of their answers.
- My students completed a problem from CMP and each group shared their answers using the doc. cam. and projector. After sharing, we created a 4-point rubric and the students scored the solutions. Each group then took the scores and graphed the results for each problem using an online graphing resource.
- Finding combinations in the Set Game. Processing extended response questions.
- Used doc camera to talk about work and their process statements. We have been also doing quick quizzes online with varying skills.
- Students share work via document camera and projector to discuss the best strategy in a factor-based game.
- I gave them a problem solving activity, which they were asked to write up in a WASL prompt format. They then took turns sharing their results with the document camera. We discussed their findings and strategies that they used.
- By doing a problem on paper (using a calculator) and sharing with the class how she/he did the problem (using document camera).
- Student work was shared via document camera/LCD
- Students use the camera to show their work and to explain how they got the answer that they did
- Using document camera to explain how they found mean, median and mode in data or to demonstrate a line plot, stem and leaf or coordinate graph
- Students were given a released WASL item to solve. the WASL item was shown to the students using a projector and document camera. the students were able to use a calculator as a tool to help them work out their solution.
- Students use document camera and projector regularly to put their solutions to problems up for comment.
- Explaining their work, answers
- Working through WASL problems, scoring them, working in groups to decide whether answers were good or bad and how many points they were worth. We used an LCD projector and document camera.
- Smartboard used as an interactive teaching aid. Students would demonstrate in front of the class their skills on certain math concepts.
- We use fraction track in various ways to apply concepts of fractions to the game.
- Students use document viewer constantly to share strategies; Students also double check their work using calculators and we have software to support our math program.
- I used the NCTM site to supplement students' learning in the Pattern Trains unit.
- Using the document camera to show their work, comparing different approaches to solving systems of equations
- My students are required to defend their mathematical thinking on the document camera daily.
- We used the document camera to share student's problem solving techniques for order of operations.
- Today, for example, students came up and explained their thinking processes concerning the group project about a remodeling topic. With their own work as the resource they had to justify their strategy and answers. Other students would evaluate and comment on that work.

Today another class worked on notes from the text while a student exemplified their note-taking style.

- Presented how they solved a word problem using the document camera.
- Investigation #6 - Shapes & Designs (CMP) utilizes Logo programming language to construct geometric figures.
- Using calculators to determine mathematical division patterns.
- Figuring formulas for spreadsheet
- Use document camera to show different solutions to problems
- I have students come up and place work under document camera for others to see and to discuss the problem and why it is correct or not.
- Students used calculators to develop an understanding of multiplying and dividing by powers of 10
- We wrote responses to a question and scored the results of each persons work using the document camera.
- Learning how to use and graph on a graphing calculator
- Students displayed their responses to a question using the document camera to show their work while they explained it to the class
- Student's daily share their solutions on the document camera and we celebrate their successes. I have checked out computers and we have made graphs spreadsheets and prime factorization trees.
- Real world problems in my Algebra II and PreCal classes
- We have the Carnegie Cognitive Tutor Program here in the 8th grade, so my students use that and our handheld calculators almost everyday.
- Using a graphing calculator to graph lines and find the slope of the lines
- When we work with review of daily work, we use the document camera and the projector. Children who have earned a calculator license can use a calculator whenever they want.
- We used the graphing calculators to test our mathematical equations that the students wrote.
- Working with Geo-Logo on computer to create designs.
- Students created a spreadsheet in MS Excel to calculate units in the metric system.
- Working out a problem that had a shadow for reference
- We used power point. I had students select a math concept to share with the class. They found real-life applications for the concepts and shared those as well.
- Students used the document camera/projector to compare ratios.
- Students presented homework solutions using document camera and lcd projector
- Students often use calculators as mathematical tools to help determine answers.
- Students used graphing calculators to explore the graphs of lines and their equations
- WASL prompt with table discussion . . . students used calculators and discussion to find solution. Then presented their solution to the class using the document camera.
- Sharing extended response results on a daily bases.
- Students on a regular basis share their strategies over the document camera
- They use the Doc Cam and LCD projector to teach other members of the class how they got a solution to a problem regarding proportional reasoning.
- We used it to help them visualize the way the interior and exterior angles of a triangle work. I also use it daily for math. Students have done examples of problems on Smartboard and have explained them to the class.

- We are using the document camera and LCD projector to share student work, which also stimulates student led discussions.
- Sharing student work under the document camera. Preparing PowerPoint presentations and presenting ideas to the class. Demonstrating how something is done under the document camera.
- Students used the Power Polygons computer program to draw polygons on a coordinate grid. Some kids were not able to interchangeably draw the same polygon on paper the next day using a coordinate grid on paper because they were confused about where to start (on paper always go back to 0, but the computer "jump to"...))
- We use the document camera and the LCD projector almost every day. It is a great way to go over assignments and questions that they have. My students are becoming very familiar showing their work to the rest of the class and getting feedback and questions from them as well as me.
- Sharing math problems on the document camera.
- We use the document camera daily to model problem solving and discuss strategies and methods to solve problems
- Students built and used a grid for moving tiles to check perimeter, built and used a Venn diagram for finding common factors and multiples, played the product game, manipulated numbers for other activities.
- Students demonstrating use of number lines when +/- positive and neg. integers.
- We used the document camera and projector to look at student work and learn how to better respond to and explain word problems.
- Converting fractions to decimals and percents, squaring numbers, finding the square root of numbers
- They used the document camera to show their work and explain how they got their answer.
- Student use the Smartboard to display their algorithm for dividing fractions. Students are able to retrieve past pages from the gallery.
- Student presentations using their choice of document camera or smart board after lab with TI 84's and CBR's on graphing
- My students use the doc camera to share their problem solving processes.
- Used Geometer's Sketchpad when working with similar triangles to find the height of buildings, trees, etc...
- Sharing their work with each other to discuss problem - solving strategies
- Use the projector to put student work up so that we can look and compare answers to reach higher order thinking among all students
- Working through finding equation given two points
- Daily WASL prompts which students present on the document camera
- The students use TI 83s every day to answer the calculations of answers to questions that are of higher-level thinking.
- I teach a special education math class. I try to involve my students in discussions about why they did the problems the way they did. It is very difficult for many of the students to explain their reasoning and many of them do not know why. We have started application problems of the day to start off class. I give the students 5 minutes to try to answer the problems on their own and then volunteers come up to share how they are working on the problem. The student does not necessarily have to be done with the problem; just have an

idea of how to complete it. This has encouraged more students to start thinking about their math processes in a new way.

- In my algebra class we used an applet to explore writing linear equations to pass through particular points on a graph
- Explaining solutions using the document camera and LCD.
- Using graphing calculators to graph lines, make tables, and change window settings to test their conjectures.
- We recently used the APPS (applications) PRB (probability) buttons of our graphing calculators to create and spin spinners to compare theoretical outcomes and empirical outcomes.
- We take shots at a basketball hoop in class as a reward for good behavior. If a student makes a shot they get a piece of candy. In order to take a shot they need to earn a chip for good behavior. I have created a spreadsheet for the class and we record shots taken vs. shots made, we predict how many shots will be made, we figure out the percentage of shots made, and find the mean, mode, median, and rate.
- The inclusion students learned how to use graphic calculators. One IEP student uses drill \$ practice software to master multiplication facts.
- Sharing work with equivalent fractions
- My students put up their homework on the document camera in Geometry to show how they wrote a proof.
- Geo-Logo and also document camera and projector to show thinking and progress in fractal project
- Explain their thinking using the document camera. Students called upon to reflect on someone else's thinking and whether or not the problem could be solved another way.
- Students used calculator-based rangers to detect their motion in an effort to interpret various graphs.
- Students daily use document camera, Smartboard and audio system to present ideas and cps units to evaluate subjective materials
- Students share solutions with document camera
- Students use the document camera to display their work to the class and to lead discussions about processes.
- We problem-solve once or twice a week which requires a higher level of thought and process. students share their results with the class using the document camera and projector
- They came to the overhead (I do not have a doc cam) to justify answers.
- Students shared their ideas explaining what a fraction means.
- Used the document camera and projector to share examples of their work.
- We are working on making polygons using geologo. some students were having difficulty with constructing triangles that follow specific rules. They had to get onto the computer and work it out. Some of the students still do not agree it can be constructed.
- Finding the square root of a number ; renaming powers of ten to standard notation
- Students share their answers generated using graphing calculators and then they share their thinking and results in a class discussion by using the document camera. We also do mad minutes everyday, which are displayed in a power point format with the LCD projector.
- Using the Orchard Math program and the document camera to present work

- We made a "human" box plot of data (how many children are in their family) and graphed it on the Smartboard. They are also using graphing calculators to enter data and make box plots to find the five-number summary.
- Sharing problem-solving techniques with the class via the document camera and projector.
- Using document camera to share efforts to solve problems and discuss alternative methods
- Smart board shape manipulatives found in the gallery. Saving and sharing student work in the Smartboard notebook. Students sharing work with the document camera.
- We used geo-logo to explore coordinates
- Displaying their assignment using the doc camera then describing strategies used to complete task with other students.
- Presenting and discussing their work with document camera and projector.
- Sharing strategies on document camera.
- Looked at student work with the document camera to determine which was easier to understand for a student that did not know how to complete the task.
- Students have started using Excel to produce spreadsheets to verify mathematical concepts.
- Students were graphing ratios from a data table to a graph, so we used the document camera and projector to show their work and compare and contrast ideas
- Showed their work that they had done using the document camera.
- Daily using the academy of math.
- Today, students shared their tables to explain to the rest of the class how they determined the equation that represented a given pattern.
- Graphing Calculator: entering lists, sizing window, setting scale to plot a picture. Discussion occurred about what would be effective, along with students trying to send info from one calculator to another and troubleshooting when it did not work.
- The use of the camera and projector was used extensively in modeling long division instruction. Students modeled their work and explained how they used different approaches.
- The students use the LCD camera and the projector on a daily basis to discuss mathematical learning. For example, a variety of methods were shared showing many ways to solve an ACE question.
- Kids share their work daily with the document camera. Almost all of the information for the day is on a PowerPoint presentation.
- Document Camera - To demonstrate difference solutions to a challenging ratio problem that was solved using manipulatives.
- Share and discussions different methods
- When we discuss how solutions were completed, student work is displayed under the document camera and projected for the entire class to see. This allows all students to participate in analyzing the method used and its effectiveness.
- Explaining their answers to other students and answering "what if"
- My main responsibility is facilitating a computer lab. I recently installed Geo-Logo. Investigations Sunken ships on our lab computers & third through fifth grade computers. I worked with students and their classroom teacher to find the ships. Another one of our projects is a weekly television show where we feature a WASL problem of the week. The winners have the opportunity to present their solution on TV.
- Within the last month, I received a new document camera and have used it to explain the lessons in the book and show student work. This allows students the ability to interact more

with the text and each other. Most kids seemed motivated to show their work, which has increased on-task behaviors.

- Going over their papers and projecting them on the board using the document camera and LCD projector.
- Students analyzed data based on water quality testing. Students used software to prepare graphs in order to analyze their data.
- They have been using the graphing calculators to discuss relationships between graphs, tables and equations.
- Students have been using the document camera to display their work to the class while sharing how they came up with their solutions.
- They explained their thinking using the document camera
- Going over their problem of the week, they discussed solutions and why or why not the solution is correct.
- Using the calculator to calculate angles and sides of right triangles use trig functions and then analyze reasonableness of response
- Use calculators for graphing. Getting familiar with ELMO and projector to use for display of projects and work
- When studying ratios and percents we used the graphing calculators.
- Using the document camera to show student examples
- Comparing even and odd polynomial functions
- Showing their work
- We used the applets on virtual math manipulatives for demonstrating various aspects of decimals (place value, comparing, adding & subtracting)
- There's an interactive website used to illustrate solving equations. I used a hyperlink in my lesson plan in smart notebook to get there, and had the kids use the interactive scale that was projected on the Smartboard.
- Students display their step-by-step algebraic solutions to various problems.
- We use the document camera and projector almost every day to show student work when having a classroom discussion.
- Having students show their solutions with the document camera and present their results to the class.
- We use both the document camera/project/notebook computer setup and whiteboard to introduce concepts and to solve problems. Students share their personal notebooks on camera, and then may toggle back and forth to the stated problem on the computer screen.
- We used graphing calculators to find the line of best fit (trend line) in a set of graphed data.
- Students always use calculators to solve their daily work in Connected Math. As they do daily work, they share it on the Doc camera with classmates.
- Used graphing calculators to demonstrate understand of linear relationships and displayed use using document camera and projector
- We use the projector and the document camera everyday to analyze and talk about math. Student work is displayed and students discuss solutions that work and solutions that do not work. We then discuss how we can improve our answers and solutions that work.
- Work with fraction with pattern blocks on document projector
- Sixth graders were learning "mean" so they saw, using the document camera, how legos could be restacked so that all stack were the same height without adding or taking legos away.

- Students complete daily Entry Tasks focusing on number sense and problem solving. We show their process using the Smart Board or Document Camera everyday.
- After completing WASL prompts, the students shared their work with the doc. camera and projector while the other students graded on a 4-point rubric the students created.
- Students have taken turns teaching the concept we have been practicing to the rest of the class.
- Presenting solutions to POWs
- My kids routinely show their thinking through their math journals. They present the journals to the rest of the class via our document camera.
- Anytime they solve problems as a group or partner
- Students gave feedback to peers on extended response WASL release items, according to a rubric.
- Presenting findings and examples in front of other students using technology
- Students use calculators to prove or disprove their strategies. Students use software for fact practice and place value representations. Students use document camera and projector to share student work and strategies.
- Students display and explain their work with aid of document camera. Graphing calculators used to calculate and as part of curriculum investigations
- My students have not had access to a document camera and projector because they have not arrived yet or are not installed yet. The Math Safari is used as an activity when class work is done and is sometimes used often and other times not much.
- Today my students used the document camera and projector to show their answers and how they got them to the other students.
- Document camera is what we use daily to facilitate kid-to-kid conversation about their work/thinking and processes.
- We project our work to talk about the steps, what worked, what didn't, etc. We played a math factor game online.
- Using the document camera to explain how they achieved their answer
- Showing up student work and students explaining their math thinking to the whole class
- Students used the document camera and projector to demonstrate process and solution for mathematical problem solving.
- They used calculators for solving exponential form.
- Students often use the document camera to project their own work and then the class discusses the material.
- We used the ELMO to highlight student work and to begin discussing how student's came up with the particular answer
- Creating different graphs for budgets
- We have been doing linear graphing, so lots of work with TI 73's. We started by speculating what various linear equations would look like before actually graphing them.
- Solving linear equations
- The main type of technology that my students use is calculators and graphing calculators. They use these on a daily basis.
- Problem solving web quests. Where in Washington Video conference
- With the use of CBR and Graphing calculator students discovered the slope of a line and the y intercept.
- Students used the document camera to show and explain their thinking on homework.

- The students use the document camera to present their work. They are more confident in writing and presenting.
- Students used on-line graph facility to post/display/explain science data.
- Using the ActivBoard to create, explain, and analyze graphs and charts
- Using my document camera & LCD projector to display and discuss student work. We've been working on how to show/describe fraction problems with pictures and drawings.
- Students were required to search the connected math program site for homework help... to answer and explain lcms and gcfs... They also use the document camera to share their thinking on a regular basis
- Explain their method for doing the coordinate graph
- Graphing Calculators to graph equations & explore matrix operations.
- Students constantly explain their strategies for solving problems in front of the room using the doc camera
- The concept of slope is discovered using the smart board by moving pre-made points and describing the rate of change.
- We use the document camera and projector every day to share our work and ideas.
- Document camera used to share a student's method for finding the area of a parallelogram.
- Showed student examples of their self-evaluations- critiquing them and improving others.
- Students shared with each other an area model of multiplication of fractions
- Using the document camera and manipulatives
- Showing and explaining how they did a problem solving activity
- The document camera is used to show the use of angle rulers, student work in figuring degrees of an angle, and student answers in math. We have a teacher study group on assessing student math work, and we used the document camera to compare student work.
- Homework and group presentations with document camera
- Giving examples of mathematical reasoning
- Students are called to bring their daily entry work and class work to be placed under document camera.
- Graphing calculators to explore linear relationships.
- Students display work and discuss appropriateness of reasoning, communication, etc.
- Academy of Math
- Going over a symmetry worksheet, students showed answers using the document camera. I used the document camera to demonstrate radii, diameter, circumference, straight angle, right angle, parallel, and perpendicular

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- My students have been doing WASL, step-by-step type prompted problems online at various websites.
- When they had to do a Math WASL prompt question. We used the Elmo and projector. Students came up to explain their thinking and asked questions.
- I have used an applet on the Illuminations site called Concentration. I am using it to help my students learn the different symbols for the numbers 1-10.
- They show their work to their classmates on the document camera and discuss what is good and what is bad about the appointment.

- Students came up in groups to show and explain their problem solving /steps using the ELMO and projector. (My document camera and the educational games I have ordered are in the process of being shipped. There was no place on this form to give that information.)
- We used the document camera and projector to do a activity on scale factor and enlarging or shrinking a figure. We discussed what changes are happening with the area, perimeter and other dimensions of the figure.
- All their presentations are displayed over the LCD projector.
- We use the document camera most everyday so students can share their thinking. We've use computer applications where appropriate, and when the computer lab was available.
- Students use the doc. camera daily to explain their mathematical thinking and how they arrived at an answer.
- I have used web sites that illustrate various boxes (various dimensions), so that my students could have practice figures out volume and surface area.
- Used document camera and LCD projector to demonstrate their different methods of solving problems.
- Students use technology to share their work
- Geo Logo the teamed up to play "Battleship"
- Students using calculators to prove prime and composite numbers
- Students used Smartboard to show representations of fractions and the 8th grade used graphing background for finding slope-y-intercept and calculating rise over run.
- My students use calculators to find the mean of a data set.
- Weekly they are on the computer doing math drill and practice 2-3 times to allow me to work with my other students in small group settings. I have a self-contained classroom so it is necessary that I am able to spend time with small groups regularly.
- My students use united steaming to review fractions
- Helped in discussion of problems and what they meant when they wrote an answer down
- They played math hangman with the projector and guessed each others problems
- Our grade level is still pursuing the availability of Illuminations in our math classes. Student computers are banned from "games" therefore, we cannot access that technology. I have had kids doing some Power Point Projects.
- We used the Smart Board to show how easy it is to divide decimals when dividing them by 10,100,1000
- Students share solutions daily using the doc camera.
- We work on communicating our mathematical thinking at the beginning of each class Monday through Friday with a "writing prompt." The focus of the prompt is on communicating mathematical understanding, not necessarily gaining new mathematical understanding. It is a three-step process. Students share their progress with each other after every step. Students are asked to question their own written communication as well as give each other feedback about what makes sense or doesn't make sense.
- We created line graphs using data from our science investigations in growing various seeds. Students had to figure out labels, and input data from earlier recorded information. Students presented their findings at our District Technology Fair and were available to explain to the community members who came to our classroom booth.
- Calculators are used to handle basic math problems, while maintaining our focus on the concepts being developed.

- Finding missing angles in polygons: calculators, document camera and projector for discussions
- The students share with the rest of the class their strategies for solving a problem.
- Students have graphed work using a graphing web site. Students also share/explain their work almost daily using the doc. camera and projector.
- Explaining their thinking with the document camera (showing work).
- Exploring polygons my scholars learned about coordinates numbers and played games on the computers. There were scholars playing the game and other scholars were watching and waiting their turn. It was exciting to see the energy produced from such activity. The scholars looked forward to the next opportunity to learn more games using the coordinates and other strategies from the Terk program. This is also connected to our math curriculum.
- Students share and discuss answers using document camera. I would draw diagrams with smart board.
- We complete a problem solving activity each morning as an "opening activity." and then use the document camera to discuss different strategies that were used.
- Students do a WASL problem every Friday. They can use a calculator to solve it, if needed. I discuss how a student can get a score of 2, 1, or 0 on a 2-point problem or a score of 4, 3, 2, 1 or 0 on a 4-point problem. A student who gets a perfect score of 2 or 4 will then present to the class how she/he got the answer using the document camera. He/she then answers questions, from the students or me, about the problem.
- Explained the process by which they reached their solution.
- Students viewed a gizmo on the explore learning website, and then answered questions using cps responders. responders provided immediate feedback to teacher and students for understanding
- Explaining thought process involved in solving problems
- Displaying work under the document camera and explaining what they did.
- Students demonstrating Pythagoras theorem on the Smart board.
- They have brought their work up under the document camera to show their thinking so it is easier for the students to follow what they are saying.
- Used the document camera to share ideas and get student feedback
- Daily use of the graphing calculator is built in to our curriculum. Today they were experimenting with quadratic models, looking at tables and graphs.
- Students used their calculators to multiply decimals and place them from least to greatest. Students used the document camera to explain their work to the class.
- Today, for example the students viewed a three-dimensional figure under the document camera, and they saw it disassembled into a net. We then discussed ways that we could calculate the total surface area of the 3-D figure.
- We used the smart board and graphing calculators to administer probability problem solving activities. We wrote equations for sequences at the site www.mathematics.hellam.net
- To prepare for a chapter test my class recently used illuminations website to practice using fractions.
- Presentation of work with projector. Calculators to allow for more difficult work.
- To show different ways to solve a problem
- Students showed various solutions to a perimeter question under the document camera and explained their thinking to the class.
- We share our papers.

- Students continually share work or mathematical ideas on the document camera. We have watched video streaming to help teach concepts in other ways.
- Students use the projector and the document camera during class presentations.
- Using graphing calculators to find patterns in absolute value
- AS we work through our math, we are constantly using the document camera and projector to view and examine student work. We also evaluate extended answer questions on a weekly basis.
- They used the calculators to graph equations and multiply.
- Document camera is used to share their thinking when solving math problems.
- Used the document camera and LCD projector to display solutions to complex problems.
- Transformations
- Used lap top computer to test cars they had gotten data from testing on a track, tried this information to see how accurate it was.
- Students were working on a scenario involving a specified data set (mode and range). Students used the SMART Board to share/compare strategies.
- Students were asked to find the perimeter and area of the classroom and create a blueprint on the computer using a CAD drawing program.
- Students use the document camera to show how they rearrange blocks to demonstrate the mean of a data set.
- I used the NCTM linear equation applet to improve discourse about relationships between representations with my eighth grade class. They actually acted interested for a while.
- Students use calculators daily and present their entry tasks, homework, and daily work (Investigations) using a document camera and laser pointer (when needed).
- The students used the graphing calculators to graph the equations of lines and promote a discussion on the slope of a line and how it changes as the coefficient of X changes.
- We discussed how to find a perimeter of a non-rectangular object, like a hand, and students discussed in teams, found a method, and presented to the whole class utilizing the document camera.
- Use of Doc. cam to explain their thinking on Ext. Response Items
- My students share strategies for how they problem solved or simply got an answer.
- Calculator: finding equivalent fraction and simplifying or reducing taking one part at a time after the students tries to figure the answer then they check their results.
- Projecting students work on the LCD projector
- They used graphing calculators to graph linear equations and check their work.
- When students are trying to find the perimeter of an L shaped surface that doesn't have all the sides labeled they show each other how they solved the problem using the document camera.
- Looking up information via computers using math web-sites
- Sharing their solutions on the document camera.
- Students shared mathematical representations (different ways of arriving at the (same answer) under the document camera.
- We use the document camera everyday to show and discuss our work in class. We also use calculators but still practice without them as well. We have also used our classroom computers for a tiling exercise.
- Put their work under the camera for class to see the example they were explaining.
- Presented answer and explained strategy to solve math problems.
- Filling and wrapping...Students sharing examples of box patterns on doc cam.

- Students showing the class different examples of graphs that they had done and explaining what the purpose of their graphs were.
- Students have asked to use the document camera to support their thinking.
- Combination of document camera (students modeling mathematical thinking) and LCD projector for PPT presentations
- We have been working on basic fraction concepts and the students have been using fraction circles. They have used the doc camera to share their new understandings with the class. We do something like this with the camera several times a week.
- Students share their work with each other using the document camera and LCD projector
- graphing calculators when looking at and solving equations
- Used TI Graphing calculators to predict the average price of a home in Seattle and to decide what type of function we were dealing with and how to make further predictions on the housing market by using that function.
- Students explain the steps they used to solve their problems and share them in front of the class. Other students add to and share questions and comments with those students.
- WASL prompts are taught daily, along with math writing skills and students explain their work on an almost daily basis using a document camera
- Graphing calculator and document camera/LCD to show student work.
- We used applets to understand and practice the solution of algebra equations.
- Students using the document camera and LCD projector to explain the process that they went through to solve a problem.
- Students are able to quickly show how they came to an answer by putting their work under the document camera to share with the class.
- We explored linear and non-linear equations and their graphs first without the graphing calculator and then with the calculator to see how the graph changes depending on the coefficient and/or constant.
- They have created visual representations of fractions and shared them with the document camera.
- We used AAA Math to review and retrieve concepts that the students should have mastered in previous years.
- Last week the kids took turns projecting on the document camera their calculations of a practice test to help each other prepare for the test.
- Using graphing calculators to define the characteristics of parabolas.
- Sharing work on assignments to other students
- One of my students put their proof in Geometry on the document camera so that we could discuss the method he used.
- Used online applet to construct and iterate fractal figures that they had designed.
- Students share work on document camera and explain their thinking. Others agree or disagree and explain why.
- Students used graphing calculators to solve matrix equations.
- Students use document camera to discuss ways the applied math concepts to problems they created themselves
- Use of document camera/projector to share and discuss work
- Using interactive white board to discuss strategies/solutions.
- Extended Response questions to support WASL work. Applets for learning new concepts.
- Sharing of student responses to WASL-style problem-solving tasks

- Calculators are used in the sped ed class as appropriate and on an ongoing basis.
- Students often share their learning and understanding through the use of document cameras and LCD projectors. Students also used calculators often to determine percent and decimal equivalents from fractions
- Students use the document camera and LCD projector on a daily basis to share their thinking, use of strategies and solutions to problems.
- A calculator to change fractions to decimals and decimals to percent.
- Students are allowed to display and share their work using the document camera and projector.
- Using the Smart Board to make right triangles of different side lengths.
- Each day students use the document camera to show the class how their problems were solved. We encourage students to show different methods for solving the same type of problem and how that develops into possible algorithms. We encourage students to take risks sharing incorrect solutions as well to facilitate discussion about why and how the solution went the wrong direction.
- Sharing work on the document camera. Visiting math websites on the computer and having that displayed over the projector.
- They use manipulatives nearly everyday to do math problem solving. Sometimes I use an online tool to introduce a concept, lesson, idea, etc.
- students shared their reasoning behind answers- used the document camera/projector combo
- A team of students instructs the rest of the class on a new geometry concept (ex: volume and surface area of spheres) using the document camera and showing examples, setting requirements for work shown, and reviewing the materials produced by the students.
- Present their answers to the class under the document camera and explain their process
- They do a lot of evaluating their peers' work with the document camera.
- Using the document camera to share student responses during entire task occurs often. Being able to move manipulatives around so that the whole class can see the moves. Yesterday we were working with arrays for multiplication and it was easier to facilitate the conversation.
- Recently, we were working through a chapter review, and I had students use the document camera and LCD projector to show how they solved problems.
- We developed a hierarchy of quadrilaterals. Then we tested the theories on Geometer's Sketchpad. Finally, we used our hierarchy to answer questions about other quadrilaterals that had not been drawn on the Geometer's Sketchpad.
- My students used the technology when they worked on word problems. Students work with partners or groups of 3 to 4. After giving them time to work, I let some of them show their work and explain their reasoning for how to solve the problem.
- We used the document camera and projector to problem solve story problems using inverse operations of multiplication and division
- Students showed their work using the document camera.
- Daily on our Academy of math software.
- Students shared their responses to problem solving exercises with the rest of the class and the class graded their work.
- They showed their extended response math problems on the document camera, and then helped each other score them using a rubric.
- Daily my students use the LCD projector to show their work to others.
- Used the Smart Board to show fractions on a number line.

- Different students shared their work (encouraging student presentations)
- Student work is displayed through the LCD projector and document camera. The class then discusses the work, noting various methods of solving problems, clear communication and accuracy.
- Bring up their assignment and explain their response and to project application to another situation.
- Students used a Virtual Manipulatives website.
- Showed student work or problems on document camera.
- Using the document camera to show their graphs of the mean and median to others in the class.
- Use of calculators to determine effects of multiplying and dividing by powers of ten.
- Buying objects with % off tags
- They used the graphing calculators to investigate different equations and their graphs. They grouped the graphs and gave reasons for their groups. Then, they looked at the equations to make general statements about which kinds of equations would produce which kinds of graphs.
- Use of calculators almost daily to justify answers / occasional use of doc. camera to share results with others.
- Students display their solutions to problems and discuss possible answers.
- Sharing work using the document camera and having a class discussion about the work.
- We use geometry sketchpad to discover relationships of shapes and angles. we are going to use it to start checking correct graphing techniques of lines. we use the document camera to present student work and analyze for improving other work.
- Graphing calculators used to support computations done by hand
- Explaining or presenting their answers to multi-step math questions.
- Demonstrating alt. solution paths to non-routine problems
- We used a virtual manipulative site to form a variety of polygons with tangram pieces.
- We worked problems on the Smartboard where we were solving systems of equations by substitution. To show how that relates to solving a system by graphing, I just brought up a graph and we graphed the equations. The students saw the point of intersection is the solution to the system.
- The students use the document camera to share work and have discussions on good problem solving strategies.
- Used Geometers Sketchpad to explore the relationships in the equilateral triangle and the altitudes and there intersections.
- To demonstrate and share solution strategies with their class.
- We were graphing different math relationships and describing the look of them. Students shared their graphs on calculator on the document camera and pointed out the certain look of them and the certain look of their equations.
- In my pre-algebra class, we used graphing calculators to generate tables and graphs. We also used them to see how equations graph differently.
- Students share work on complex problems. We discuss what is correct and "smart" and what things we could do to improve responses
- Graphing equations...solving Pythagorean theorem
- Daily- we use the technology to share mathematical thinking and ideas.
- The students use to projector to display their assignment solutions.

- My students used lessons from my e-coach locker in science.
- Checked graphing calculators to find the intersection of two lines.
- Students answered a WASL-style problem using QIPS. I copied three samples of students work for all students to grade using a checklist. Groups had to present and support the grades they had given.
- They used the document camera and projector to show and explain their work to the class.
- They shared their answers to extended response questions using the doc. camera and LCD projector.
- Students demonstrated understanding by being the teacher and providing practice for the other students.
- Giving presentations to peers
- I had students present their findings of a problem-solving task that involved area and quadratics by showing their work through the document camera. They have also numerous times presented their methods for answering WASL type problems, explaining why they did what they did and what they thought their score should be. Their classmates also are given an opportunity to critic their work. We also use the graphing calculators to look at problems from different angles.
- Technology is such an integral part of day-to-day life in here - kids are using the technology to display their work or show students how they do math.
- My students have used the calculator in order to solve for substitution plus we use the LCD and document camera daily to evaluate each others work.
- We have been working on fractions, decimals and percents. Student have been using their calculators and sharing their strategies with the class using the doc. cam and projector.
- Students created spreadsheets with fact practices and used data to make a graph showing their progress. Students used this information to document comparisons and trends.
- Before a test students were asked to review certain concepts with the class. They used the document camera and graphing calculator to describe to write a linear equation and enter it in a graphing calculator.
- Students used graphing calculators to find the actual numerical value of square roots when working the Pythagorean theorem
- Students display answers to today's number and discuss whether the equations work or not.
- Students worked together to solve a connected math investigation question. They then shared, discussed, and defended their work that was displayed on the white board using our document camera and projector.
- We've had great success with Gizmos from Explore learning and also in using Scilinks to do online dissections and to use the info to compare/contrast different characteristics between different phyla. We also use released WASL items as warm-ups.
- They were using calculators to determine the equation of a line that would fit a set of data.
- We used an applet to work on fraction parts/whole concept. I used my laptop with the projector to show kids the applet, then kids went on to do a paper and pencil follow-up with a problem to solve.
- Using the Document camera to explain their income vs. expense graphs of Linear equations. Ex: Loss, Break-Even points, Profit.
- Students placed graphs and tables under the document camera and supported answers to problem questions.

- We use the document camera daily to correct our opening exercise. The students come up and explain how and why they came up with their solution.
- Created spreadsheet for a budget
- They use calculators to assist them in their math assignments/tests
- Reviewing WASL sample questions they answered and scored and then explaining to the class
- Students were required to present "The Big Problem" that their Team (of 3 or 4) completed to the rest of the class using either the Document Camera or the Smart Board and Projector. Each presentation took 5 to 10 minutes.
- Students used technology to promote higher order thinking skills by showing and explaining their solutions to problems on the document camera.
- Used cubic centimeter blocks and the document camera when calculating the number of visible sides in a double row of stacked boxes.
- Asymptotes on rational functions
- Discussing congruence and similarity of figures. Demonstration on ActivBoard with students doing work. Did project involving cut and paste (the real stuff!) with same concept
- Daily use of document camera and LCD projector to show/discuss student work in order to scaffold student thinking
- Students are always using the document camera to compare answers and share their strategies. They also just completed a graph using Excel, to show the rate of their cars (versus the angle) from their science experiment. Then they drew some conclusions about the speed compared to the angle.
- Showing how different types of polygons tile
- Graphing linear equations, comparison of scale,
- Students show and explain how the solved problems in front of the room.
- I had the students get into groups and each group worked on the same problem. One student used the Smartboard to work a problem out and explain how to do their problem to another group.
- We use our document camera and LCD projector every day for math. I use it to present new material to the class. In addition, students present their work and solve problems using the document camera.
- My students use calculators to solve story problems and Academy of Math to work on math skills at an individual level.
- Students shared work to display different methods of solving the same problem
- Share and discuss math with the doc camera/projector
- They frequently use document camera & light projector for showing/sharing work and discussing reasoning for strategy.
- Sharing of at least four different ways to do an addition of fractions equation
- They used the document camera to show homework problems.
- Explaining a problem solving process
- Showing their papers so we could see different ways of doing the same problem. They also could have demonstrated using manipulatives.
- Each day, students have an entry task, which is projected on the screen. They are to answer the question, then various students are called upon to share their responses via the document comers/projector
- They are asked to come up and share their work on the document camera.

- My students have brought work to show under the document camera and have used their calculator to support their reasoning.
- Sharing answers presentations

April – 06:

- The students have computer time each Friday. We go to math sites to explore, work problems and play games.
- Teaching WASL strategies, and problem solving examples.
- Students used PowerPoint to create a scale drawing of the classroom.
- They put their work under the Elmo and explained to the class what their thought process was and why.
- Calculating and analyzing data from larger and larger samples; predicting what results would be as larger samples were collected.
- We often use the document camera to show examples of student work, which also has the students excited to present because they get to use the camera. Also, we have been working with 3-d figures in geometry and the document camera helps the whole class see and better understand the shapes.
- Students present they WASL pre-tests over the LCD projector and the constant using the calculators to master their answers.
- Explanations of solutions to multiplication strategies (without algorithms) were shared.
- When they used a calculator to work inches into feet to discover what the "mystery data" was.
- We used a graphing practice web site, so students could learn how to set up graphs, as well as predict trends in graphs.
- Demonstrating how they solved story problems.
- Students use their work for discussion
- The students have been having a discussion about strategies and discovering/testing methods using applets.
- Students use the Smartboard on a daily basis. We recently did a Mapping lesson for "looking for Pythagoras" CMP book. I scanned a copy of the map and students plotted the routes on the Smartboard for moving from place to place. Lesson 1.2 in the book.
- My students used calculators to find the mean of a given data set
- My class uses math programs to help develop their basic facts. They also use the document camera and projector to share their work with the rest of the class.
- Showing flat shaped folded into cubes or other shapes
- We put student work on the screen and discussed what part of the student work showed the elements u s a.
- Computer games as partners
- LCD Projector and camera used for students to explain answers to questions regarding strategies used for finding patterns and ways to skip count. Explanation of mental math strategies on a daily basis. Explanation of math homework strategies.
- We did a simulation activity and used the Smartboard and the projector to make the lesson more effective
- My students regularly participate in sharing their ideas and answers to questions. Students regularly come up to the front of the class and share their work using the document camera.

- Recently we have been learning how to calculate % using cross-multiply and divide method, or other regular methods. I had students use the doc. camera to show their work and prove their answers. I reward any student by giving bonus bucks that we use with our checkbooks.
- Using the document camera and smart board to share mathematical ideas and work.
- Used calculating and graphing of means of plants heights and number of seeds developed per plant to draw conclusion to science experiment
- A student was able to demonstrate to the rest of the class how a coordinate graph showed the positive and negative slope for a set of data.
- They worked on the MCS Mentor program to evaluate student work on WASL prompts.
- Students compared answers in daily journal and constructed their own positive resolve of how to answer the problem.
- We have recently been participating in many WASL practice test items in math and students have been sharing strategies for solving problems via the doc. cam. and projector. Students have also started using a journal on Moodle regarding their successes and failures in math class.
- We used the doc camera to show mathematical thinking of extended response questions
- We went over a problem solving activity with a write up. My students peer edited each others work and then presented their findings using the document camera.
- To share their work with the class
- Share answers using the projector and document camera
- Discussed/evaluated student work on 6th grade math sample WASL
- Reviewing lesson and going over material
- classroom performance system responders...students discussed and worked out problems and selected from a set of answers using the cps responders
- Sharing problems solving strategies
- Showing examples with the Document Camera to the rest of the class.
- Creating tessellations on the smart board
- We use the Elmo all the time to share our written thinking with each other.
- Doc cam with projector to share work and give feedback to each other.
- Graphing quadratic equations and using the graph (or table) to solve quadratic equations
- Students work in groups to solve problems and bring their work up to defend their thinking and share strategies.
- They have been using calculators to multiply percents and decimals. They have used the document camera to share their answers on WASL prompts.
- Students are required to bring there current work up to the document camera and justify their strategies/calculations to the class at any given time.
- Performed transformations with the activboard
- We use a document camera almost daily to share divergent ways of solving math problems. This has been especially valuable as students have been struggling to visually portray division of fractions by fractions.
- Peer teaching
- Using doc camera to show different ways to solve problem
- Having students put own work under the camera to show other students what they did for the problem.
- Students used the document camera to share their solutions
- show how to build origami figures

- We often show student samples of Problem Solving activities and the variety of solutions that can be utilized.
- Showing their Geometry solutions
- Used document camera and lcd projector to present their problem solutions to the class.
- Algebra students used the graphing calc. to help support their ideas of what a quadratic (if graphed) would look like.
- Every day when we discuss problem solving we use the document camera and the projector.
- The students in my classroom use the document camera to show their work and explain their strategies to the classroom.
- With the document camera explaining their thinking to other students.
- Using the document camera to share work.
- State modules for the WASL
- Using basic calculators
- Students used document camera/projector to illustrate their concepts to their peers and give each other feedback. Students used computer resources (internet/spreadsheet/PowerPoint) to present to peers using linkup to the projector
- We were working on a problem that involved working backwards. The students had great discussions regarding different ways of looking at and thinking about the problem.
- My students looked for patterns with multiples and then shared their work using the document camera and the projector so the class could discuss the patterns as well.
- Investigating the shooting balls applet on the NCTM website
- Students present entry tasks, homework, and their investigations using a document camera.
- We used the graphing calculator to calculate the slope of a line and to find the difference in the rise over the run
- Students were completing a worksheet, placing decimal numbers on a number line. They had to approximate decimals to the hundredths to show some numbers between the increments marked with lines. As students completed the worksheet, they came up and put the paper under the document camera to show their thinking about placing the decimal numbers. Next, they drew lines the length of specific mixed numbers (whole numbers and decimal numbers) and shared using the document camera. There was no overhead for this lesson. The document camera was the perfect tool.
- Use of doc. camera
- The student share their strategies on the document camera and others help edit them to be quality responses
- Projecting student work on the document camera
- Students demonstrated work samples that showed how they solved a particular math problem
- The students logged onto the OSPI site that had examples of lessons in the 5 strands and a SuperMath Game. The students have also been using calculators to find the mean (average) of collected data. The students explain their process for solving math problems daily using the projector and ELMO. The students have also been using the Software that goes with the Everyday Math program that has games for each unit of instruction.
- Internet as a resource
- Students found irregular area on complex shapes (calculators allowed) and then shared their strategies using the document camera.
- Didn't occur except some sharing of student work under the document camera.
- We use the Document camera everyday to discuss their answers and explain how they did it.

- Shared their written math
- Students teach students problem-solving strategies for problem of the day, share mathematical thinking to prove their answers. Allowing sharing of multitude of problem solving strategies stimulates mathematical thinking.
- Students often use the airliner and the Smartboard to demonstrate their solution to a problem.
- Students sharing problem solving techniques used doc. camera and projector.
- Using web sites to see pi to the millionth place and using calculators to find area and circumference of circles along with surface area and volume of cylinders.
- We just got our LCD projector so we have used it a lot to show each other how we got our answers.
- They showed their work on the document camera and then explained how they got it to the class.
- Explaining mathematical reasoning to the class when presenting the solution to a problem.
- They used projector and doc camera to share their math thinking in journals and problem solving
- Students share their work on the document camera. They discuss processes and share how they did their work.
- Used document camera to perform algebraic tasks in front of the class
- Collect data and use calculator to find function
- Projector and camera to model their solutions to two-step equations.
- Normally, almost daily, we use the document camera for discourse over student work. Just finished fractions block
- Students used the document camera to showcase their work to the rest of the class.
- When going over homework or problems, students support their answers by sharing their work on the document camera.
- Used applets to introduce the idea of linear patterns
- Explaining the mathematical process they went through to solve a problem using the document camera and LCD projector.
- Students use the document camera & LCD projector to display and present their work and thought processes.
- In one of my classes the students are grouped by threes and are teaching a series of lessons since they've seen me teach all year. They make heavy use of the document camera and projector to present their warm-up, notes, examples, and follow up problems.
- Demonstrated adding fractions.
- Writing thoughts about a math problem on the alpha smart
- I used a few online math quizzes and supplemental sites to enhance background knowledge for the kids.
- We used the graphing calculators to find the standard deviation and other statistics info. We also used it to graph box and whisker graphs.
- Students share possible solutions using document camera and projector
- Students use the doc. camera and lcd projector to share their thoughts and findings and discuss them on an almost daily basis. Because they can actually show all the work they've already done, the student conversations are much more focused and specific - they don't have to recreate their work on the board (which always leaves out all of the mistakes or ideas they may have tried partway.) In particular, it's allowing them to talk more easily about HOW they get their answers or exactly what part of a problem they do not understand.

Conversations are becoming more student-driven than they used to, though I still have to learn how to get out of the way.

- Showing student work on document camera and asking them to explain their thinking. Asking others if they can understand what someone else has done and if they agree or disagree with their answers/methods, etc.
- Students used remotes to evaluate and correct communication skills of classmates.
- The students will put their work under the document camera and discuss with the class.
- Sharing solutions to problem-solving tasks by use of projector and doc. cam.
- I teach special ed math..... calculators are often used to support their answers..... I try to include problems that encourage higher order thinking skills.
- Explanation of how yo-yo practice affects improved performance. Used projector and camera to show tables completed. Used calculators to determine totals and percentages.
- Students are given problems to solve and they complete the process using the document camera as they work.
- When working on a problem with fractions, Students could not reach an agreement about what group would be larger. They finally settled it by using a calculator.
- We learned commands on the calculator that support fractions.
- Students are encouraged to share their work using the document camera with the class to discuss their thinking.
- My students have used the projector and document camera to display work and discuss problem-solving strategies.
- Sharing answers on doc. camera - practice WASL questions
- The students when sharing their strategies on an investigation they bring their work up to the Document camera and point what they did, how they did it, and their reasoning behind what they did.
- Creating spreadsheets and using them to create graphs to facilitate understanding of and use of graphs to display and interpret data.
- Showing their work under the doc. camera
- Students discussed a PowerPoint presentation on integers.
- Students used document camera to evaluate each other's work as they created problems and solves them sharing strategies via the doc camera.
- We were able to show examples of symmetrical designs and lines of symmetry in pictures and pattern blocks using the document camera. We used calculators to test the speed of mental calculation against the calculator.
- My students often use the document camera and projector during class discussions to demonstrate how they solved a problem.
- Students used the Smartboard to work percent problems. Explaining the steps and logic behind their work.
- My students used the document-camera to display their investigation procedures and data collections for a math lab involving the determination of the most absorbent paper towel.
- Used NCTM's Illuminations applets to simulate probabilities
- Math Software
- We shared WASL Sample Test short answer and extended response answers as a class and looked at annotated anchor papers.
- My students use the document camera and LCD projector daily to share their work orally. I do this with my openers and with my daily work. My students use it during our explore and

summary parts of my lessons. Recently, we have been using it for sharing sample WASL problems and showing student replies and rubrics

- Presenting WASL sample problems to class using document camera
- Different students shared their work (encouraging student presentations)
- My students have daily discourse about their solutions of higher-order math problems. They use the LCD projector and document camera to display their thinking and solution.
- Showing their work with the Camera
- We look at student work with the document camera on a daily basis.
- Showing student work
- Students used excel spreadsheets to show their data analysis of our watershed. They collected and analyzed the data that was collected over the past year. They also produced a power point to share their data with others.
- Displaying their daily work on the doc camera w/ explanation
- Students used the document camera to show their work and explain their thinking
- Calculating Standard deviation and interpreting the SD using the normal distribution curve. Graphing lines on geometry sketchpad to check their own work.
- Students explain and teach classmates about a problem they solved using the document camera and LCD.
- Discussion of circle geometry - unit circle concept developed
- A student came up and drew what he was describing orally so that other students could see it projected on the wall. This helped other students understand his line of thinking.
- My students did a unit on graphing and the document camera was a great tool for comparing graphs as well as setting a standard for what the graphs should look like.
- My students show their work on the projector which leads to in depth discussion about how to do math, specifically the problems that are shared.
- Sharing problem solutions via camera and projector
- Students were working on finding squares whose vertices could fit at integer coordinate pairs, and after exploring, students shared their results by placing them on the document camera for all to see.
- Students used calculators to find equivalent fractions.
- Sharing answers to questions and solutions with one another
- Pattern blocks on document projector to demonstrate rotational symmetry
- Showed examples of student work on WASL-type problems.
- Everyday, I have a problem solving exercise on our Power Point. We begin the QIPS process together. Students work the process in pairs. Then, I record their process using the Smartboard as they share orally.
- Used computers in the lab to access web sites that illustrated polygon transformations (slides, flips, and turns).
- While preparing for the WASL, they used the doc. camera and projector to share how they did the problems
- We used the graphing calculators in conjunction with the TI navigator system to analyze sine and cosine waves as they relate to the unit circle. We were able to share data and graphs that brought about discussions of what translations occur to a sine and cosine wave.
- Students are always using either the Smartboard or doc camera when presenting their work
- The show their work using the projector and document camera on a daily basis. We have also been using our calculators to calculate decimal and percentages.

- Students used the computer program with Investigations to create figures on Coordinate grids, used Excel to create spreadsheets and graphs, and used computers to demonstrate graphs to parents, used document camera and projector to share spreadsheets, graphs and charts with class.
- Document camera and LCD used to support instruction of WASL released test item questions and to show our students' examples as well as released student samples.
- We use the document camera and projector to display student work as it is discussed.
- A student put their work under the document camera and verbally shared his problem solving strategy to a class problem.
- Students share their work by using the document camera and projector. This aids in discussions about how they solved particular problems.
- Used the "Mimio" to convey their ideas to the class by showing their thought processes.
- Students used the laptop and projector to present science projects that required the use of mathematical reasoning and representation.
- Using a calculator to solve their proportions in order to scale their houses down. Using the document camera to share their work and discuss it with the rest of the class.
- They are attempting to adapt a form of reciprocal teaching to our math and they used the document camera to present group work
- When scoring the WASL examples the students have come up to the camera to explain their thinking
- Students created spreadsheets and graphs to display information from surveys
- Quadratic equations and exponential equations on graphing calculators
- Teaching others the methods used for solving mathematical problems
- Students were required to complete a problem that included tables and present it to the class using either the smart board or document camera.
- Students display and explain their work on the document camera
- Use of document camera for problem solving.
- Student's journal on-line at least 2 times per week regarding their learning generally or regarding a specific problem, etc.
- On a daily basis the students use the document camera to share work and discuss mathematical solutions.
- Was able to project images from the textbook on to the whiteboard and have a deeper discussion of how/why formulas are used within geometric shapes.
- Daily they use the document camera to share their thinking. We are currently working on a problem solving method and students are encouraged to share their thinking. I have had to put a time limit on this activity, as students are so excited to share their methods. We worked on some online activities with a focus on positive and negative integers. The students had to answer questions and take the timed quizzes.
- During WASL Prep, show other students' work and evaluate the points earned. The pros and cons of each work.
- Used document camera and projector to share method of solving problems with other students
- We use all of our technology daily. Kids use the document camera to show WASL test questions
- Coordinate graphing using virtual manipulatives
- showing how they solved problems using the doc camera.

- They used the Smartboard to illustrate how the Area changes as the dimensions change.
- We use the document camera and LCD projector every day to learn about new concepts and to share and discuss student work.
- Today during the exploration of ratio I was displaying with the document camera, some simple ratio using tiles and they were expanding on those ratios using their own tiles.
- Sharing/explaining their problem-solving strategies & thinking processes
- Using the document camera to share student work and different ways to reach the same conclusion.
- A student used the document camera to show their work.
- Students presenting and explaining a problem solving exercise using the document camera and LCD projector
- Showing how they solved a problem, sharing within the classroom different ways to solve a problem.
- Use document camera and projector to share in class work and homework on a daily basis. Once a week we do MALT problems using CD and projector.
- WASL practice
- TI 73's to explore and discuss choice of roller-skate company for class outing.
- We used the Smartboard to draw enlarged or shrunken sized shapes to learn about scale factor.
- The students have been using the MS Shapes software on the Macs

May – 06:

- We did a hands on equations algebra lesson and used the doc camera to support the lesson.
- We use the document camera to facilitate student discourse surrounding mathematical concepts and ideas.
- We played an applet using the computer and Elmo. The students had to explain their reasoning to the class.
- They use the document camera and LCD to display and discuss their work. They have also done skill work on the computer.
- Use of document camera to discuss with others what and why they did something
- We have been using geo. sketchpad to work on transformations, and the document camera to illustrate surface area of three d objects.
- 1. During discussion; 2. Presentation (group); 3. Daily class work
- Shared solutions to algebraic questions
- Explaining their thinking about a math problem and sharing their strategy for "counting up" w/money.
- We go over our warm ups on an individual basis. Students are randomly picked to come up to the document reader and show their work everyday. About 7-9 students a class have to do this, not to mention during our regular work as well.
- We have been using similar figures for indirect measurement and have been working with percentages so they have been using calculators
- Students used the projector and camera to enlarge pictures to make coordinate graphs
- Use of Applets for demonstration and/or practice.

- It would depend on what you consider 'higher-level thinking'. I have a very low math group. They used their calculators when making multiples of various numbers, such as 1105,391 etc. Does this count?
- Students showed/shared/critiqued student work on document camera.
- Opening math story problem - showing how they solved the given problem
- Using internet sources to understand the law of large numbers
- Sharing strategies for solving cluster multiplication and division problems with class
- The kids used a document camera to explain their mathematical thinking on a simulation project we were working on.
- Students share their work daily using the presenter.
- We have been using tangrams to discuss tessellations. Students have used the document camera to share their patterns
- Calculators used to do basic problems allowing students to focus on larger problem.
- Sharing their answers and strategies for released 6th grade WASL test
- The students were able to demonstrate visually the difference in distance with two different modes of transportation using a grid of a city map.
- Document camera to display their explanation of a strategy.
- We place problems under the document camera to be shown and explained to the class.
- Students used the document cam and projector to demonstrate the relationship between the volume of a pyramid and the volume of a cube.
- Use box light, doc cam daily, students show their problem solving
- Document camera to explain their thinking about mathematics and discuss others' strengths and weaknesses about explaining their work.
- Students used excel to go through the process of finding standard deviation in order to understand it.
- We are exploring comparing and ordering fractions in their greatest, least and equal forms.
- I introduced Excel to my class.... gave the students data ... showed the students how to create a "scatter plot" graph. Then I gave the students another set of data, and they created a graph on their own.
- Sharing student work on the document camera.
- Students share their homework assignments with their classmates
- Students explain their reasoning and justify their work to their classmates with the document camera.
- Going over assignments.
- Students used smart tablet to demonstrate concept to class and themselves
- Comparing different parallelograms and how their differences may affect the area or perimeters.
- Showing/explaining thinking about problems
- Giving examples on the document camera. Sharing work with other students under the camera.
- Geometer sketchpad on the Smartboard.
- We are studying geometry right now, and the projector and document camera is great for showing the drawings they are doing in their notebooks. We also use the manipulatives directly under the Elmo.
- Sharing responses using doc camera and projector. I've also modeled the use of tools using the projector.

- Used graphing calculators to discover the relationships between a linear equation and its graph. Used document camera to share plans for tent layout/location given a disaster. Used document camera to simulate a mathematical newscast.
- Calculators to check their calculations
- Students used a paper model to measure distances related to a circle. They then graphed these manually and shared them under the document camera. This was followed up by an activity that used trig ratios to calculate the same distances they were measuring before and then using the graphing calculator to look at the graph of the trig function and compare it to the one they did manually.
- Students bring their work up to the document camera to defend and explain their work.
- Students share and explain their problem solving skills and strategies w/ each other on the document camera.
- Presented how they solved word problems algebraically using the document camera. Also, doing practice SAT problems online.
- Before every math test I try to involve math games from the internet that relates to the subject that we have been studying. Also, over the past two months I have implemented our NO LIMIT projects. The class has really enjoyed the use of the computer.
- Students share divergent solutions to problems using the document camera to show their work while explaining the process they used to complete the problem.
- Presentation of work with projector.
- Daily we use the document camera and LCD projector to facilitate math discussions.
- Use doc camera to show their work to other students
- I have gone to a web site where games are played with mathematical concepts that the students can see on the overhead screen and can participate.
- Students' used the document camera to display answers to questions
- Drawing the picture of a function machine that students saw a diagram of somewhere and wanted to share.
- Sharing their written responses to problems
- Everyday in my classroom students use the LCD and document camera to present strategies for solving problems and sharing new ideas about concepts we are learning. I use video streaming to introduce or solidify learning too.
- When students were showing how they had developed a graph.
- kids showing class work
- The students solve algebra problems on the computer and they use the LCD projector and the document camera to project the problem on a screen to explain their thinking to the whole class.
- In working with radicals, their graphs and solutions - students defended their thoughts on the correlation between equations/graphs/solutions and used the technology (smart board, doc. camera, and graph calc.) to demonstrate their ideas.
- After the students had time to work on a math problem, they were asked to explain how they came to their answers. To help with this I asked the volunteers to go to the document camera and show us. The volunteer could either work the problem fresh or show the finish product and talk us through the process. I believe we were working on how to add fractions with different denominators.

- Tom Snyder's Math Talk series, Illuminations applets to illustrate and practice, United Streaming teaching videos and lessons, WASL tools day and practice, - between daily and weekly- some days we don't use technology for Math HOTS
- We use document camera to share our understanding of math.
- Creating word problems on the palm pilots and beaming them to each other to solve.
- Figuring out the price for square footage of tile needed to cover a certain area.
- We used graphing software to graph information we had gathered (pie, bar, line, etc.) and analyzed data.
- After students work through problems as a group, they may be selected to come to the document camera to share a strategy.
- Students used the document camera to explain how they find the area of a parallelogram.
- Today they shared their strategies for solving multiplication clusters. They showed what they did using the projector and the document camera.
- Exploring intersections of linear equations using graphing calculator
- Used the graphing calculator to find the graphs of equations involving exponents
- Students showed 12 possible rectangles with a perimeter of 48; next they found the area of each rectangle; finally, they made observations of a pattern or change they saw as the width increased. In way of application, I asked which would give you the most area for a garden.
- We used calculators to find area, surface area, and volume of various shapes. We used a document camera and projector to share our work.
- MALT extended resp.
- Sharing student strategies
- Presenting projects or ways to solve problems on overhead projector.
- Showing their work to the class on the Document Camera
- We use the projector to share different strategies for solving a problem. My algebra students are presenting reviews for the final, using the technology, possibly PowerPoint's, Smartboard, or document camera.
- They use the document camera to display their work and to explain it.
- Worked on computation pages. Used the document camera to show how they were solving 14×23 without using the traditional way.
- Students sharing solutions to problems using projector and camera.
- Students use the document camera and presenter to present findings to the class. They use calculators to check solutions when evaluation equations.
- They used the graphing calculator to prove their answers were right.
- Students used the document camera and projector to demonstrate various ways of finding perimeters and areas of polygons
- Presentation of mathematical thinking
- Students shared their solutions to problems with the class using the document camera or smart board
- Today we did a problem activity that several possible routes to the correct answer. I had the students share in pairs how they had solved the problems.
- Students share work with document camera.
- Use of document camera to go over homework
- Calculated exponential growth and decay of real-life applications and looked at the graphs for interpretation.

- We use technology daily to show our work and show our explanation of our thinking. We also use it almost daily to show what good work looks like either from other students in our class or from MALT items on-line. We also use the sites like Illuminations and Gizmos to help understand concepts and watch some of the WA state math videos/DVDs that were given to us during a No Limit meeting.
- This happens on an almost daily basis with my students using document camera and projector. Dealing with division right now and have used "Study Island.com" for practice of skills learned in the classroom.
- Using the document camera to display work.
- Students were exploring different shapes. The students were manipulating triangles to see if a triangle could be made with any size of sides. Students made examples and non-examples to explain their reasoning.
- Used graphing calculators to explore slope and y intercept in linear equations and draw conclusion about parallel and perpendicular lines
- Using the document camera and projector to explain the process they used to answer a question.
- Student constantly use the document camera to display and share their work.
- My advanced class is doing a unit of quadratic equations, so we have used the graphing calculator extensively to graph parabolas then show the table of values that correlate to the graph, find minimum or maximum and x-axis intercepts. Most of our applications use the formula for gravity and a given velocity, but some of the equations are of jumps and dives and profit.
- Today we explored Geometry and had the students use the document cameras to define angles and how to use a protractor.
- Internet-based geometric inquiry about volume
- Using the Activision board to compare box plots. Student groups plot their data and we collectively go over results.
- Using calculators to generate random numbers.
- Students explain to class how they solved particular problems
- Sharing solutions
- My first year Algebra students used the graphing calculator to make observations about how changing a number (slope, y-intercept, different parts of a quadratic) in the equation can change what the graph looks like.
- Showing their own work under the document camera.
- Students used GPS to set out coordinates for a "treasure hunt" for other students.
- We've been working on geometry concepts - angles, area, etc. In comparing ways to manipulate lines and shapes, having the document camera/projector combo meant that as we talked about what we found for area, for example, students were able to show their work directly and ask questions and comment about what they saw. For one problem, students put the shapes they had designed to meet perimeter and area requirements up without labels, and used them as a problem for the rest of the class to solve.
- Students used spreadsheet a document camera to organize data to support a hypothesis about measurement accuracy
- Document camera/projector to share solutions
- Comparing box and whisker plots with a graphing calculator.
- Combinations of geometric figures, finding their area and perimeter as combined shapes.

- Students share their responses to problem-solving tasks...
- I began using the Prime Time Math CD series. But, I am now encountering difficulties with the power strip.... I think it may have a short..... the school has no additional strips.
- Power point presentation on solving WASL type prompts
- The students present their work and problem solving skills to model or explain their work and how they solved a problem. They also have modeled solutions using manipulatives.
- Sharing word problem solutions with the class via the document camera and projector.
- Sharing student work with the document camera and projector. Also, I use the starboard to allow student's to see examples of how to show their work and how to use the manipulatives.
- Every time kids show their work, they use the document camera.
- Students used document camera to capture their work and show it on the whiteboard-justified their answer and thinking.
- Reviewing Homework with critical and constructive evaluations
- Give presentations on mathematical concepts
- We used Vernier sensors to collect data on how strong students' grips were. Then we used the data to find maximum, minimum, mean, median, and mode. Students created box-and-whisker graphs and histograms/bar graphs.
- Students creating spreadsheets in excel
- President Garfield's proof of the Pythagorean Theorem was emulated on GeoSketchPad and the students worked the proof through the use of a parallelogram to show that $A^2 + B^2 = C^2$.
- My students were explaining how to solve a problem using an equation with one variable.
- After the students work on their problem solving booklets, individuals are invited up to show how they got their solutions by displaying them with the document-camera for the whole class. Students make up a rubric for evaluating the presentations depending on the difficulty of the problems.
- Showing results of projects on document camera
- Sharing conversions of measurement with the class
- Students got online and worked on a variety of math assignments/programs
- Daily math program
- When looking at patterns changing over periods of time students had to make inferences of where the patterns would be in the future and explain.
- Students created graphs for given situations and rationalized their graphs to the class.
- We have been using the smart board to do homework problems
- We used the projector to share work and discuss/score it according to rubric
- We have been working with geometry and the document camera has helped students show their drawings. Also, they have been using calculators and protractors to name the interior angles and the angle sums and to discuss the connections with the number of sides to the angle sum of a regular polygon. The document camera, LCD projector, and the calculators have all helped with student discourse.
- Students presentations
- Showing their math thinking through document camera and LCD projector. Class discussion of various solutions.
- Students presented their checkbooks...
- I am the technology facilitator at my school.
- Showed their work to the class.

- We do group problem solving, and groups must share their ideas and results under the LCD/Doc Cam to the class.
- Using calculators to check their work and using the document camera and LCD projector to show their work.
- Analyzing data, producing power point presentations
- Having students share their problem solving techniques.
- Tessellation Designs --discussion about angles and whether or not polygons tessellated
- Students showed different ways of finding the area of irregular figures
- Document camera to analyze graphs of conic sections
- Students use document camera on a daily basis to present their findings of new concepts or answers to their problems.
- When finding $I=prt$, and the project we did using imaginary finances
- Evaluating expected value for student-made games of chance
- Students complete warm-ups. Everyone gets an opportunity to show their results, if it is neat and thorough.
- We worked together using calculators (I demonstrated on the document camera) to find the sides and angles of triangles in real life problems.
- They used the document camera to show their solutions to geometry based problems such as area and circumference of circles. Displayed their polyhedron drawings.
- My students show their work to the classroom very often and then have in depth discussions as to the outcome of a problem and how to improve the solution etc.
- On a daily basis my students share problem solutions via the document camera/projector. On occasion, we will explore the Web for math related background information in science, culture, etc.
- Student shared idea on finding the length of a triangle using the Pythagorean theorem on the document camera.
- Students showed work with area and perimeter on the doc camera.
- Students use the document camera and projector to share work and solutions.
- Projector and Camera...demonstrated problem solving process and explained reasoning
- They worked with probability through internet games.
- Used technology to compare sizes of similar figures. Document camera can zoom in and out and we can measure, compare and find scale factors.
- Students practice computation skills using Accelerated Math.
- Every day students use the doc camera to share solutions to ace problems or other subject material.
- They shared their answers to extended response questions on the big screen
- Presentations and student explanation of work
- My students put their math journals under the document camera daily. They always do this to discuss their strategies in dealing with fairly open-ended problem solving.
- Students used the document camera and LCD to help present and explain their probability games that they created for the treasure hunt games.
- Everyday we use the projector and document camera. I just received the Mobile Presenter and am in the process of learning how to use it. Computer lab is another time we use technology to support math and higher order thinking skills
- We used the TI navigator to investigate changes in the graphs of sine and cosine waves and how they can be used to model the action of an respirator

- Each day, I have students share their work on the document camera or on the Smart Board - leads to great discussions
- Students used a virtual graphing calculator to show other students how they figured out a problem.
- They show their work on the document camera, and then explain to the class the steps they took to solve, and their thought process throughout the problem
- Document camera used to show student work and spark class discussion / comments
- Used Excel to design and create spreadsheet for computing ms baseball and softball batting averages and other statistics from the games
- Students demonstrated area and perimeter with tiles under document camera.
- We were calculating the area of squares and using the mimio to interact with the book.
- Students use the document camera and projector to present their work and finding in investigations.
- The used Geoboards and the doc camera to share how they discovered the formula for area of parallelograms and triangles.
- Used document camera and projector to demonstrate and explain in writing their understanding of the Pythagorean Theorem.
- We correct daily work at the document camera and they are always able to use their calculators to check their work
- Students use the document camera with projector often in explaining how they worked mathematical problems.
- Proving the Pythagorean theorem, used life skills applications
- Presented and discussed their work
- Used ratio to determine estimated number of fish in an imaginary lake. They then presented their findings to the class. Some used the document camera and some used the Smart Board. I had one team that used the scanner to save the findings to the server.
- Students use the document camera every day to explain their thinking on how they solved problems.
- Handheld calculators. Haven't used my LCD projector or document camera for a month because I can't get Troxell to send me a bulb.
- Students frequently share their work (both product and process) or demonstrate their explanation regarding a solution to a problem.
- When working with symmetry, the use of Geometer's sketchpad to demonstrate how rotational, reflect ional and translational symmetry work.
- We used the internet, spreadsheet program, laptop, document camera, and LCD project during a "Weather Graphing Project." Students collected weather data for our city for a given month from the local newspaper. We recorded it, as a class, into a spreadsheet on my laptop. The laptop was displayed through the LCD project so we could check our accuracy. Data was crunched (measures of central tendency were calculated) and than groups were assigned a particular graph to make with the data. Graphs were hung in the room and analyzed based on the "visual" data you could get off it. A second city was chosen and new graphs were made to help determine any similar weather patterns. Class discussions were held and each class was responsible for creating a checklist to assess similarities. Individuals had to defend their choice(s) for landmarks to use in the checklist and define acceptable ranges to fall within. Finally, based on geographical location and other influences that affect weather, groups tried to locate a foreign city with similar weather patterns. A 30-year

average of our own city was available on a weather related website and groups received a similar print out of the city they chose. This has been a project I've used the last three years when we finish up WASL testing. It's not something I do on any type of regular basis (next question).

- Students share their answers and thinking strategies in front of the classroom several times during the week
- Used the doc camera to explain their reasoning
- Students used document camera and projector to share different ways of solving problems with their classmates
- The same way we always have
- Travel planning and finding best price on flights and other travel costs and supporting their findings.
- A water tank problem that was on it's side to calculate the volume of water in the tank and how much it would take to fill it up.
- We use our document camera and projector daily for Connected Math lessons. I use the camera to present and explain new concepts and the students share their work on the camera.
- Studying probability used several different emulators like spinners, dice, and coins to study what happens when doing many trials.
- Sharing strategies
- In problem-solving -- used doc camera/projector set-up to show work as they explain thinking and strategies
- Graphing linear and nonlinear equations
- The students were given a graphing calculator lesson.
- Using the document camera and LCD projector to explain to the class how they solved a problem solving exercise.
- They share their work, showing different ways to reach answers.
- Sharing answers using the document camera; scoring student work samples
- Showing work w/the projector / document camera and student discussion on it
- They bring their daily work and place it under document camera and they explain their work to the class.
- Graphing calculators to explore linear relationships, slope, y intercept "T" table and intersections.
- Students have used the NCTM's Illuminations applet for patterns and MS Shapes.

October – 06:

- Using CMP lessons
- They had to explain their reasoning and thinking to the class.
- We used the document camera for a lesson on patterns
- Use of document camera to explain and discuss with other students their mathematical strategies
- Discussion of WASL practice tests; different strategies; evaluating other answers
- Used document camera and projector to show student thinking and bring about group discussions
- When we do the discussion portion of an investigations lesson. They share their thinking under the Elmo.

- They show and discuss their work by use of the document camera.
- Using calculators to graphs equations
- Use document camera to view individual/group work
- Students used the document camera to share bar graphs. We as a class were able to analyze each one applying the concepts that we have learned to understand what was correct and what was different
- Sharing solutions to problems under the document camera that is projected through the LCD projector.
- Sharing math strategies to solve cluster multiplication problems and rectangular arrays of multiplication. Students shared and called on other students to give feedback, ask questions and make comments
- Presentations using doc camera
- Getting up in front of each other and sharing their ideas about their work.
- I used state released WASL practice problems, and had students discuss the answers and explained their reasoning and strategies to the class. They used the LCD and document camera to show their work.
- Sharing solutions with class
- The students shared their data tables and coordinate graphs to show relationships between two variables
- Before the document camera broke down, having teams discuss and explain their problem solving method really makes them organize and evaluate what they have done.
- After the students had completed a problem-solving problem, they shared their work using the document camera.
- Students shared work on a particular problem using the doc. cam and projector.
- Sharing work via camera/projector
- Students share work on the camera and projector
- Students discussed findings with GCM and LCM and provide a rationale for their thinking - other students question/summarize or respond to work on document camera
- Students used homework as examples to describe the math work that they completed.
- Sharing problem-solving strategies, graphs
- Students show their work under the document camera and explain their rationale for coming to their answer.
- We have been using pattern blocks to learn the angles of regular polygons. The students, after discovering a couple of ways to prove the angles, have come up under the Elmo to show the students how they figured out what the angle is.
- Used document camera to explain their thinking
- Put student examples under the document camera of data collected and graphs created following an activity. Used these to compare and contrast, look for patterns.
- sharing graphic representation of multiplying fractions
- When discussing our problem of the day, they do this.
- Reasoning with QWIZDOM
- I would put an example of an WASL style prompt for the kids to look at under the document camera.
- Spreadsheet to assist with FOIL multiplications.
- Sharing different solutions to WASL type questions done in small groups using the document camera and projector.

- When presenting their work using the Elmo and computer
- Students often present their work and discuss their thinking of a problem by showing the class their work on the document camera
- We use technology on a daily basis in the form of the document camera and projector. We also use Accelerated Math 4 out of 5 days a week.
- We use the document camera daily to help illustrate our thinking.
- Students share their thinking with other students through the use of the document camera and projector.
- Algebra II Dance--graph of Absolute Value
- Students use the document camera to explain their thinking and go over problems each day.
- We followed the steps of a Pythagorean theorem proof from an applet and discussed the validity of each step and why they worked.
- Use of the graphing calculators to project values in a linear progression
- On a WASL style question, students took turns showing how they got their answers and questioned each other.
- Share graphs and patterns
- We share daily our solutions and our explanations. Students like to have their work highlighted on the document camera. We use the camera for comparing ideas as well.
- Students model their division problem solving strategies under the LCD
- I had a student bring her work to the document camera and explain to the class how she approached the problem; as she explained I heard two students simultaneously say, "ohhhh!" indicating that they "got it". I then had one of those students come to the camera and demonstrate "where" they were stuck and where they "got it". It was a great moment.
- Sharing work and how they solved a problem.
- When discussing lines of symmetry, students showed examples of geometric figures with lines of symmetry. When discussing graphing of points on a coordinate grid, students showed examples of locating points. When solving "consumer problems", students shared examples of finding unit prices, amount saved per day when purchasing one brand over another to amount saved per year.
- Students displaying and explaining problem solving strategies on math problems using doc camera and projector.
- Presenting student work to the class. Showing the class reasoning and work to justify their answers.
- Use the doc cam and LCD projector to do a problem so the class can view. Other students can then come up and add/subtract to the problem.
- Kids use the doc camera daily to share journal entries, problem solving strategies
- Students share their work during warm-ups and discuss processes.
- WASL Like Problems at the beginning of class
- Graphing various equations on the graphing calculator and evaluating what each graph should look like and why?
- Sharing thinking about how to solve a word problem.
- We used the Elmo and projector to explore enlargements and reductions and to talk about similarity
- Explaining the process they went through to solve a problem using the document camera, and projector.

- My students used Geometers Sketchpad to connect the midpoints of any quadrilateral to discover and prove the inner quad is a parallelogram with an area one-half the original.
- Used doc. camera to share problem-solving strategies.
- We used the graphing calculator to find the intersection of two lines after learning to do it by hand.
- Daily use of document camera and projector as students share their thinking and invite discussion
- Used handhelds to evaluate other students communication skills. Handhelds initiated discussions
- Money manipulation, smart board and projector
- Students use the DC and projector to display and explain their work to the class.
- We are currently working on developing a list of problem-solving strategies to use with extended response items. We've been analyzing student work from a "WASL-grading" perspective.
- Interaction with NCTM's applet, "Bobbie Bear" to teach the Fundamental Counting Principle
- Students share the work in their journals using the document camera and projector.
- Students continue to share their work with the rest of the class using the document camera and projector to allow them to explain their work and discuss it with the class
- Everyday, showing homework.
- Showing their work
- Students use the calculator to explore the relationship of digits/decimal point in the base ten system and multiplying and dividing by ten
- Used graphing calculators to make a graph in order to find the approximate point where two equations are equal.
- Used the internet to create the Pythagorean Theorem created by Pres. Garfield.
- My students were explaining a word problem showing the 4 steps I am teaching them to follow. 1. Read the problem twice. Visualize the problem. Restate in your own words. 2. Select an appropriate strategy. 3. Estimate the answer. Solve the problem and show your work. 4. Check your plan or strategy. Answer all the questions).
- After working on a graphing project involving collecting data, determining the median, and graphing the information, they presented their results to the rest of the class. They were put into teams of two, so a lot of cooperation was needed to get all the tasks accomplished.
- Used calculators to help find patterns and write rules
- Students shared their graphs of equations
- Discussion about the value of mental math vs. the use of a calculator. Also, we viewed a film and took notes in order to facilitate a discussion and write a multi-paragraph response.
- We are working on geometry and the students have been using the projector to share their polygon shapes and how they are constructed.
- Show their work
- We use our document camera daily when discussing mathematical concepts. We are just beginning to use the Smartboard.
- My Algebra class used the document camera to show their graphs and explain their conclusions
- We worked with linear regressions given data and the graphing calculator
- Looking up concepts online
- Using CMP2

- Sum of interior angles of a convex polygon in Euclidean Space
- My students used the document camera yesterday to present their solutions to the story problem assignment.
- My students continue to use the camera and projector to share solutions and to discuss options.
- Currently, my 7/8 resource class is creating coordinate graphs from data tables that they've created. They are sharing and improving their product--in a whole-group context--via the document camera and project.
- Showed work on doc camera
- Students share their work and discuss...compare, show other methods
- How many cars lined up between the bridge and Safeway?
- Students present their graphs using the document camera.
- Students use the document camera everyday to share student work on in class problems or to show homework.
- When they share their answers to extended response questions using the document camera and LCD projector.
- Students were presented with graphs that they had to answer questions on. Students used the camera to prove their point to the class.
- Sharing and scoring work
- Analyze student work on document camera with projector
- Students use the LCD Projector and Doc. Cam. to share their work with other students, this gives students opportunity to think out loud and other students a chance to see a problem solved in a different way.
- Students showed examples of their work on the document camera.
- Used released WASL items for entrance "warm-ups"
- Discussing why a graph looked the way it does. The distribution of the data
- Students completed science labs and presented their finding with the use of projectors and document cameras based on scientific method.
- Presenting their mathematical work
- They are using graphing calculators in working with linear equations.
- Used the document camera and projector to show how commutative and associative properties were alike and different.
- We use the document camera and projector on a frequent basis. Also, I've used my laptop computer with many interesting technological programs available.
- They used lcd and doc. camera to show how they solved geometric problems
- They used calculator to solve problems. they used document camera to show how they solved problems.
- Students are sharing their "how" and "why" of process; comparing and contrasting strategies;
- Using the document camera and LCD projector to analyze and discuss student work
- During Qwizdom, we check the graph and discuss thinking Share on the over head
- Provided their answers to class and had to explain their thinking process of solving the problem - regardless of correct/incorrect answers
- Through solving problems on the Smartboard
- Students get to work in pairs and then share their work with the class on the document camera.
- Student shared work for classroom discussion

- sharing problem-solving strategies, solutions
- Being able to show similar triangles on a projector
- We used grids on Smartboard to do arrays for our Prime Time book in math, and now for graphing in Data About Us. Calculators were used daily in Prime Time. The document camera is also used to share student work, display examples, and read sections together
- Sharing student work at camera
- Don't have technology at this time. We use the white board
- Explored window sets to view equations they were working with.
- Students wrote their own word problems, and then presented them to the class to solve by using the document camera.
- Scholars used calculators to find the LCM of 13 and 17. Scholars used the internet to find out about cicadas. Scholars used document camera to aid in their presentation of their daily work.
- Not sure - students used Smart Board to discover equivalent fractions and their relationships
- Showed examples of different ways students solved a problem using their work under the document camera.
- Using matrices to solve a three variable system of equations
- An example of an object was projected onto the wall and the students were asked to discuss the similarities and the differences in their groups.
- Students were given a problem-based activity in which they had to work in teams to solve. After working together to solve the problem, they could enter portions of answers into Qwizdom to check their work. If they were incorrect on portions, they had to come back together as a team to dissect the problem and what they need to do differently to solve the problem.
- We are studying scientific notation and they are using calculators and small group learning to help each other learn and understand converting decimals from standard notation to scientific notation.
- We used it to find patterns in the 100 chart.
- My students have used the document camera to present and teach their answers and findings to the class.
- Students use a document camera and lcd projector to show their thinking on how they solved a problem
- Student discussion has been at its best when students are sharing their work under the document camera. Other students see the strategies, hear their strategies, and feel comfortable either agreeing or disagreeing with their strategies and process. Each day we do this process of sharing and discussion. In particular, we used this yesterday when sharing our strategies for a math products game.
- Document camera computers
- Students demonstrated to class how to achieve product by showing examples and explaining process on LCD projector
- Checking answers when dividing fractions and decimals
- Displaying and explaining thought processes to solve problems.
- Inquiry based investigations
- the students often share the process that they used to get an answer in math. They do not share the answer as often as what process they went through.
- To share their work on the doc. camera and projector.

- The math unit we are in, involves a lot of plotting points, which we have done on the computers
- Students display their work or I display their work in order to compare/contrast work. In the current unit, students are learning to critically examine graphs; to examine both the elements of a graph and to decipher information.
- Students showed their work on the document camera.
- use of the document camera to express and explain their ideas
- Almost daily the students come up to the document camera to talk about (and show) how they solved a problem.

December – 06:

- To show student work examples and lead a class.
- Online mathematical resources (e.g., NCTM's Illuminations applets)
- They used calculators and document camera
- Used Smartboard to make equivalent fractions; joining parts to make wholes, using available shapes, etc. They showed different ways of joining parts.
- Students show and explain their work with the document camera.
- We worked with some story problems and students showed their work on the board to demonstrate different methods of solving problems.
- Students leading discussions with display of their work
- Projecting their work to show the other students
- Sharing work via projector and document camera helps students to be able to explain ones thinking which leads to a deeper understanding.
- LCD projector and document camera is used to display divergent solutions to problems. Discourse is encouraged to determine validity of mathematical thinking.
- Base 10 blocks
- Students often share their work using the document camera.
- Students often come to the document camera and projector to explain how they solved fraction problems. We also had our math specialist come in and teach math casting and students were excited to show their parents their work at home over the internet.
- The students shared their fraction models and representations of different fractional parts
- Document camera is being repaired so, we have only used calculators lately to support our answers and ideas.
- Students use the document camera to share their methods for solving problems.
- Showing and explaining WASL work
- Students shared their work and justified to their thinking to other students.
- Showed their work on the document camera
- Students showed stem and leaf graphs that they had created under the camera.
- Students show work through document camera, projector. class discussion about work.
- Students showed examples of their work on the document camera.
- I put a problem under the Elmo and we discuss what the question is asking then we break out to work on the problem, at times using manipulatives (whatever works for them) and then we come back and discuss under the Elmo what we found out. It is then that questions and disagreement happens.
- We use the technology every day to share student thinking.

- Students graphed rules on graphing calculator, looking for connection between rule and the graph's shape. After making conjectures, groups presented to the class using document camera and LCD.
- Students share their strategies and problem solving skills for every lesson
- Students used their graphing calculators to find where the lines intersected on a linear programming problem in Algebra II.
- Discussion of the Problem of the Day is facilitated by the use of the LCD projector and the Aver Media 3001.
- Classroom of teachers
- Used calculators and doc cam to show work, and Qwizdom
- We go over WASL style prompts and the problem will be given to them on the overhead as well as in front of them. Students will write their answers and students will put their work under the document camera and other students will score the answer that is under the camera.
- We took paper and captured the mark where snowflakes fell, photographed the pages with the document camera and created a slide show to try to show randomness.
- Graphing different equations to see whether or not an equation was a linear function and making inferences based on their finding. - leading them up to the requirements in an equation which would make it a linear function.
- Used document camera/projector to share work, used Accelerated math to improve basic skills so constructivist approach can be used for new material
- Sharing math thinking on journals.
- Students practice higher level algebra problems in groups with a web site called www.mathcounts.org
- Students bring their calculators up to the document camera and show how they used it to find their solution.
- Show work and explain under doc. camera
- Graphing calculator to calculate the slope of a line and comparing positive and negative slope
- Students place their answers under the document camera and describe how they came up with their answer and why they know they are correct. Other students ask questions or show a different way to find the answer.
- Share understanding and strategies
- Students used the document camera and the LCD projector to show how they could measure an angle using the protractor on their Geometry Template. They have also used the wooden blocks to demonstrate how to level off several stacks in order to find the mean number of blocks in each stack.
- Students compare answers and analyze write-ups, sharing their work on the document camera.
- Students used iBooks too play Geo Logo, specifically the Power Polygons program. They drew polygons using xy coordinate grids.
- I have my students do a math project every week that involves using excel and creating graphs. Then they have to write about what the graph is telling them and then they discuss each others graphs and what they thought.
- Shared math problem on the camera and explained how he/she did it. Others observed.
- Used graphing calculators to look at equations involving 3 different speeds of cars.
- Modeling mathematical thinking

- Students use document cameras, Smartboard, and graphing calculators to present solutions to problems to the rest of the class on a regular basis
- Using the doc cam and projector to do the problems so the class can comment and give responses...They love to get up and do the math cause its seen by everyone.
- My students use the doc camera to share work and journal entries. I just got the video camera yesterday and have not had a chance to use it yet.
- Use document camera to explain work done in class
- Finding an algorithm for predicting weights of pumpkins and finding the line of best fit.
- My students regularly show their thinking on the document camera. They are able to show their work and challenge each other's work.
- Students used their TI 83s to complete the investigations they did today.
- Students used graphing calculators to explore the effects of changing the coefficient or the base in exponential equations.
- Using document camera and projector to explain the process they went through to answer a question.
- A textbook assignment was to make 3 scatter plots from a table of data. I took my class to the Computer Lab to do the spreadsheet and scatter plots on Excel. Then we hand drew fitted lines discussed positive, negative, "no" correlation and made predictions.
- Exploring the difference between equations and expressions.
- Students showing different ways to model equations (graph, table etc) on document camera.
- My students used the graphing calculator to find out how changing a, b, and c, in a quadratic changes the position of its graph.
- we used cps to order criterion for good communication
- Students used document cameras to display work.
- As always, students share their responses to problem-solving tasks with the class, using the document camera and the LCD projector.
- Students used calculators to practice the strategy of checking their answers.
- We use the document camera with all mathematics discussions so that students can share their work and discuss solutions
- Students took data from our recent fundraiser and made spreadsheets. Then they analyzed the data to help make some decisions about the sixth grade field trip later in the year.
- My students were explaining how to use the greatest common factor to simplify a fraction.
- My students used the document camera/projector to show different equivalent fractions and fraction sentences. We also used it to show and explain outcomes for problem solving.
- Showed their work with the document camera. Used graphing calculator to demonstrate how slope affects a line
- Students proved answers sharing on the document camera
- We have been using the document camera and LCD projector to show the interior angles of regular and irregular polygons and how the angle sum compares.
- Students used the graphing calculator to graph two equations to see where the point of intersection was. They then had to think about what that point meant in the context of the problem.
- Regressions, creating quadrilaterals and proving it, creating parallel lines and proving it.
- Internet
- We use the document camera and projector to help with discussions
- When reviewing and correcting assignments, I allow students to show their work.

- Used the document camera to share solutions with the class on an open-ended problem solving activity.
- Students navigated aerial photographs via a spatial orientation activity on the ACTIV board.
- Students work in groups to solve a problem. Next, they share their work using the document camera and projector
- Use computers in the lab to find temperatures and then used that data to discuss reasons why temperatures may be what they were. Found trends in temperatures over a variety of regions, geographical areas, etc.
- Students share their work using the document camera.
- The students took turns presenting puzzles using the movement of toothpicks with the document camera and projector.
- Probability: using an applet spinner web site to analyze what happens as the number of trials increases, approaching theoretical probabilities
- Students discuss their work daily, demonstrating their thinking using the projector and camera
- Used document camera and LCD to display examples of student work to meet GLE standards
- Students use the document camera and projector to demonstrate their mathematical reasoning frequently during the week.
- Using graphing calculators to graph linear equations.
- Students used the document camera to show how changing what an equation is equal to makes a change in the value of the variable.
- Sharing work on the document camera.
- By demonstrating their understanding of concept through the use of the document camera. Showing the class their understanding. They also use the Smartboard to work problems.
- On almost a daily basis students use document camera and projector to communicate/share their thinking about math process with classmates and teacher
- During Qwizdom, we see all responses and students discuss the correct answer and why other answers may have been chosen. Students also share their thinking about a problem under the document camera
- Needed to demonstrate the process for reaching the answer on the document camera and projector
- Plotted points on a graph on the Smartboard to calculate the regression equation
- Students have shown their own work on the document camera to explain and/or question each other.
- Looked together at an applet that showed how equations can be balanced and discussed how positives can weigh down the scale and negatives were balloons. Discussed the similarities and differences of the model to the pouches and coins model we had previously been using.
- Shared problem solving strategies and showed their work/solutions
- Using the document camera to explain how they answered a problem.
- Presentation of student work at document camera/projector
- Students use projector and document camera to analyze each others problems
- Graphing calculators to explore linear relationships and the standard form of a linear equation.
- Students shared problems they had written with the rest of the class for their peers to solve.
- Students used the Smart Board to demonstrate perimeter and area competency, solved magic squares, demonstrated the use of compasses to measure angles

- Graphing
- Analyzing all functions from a graph. Finding x-intercepts and finding points.
- Not much at this time. The use of graphing calculators will begin in our class next week.
- We use document camera almost everyday for math idea exploration and discussion.
- Using the document camera and projector to model or assist students on a CMP lesson
- Use calculators to check the total degree amounts for straight angles and other types of angles
- We use student work to talk about mathematical concepts and we use the document camera to support this learning.
- During problem solving activities, students shared how they solved their problems using a document camera and an lcd projector
- I use the Accelerated Math program every day and students problem solve independently or with my help.
- We are working with computer and document camera to share ideas with the whole class
- Graphing linear equations
- Organizing and displaying the concepts learned in Bits & Pieces I.
- Students will show their peers how to calculate a problem as well as defend their stance
- Students use Projector to show work. Students create spreadsheets.
- I introduced the students to graphing calculators and we used the calculators to write equations, prepare tables and graphs. Using the calculators, we were able to compare the graphs of up to three equations at a time. The students were able to quickly compare and contrast graphs and to relate the different shapes of graphs to the different equations.
- My students, today, used computers and the internet for figuring out the cost (including tax) of buying clothes. they were limited to only \$50.
- Demo solutions to problems
- Used the doc camera and projector to show work on the whiteboard and discuss it
- Students brought their work up to the document camera to explain what they had done and why they had done it.
- Almost daily the kids show their answers from questions raised previously and share how they came up with the solution.

February – 07:

- The students used the document camera to explain their reasoning to the class about a WASL math prompt.
- When discussing their thinking on their journal writing
- Document cameras on a daily basis.
- Kids shared their WASL exemplar and we discussed how to share our thinking in writing.
- Sharing of homework and strategies.
- Used graphing calculators to determine theoretical probability of games of chance. document camera and LCD projector to display students games and promote discussion
- Students use graphing equations while working with slope intercept form.
- Use document camera to show individual work
- Project we did at end of Pythagoras unit. Students graphed results looked for patterns.
- Sharing solutions of complex problems involving higher order thinking skills, such as comparing unlike fractions in ratios.

- A student came to the document camera to share her strategies for solving a problem using the Pythagorean theorem; she explained exactly how she solved the problem to the class while displaying her work. As she went on explaining, students that previously had difficulty with the idea, began saying, "aHHh ha!" It just reminded me of the power that each student has when they are provided the chance to help someone else get it; and I didn't have them make posters or write on transparencies, it was a spur of the moment decision that really benefited students in the class.
- Use of LCD camera, daily
- Shared work with doc camera
- Every Friday, we discuss WASL type problems. I do not give the answer; however, various students share their papers and their logic in the steps they took to solve multi-step problems. Also, we have clickers where the students have been taking the 6th gr. Texas state test. We discuss results and I get printouts to review with the students.
- The students used the document camera to show their strategies for solving a problem. It was a strategy the few students in class were able to come up with.
- Students recently used online software to create tessellations. We also used United Streaming to view a video about polygons.
- Students explaining their thinking on WASL questions
- Used the document camera with their own work to justify their answer. We also used it to discuss 1-4 point sample WASL problems and why the anchor papers were scored as they were scored.
- Student demonstration & support to homework questions/solutions.
- Sharing solutions to problems
- Students explaining how to do math problems from 1790, 1860, 1900, and 1990 to the class on the document camera.
- Putting student work under document camera to compare and contrast ideas
- Students use the document camera to discuss and support their work.
- Used a function machine game to strengthen skills on writing the n th term for a sequence.
- Student samples are shared almost daily using a document camera and projector. This enhances students' explanations of mathematical reasoning and shows divergent strategies used by different students to solve problems.
- Use doc. camera to show answer
- Students will bring their work to put under the camera to show students an answer.
- We were in the science lab and have data to graph
- Students share work on the document camera on how to solve related story problems or different solutions to the same problems.
- showing linear equations from a scatter plot on the graphing calculator
- Anytime we use the LCD projector and document camera, we discuss the work.
- We use our document camera daily in sharing our learning.
- Used document camera/projector to share problem-solving strategies with the class.
- My math focus class used some of the NCTM illumination lessons to work on their fraction skills.
- Using dot pattern applets to generate tables and equations
- Students place work under the document camera to help aid in explaining ideas and to encourage questioning from other students. Also, we have placed tiles under the document camera to help explain surface area and perimeter.

- Every time we do an application activity, students have an opportunity to share their thinking. We also like to look at and discuss alternative ways of solving problems. The most commonly expressed question in my class is "Why?"
- To demonstrate their thinking
- Show work, discuss outcomes for probability using a tree diagram
- Used doc camera and projector to show area and volume using blocks.
- Student example problems being show on the doc camera.
- Demonstrating work under the document camera
- Explaining mathematical thinking to class
- Students used document camera to present alternate solutions to challenging problems
- My students use the doc camera and projector to share journal entries, problem solvers, and their thinking with the class.
- Exploring new concepts and discussing problems
- Use graphing calculators to graph equations, etc.
- Collecting Data and finding the line of best fit. Using correlation coefficient to identify the type of function.
- They constantly show and explain their work on the document camera.
- Sharing and discussing class work
- Students showed their solutions to a problem and discussed with the rest of the class.
- Presenting problems that they have done using the document camera and projector.
- After learning how to find enough (x,y) points to graph an equation by hand on graph paper, we used the graphing calculators to graph equations and discuss if they were linear or nonlinear. Slope was the next thing we explored and then slope as rate of speed if the graph is distance over time.
- Shared area models with the document camera.
- Using a calculator to estimate square roots with out using the square root key.
- We used graphing calculators to compare different graphs so that they could see how changing a coefficient in an equation changed the position of the graph
- Math teams were working on Absurd Math on laptops or using document camera to explain their thinking and invite other ideas.
- Students synthesized problems on the board
- Use of document camera and projector to share reasoning for ordering fractions smallest to largest
- Interactive response system
- Doc. Camera and Projector to show and explain their work and thinking to the class.
- When working with the ideas of reflection, rotation, and pentomino possible shapes, students used the document camera and LCD projector to display their results to share with the class
- LCD projector/document camera used for sharing different strategies for problem solving
- We use the doc camera and projector everyday.
- The students share strategies everyday on math problems using the document camera and student as questions and really press students to explain in detail their thinking the problem at hand.
- Using document cam to display and explain work
- Showing their work under the document camera
- In opening review, students show their solutions and discuss the problem. The class used an applet to play fraction track.

- Students used the calculator to discover the best sailing times through the use of a sin curve.
- My students explain how they worked their problems using the document camera. I have typed my lessons on the LAPTOP, and I use the document camera to present the lessons to the students.
- We used our daily oral language scores to find the means by using calculators, then converted them to fractions, decimals and percents using the calculators.
- Graphing linear equations
- We used an online pentomino activity to discuss area and perimeter.
- Calculators to do extended length problems - not so bogged down with the computation. document camera - looking at work samples
- In my classroom the students switched papers and had to make sense of another persons mathematical thinking and reasoning. Each student was to show the others' under the document camera and explain to the class.
- Used an online spreadsheet to create graphs to go with their project. Used the document camera to share individual solutions to WASL type problems
- I facilitate a computer Lab. However a kindergarten student, was playing a math game online. He asked me for an answer. I asked him a series of questions to help him figure out the answer.
- Presenting problems and working out the mistakes and/or showing a different way they solved a problem.
- Sharing work under document camera
- Geometry sketchpad to construct circles with inscribed angles to determine relationships between different angles within the circle, central angles etc...
- Using the ELMO to display answers are explain
- Students created a spreadsheet to create a graph that showed the last 10 years sales by vehicle manufacturers. They had to assess the information and predict what manufacturers would be sales would be the following year.
- Geometry class--trig functions
- Student will discuss there solution using the document camera. This is very helpful in teaching problem solving strategies
- Shared solutions via the document camera.
- Students used the doc cameral and presenter to show the Special Number projects.
- Students shared different approaches to solving linear equations
- Used a spreadsheet to investigate the relationships between area and perimeter of a rectangle.
- Students share their work using the document camera.
- Use of online resources from Shodor illuminations, and two other sites to develop concept of similar and congruent figures, and translations/dilations
- Shared with peers a variety of problem solving strategies
- Graphed linear equations on graphing calculators
- We use our document camera just about everyday. This allows students to show their work without having to recreate it on the whiteboard.
- Students came up to the whiteboard and show students how they came up with answers.
- Student are working on geometry, so they use manipulatives with the document camera to demonstrate understanding and to share their own mathematical reasoning with other students.

- Students sharing work and showing different ways to work problems using the document camera
- TI 73's for linear graphing, statistics, and area of circles using pi.
- Students communicate on a nearly daily basis the how and why of the process they use to solve problems, perform math operations/assignments.
- Discuss how someone may have gotten an answer. We put up prompts with an incorrect answer. Or share our thinking by going up to the document camera
- demonstrating lines of symmetry
- They would come up and explain and do problems on the Smartboard.
- Looked at an online applet that showed a geometric proof for the Pythagorean theorem. This was a follow-up to a hands-on activity that used another geometric proof.
- Show different ways to answer a problem from their written work
- They share work using the document camera. The 7th graders are learning to use graphing calculators.
- Made histogram of data from an experiment and discussed variability of the data. then looked a box and whiskered plot to extend the discourse.
- Working through problems and describing how the answer was obtained to the rest of the class.
- They discussed their answers to the last unit test while looking at a blank copy of it on the document camera. They took turns explaining at the board.
- I usually put the entry task on the wall so they can discuss in their groups. Then we open up the discussion to the class and together they attempt to bring out the concept
- My students used the interactive whiteboard to explain how only one triangle could meet the constraints of side lengths of 3 cm, 4 cm, and 5 cm. Several students felt that there could be more than one, while others argued that there was only one. The Smartboard was effective in helping students engage in the discussion as well as help them prove their thinking.
- I teach remedial math so my students are concentrating on basic math skills.
- Students used the document camera to present two ways that they solved a story problem involving fractions.
- Presentation of there mathematical thinking.
- Share with group work done
- Students developed probability-based math games using the graphing calculators and the ProbSim feature. S's discussed how the outcomes of the games could be changed based on changes made to the game (Example size of sections in a spinner)
- Explaining how they understood the problem and show class.
- Students entered data on an exercise modeling half-life of radioactive isotopes into a spreadsheet and utilized data to prepare graphs for a presentation. Student graphs were compared using document cameras. Graphs were then critiqued by the class as to correctness--(all required pieces being present) and ease of reading. Further discourse developed on finding slopes of individual line segments within the graph.
- Today I had students find an item on the internet that was on sale. They then had to calculate how much the sale price would be.
- Students present their solutions through the document cameras.
- Students used the projector to show their work to their peers.
- Students regularly use the document camera to come up front and describe their thinking and their work.

- Sharing their work with the class.
- Students completed a pencil/paper exercise then inputted the answer into their interactive handheld Qwizdom. The immediate feedback of right/wrong answers is wonderful.
- We use our document camera daily to discuss and demonstrate our work. The software is used to develop charts and graphs.
- Students used calculators, Document Camera, and projector to figure out the cost of multiple items and the change they would receive from a \$20 bill.

May – 07:

- Looking at CMP lessons online
- Discuss their thinking with the class about their answers. Also engaging the other students in what score they think that their answer should get.
- LCD projector daily to demonstrate solutions to assigned problems etc.
- Using the document camera to explore many students' thinking for specific problems
- During sample WASL questions, students presented their solutions to the class and we analyzed them.
- Students use graphing calculators to solve problems
- After completing a individual design problems student presented their solution
- Students present homework assignments
- Display solution to problems under document camera that initiates students discourse.
- Along with sharing strategies for solving problems with the document camera, students also show their strategies using the Smart Board. Observing other students solving problems while talking through them, classmates get to hear and see math in action. In addition, they learn more efficient ways of thinking and problem solving that may work better than previously learned methods.
- Students share work using doc camera.
- Students used the document camera (along with projector) to show how they arrived at a WASL practice problem
- The students were sharing their answers and used the document camera and the projector to show the class the steps they used to find their answer.
- Demonstrating their understanding with document camera and projector.
- Demonstrating their understanding with document camera and projector.
- Sharing work with class
- When sharing their work with the class they use the camera to show their work.
- Showing student work under the document camera and then discussing that work with their peers
- Students show their steps in solving a problem. Other students ask questions or comment with their opinions, or offer an alternate method.
- To show their WASL examples to the rest of the students
- Used Geometer's Sketchpad to model relationships among secants, tangents, angles, and arcs.
- After working on a long Order of Operations problem, samples of student work were display under the document camera. Students were able to see more clearly what made sense in terms of showing work. They could also see the advantage to working in small steps so they did not get lost.

- Students use the document camera/ smart board to explain/ defend their work. This also facilitates a classroom discussion of mathematical concepts.
- Found x intercepts in a quadratic equation and then calculated them on a graphing calculator to check their answers.
- Problem of the Day - students show diverse solution for finding an answer; share different ways of recording data
- Today the students were using the document camera solve and create missing addend problems.
- Use doc. cam to show multi. solutions to problem
- Being able to explain under the document camera about an assignment while showing what they did on their own.
- We recently researched statistical information in which they answered some questions about and then found the mean, median, and mode of that information.
- During WASL Testing
- Students commonly come up to the front of the classroom to show their work and defend their thinking on a problem.
- We used graphing calculators to discover the values for percentages of red vs. other color jellybeans in two kinds of jellybeans.
- When demonstrating their thinking using the journal prompts.
- Online math challenge to promote higher-order thinking.
- Students used the document camera to report on a shape-sorting project.
- Used graphing calculator for statistical analysis of numerical data
- Students shared solutions to a problem-solving activity on the document camera.
- We created a spreadsheet and graph that helped with probability lessons
- Modeling long division
- In the last two months the most that we have done has been scoring student WASL practice on the document camera and projector.
- WASL practice... Calculator, LCD, document camera Demonstrating various strategies
- Students solve problems and explain their process using either the smart board or document cameras
- Using the doc cam and projector to show the class how they worked out a problem
- Kids use the doc camera to share problem solving solutions and to share journal entries
- We used the Ti-84's to graph vertical motion problems and predict various times and heights of the objects thrown or dropped.
- Students used the Segmented Math Course software where the students used the software to discuss i.e. Pythagorean Theorem
- We are using graphing calculators to explore linear relationships in two classes and quadratic equations in another.
- Students use the document camera and projector to explain the process they went through to solve a problem.
- Using graphing calculators they graphed two linear equations and using "trace" and "zoom" they located the intersection to find the "common" solution.
- Created three graphs to show data they collected.
- Using graphing calculators to create and evaluate Box and Whisker plots.
- We used the graphing calculators to find intercepts of polynomial functions. We graphed different functions after talking about what we thought it would look like.

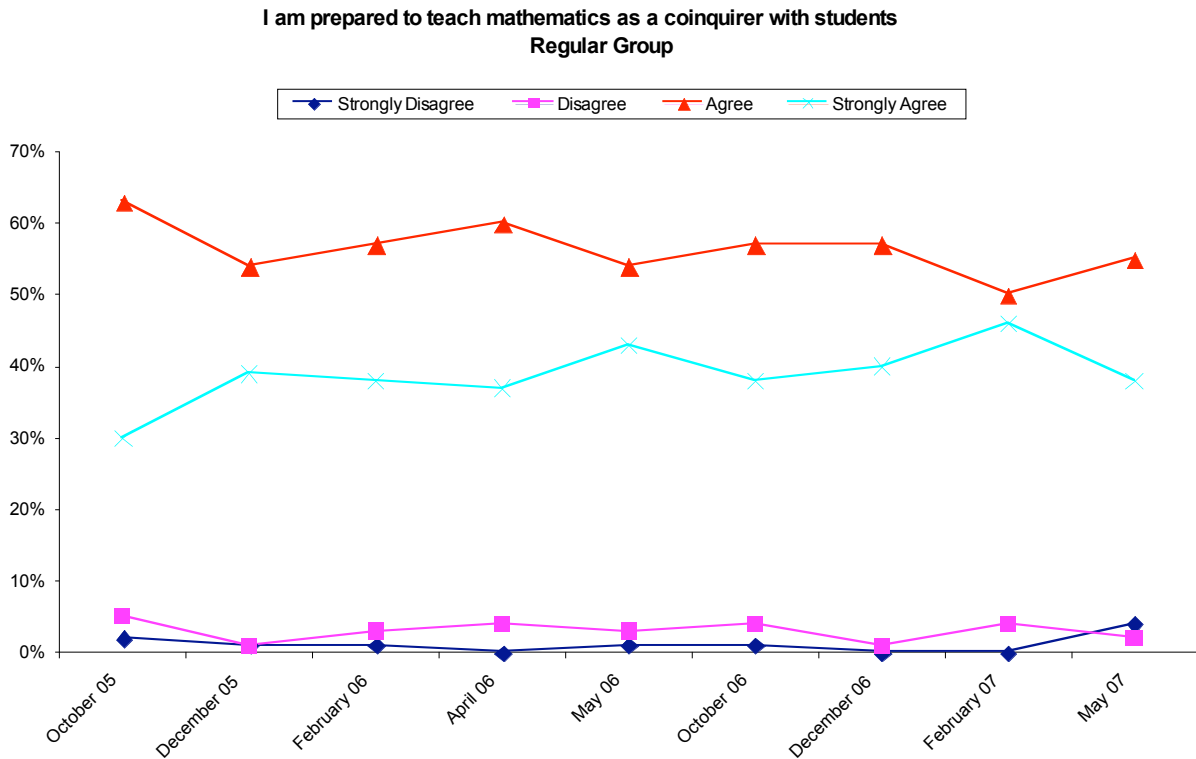
- Used document camera to demonstrate shrinking and stretching
- Used document camera and projector to show work.
- Smartboard use in grouping multiplication problems
- Went on-line to view websites that are interactive math activities.
- Students share their work using the document camera and projector every day. Students use graphing calculators regularly.
- I have observe math lessons when students have explained their discourse and higher order thinking skills to other students
- I do not know where else to "fit" this information, but...during the last two weeks we did WASL. Therefore, that was 8 of 10 of the last days.
- Students built boxes and designed nets of the boxes to write a proposal for the cost and material that would be needed.
- My students were solving a word problem. They were allowed to use the calculators, and some of them presented their steps to the class using the Document Camera and the LCD projector.
- We worked on geometric shapes and finding area, students presented their projects to the class using the document-camera and projector and explained their reasoning. They also presented challenge problems for other students to solve
- They used graphing calculators to support their conclusions about slope.
- present to class their process of solving multi step equations to graph
- Used "paper pool" applet from illuminations site to discuss patterning and common factors.
- Students put their work under the doc cam and discussed pros and cons of each others' solutions
- Show student work.
- Explaining their work
- Algebra students used graphing calculators to look at graphs of higher-order polynomials and discuss lines of best fit.
- Showing their work
- When preparing for the WASL we used the document camera to cover common mistakes made by students when answering WASL questions
- Calculator
- Document camera and LCD projector used on a daily basis communicate different strategies around solving mathematical problems
- Fitting linear graphs to student data
- Used a program on graphing (green globs) to help practice graphing linear equations.
- Camera and projector. We have also used the internet to support our current project on Egyptian architecture/geometry. These are projected from the computer onto a screen for whole-class viewing.
- Students show and/or explain work
- Students display their work and discuss their outcomes
- Generate random numbers, counted and graphed them using Excel.
- Students work in teams to estimate the length or area of an object displayed on Shodor Interactivity's Estimator.
- We had students share work from critical thinking questions.
- From an animated power point on solving 2 step equations we discussed which properties made it possible to complete each step

- Students use the project and document camera daily to show and discuss their problem-solving strategies
- We use the document camera all the time to share how we got to our answer, show our thinking, and how we organized our work.
- Students used the document camera and projector to demonstrate probability games they created to go along with the CMP text What Do You Expect?
- Graphing exponential plans on the graphing calculator.
- Thought-provoking questions on the document camera, then students discussed their answers/opinions
- Used the Elmo to demonstrate how they obtained their answer and use the calculator to check their answer
- Students were able to show their work and explain in front of the class.
- Using graphing calculators to better understand exponential equations
- Completing group activity on finding perimeter, area, and volume, group problem solving with fractions using the SIOP model
- They journal on-line (Moodle) at least one time per week--often daily.
- Qwizdom we discuss all answers and why someone chose an answer.... share their method for solving (even name it)
- Review of content
- How to create the formula of a Geometric sequence?
- Looking at / discussing student work.
- Sharing work, strategies, explaining processes, evaluating work
- Sharing work at the document camera and projector and using calculators to verify answers to problems
- Students answer problem solving questions and put them up on a screen using a document camera
- Calculators to explore the meaning of square root.
- Using the document camera to explain their work to the class
- While discussing the homework we used the Projector to have different students give their thoughts about why a problem was right or wrong.
- We are constantly using the document camera as a way for students to show how they solve problems.
- Students used a document camera to illustrate a summary of a lesson they completed.
- Graphing progress
- We journal on moodle
- The students were learning how to use the quadratic formula to solve problems. We looked at the solutions on a graph
- Organizing and displaying students' mathematical thinking.
- Used LCD to share work with class
- When graphing the mean, median, and mode of student names, the graphs were displayed on the document camera.
- Showing and explaining their answers under the document camera.
- Showing their work under doc camera and explaining
- Using graphing calculators to simulate coin tossing for probability
- Presentation of student work
- Use graphing calculator to graph quadratic equations that students wrote

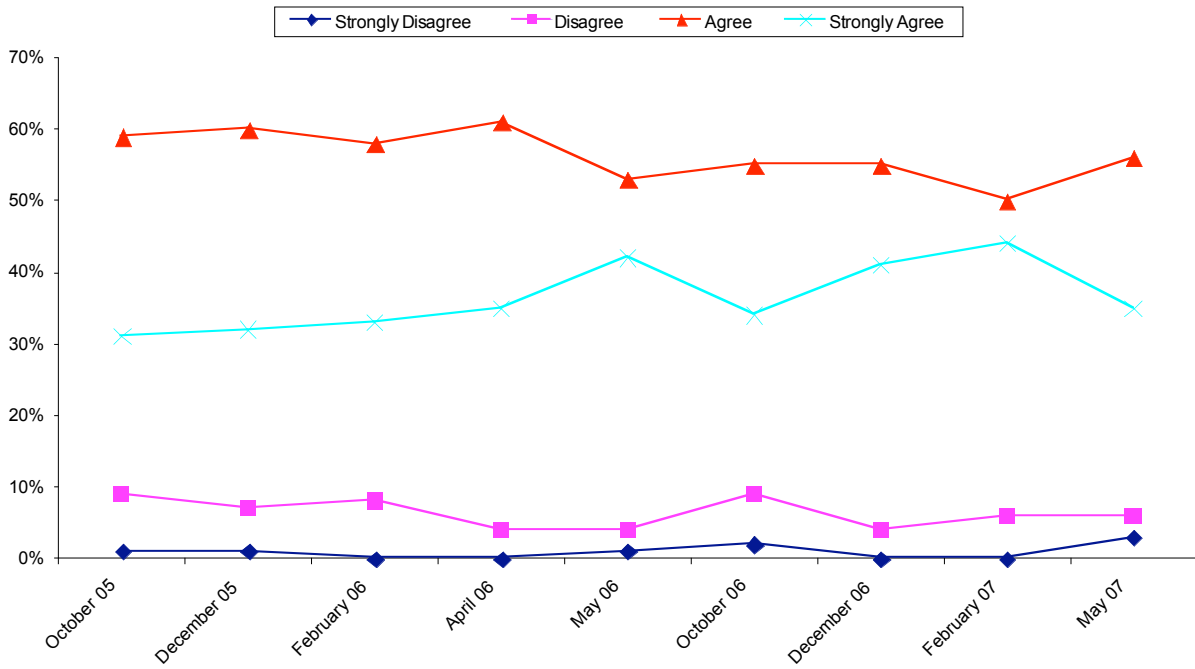
- Students explained their work on the board and we used a video camera to record student responses as to how they solved their problem and answered critical thinking questions.
- Students used document camera to show how they solved a problem.
- Students came up and shared their ways of making number sentences for subtracting using unifix cubes. Displaying them on the document camera helps all to see and gives the students an opportunity to explain and show their work in a positive way.
- computer online
- We used the CPM to generate discussions, document camera to share work, and the internet to access information.

Item 13:

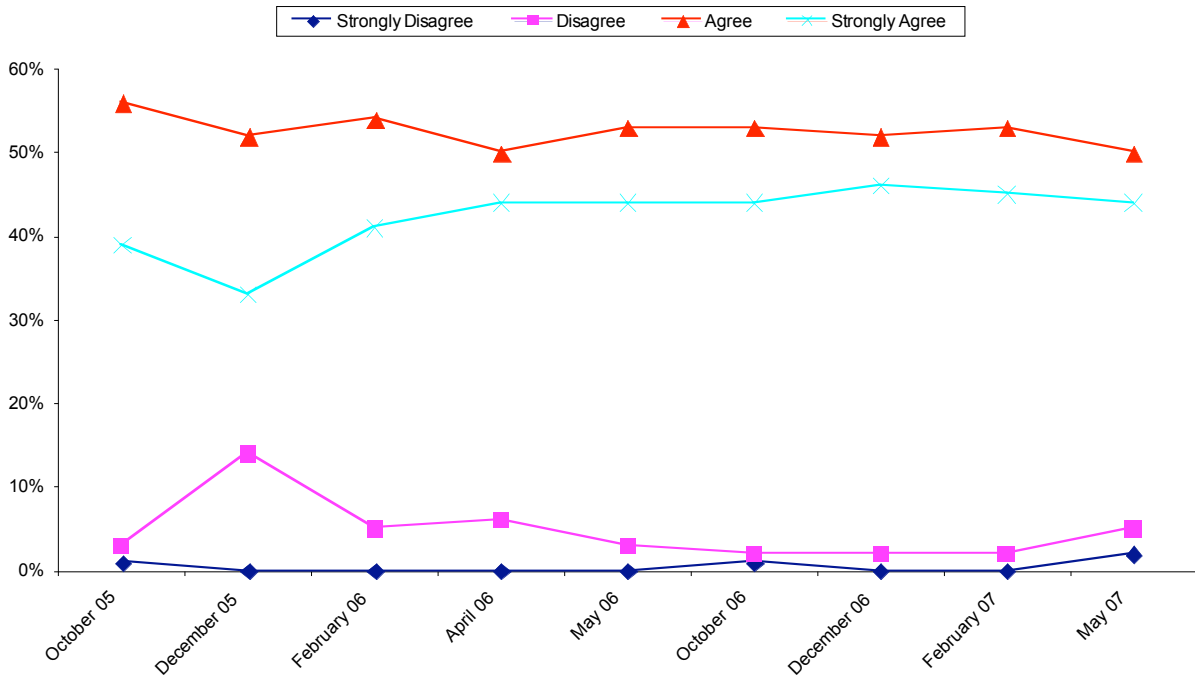
Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.



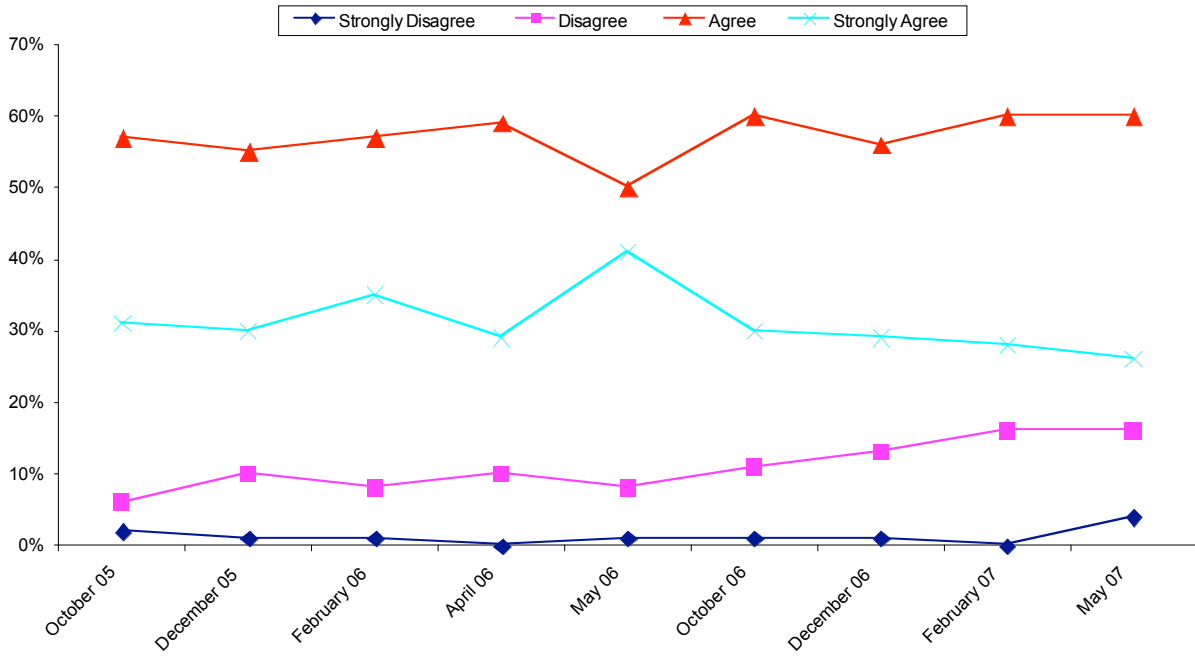
I am prepared to give students opportunities to demonstrate their understanding of mathematical concepts in ways that match their individual learning styles
Regular Group



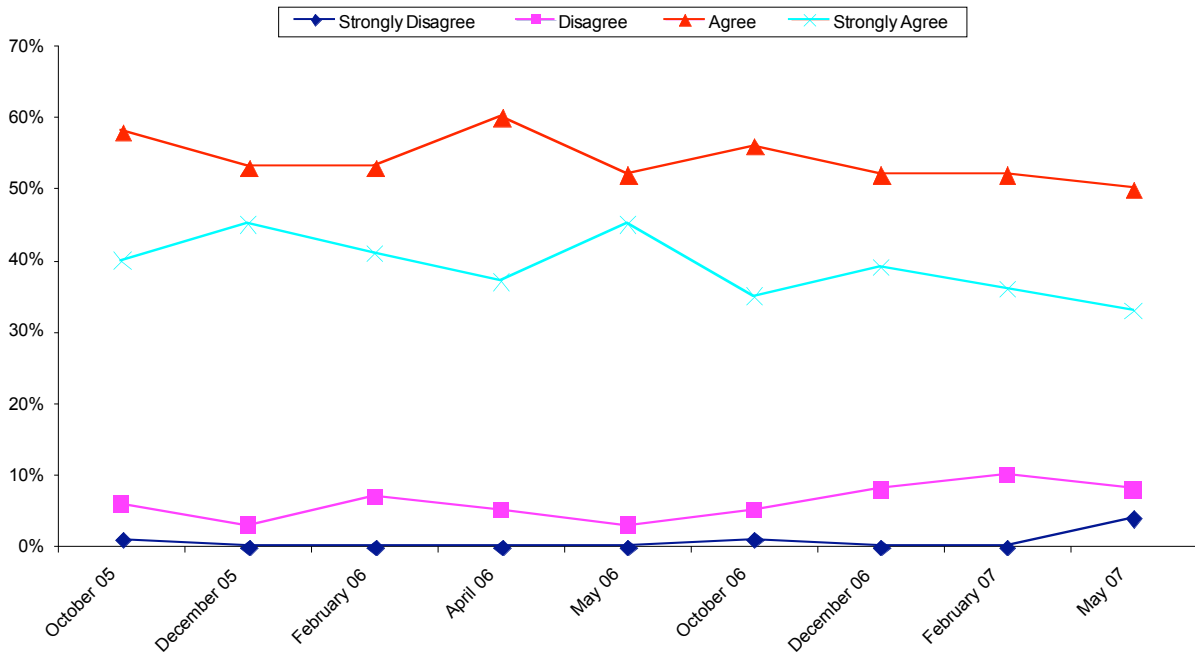
I am prepared to use cooperative learning approaches
Regular Group

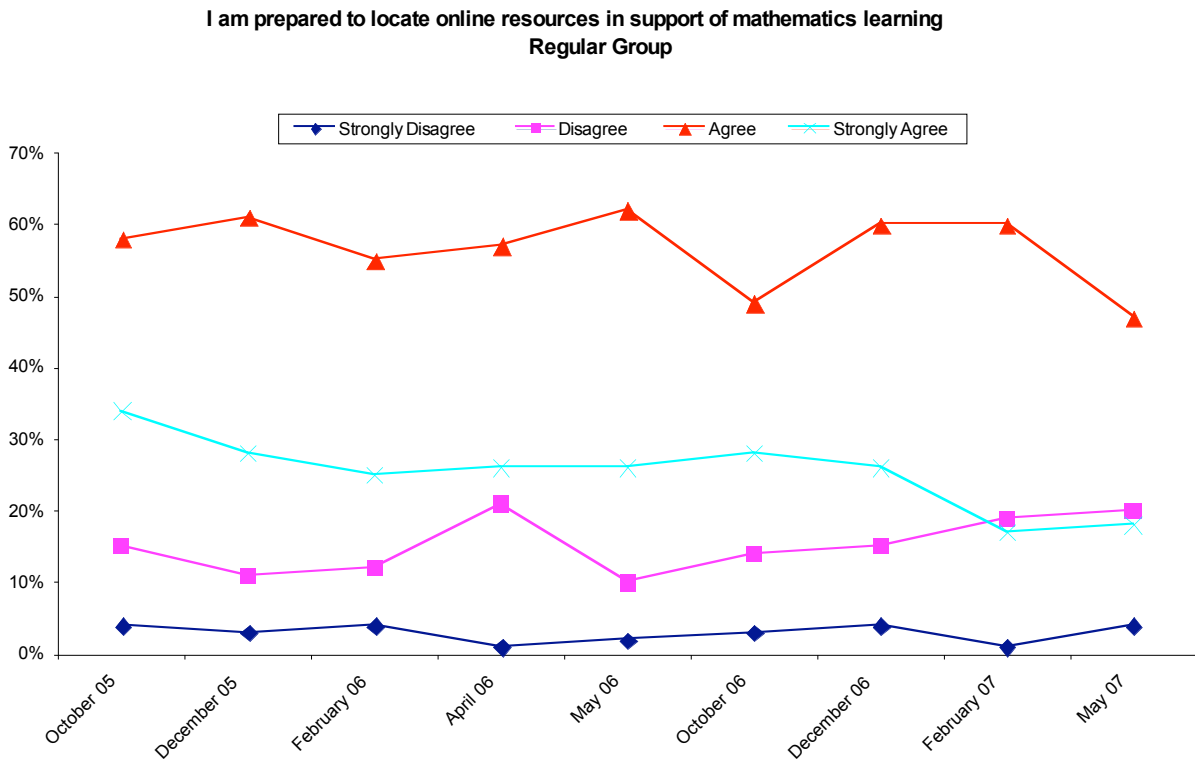
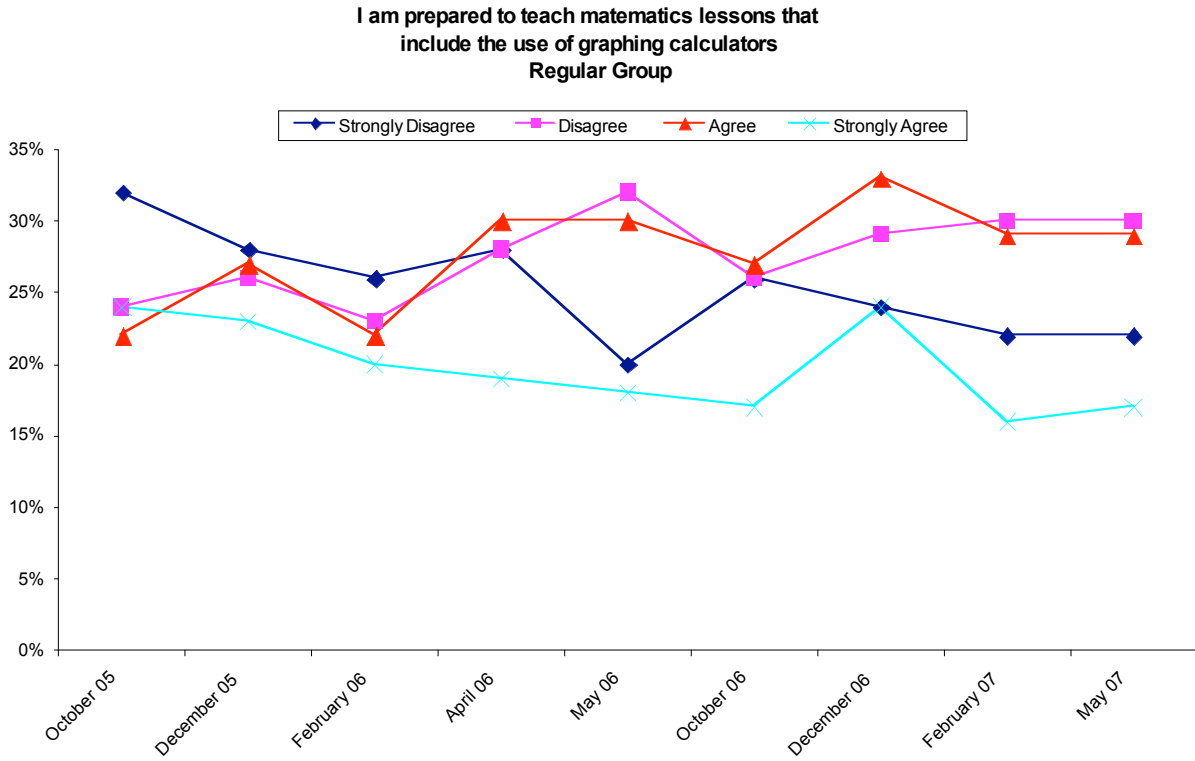


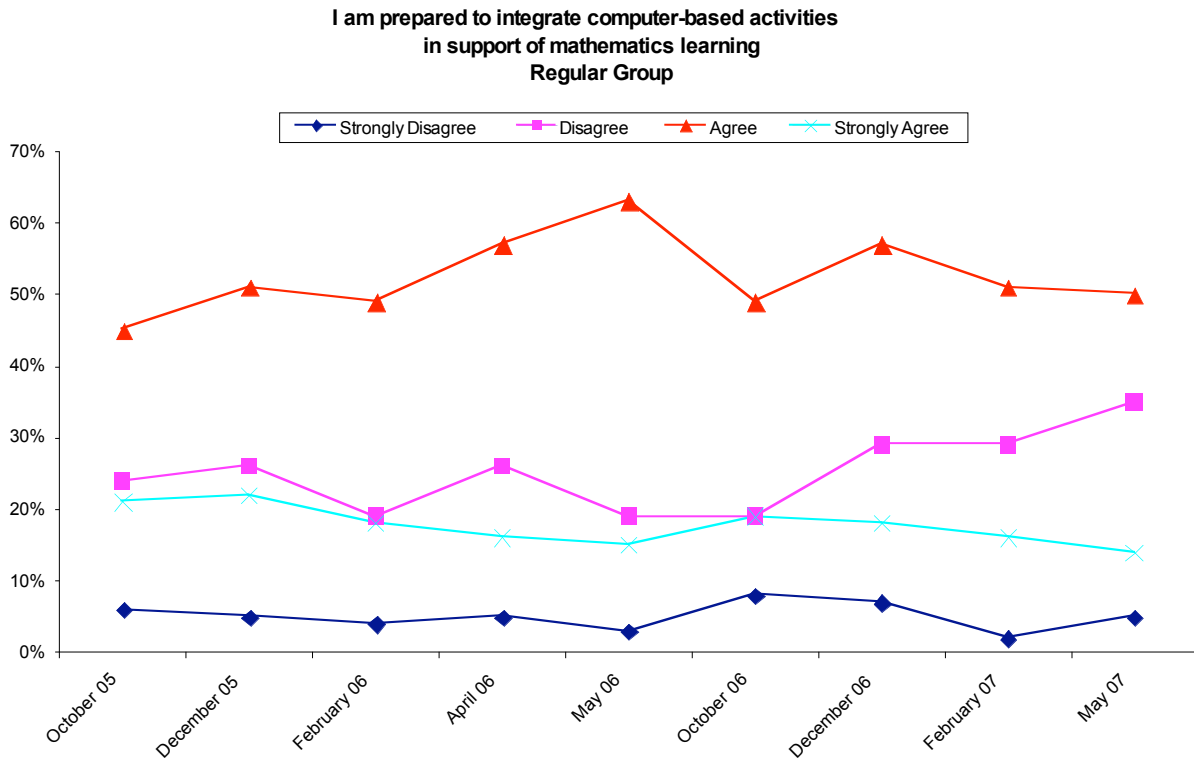
I am prepared to implement a variety of mathematical teaching strategies that incorporate problem/project based learning
Regular Group



I am prepared to involve students in hands-on, concrete mathematical experiences
Regular Group







Comments:

October – 05:

- Use of Investigation Math encourages all these areas.
- I am hoping to increase my skills in the above areas through my involvement with this grant opportunity. I would definitely like some ideas for how to incorporate technology and the tools I have available into math instruction.
- All the school computers are located in the library for students to use.
- I need more on-line resources that will coordinate with my lessons. I would like to do more of this. We do not have lots of computer time in our school, so we would need to use my laptop for this activity. (We only have one computer lab for the entire school and it is usually in use.)
- The above answers are based on what I have available
- In order to involve students in hands-on, concrete mathematical experiences I need to have access to materials that are not currently available.
- My classroom has the "highly capable" cluster of learners, therefore I plan to utilize higher level thinking & learning with computer, math technology. The HI CAP coordinator is very excited about inclusion of technology and has the pullout group doing math computer activities.
- I believe our curriculum limits us to these discoveries.
- I am interested in learning more about computer-based projects for my students. I do not want my computers to be used as drill and practice.
- I have a minor in math and have been teaching Saxon for the past 3 years. I have not had the time nor created the time necessary to go beyond what the curriculum has to offer. My

students have not had the opportunity, until this year to use technology in my math classes. I am ready to integrate that into my teaching and think they are ready to learn to use technology as a math tool.

- I only have basic calculators, which work for my students most of the time. I have not put much thought into how I would use graphic calculators. I do have 6 student computers and my computer for students to work on.
- I do not have my technology yet and I am very curious about the delay.
- My training and experience with computer-based activities is limited.
- Time is the issue in a small school like ours - it is difficult to find the time to do all of these things and still meet our requirements.
- Some of the computers in my room are not able to use.
- I do not use graphing calculators in my curriculum so there is no reason for me to 'be prepared' to use them.
- It is my belief that children learn best in an environment that encourages and supports hands on inquiry-based learning.
- Would like to take time to research more computer use in Mathematics
- I may want to do many of these things, but I do not have the ability yet to incorporate much of the technology into what I do.
- I do not really know what a "co-inquirer" is...not sure what that would look like.
- There is still so much I need to learn, but so little time!
- I am anxious to use technology more effectively in my classroom-plan to use Excel with my students during the next few weeks. Our unit project involves graphing. Learned how to use Excel during our last grant session! Super!
- I have not had much experience incorporating computers into instruction.
- The last two items are something that I am striving to incorporate into my lessons.
- don't have the material yet
- I wish the above section had something between disagree and agree - several of my responses should really be "In part, but not entirely." I marked disagree on anything that I do not feel that I am totally ready to handle. I do think I am part way there and am working on several of these things.
- I still feel inadequate in using cooperative learning though I'm improving
- I feel like our district is not supporting us when it comes to student technology. Here it is October and we have no working student computers in our classrooms. I realize they are having difficulties with the batch of computers they bought and are having to send back the motherboards, but it seems a bit ridiculous. The tech person is doing his job, but he has too much to do. We also, had to go retrieve our equipment (doc. camera, LCD projector) and install it without help because no one had time from the district office to help us. I figured it all out, but now we have improper cord usage (due to a shortage of power strips, cables, etc) and are having to stack our LCD projector boxes on books because we have not had anyone be able to install them onto the ceilings yet. Other teachers, who are not working with the NO LIMIT grant, were offered the same equipment at the beginning of the year and the district was able to install it for them (properly) right away. Interesting isn't it?
- I don't know what you meant by having students demonstrate their learning by using their individual learning style...need more details. In addition, we do not have graphing calculators to use.

- I need help with resources for problem-based instruction. I have a large population of ESL students that I need to instruct.
- I have felt comfortable with calculators and am starting to experiment with geosketchpad. I will be trying to add a math technology class to our electives at Wellpinit. We did this three years ago and that is how I became stronger with the calculator.
- I am planning on learning how to use the graphing calculator and to take additional classes on using technology and teaching mathematics.
- We have neither computers in the classroom nor access to a computer lab.
- I am knowledgeable about how to use the computer; however I have little experience using them with Math assignments. Therefore, when I am trying to implement something new I often run out of time and am unable to prepare for a computer based lesson. I am specifically talking about using software like EXCEL. I feel very comfortable using the projector and the document camera as a part of my daily lessons.
- Lack of resources is a major problem
- The issue is time. It takes time to find resources and computer activities to implement in class.
- I don't have access to a computer lab, so computer-based activities are limited.
- I would like to be offered the choice of "Somewhat Agree" as a survey response
- At this time, with the particular student body I'm working with, graphing calculators would only detract from their learning experience.
- I have learned to let students find their own solutions to problems and am often surprised and elated by their diverse methods, but am frustrated with the low level of basic mathematical fact knowledge that seems to hamper their understanding of why different methods can be used to achieve a solution.
- As soon as I have technology available to me I will integrate computer-based activities to support mathematics. At the moment I use the computer to supplement my teaching.
- I wish I could be more agreeable to these statements. I truly want to use these strategies, but I'm not there yet. I need more time to learn about them and to see how to use them.
- Disagrees are because of technical issues
- I am incorporating more cooperative learning activities such as "numbered heads" to allow more student discourse.
- I was a participant in the NO LIMITS for learning disabled students over the past two years and have had all the training through that project.
- I am sorry, but I don't know what the graphics calculator is?
- I need help doing more one computer in the classroom activities/learnings. We have very limited access to the computer lab...
- The implementation of technology in our school has been painfully slow. It is now October 21st and I'm still awaiting my laptop from the district with the proper software for it to be functional.
- It is not that I do not want to do some of these activities; my ability to do them is not there.
- We have still to receive our equipment and on-line computer access. I am sharing my the current equipment with the sixth grade teaching team for all content areas
- I need to get better at using Excel.
- I would love to use more internet resources and computers based activities and believe that by the end of the year I will be. Currently I have trouble finding time to research them and

implement them. I believe that with in the next PLC meeting or two we are going to take some time to research some of these resources and use them.

- I am not sure what co-inquirer means. I have one computer at my disposal in the classroom. The lab is available on a limited basis. My graphing calculators are TI-73. All instruction appears to be for TI-83.

December – 05:

- Looking forward to getting and working with the Math/Technology things like Document Cameras that we were promised.
- I would like to get more assistance and ideas in/for using the rich amount of computers that I have in my class to facilitate success and growth in math. They are not used to the fullest potential.
- Students will research information resources online if there is computers in the classroom for them.
- The last question (integrating computer-based activities) I answered with reservations. We do have computer labs, but there is only one for 25 classroom, and the librarian often uses it as well. This causes a lot of scheduling conflicts and limits the amount of time we can use it. I have only three computers in my class that students can use to access the Internet, so our activities are limited.
- We have only one computer lab for the entire school, so it is almost impossible for my students to get computer related lesson activities. My remedial math class is more likely to get that opportunity because it is later in the day.
- Limiting factors is my knowledge of computers
- Lack materials to provide concrete materials for hands on experiences
- Our district will not allow students to use the NCTM Illuminations interactive applets. I have tried to get them setup.
- I would like to be able to integrate computer-based activities more regularly-I feel a time crunch to cover the investigations in our text.
- To be honest, I do not have enough time to research and investigate the internet during the school year to come up with technology-based projects. I have created such projects during my summer break in other subjects, but once our math program starts, it takes anywhere from 60 minutes up towards 90 minutes of class time per day. We break it up with mental math, use of student white boards, teaching new concepts, homework review, and then the daily lessons. When I do schedule activities, it's usually on a Friday, where we break away from the routines.
- I only use computer-based activities with the whole class. I do not have computers for more than one student at a time.
- I don't think my students would benefit from the complicated use of a graphic calculator. I have basic calculators for use.
- It is a "work in progress" for me to change my style of teaching.... I am learning.
- Finding time to do all of these and still be ready for the WASL is the issue.
- We don't have any graphing calculators and I haven't used them in a while.
- I could still use help on the statements that I agreed with...
- My class does not use graphing calculators- we do not need them we use regular 10-key calculators with basic functions.

- If I could get the technology working properly and hooked-up I could use it.
- This is the first year I've had a document camera or a projector, so I'm learning as I go. I need to research good websites more.
- There are time constraints to incorporating problem/project based learning. It could be done once I teach Investigations more and see those opportunities. I think geometry has huge potential for that.
- I don't have enough technology to integrate computer-based activities yet. I only have 5 computers for student use and 23 math students. I'm just not comfortable with the management of that. I am not prepared to teach pre-algebra using manipulatives at this time. I have very limited knowledge.
- There are not enough minutes in the day for me to learn every new thing that comes along nor is there time to use even all the tricks I already know.
- While not well prepared in these areas, the no limit training is helping and I want to be able to do these things. I don't like the answers I have to choose from.
- I am still coming to grips with many of the issues above. Have not actually done too much research on online resources other than NCTM's site.
- While I am prepared to do these things, I don't always have the time to do them well.
- It is difficult to do all the above in one lesson. Some of these I do over a period of time with separate lessons. My class works better individually than as a group. However, at times they exhibit good co-operative behavior for lessons not related to math.
- I need updated computers for my classroom.
- Our curriculum is already full. If we take extra time to do more than problem solving once a week, we won't make it through the curriculum for Everyday Math.
- My sixth grade curriculum does not have a graphing calculators unit. In addition, having the students all work on a math concepts computer assignment is not something that I would seek out to do at this time. No time to research the site and to get the computer lab reserved. I feel I have better things to focus on right now.
- I shared with Katie and my cohort at the last meeting that I feel like I have reverted some in my teaching. I get overwhelmed with all there is to do in teaching and slip back into old ways. My solution was to focus talk moves during the entry task that was a smaller chunk of instruction.
- I believe I have started to use computers more often to supplement my teaching strategies.
- All levels are developing. I feel I am improving.
- The questions related to having a specific math class are not applicable.
- I never had the benefit of learning how to use a graphing calculator. Because of this, I am not "prepared." Does using a calculator help students understand mathematical concepts?
- I am stronger in certain Math concepts than others and that would determine how much technology I use when teaching it. The stronger I am in a Math concept the more comfortable I am using technology and other resources.
- Need hands on help
- I had graphing calculator training and it went well at the time, but I haven't had the opportunity to use it so I don't feel I remember it well enough now.
- It is hard to teach class lessons on computers since we have limited access to the computer lab.
- The only thing keeping me from locating online resources is that it is time consuming. There is a lot of poor quality activities that waste time in seeking the good ones.

- Access to technology remains a key problem at Summit K-12. Our students come from homes that are frequently too affected by our present, Federal Government's lack of concern for the needy and, subsequently, have little or no access to higher tech.
- I'm getting better!
- Physical specifics of our building allow very limited access for my classes to work on computers. There are no student computers in my room.
- Time to prepare is always the problem. If I had the time to get materials together, I would be better able and more likely to teach hands-on lessons.
- Daily.
- Not enough time to cruise the internet looking for applets, etc. My laptop is not hooked up to the internet in a safe classroom environment (cord goes across the room to the front, and I don't have a cord long enough; I would have to buy one or borrow one from another teacher) to use it in front of the whole class. So using the applets is inconvenient and not practical at this point. Working on it.
- There is not a computer lab where we could go as a class to use the sources online.
- Agree means better than before but not sufficient
- With the lack of access to the computer labs it is more difficult to use the computer technology on a regular basis. I do use a laptop and Smartboard along with the document camera.
- I can't integrate computer-based activities when I only have a teacher computer.
- Lack of time and computer availability... I still haven't even gotten my NO LIMIT laptop.
- Still need hardware issues resolved in order to get efficient access to online resources for students. Currently no functional student computers in classroom
- I would like to do these things, but I am unwilling to spend a lot of my own time researching/testing these things.

February – 06:

- The students need computers to type their assignments due to complains from other students who can't read others hand writings.
- We are limited with computer access time--and we are limited on which on-line sites we can access. It takes days to get a site added--by then it is often too late.
- Having a lack of computers for student use really limits how much Web based, or interactive software I can use effectively. If I had enough student computer time then I would do more of this!
- If I indicated that I am not prepared to teach or integrate mathematics learning, I am answering these questions in accordance with the amount of technology I have or do not have in my classroom, available for the scholars' immediate use.
- I feel completely comfortable trying out these new ideas and practices. Finding the time to implement some of them is another matter. We are on a WASL timeline now.
- I am working at getting better at Web activities
- I am prepared to support online computer-based activities, but it is difficult when the district does not support our NO LIMIT team. We do the best we can, but have had many hoops to jump through
- I do wish that I had curriculum that supported my hands-on, deeper understanding mathematics

- I enjoy incorporating technology into my math class but need some examples, or instruction as to how to do it more often and more efficiently. I have found some great online resources, however I have a hard time adding to our class time. I will probably feel more comfortable next year when it's not the first time that I'm teaching CMP. This year I am trying to keep my head above water with CMP and changing my style of teaching math.
- Graphic Calculators are over my students' heads and we are still working on calculation skills and basic numerical understanding.
- I am not sure what is meant by "co-inquirer" in the first statement.
- I frequently struggle with the 'hows' and 'whys' of inquiry based math.
- More training would be great - or if we were given a list of great activities that have been used by other teachers or websites that are effective, that would be helpful as well.
- I have the equipment but it is not set up because of my classroom's electrical needs.
- Bits and Pieces 1. I had my students go the computer lab and I found a site called Fraction Frenzy on equivalent fractions students had great fun and learning at the same time
- I have no graphing calculators. I've never been trained to use them and don't understand their application in 5th grade.
- I like the tech. and lessons I have but am not comfortable with things I am not familiar with.
- I only have two student computers in my room so that makes it difficult (unless somebody shows me how to do it). I have never used graphing calculators at 5th grade and I'm not sure that they are necessary with our curriculum.
- We are always in the need for time to visit sites and learn from others what is out there. Therefore, there are things I am doing, but there is always room to find out what is bigger and better out there.
- Need training in above
- Still struggle to find the time.
- The computers in my classroom are virtually useless.
- I do not I have the time to research lessons that may enhance our regular curriculum. Our curriculum takes most of our math time.
- We have 40 graphing calculators for the entire student body.
- I believe I am prepared to do most everything in the classroom. Our biggest problem is time. A lot of the activities that I would like to do would take to long. We only have 50-minute classes and a lot of material that needs to be presented before students take the WASL.
- I am going to work on learning how to use the graphing calculator.
- I've really never taken the time to sit down at the computer to search out computer-based activities for math. I have done scavenger hunts with Social Studies and reading projects, however.
- My Smartboard was just installed today, so I will be learning it and using it frequently in the future
- Not applicable, I facilitate our computer lab.
- I would like to have more training and computers in my room for the students to use in math.
- With 25 plus students in each class and only 7 computers - doing class wide project/activities on the computers is challenging.
- I am probably more prepared than this indicates. I don't do as much project and hands-on as I would like because of the pressure to keep up with the standards.
- Don't have the computers to do so. The computers in the labs are too slow to run many of the programs that we could use.

- The "online" part sometimes doesn't work because my computer seems to have difficulty getting online. Other than that, I'm prepared to locate online resources in support of mathematics learning.
- We have no access to enough computers to do anything computer based
- Computer-based activities for all kids require an accessible computer lab.
- Finding time to locate and use on line resources is major challenge for me. I find myself with no time to look for these items or implement them.
- I am highly qualified and always prepared to implement any type of instruction.
- I have yet to incorporate use of computer-generated lessons with the class. There are no individual student computers. The only one students can be involved with is the laptop from the grant, and I am hesitant to allow students to use it, even within the context of a lesson employing the LCD.
- Our computer lab still does not have student access to applets available due to filters put on by the district. I can use my computer to show up applets to introduce ideas, but there is no follow-up available for students to work individually on an applet. It is very frustrating. In addition, I don't have the time needed to look up an appropriate applet that goes well with the lesson. I wish I had more time to coordinate my Investigations Curriculum with the applets that are available out there.
- Don't have any student computers, just mine.
- I don't have a laptop or computers in the classroom. With the class I have I want to keep them in the class instead of using the computer lab that is in a more open area with the ability to disturb classes.
- The problem is always the amount of time I have to prepare for the lessons!
- I am a bit freaked out about teaching graphing calculator activities. I am planning to ask my NO LIMIT Math Coordinator to demonstrate. Part of the problem is the lack of the calculators. I have been introduced to some great activities, just never been able to try them.
- Not enough computer access
- I do not have the classroom set-up/hardware/connections to have students involved hands-on with internet- or computer-based activities.
- I use Connected Mathematics in my class and I do not have the time to do all the group work suggested, so I do not feel the need to extend lessons by getting online.

April – 06:

- There are a few key components that would greatly enhance my math instruction. I.e. Smartboards or Qizdom units.
- We are very limited on access to technology. Three computers in class and problems in the computer lab accessing sites and/or scheduling time.
- We don't have graphing calculators in our classroom. Though I have had a little training with them through No Limit, I need a lot more to be competent in teaching with them. I have asked for further training and expect they will help me with this.
- I feel that I am strongly prepared to try new things, strategies, and incorporate technology in my classroom. In my short 5 years of teaching, they have become necessary tools, but also lesson enhancers.
- I am prepared to teach with online and computer activities however my students have no access to computers

- Online activities, such as Illuminations, are a great opportunity for students, however, rarely have opportunity to use, due to lack of computer access.
- Only one computer that can be used by students in classroom...supposed to be getting a couple soon. CMP2 has good web sites that reinforce concepts with the lessons.
- I feel like I am weak in the area of integrating computer-based activities into my math class. There are a number of factors. Two of which are time and knowledge.
- I have been using ThatQuiz.com as an extension and review activity for students that have their work finished (when others need more time). I really like it and it is FREE.
- Lack of time is the only issue
- I have had a couple of training sessions in the use of graphing calculators as part of the No Limit! training. I don't own any for my own classroom. I could borrow some from either the ESD or one of the 7th.8th grade teachers, but to be honest, I have so many other new things I'm doing with my math curriculum this year, that I've barely begun to think about implementing graphing calculators.
- This continues to be a struggle for me.
- Graphing calculators are not used in the 6th grade. We only have basic calculators. My preparedness in the other questions is not due to No LIMIT.
- I am learning to incorporate more technology into my lessons. I'm using the projector and computer much more frequently. I probably don't use the document camera with student work as much as I should. That's my next area to focus on.
- No graphing calculators nor computers
- In our 5th grade program we have never had a situation where students were expected to use graphing calculators. I wish I had more problem/project based math situations to offer the students.
- I still need practice and time before I feel competent with a graphing calculator. I also need more time to find effective ways to use the computer as an instructional tool.
- I'm actually realizing that I'm not nearly so prepared on some things as I thought I was. In particular, this grant has shown me a lot of online resources to use, but while I'm comfortable with technology, this does not mean that I'm actually able to find the time and best methods to integrate web resources into my classroom. I think that my ability to teach math has improved greatly this year, but in some ways I feel I actually have more to learn than I did - mostly because now that I'm really connecting with my students, I'm able to see more gaps than I used to. I'm very comfortable with cooperative learning, but I am not always able to provide a variety of ways for a student to demonstrate understanding.
- Being prepared to do it and finding the time to do it are two different things. I believe I am prepared but I don't often have the time it takes to do it.
- my knowledge base grows each year!
- My struggle is the fact the computers in my room cannot support most modern software nor can they handle the interactive math activities on many Internet sites. I finally (think) have the laptop the school is allowing me to use functioning without glitches... I share my room during my planning time with another teacher... so, it is hard to find time to play around with my document camera and get things going.....
- Until I become better at using the computer, I probably will not try to use it because it takes me so long to get to the right lesson.
- Have only one set of graphing calculators for whole school.

- Some of my answers changed about being prepared for hands-on activities and projects because of the geometry content and I had a limited amount of ideas for quick access.
- I'd really like to learn how to integrate computer based activities for math in my classroom. I do have a laptop, but use it mostly for data recording.
- Some things that I disagree with are because finding time to research or use that is difficult.
- I have really enjoyed teaching the Investigations curriculum this year. Math has become one of my favorite parts of the day.
- Given the time to prepare the actual lessons, most of the above is possible. The size of classes (over 30) is a limiting factor.
- Time limitations on preparation using technology play a role in how much technology can be implemented.
- I have no student computers in my classroom.
- The last two I am very weak in my ability, so do not do it readily. In addition, I feel my math series has enough for them to do and have not felt the need to supplement in math.
- No classroom computers for student use.
- I would do more computer-based things if I had some guidance and input from another colleague who has done it.

May – 06:

- We are very limited in accessing computers for the whole class.
- I need a lot more help with graphing calculators. We did have a couple sessions on this, but it went too fast for a beginner like me.
- I need more courses in differentiated instruction and using computers more effectively to support learning.
- CMP2 program has site connections for activities and multiple-choice practice for the concepts presented.
- I would like to see NO LIMIT! use part of the regional meeting time on graphing calculator training. I don't know this well. This would be a fun activity!
- My students don't have access to graphic calculators and their skills are low that I focus on that more than graphic calculators.
- I am a teacher that has my classroom set up for scholars for activities from pencil and paper, object to concrete level, and to the level of technology. Where ever the scholar's are my job is to take them as far as I can motivate them to excel to the greatest potential.
- It is my goal for the 2006-07 school year to have the students use graphing calculators more. Our school district will, hopefully, be purchasing calculators for classroom use.
- 6th grade does not currently have a use for graphing calculators so I do not use them in class.
- I still need to do more exploring with the integration of technology into my teaching. I want it to be a tool that supports learning, not a gadget that can get in the way of learning.
- I don't use graphing calculators in 5th grade. Because I only have one working computer in the room I also don't use software. I would like to have training on how to integrate tech in a one-computer classroom.
- Need more professional development to stay up with the technology.
- Technology has become an increasingly important part of my classroom over the past year.
- I have not focused on online resources or computer activities, though we've talked about both during our No Limit! training. We have one computer lab at school, and it's usually booked. I have three computers in my room available to students, but this does not go far with about

27 students in my math class. I've focused on the camera and projector this year. I think it's better to integrate slowly, but more meaningfully and in depth rather than a little bit of everything.

- I need more computer-based activities...
- My four classroom computers are nearly useless... they are outdated ... slow... cannot support new software ... cannot run online programs. I have reported this to my administration and computer services....
- I often visit an online interactive math dictionary to help kids get a visual with a definition of a math term. This is the only online resource I use. There is so much material in the adopted curriculum- Connected Mathematics Project- I just stick to that.
- Only teacher's laptop is in the room and I don't allow students to access it. I can connect it to the projector for lesson purposes.
- My classroom activities have become much more technology and project oriented over the years of my involvement with No Limits.
- I just recently started using the computer, so I haven't had much opportunity to search out different websites to use with the class.
- I am the technology facilitator at my school.
- I have yet to have access to graphing calculators--nor really demonstrate a critical, curriculum-based (CMP) need for them at this time. Perhaps next year.
- My students do not have daily (or even) weekly access to computers. scheduling of the lab is tight. The entire class must go to the lab as a unit.
- finding appropriate online materials is a very time consuming task
- Not enough computers in my room
- I feel prepared for using computer-based activities; however, our facilities are very limited for class wide computer use.
- I have asked for a couple of computers to be in the class so the students can access the applets and other math next year.
- The fact that the grant has been discontinued will now hinder my ability to learn and practice further.
- I have gained a lot of different strategies using technology this year, thanks to the grant and Brent Howard's expertise. I still need more work with the graphing calculators to feel comfortable using them with my class.
- I need to make better use of manipulatives.
- This was not provided by the people at No-limits. It was one of my pet peeves that we didn't dedicate more time looking for applicable resources
- Not enough computers and graphing calculators for students to access.
- I am getting stronger in some areas but am not confident by my self. Also, the math program is so full of ideas I haven't seen the need to get on-line for more activities.
- I feel I still need training when working with the computer and graphing calculators.

October – 06:

- I am prepared, but time seems to be an issue. Such a time crunch; more this year than ever. More expected during the day, no more time.
- Limitations in on-line computers continue to be a problem
- I am still really shaky on the use of graphing calculators even though I have them in my room. We have had two trainings, but it wasn't enough for me.

- I am prepared, however, that does not indicate that I have the materials or resources to carry out these items
- We do not use graphing calculators in 5th grade, but I have personal use with them.
- I have no student computers in my classroom and it is difficult to take an entire classroom of students to the lab.
- I am wondering if the ideal of "every student understanding of mathematical concepts in ways that match their individual learning styles" is unrealistic given time and resource constraints.
- I need more training in how to teach with a graphing calculator
- Finding the time to go on-line to find the resources to help students learn on the computer is very time consuming.
- We do not use graphing calculators in the 6th grade.
- I still need more in-service in using and trouble-shooting the graphing calculator.
- I created a protopage site for my students to use. They can find the homework and online support for the concepts they are exploring.
- I teach 5th grade so I don't believe there is an application for graphing calculators. Computer based projects are tough because I only have 3 computers in my room. I would like some instruction on how to utilize the ones that I have.
- I am continuing to work toward having more than 1 functioning student computer. Our building is very dated and new technology creates many challenges (blown circuits, etc.)
- The activities I see in Investigations (a fourth grade district sample) lets me see the great possibilities are out there for project based learning. I do not feel I know how to create these on my own or have the time to think of them and create the paperwork. I try to take from various resources and change activities in our district text.
- I facilitate a computer lab.
- Don't have access to computer lab
- My classroom lacks manipulatives. I would like more for many of my lower level learners. However, we're very creative and am able to make sense of most concepts.
- Have graphing calculators, but have not used yet, plan to
- Difficult to schedule time in the computer lab
- I am prepared to give students hands on concrete mathematical experiences on a limited amount of topics.
- The Saxon curriculum does not lend itself to inquiry based instructions, although, we continue to work at integrating the two diverse approaches to math instruction.
- I don't have access to computers to use on line materials regularly.
- This is the first year that I am using on-line math sites to extend the students' learning of concepts. I have always stuck with the math curriculum. I'm venturing out!
- I am teaching 6th grade this year (a new math level) having taught 5th for the past 4 years using Everyday Math. I'm finding some difficulty in teaching some of the newer skills and concepts that are strange to me this year but I find it challenging and actually like the 6th grade math more than 5th.
- I suspect my answers will change frequently to the above questions. I have great weeks, and not-so-great weeks with mathematics instruction. However, it is the one area that I want consistency and improvement with teaching practices. I am so glad to be on this PLC!
- My students are very ready to willing and able to research geometrical information online as a final project.

- As a new teacher to the material I do not have the time to explore all the avenues available to me. I also do not have the access to computers to involve the students in computer-based activities.
- I have a low 5th grade math class. They can barely use a regular calculator, let alone a graphing calc.

December – 06:

- Very young children
- There is always room for improvement.
- We do not have enough student computers to have my class use them.
- I do not have access to student computers in my classroom. Getting students to the computer lab is very time consuming and does not usually correlate with our pacing chart.
- These surveys are getting tedious
- I only integrate computer-based activities when I see they are needed, not because they are available.
- I don't have graphing calculators and am not sure they meet the need of WASL preparation.
- Graphing calculators are not used in my grade level
- Lost all websites when our school burned down.
- I let students use the Everyday Math games on the computer, but I'm reluctant to let them use the web because of all the messages that pop up. I am aware of NCTM's Illuminations, but have not taken the time to connect them to classroom instruction.
- Graphing calculators aren't used in our 5th grade curriculum
- Need time to collaborate to find resources to incorporate into the classroom.
- I am a computer lab facilitator
- With reduced focus on inquiry based mathematics this year it has been difficult to coordinate and provide adequate opportunities to do inquiry
- If you don't have the computers available it doesn't matter what you know you're not prepared to integrate computer-base activities into your classes.
- I would love to integrate computer-based activities, but the hardware and software is not available.
- I have to go to a computer lab to have use of individual computers.
- I would like to spend time searching for mathematical games and resources on the internet. I also need time to play with these as well as downloading them to each computer in my room.
- I am capable of teaching and using graphing calculators, however, they are not available to the 6th grade classrooms in my building.
- The classroom computers in our school do not support online programs and are too slow to support math software programs.

February – 07:

- We are severely limited on the kids accessing the internet due to limited number of computers.
- We do not have access for students for regular computer access. At best it would be once a month, so this is not a viable option.
- May need some training myself first
- Need more computers to be able to have students get their hands on them.

- I am not prepared for the two above, because I don't have graphing calculators or classroom computers
- I need more training in the area of technology-hoped our PLC meetings would address this area. They do not.
- Since we have Everyday Math curriculum, it is very vigorous and we spend so much time doing the program, it's hard to get computer time.
- Wish I had more student computers
- We do not use graphing calculators in 6th grade.
- Using online websites is not something I am comfortable with due to the amount of cookies, tracking devices, and other computer destroying, and system crashing items. We had math websites up for kids to use until one of them caused our whole district to shut down while it was being located and contained. It would be nice to have a list of SAFE internet sites!
- I have only a couple computers in my room and limited access to a computer lab. I also do not use graphing calculators because they do not fit with 5th grade curriculum.
- We recently explored savings with interest over a long period of time using computer spreadsheets and graphs.
- These ratings are sure affected by my mood. Not very scientific feeling to me.
- I'm not sure how to go about using the computer for math when I only have 3 in my classroom with 21 students. I'd really like to learn how to set up sites and incorporate it as part of the students' enrichment learning.
- I facilitate a computer Lab.
- I don't have graphing calculators in my classroom.
- Lack of a computer lab limits some strategies to demonstrations with discussion, but demonstrations allow directing inquiry and focusing direction of inquiry
- Need more coaching on using computer based activities in support of mathematics learning
- Computers for students not available in classroom
- Integrating computer-based activities is limited to my one computer with Internet being used with whole class lessons. I do not have facilities at my school that would allow me to have students use these programs on their own. It is frustrating that except for 12 computers in the library we do not have a computer lab for whole class instruction.
- I love when kids find different ways to do a math problem... even if it doesn't work, we try it out, but when it works, it is fun to name it after the student and share the 'knowledge.' I have learned a lot from kids when they have shared how they solve problems....
- Computer based activities are very rare due to the size of our student population and the fact that we only have one computer lab available to the school.
- Our computer network is weak and too difficult to plan to depend on computer/internet access during class time.
- We do not have the flexibility to develop project based learning to its potential.

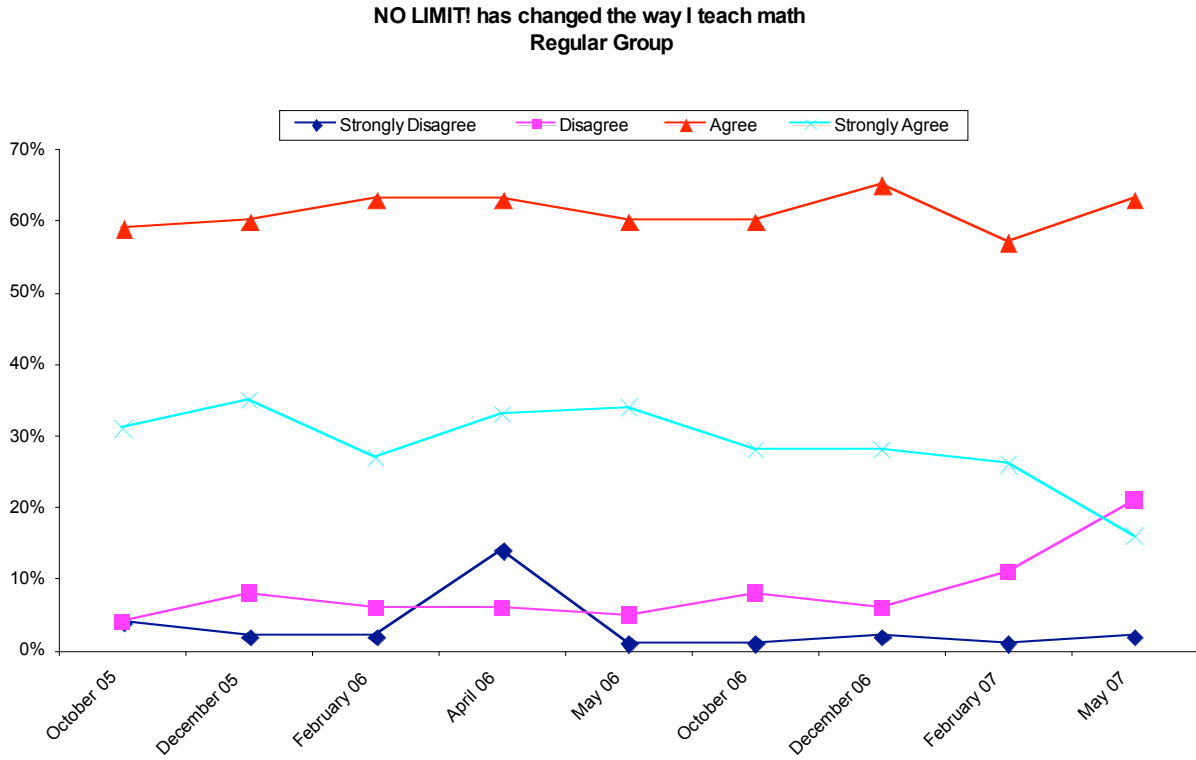
May – 07:

- Our math coach has helped in using tech.
- We are severely limited in access to computers. Our lab is often booked up and we have only three student computers in class with on-line access.
- We have little access for students in terms of computers in our school. I am not very competent in the use of a graphing calculator. I know some skills well, but mostly I don't even have a grasp of the functions and how they work.

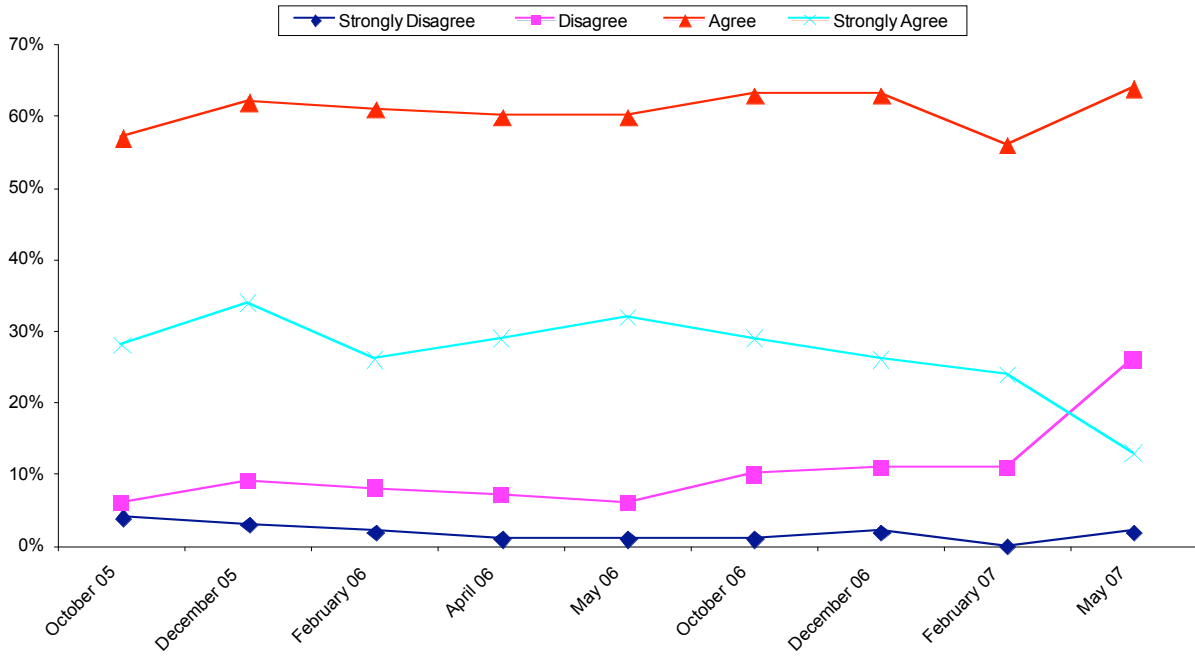
- We only have a school set of graphing calculators. I am working on project-based ideas to implement into my curriculum.
- I was looking forward to more training in these areas.
- I have most difficulty finding enough computers to have students work on projects together.
- Students use computer based applications including Excel fairly regularly; and Logo programming as part of a geometry project.
- Many of my students have signed up for the online Aleks program. The other students work on Addison-Wesley computation. I feel students need practice with math computation, something Investigations does not offer. This is my first year with Aleks but my 6th year offering computation worksheets.
- We don't use graphing calculators in the 5th grade.
- As far as the computer-based activities are concerned, it is very frustrating that Lochburn does not have a computer lab available for math teachers to use in-group lessons. There is a lot of great software out there that would enhance what I am teaching, however, with one desktop computer in my classroom and one laptop, it just doesn't work. Everyone who knows anything about education understands that the kids learn more successfully by doing it themselves, rather than, watching me do the activities.
- I need better equipment to incorporate computer based activities
- I have a math literacy class of 22 students using an online math program called ALEKS
- Graphing calculators aren't used at 6th grade, so I learn that materials, but haven't had a place to put them into action... if I had to I would/could
- I still have not mastered the smooth integration of on-line resources into my lessons. I have done this more this year and plan on continuing to build this into my lessons when possible. It does increase student engagement.
- I would like to include more computer-based mathematics in my classroom.
- That the present time I do not have access to graphing calculators, but it has not been a necessary instructional material.
- I've found that along with lessons that are verbally approached and have something to look at are fine, but hands on learning is extremely important in reaching many more students who learn better spatially and are tactile learners.
- I have had little to no experience with the graphing calculators.

Item 14:

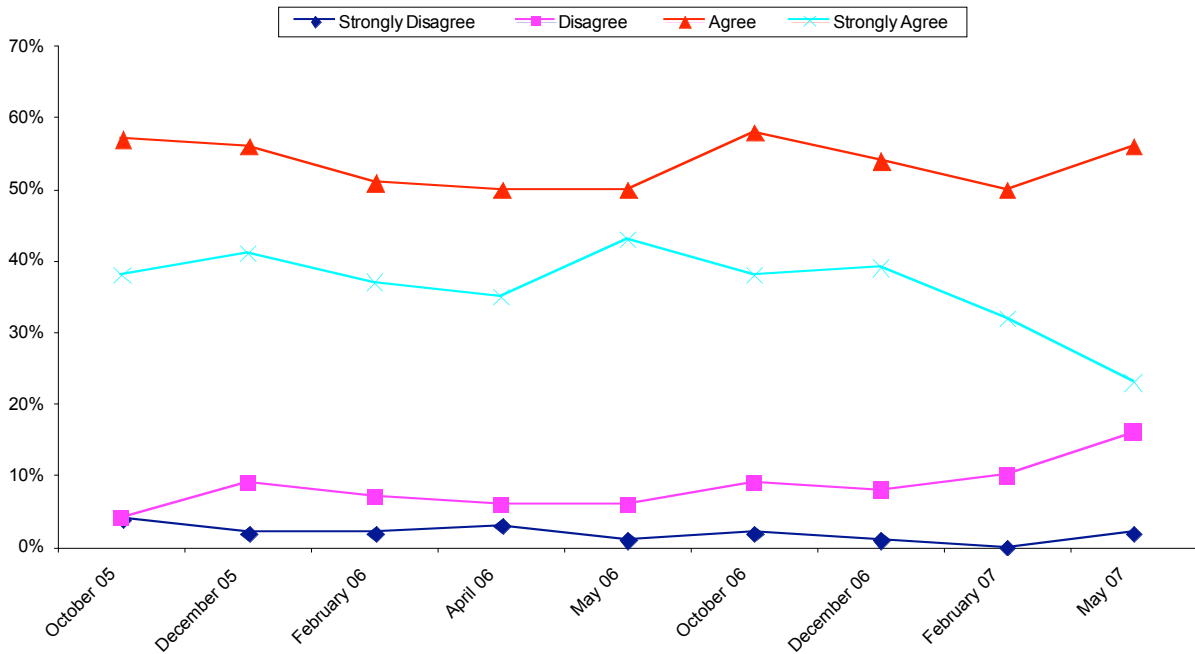
Please tell us how NO LIMIT! Has impacted your classroom. We are interested in your frank responses.



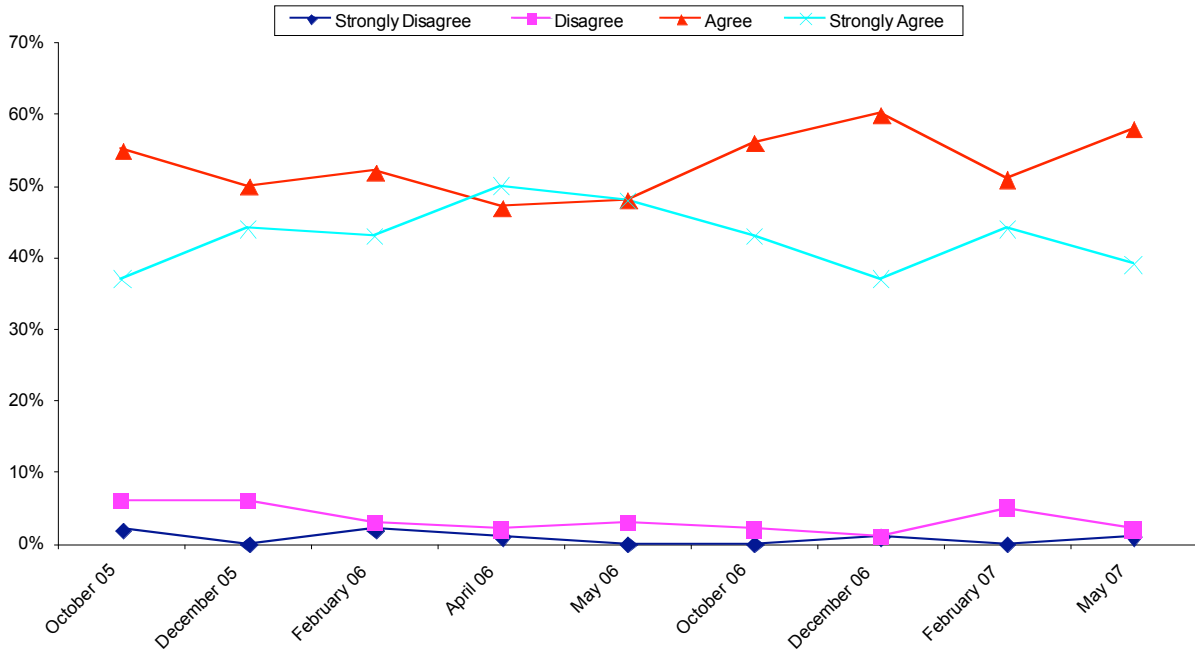
NO LIMIT! has changed how my students learn math
Regular Group



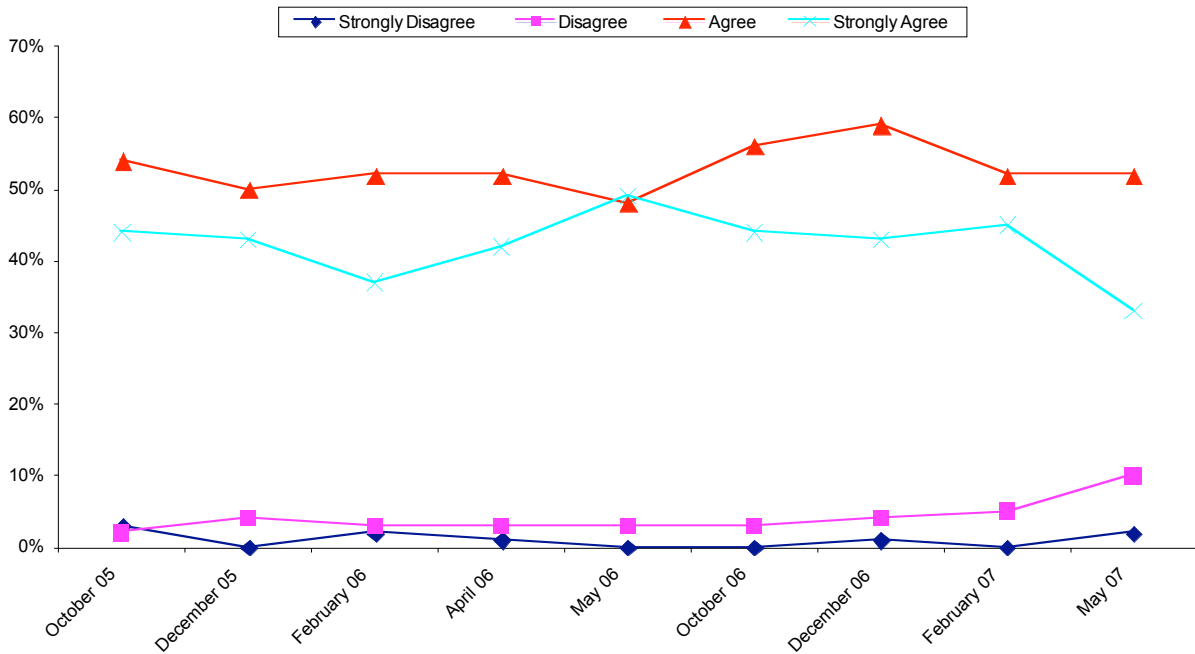
I feel more comfortable using technology to teach math
Regular Group



**My involvement in NO LIMIT! has benefited me
Regular Group**



**My involvement in NO LIMIT! has benefited my students
Regular Group**



Comments:October – 05:

- Being able to meet and discuss with other staff members within our district and outside our district has benefited me in listening to other ideas and bringing about a better understanding of mathematical thinking in children.
- I can't say that much change has occurred yet as we have not had meetings with the coaches or each other. The beginning of the school year has been filled with beginning of the year meetings, activities, building requirements. I am looking forward to the sharing among participants in the grant so that my involvement in No Limit will ultimately benefit my students.
- The students need some technology devices in class
- I already had a constructivist math philosophy
- Being able to use student work to teach math and also to give students the opportunity to showcase their work has been a total blessing. I can't wait to integrate more on-line instruction as well.
- NO LIMIT has enhanced my attempts to help struggling students visualize math and begin to understand the why's of a concept.
- What has changed the way I teach math is being trained for a week in Investigations. The NO LIMITS! workshop was not centered on technology use, it was focused on Learning Communities. I barely got any training on the use of the document camera and projector.
- At this time I can not answer the questions since nothing has come our way - yet
- Too early in the grant to fully tell the impact of the NO LIMIT! grant. Technology has not made it into the classrooms yet.
- I don't feel that the No Limit! has changed how I teach math but rather helped me and supported the changes that are already occurring in my school and district.
- This year I feel we haven't received the support from our district for the no limit hardware installation. We haven't had much support from our ESD because of our district's lack of help.
- We do not yet have our equipment installed. I look forward to getting it to begin to benefit from the NO LIMIT experience.
- Katy Absten has observed and taught lessons that I have gained a tremendous amount of insight from. Our group debriefs and the information is extremely valuable to my teaching. I am able to discuss instructional strategies and apply them to my teaching.
- Again, curriculum
- The doc camera has certainly changed my teaching and student learning. It is amazing to see the change in student work and participation when they know their work will be shared with all to see. It really enables the students to learn more from each other and from each lesson presented.
- At this time my answers would be more neutral than either disagree or agree.
- Getting new technology is the thing that has benefited me and my students the most at this time. I don't feel like I have gained any greater knowledge or understanding of math as a subject area because of the grant, yet.
- Haven't used anything yet-no equipment, not sure what it is, etc.
- Still lots to see, do, learn and incorporate into my class.
- I don't have my technology yet. I also found it frustrating that the training in August was completely devoid of any training on how to use technology to improve student learning.

- I have no idea about the answer I marked below but had to mark one to go on
- The document camera was immediately beneficial and has huge potential that is only limited by my imagination and creativity with it.
- It still feels early in the year to say that No Limit! has revolutionized the way in which I teach math. I can see potential for more change as my students and I learn together.
- As I learn more I think my students will be able to use the technology more - in a way that changes the way they do math but we are not there yet...
- I have not seen the technology yet for my class and most of the things that we trained on over the summer had already been incorporated into my class.
- We have not gotten our grant off the ground as we just started on it last month. We feel the potential to improve but have not had time to experience it at this point.
- Response is largely due to this being our 3rd year in program.
- I have just started the NO LIMIT grant in September and feel that I don't have enough experience to answer these questions at this time.
- I have just started the NO LIMIT grant in September and feel that I don't have enough experience to answer these questions at this time.
- Since I don't have all the technology yet and due to not knowing what I'm really supposed to be doing ...
- I anticipate change when as I continue to learn from the PLC No Limit experience.
- I do use my document camera each and every day in math - since the day I hooked it up, however, I don't use computers in math instruction, even with my projector, because I don't know what to have the kids do that is more than just "playing" on a web site, and my lap top cannot connect the internet yet.
- Having a new document camera and using it daily has made a big difference in the way I teach math.
- The technology is nice, but I have not learned how to use it to change the way I teach. It definitely has made the discussions easier or more fluid.
- The doc camera has made a huge difference in my classroom. It is an excellent resource to encourage discourse between students.
- Haven't been involved in No Limit long enough to say that it has changed the way I teach and the way my students learn math.
- At this stage my math team is still trying to figure out our direction in NO Limit.
- I feel the biggest change will come when all the technology gets here and when we have had more time to implement some of the things we have discussed.
- I would be marking strongly agree on all of these IF I HAD MY TECHNOLOGY - but I am feeling extremely unsupported by my district and school admin. on this. The only reason we've gotten the one (two as of this week now) piece of tech so far is a very kind soul in the tech/network analyst dept. in the district who was willing to navigate muddy waters and managed to help expedite a bit. The fact remains that it's now November, and I am not able to use the 3 pieces of technology as a coherent whole that the grant wants me to have.
- NO LIMIT has been a part of a big change in our district. We have adopted problem-based, inquiry-based textbooks (CMP) largely due to training and exposure through NO LIMIT training.
- We're still waiting on the arrival of our equipment. I have borrowed other equipment and find the students excited and looking forward to getting our own equipment to use on a regular basis.

- I wish that our whole school district really believed in and supported the importance of technology.
- I'm not comfortable with it all yet because I haven't been able to use the laptop.
- We still are swaying on our school to purchase all of the technology that we have requested. So far the only thing that I have seen is the sketchpad and it has had a very positive effect on my students. When we see the rest I am sure it will benefit my students greatly.
- I am looking forward to getting and using the equipment funded by the grant.
- I am just in the beginning stages of learning different teaching strategies this would be a good question for later in the school year.
- Having a supportive person observe and give me feedback and suggestions is invaluable.
- We do not have our technology equipment So I am still doing things the way that I did last year.
- I was involved in TELDEC years ago and so far, have seen nothing new from NO LIMIT! I have benefited from being able to meet with co-teachers, but so far we've only had one meeting and we haven't gotten to anything that directly affects my students.
- Have not received any equipment. Our school is still trying to budget/buy batteries for all graphing calculators, but NO LIMIT has opened my eyes to ask student more why questions when they give me an answer.
- I just received the hardware and still don't have it set up. should happen in the next few weeks.
- Only disagree because my district has not been able to get me the equipment we ordered moths ago! I am greatly looking forward to using the document cameras and projectors, when the arrive...
- I have not received the technology promised to implement strategies in my classroom I anxiously await the products arrival.
- The use of the document camera has been a huge benefit. I allows me to have students share their work with the class in a time efficient manner. In addition, it helps displaying information in chart, graph, and visual form with out making costly overheads. It has been a real time saver for me and I can't imagine being without one now.
- I would like to respond as "Somewhat Agree" to those I selected as Agree
- As this school year progresses I see my involvement with this grant becoming greater and greater.
- I feel that I am more comfortable with using technology but I am not sure if I am successful at passing that on to my students. (They often know even more than me, or have another way of accomplishing the same thing - usually faster.)
- We just received our technology, but I expect it will significantly change the way I teach math and therefore benefit my students.
- There has been no impact from technology because we haven't received it yet.
- Because of the document camera the benefit to students and me is the immediate feedback it provides to students about the content.
- As of yet I haven't really changed the way I teach math much, other than an increased focus on giving students chances to work with concrete models.
- No Limit has just begun to teach me what I can do and where I CAN GO!
- There is a transition between my getting better and the student getting better.
- We are just starting NO LIMITS this year so I cannot really answer these questions.

- No radical changes in the way I teach math. Throughout the school year I want to make continuous improvements in my teaching methods and student learning. I've been using a computer and projector for several years, but the new document camera really makes a difference.
- The above section answers are based on our beginning the use of CMP--the training provided this summer will change the way I teach math.
- Please note, this is NOT because of the current participation in No Limits. It is from the exceptional training in the past two years of the other grant round.
- I've only use the document reader in the classroom. There is nothing more to report on.
- To totally say "changed" me is not correct, as I am beginning to see more and more what I can do . To say disagree would not be correct at all.
- I have always felt comfortable using technology, long before this grant
- No equipment has been delivered
- As of right now I would not say that NO LIMIT has changed the way my students learn math. I believe in time it will. I have always felt comfortable using technology to enhance the learning experience. NO LIMIT is giving me the opportunity to use quality instruments and giving me opportunities to change the ways that my students learn math.
- I see things that could change. Knowing how to facilitate those changes, and having time to make those changes are my challenges.

December – 05:

- We will be holding our first Math Olympiad at the school thanks to NO LIMIT.
- I notice that I have been integrating websites recommended by No Limit to help supplement the pattern unit.
- The devices given to me from the grants has done a great deal of impart in my classroom environment.
- My philosophy and approach to teaching as changed dramatically as a result of No Limit training.
- I'm a first year teacher who loves the no limit philosophy. So there hasn't been much to change (in regards to the first question).
- I have always had a cooperative learning environment. Having an Elmo though has changed how my students can show and explain their thinking. Having a laptop means that I can show concepts to the entire class via the Internet. This addition of technology is a powerful tool.
- NO LIMIT has changed the face of our math department and teaching. It is engaging, challenging, and our WASL scores are improving each year. Our sixth graders this year are higher and stronger at basic math skills than previous years.
- It will benefit my student once everything is up and running - soon
- I use the technology daily.
- This is my first year at this grade level, so it is difficult to compare how students would have learned without No Limit, but I do know I have benefited and so have the students in a multitude of ways!
- I am finding new ways to use my projector-the students really enjoy presenting. They are learning so much from each other and are developing confidence in their mathematical skills.
- Because of NO LIMIT! we now have CMP instead of Saxon. That has changed my teaching style dramatically and it has changed they way my students learn. They are now able to

communicate understanding, which was missing with Saxon. I actually look forward to math class and the discussions it invokes!

- I am frustrated with the lack of focus when we meet for our big meetings away from our school site. I do not appreciate having my time wasted, and I do not enjoy being away for an entire day.
- NO LIMIT has changed the way I teach in a few minor areas but, I still need to work on how students learn (the different strategies that will help ALL students).
- I haven't received any of the equipment promised through the no limits grant - yet. I already taught using inquiry and the cognitive tutor was already in place.
- So far the no limit! grant has basically helped in giving the class more technology to work with but it is still up to the teacher to teach in a new way or old way - the grant hasn't taught me much in the way of instructional strategies that I don't already use
- A few students don't like CMP as much as a traditional approach, but with time, I believe they'll grow to understand how this technique gives a deeper level understanding.
- To be quite honest, the only true benefit that I, or my students, have received from my Involvement in No Limit is the Technology grant that has provided our classroom with a document camera (which is just fantastic!!!).
- So far, I have not received training in incorporating technology into math. The only piece I have received was two websites for support for student use. I am hoping that they will offer some hands-on training incorporating technology above and beyond document cameras.
- This is the first year I have taught Connected Math. I think that most of my responses are due to the change in the curriculum. No Limit has allowed me to visit with others that are new to CMP. I absolutely love CMP, my students enjoy it as well.
- Absolutely! I am getting better at teaching, and my students are getting better at learning the things they need to be successful in subsequent math classes!
- Our district has contracted with a math consultant that has been teaching us constructivist approaches for the past two years. No limit has supported what I have learned from her.
- With our focus being on mathematical writing, we have really begun to employ WASL prompts in our daily lesson plans. Feel this will really improve students' skills as time progresses.
- It is still early in the process for the grant to reach the resource room.
- Spend too much time on paperwork and tracking.
- At this point I am wondering where the technology training is going to come into play. I was under the impression that this grant was about implementing technology into the classroom.
- At 5th grade we really do not have a need to have a graphing calculator. We need those, which convert fractions to decimals.
- Not only math, but all other subject areas that I teach, including science and reading.
- My response to feeling more comfortable using technology is true but not nearly enough for me to be at all satisfied. Just a beginning, I hope.
- I believe my/our MIS have helped both my students and I understand, and then believe, there is almost always more than ONE WAY to do math!! As long as we all come up with the correct final product, how we get there is just as important!! I feel this has helped boost confidence in a number of my students.
- The biggest area that NO LIMIT has played a part in my teaching strategies is through the use of Geometer's Sketchpad. I have started using it to demonstrate more often and have started to save files for future use.

- I really like using the document camera and projector...it has really improved student interest and attention to details
- I feel the use of the technology purchased with the NO LIMIT grant has been beneficial, yet I feel I am not using those tools to their full potential.
- I think my continued involvement, will eventually change my answer to the last question.
- The document camera has made a HUGE beneficial impact
- Having the math technology in my classroom is wonderful for my students and me.
- TO MUCH TALK AND NOT ENOUGH HANDS ON
- I'm writing up my lesson plans in Smart notebook. Next year, when I go to teach each lesson, (since I don't have to recreate all that, there will be more time to change things in the plans that I'd like to and really focus on what the kids need.
- Using the technology, especially the document camera, has greatly benefited my teaching. It facilitates student-centered discussions of problem solving techniques and strategies.
- My involvement in the grant has yet to produce any new technology (I have technology from another grant program.) for my students. Given space restrictions, I have yet to be able to purchase the one item, an interactive screen, for my kids. If I had a suitable classroom, I would. In the interim, I will wait to see what happens and what other purchases would help. Otherwise, I am not too impressed with the content taught via NO LIMIT versus T2CI. I learned much more relevant material and strategies in the latter.
- The technology purchased through your grant has helped my students get to the math quicker. When I say get to the math quicker I mean making quicker connections, understanding, discussions, etc.
- I do not blame NO LIMIT! for the lack of benefit to myself and my work. That Seattle Public Schools has reneged or disregarded NO LIMIT! efforts to help incorporate technology into my classroom is not NO LIMIT!'s fault. I blame SPS for the lack of assistance and technology my classrooms suffers from.
- My way of teaching and the use of technology has totally changed my way to teaching math and students learning math
- My school is a GATES school and many of the concepts presented to me by NO LIMIT has been our standard for several years.
- I feel more comfortable with trying new things and am excited to show them to my students. It doesn't always go smoothly, but they are often very helpful in figuring out how to make the lesson work better and the technology quicker and smoother.
- At this time, I don't feel the time I have been away from my students for NO LIMITS activities has been worth it. I still don't have the document camera and projector ready to use. There have been many times since the beginning of school that I have wanted to use it, but it has not arrived and/or is not installed.
- Life has changed for the better!
- It is nice to be able to let students come up and put their work up for examination with having to take the time to recopy it on the board or on an overhead. Math engagement is more immediate. I also like being able to pull up materials on the internet and not having to waste copy paper for everything we do.
- I think that NO LIMIT! will be more beneficial to our/my students once the content strands that were chosen for use to work on as a department start to impact the students.
- Our personal trainer Brent Howard has been extremely beneficial to my teaching.

- And this comes from my original participation in a NO LIMITS grant with CWU SETC/Ann Black. This particular grant so far has added nothing, and in fact I have lost ground due to the fact I have to participate in this grant and be away from my classes.
- I feel better prepared to describe and/or defend why something is the way it is. Most of this comes from repeated exposure to the material. I am getting better at helping students see/identify their own misconceptions and/or errors. The document camera has aided this process 100%.
- I was able to participate in the first round of No Limit and it has changed the way I teacher. I am enjoying learning even more!
- My cohort has not received ANY technology training with our new items.
- I do not know the answer to the question about the Tucker group, so will say no
- I plan on implementing many No Limit ideas into my math classroom after the Christmas break.

February – 06:

- I feel that the equipment has helped me and my students but I could have received this equipment on my own and had the same effect. It isn't a result of the No Limit grant.
- We have a challenge with our PLC in that we are coordinating lesson plans across fifth & fourth grade levels. We have to adjust lessons so that they fit ability level, grade level and HI CAP levels. Our meetings have been very valuable in preparing these types of lessons.
- I think there needs to be blanks between "Disagree" and "Agree", because that's where I am. I'm making some changes, using some ideas, but want to have the time to learn more. I'm beginning to think I've bit off more than I can chew trying to do NO LIMIT and Masters classes. I need more time to explore the uses of the technology I have and maybe more chances to see it modeled during mathematics instruction.
- The LCD projector is more beneficial to the student-learning environment than before.
- Best learning experience I've had since leaving college.
- I'm a first year teacher sooo...there isn't a change in the way I teach math.
- The last training we had was the best of them all. I learned how to use WORD Equator. Now I can write my own tests / worksheets instead of using canned tests. Thank the LORD!
- No Limit! has increased our involvement to think as WASL activities are presented. We do not necessarily teach to the WASL, but my scholars are beginning to show gains in their abilities to critically think.
- Am going to Listen to John Van de Walle tomorrow with No LIMIT. Have two of his books and they are referenced by me for topics we cover in class. He is a valuable resource and I am excited to go here him speak.
- Technology is a way to bring up interest in the student.
- Regional meetings confirm that students are benefited from technology in math. I feel more confident and am willing to reach out for additional resources to teach math. Math is exciting and I have benefited from my training and colleague collaboration.
- I would like more training using my new technology. I know I am not using it to its fullest potential.
- We tried to start deep aligning our connected math Monday. No one remembers how, and the male member on our team refuses to admit this or ask for help from our MIS. It was a joke.
- Confident in using the three pieces of technology supplied through NO LIMIT

- Without the technology NO LIMIT! has provided my students wouldn't get share their work and explain it as often as they do. I also get the chance to use my computer more often during lessons. I feel that the time provided for collaboration amongst the PLC and whole NO LIMIT groups has been valuable also. If nothing else, it has given me new ideas and energy for teaching math.
- My NO LIMIT! person has put her money where her mouth is! She has supported our staff and principal 100%. Our teacher core for NO LIMIT! We have met since September every Thursday an hour before school learning, sharing and putting together problems for the whole school(K-8th grade). She does the training before school and then stay all day working in our classrooms around the building. Our principal really enjoy the opportunities she have in planning activities that help scholars understanding the content areas of mathematics. The scholars look forward to her day at our school because there are fun activities that encourage them to work in groups or teams.
- I find it challenging to find the time to 'play' with the technology...so that I can become proficient using it.
- Some of our equipment was stolen, and it is taking the district a long time to get it replaced. I really notice how much I miss it, and so do the students. They love to show off their good work, and I have more trouble allowing them to do that without the LCD projector.
- Becoming more confident with technology.
- Our last meeting was very beneficial for my students and me.
- We had a guest speaker come in to show us how to use the clickers and our Smart Boards.
- We have been working with Tom Boyce and recently met with him to plan our next lesson that directly relates to this but was not a PLC meeting.
- With the projector and the document camera the students become engaged and the lesson becomes theirs . They get a chance to demonstrate what they were thinking. Sometimes the responses look the same, but the explanations are different.
- In particular being on the PLC has led me to get very close with a top-notch math teacher that I really didn't know before. This has really helped me a ton. She is a great resource and dependable.
- The 5th grade in our district is working on aligning the curriculum with the state standards. We are double dipping our understanding and instruction with information from the No Limit and the districts training.
- A lot of what No Limit has done is strengthen what I was previously doing with Investigations and added the technology to allow kids to have more of a voice.
- A busy month.
- I am the only teacher from our PLC at my school so it is difficult to do any planning.
- I cannot live without this technology piece - if I changed schools, I would have to find a school that also has the technology.
- If nothing else, because of our isolation and small size, the collaboration that occurs at No Limit meetings is greatly beneficial to me.
- This is happening throughout the school (K-8).
- Have had some very useful time together since Christmas break.
- AT MY SCHOOL I HAVE NOT RECEIVED A DOC CAM YET.
- These questions are very subjective.
- This is a work in progress

- The trainings are worthless and a waste of time. The only reason NO LIMIT is worth it is due to the technology I get in my classroom.
- Hooray for NO LIMIT!
- Although I have a Smartboard now, everything else I already in (older document camera though) I still do not have a long enough cord to hook it to my computer, so not much has changed yet.
- I believed I've changed my response about using technology because its use is not increasing in my teaching. I feel at stagnant point in improving my math teaching. Tamara and Katie have been encouraging about baby steps.
- I don't feel like we are going anywhere. I don't feel like I am contributing to the PLC's progress.
- I appreciate the workshops and the assistance from the NO LIMIT staff.
- I feel a whole lot more confident using technology and equipment in my classroom now, than when I first started. My goal is to be able to content my laptop and do lessons from it soon. I would really like help in finds sites that you can use for different skills both teacher directed and student directed.
- From our meetings we have branched out to start a curriculum committee for math. These meetings have just begun and are on the right track. We have assigned material to be gathered for our next meeting.
- Not applicable, I facilitate our computer lab.
- I was already implementing best practices. What I was missing was the document camera, which makes student sharing so much easier.
- The use of the document camera has been a huge advantage to my students in showing student generated work and facilitating discussion on the problem solving process.
- Worked with other PLC members to align curriculum, and GLE's
- We are working on a way to report to parents and students what they are learning and why they are to learn it.
- Most of the NO LIMIT Training has focused on concepts taught to pre-service Math teachers. I need more training focused on USING technology to teach Math.
- The alignment of curricula occurred between me and the 6th grade math teacher. The sixth grade teacher isn't formally in our PLC, but has been invited to participate in our activities.
- We need more time to do the above!!! Would love to be able to do all those things on a more consistent basis as a team.
- The addition of the technology has helped my students and me. Being able to meet with other teachers in my school has been very beneficial to me and somewhat rewarding for my students. I sometimes feel like our focus gets lost or that we get to involved in using strategies that some of us do not have time to implement. I also find that we are asked to do things that we never get around to discussing.
- No limit has helped reinforce everything that my school has been doing over several years. It has not impacted my teaching and students at all.
- Teacher and students have all benefited in understanding concepts of math, willingness to share ideas, and a wider application of technology.
- My document camera was just installed last week and I haven't had any training with it yet. I'm still trying to figure it out and how to best use it to help my kids.
- Our PLC meeting was cancelled because we needed to use that time to prepare for an after school family activity night.

- A lot of the above is done with our grade-level teams. Discussion then carries over to the PLC.
- I still cannot get my computer and LCD projector to work together.
- Using the document camera has been a great help in facilitating learning of mathematics. The PSED involvement in the NO LIMIT has not been of any help.
- No Limit has taken me out of the classroom, which I normally hate, but this has been a very legitimate reason for being out of my classroom. Brent has been extremely helpful with my teaching style and the students have benefited greatly. I work with the lowest functioning students of math in the High School and the new knowledge has been most beneficial!
- I feel that the population I am teaching at this time is not benefited by No Limit. If I were teaching a population and community that was not apathetic about learning I would be more inclined to use the strategies I have learned.
- Unfortunately, my reference to NO LIMIT is to the grant with which I was involved 2003-2005 at CWU. This particular grant has added little.
- We work both with our PLC and with the middle school math teachers in our district for all of the above.
- It has taken this year to get comfortable with using the technology and then next year some more changes will take place.
- We have met and worked on aligning our math curriculum with the GLE's, however, I'm feeling very frustrated with the whole process.
- Like I said, it's terrible. We are so far from meeting any goals other than not yelling at each other... Oops, we haven't even met THAT goal yet.
- Again, my curriculum has changed me the most in how I teach math, NO LIMIT has opened my classroom up to technology and the possibilities there. Any new technology has helped me be a part of the 21st century.
- They are getting to the point where they now want to come up to the camera and share their class/group work.
- Introduced school wide vocabs for other teachers outside their subject content.

April – 06:

- It is much better. Students feel more confident about showing how they achieved a particular result and enjoy using the technology to highlight their work.
- My whole style of teaching has changed due to my No Limit experience. I've taken a constructivist approach when teaching math.
- I'm a first year teacher so I haven't changed anything in the way I teach math. My philosophy, education, and No Limit are all closely related.
- I am much more confident using technology due to No Limit. I also now know how to create my own texts because we learned how to use the symbols in WORD, which was SO helpful.
- I value the ideas and strategies that I have learned from my NO LIMIT group. I enjoy the collaboration that NO LIMIT has provided. I benefit from the feedback of colleagues and NO LIMIT directors and team.
- The availability of a document camera, laptop, and projector has been so instrumental in getting students involved. Being able to see how other students work problems, etc. is very valuable.

- The technology received in the grant has changed my teaching overall including math. Because I was exposed to CMP and the district is now adopting it my teaching style in math is drastically different. I still have a lot to learn, but it is all for a good reason!
- I have more resources now and just started to use them has made it easier for me to access appropriate materials on my own.
- The benefit of No Limit has clearly been the technology and the time spent with the PLC at our school. The time spent at the ESD has been a complete disappointment.
- Integrating it more and more
- I think the goal set by my PLC, to improve students' written communication in math, has been an excellent focus. It took a while to figure out where we were going and how we planned to get there. I look forward to next year when we can start at the beginning of the year. I want to get earlier baseline data collected, then watch student progress over the course of the year. I also look forward to involving the students more directly in tracking their own growth.
- No LIMIT has brought more focus to my teaching as has the Master's program I am in.
- Our district had not really focused on the middle school math curriculum. No Limit has really changed that. I believe that student achievement will begin to improve, largely because of the support No Limit is providing.
- If I didn't have the ELMO, projector, and wireless microphone, the students would take a longer amount of time trying to explain their solutions. When the children explain their thinking I can find common misunderstandings and help students that are struggling with using mathematical vocabulary.
- I am responding for this month only....not a good month for math. I felt frustrated having to balance No Limit with my needs as a teacher.
- Can't teach without the technology anymore!
- I am much better at engaging my students with technology and do it much more often than I use to.
- See above comments - they all seem to address this issue. I'd like to note that it's not just the tech that's been of benefit - having a math consultant working regularly with our small team, giving specific feedback to my classroom and teaching, has probably been the most valuable part of this grant. The document camera and projector have been huge assets - best tech I've ever added to my classroom and by far the most integrated of anything I've tried - but as wonderful as it is, I think my teaching has been even more impacted by having someone come, observe, share thoughts, be a sounding board, provide resources, and specific feedback, as well as a willingness to put in extra time to solve any specific questions and problems I have. That's priceless.
- I believe I learned much more from the first round of NO LIMIT where the focus was on Mathematics and best practices.
- Working closer with the math teachers in our district has reaped the most benefit for our school and our students.
- I have changed and have been encouraged by my cohort and Tamara and Katy to feel good about small steps. About midyear, I felt like I had reached my peak of change. I know where I need to improve over the summer to be prepared for next year.
- I have to say the document camera has benefited me the most. It allows me to use student work to facilitate learning. But I don't feel I'm a better math teacher or able to explain the concepts better.

- NO LIMIT provided me with a document camera and projector, which has made doing what I do easier. It's also easier for students.
- It will take some time for me to become more adept at what I'm trying to change
- I have used a document camera/notebook/projector technology set-up for three years. The NO LIMIT! grant has yet to afford me new technology. However, we have recently decided to procure an Activiboard to help my learners. Then, things may change for us.
- What has changed my teaching and my student' discussions is the document camera and LCD projector. These tools were a part of the grant. Beyond that my team has gained little from No Limit. It could be the fault of my team
- I have benefited greatly from NO LIMIT participation. My laptop helps me do my teacher work more efficiently, the document camera and projector make instruction, demonstration and sharing work easier and the clock hours that are available for training have been personally beneficial. I am not convinced that the work I have to do for a guest teacher and being away from my students during the day has been offset by sufficient improvement in student learning.
- The new technology we received even though we didn't get much of any training for it.
- What tech. we have existed before the grant. We will be purchasing more before the year's end, and that will benefit. The trips to Renton have been a waste of time.
- I think my first exposure (3 years ago) had huge impact on my students and my classroom instruction. This year was minimal.
- except for the use of document camera there has been no change
- I don't know the answer to the last question on this page. Who is Tucker Group?
- I was part of a NO LIMIT grant for LD students that prepared me for using technology to a much greater degree than this one.
- Sometimes the influence it has had on my students is hard to measure. Different groups each year present unique struggles and challenges. I firmly believe that my knowledge of the subject matter increases each year and lends itself to better classroom exploration. I know without a doubt that the use of my document camera and LCD projector have enhanced the learning we do.
- This year has been a year to learn how to use the technology. Planning will take place this summer to change how I do things in my class.
- The biggest impact in my math teaching was going to "Connected mathematics" As I become more familiar with using the technology I know it impacts my students. They love using the document camera and sharing their work.

May – 06:

- I would do it again!
- Best experience of my career.
- Using technology to enhance student learning and participation has exceeded my wildest expectations. I also love that I can bring the Internet and math activities from outside of my classroom to my students and use it as an effective teaching tool.
- Without NO LIMIT, my classroom would be missing most of the tools used on a daily basis in EVERY class.
- Anything that help the learning process is good!!
- I have always used and felt comfortable using tech in my classroom

- There is still lots of work to be done between collaborating with special and general education.
- I think NO LIMIT! has impacted my classroom by not just training the teachers but giving them a person qualified to take us to such heights as moving out of our little comfort zones (rooms) to using tools like document cameras, projectors, and computers to enhance learning and involvement from teachers, scholars and parents. My scholars were so charged when they saw these equipment brought into the classroom. I had already prepared them about this adventure. I told them of the difference in the overhead projector and its limitations. I informed them that the new tools would give them more of an opportunity to use their skills in a far better way than they have even imaged. I made a diagram of the equipment on the blackboard (because of my artistic talent)of the backside of the document camera, projector, and the side view of the projector. I then had the scholars view the actual machines and then the diagram of the objects on the blackboard. We had some discussion as to where would start to connect the machines. The scholars proceeded to number the connections that needed to take place in order to successfully run the machines as they were intended to run. They were so excited and so was I! My heart was skipping beats as one scholar at a time would go up to connect their part to the machine. They counted six steps to successfully connect the document and projector in order for it to function as expected. When the sixth connection was made we all held our breath and waited! "WOW" "OH Ms Beeler LOOK IT'S ON!" The scholars were jumping out of their seats with great satisfaction on completing the first try with out any mistakes. We continue having every scholar taking turns in connecting the machines each morning until everyone had a turn experiencing the joy of watching the lights on each machine turn from red to green. When they finished we would clap for them on being successful in connecting the machines to its completion. When you teach them the proper care of the equipment and allow them to handle them they do a swell job. I am very proud of my scholars!
- I need to use technology more next year doing more projects (getting out of the textbook).
- The Share Fair added to my resources for effective teaching methods.
- We already had the technology in place that was recommended. I did gain some good ideas from fellow teachers attending the workshops, but I am not sure if it benefited my students enough to offset the missed class time as well as the time demands No Limits took away from time that could be spent in a more direct way to my students.
- My No Limit training along with a district math coach has made my teaching more hands on and more about the conceptual understanding than on the algorithm.
- As a teacher who is in the grant for a second time I know that the first time I was in No Limits made a huge difference in the way I teach. The ESD support staff for the grant made sure that I had access to any tools that I might need. They also made sure that they came in to watch every teacher in the grant. They knew what was going on in our school and could tell give you ideas on how to improve. They also made sure that the teachers had significant training with equipment that we received through the grant. I have been disappointed in how little help we have received this year.
- I cannot teach without the technology.
- Networking has been a very important piece of the No Limit experience. I have picked up some great ideas and met some wonderful people during our meetings.
- It's too bad our school didn't get the grant renewed for next year. We've got a new crop of math teachers coming into the fold who will not benefit from these tools.

- If I had access to newer computers, I could incorporate so much more of what I have learned from NO LIMIT. I have seen Qwizdom in action and would love to have a set of my own.
- The collaboration with my colleagues in the math department has been the most benefit to me as a fifth grade math teacher.
- Having the Smartboard, document camera, and projector has totally enhanced learning. This is seen not only in math, but also in science. Every classroom should have these three items of equipment.
- This grant along with the Investigations math curriculum has clearly helped my TITLE math kids be more successful.
- I wish our school had been chosen to continue with the grant. Alas, we were dropped.
- Students have loved trying new strategies to solve math. It has been meaningful and fun for them.
- As part of the "No Limit" team I feel that we were change agents in our school. Our goal was to create a climate where math became part of the culture of our school. We have taken a very positive step towards that.
- This is based on the fact of the initial involvement. The equipment and beginning training were very beneficial to my students and me and continue to do so, but I have not had any additional training since the fall.
- Before no limits grants, I knew through research SPED students would greatly benefit from using computer and project based material. I am pleased with my limited use and look forward to seeing student progress even more next year.
- LCD projector and doc camera have allowed my students to become more active participants in my classroom.
- I could not go back to not having the equipment.
- Just being able to use technology that makes it easier for students to share their work has benefited both my students and me.
- No Limit has provided the resources, professional trainings and mentoring from the No Limit people to - especially Tami Motsom
- It has been a great experience collaborating with different people and learning new ways to engage the students.
- The use of the document camera has increased student confidence when explaining their approach to a problem.
- I began this project with the knowledge and skills obtained through a previous NO LIMITs project through CWU, SETC.
- The document camera is a MUST in any mathematics classroom that wants to promote student discourse.
- I enjoy collaborating, but the use of school time is not beneficial to students.
- Yes, we got the equipment to use but no I don't feel the experience was worth it or prepared me any differently other than just having the equipment on hand
- It is very sad that we will not be continuing our No Limit training next year. It has been very valuable.
- Too much time away from students
- Having more technology in the classroom makes us all more familiar with it possibilities.
- I am looking forward to more opportunities to implement learned strategies and incorporate them into my personal teaching "toolbox". I still feel like a novice in many ways but we (students & I) are getting stronger!

October – 06:

- I recently remembered how to use my document camera to take pictures of student work in order to use some for examples. The lesson turned out GREAT.
- Talk moves and classroom discourse has been very important in student achievement and understanding. Document camera has been a wonderful resource to student collaboration and sharing strategies.
- NO LIMIT has allowed my classroom to be supplied with technology that allows me to implement CMP2 and get kids more involved through showing their own work.
- Because of No Limit! we are working collaboratively to improve math instruction and we have adopted CMP II as our middle school curriculum.
- I would like to clarify that the benefit from NO LIMIT has been the access to technology and paid time to meet with PLC. The classes at ESD and the support from the ESD were mostly a waste of time.
- Thank you.
- I am a relatively new teacher; I taught .5 years before I received my "triad"; I cannot imagine not using the technology! It should be required in every classroom to have a doc cam, pc viewer, and laptop.
- Love the document camera!
- Can't teach without the technology - it makes learning math so much more fun.
- I know the benefit of being part of a PLC and having time together to focus on content and teaching. The reading I have done as part of No Limit has made changes in my teaching. I have less of a sense or concrete evidence that my students benefit. I think the benefit will show more profoundly over the course of a few years.
- I basing this input on basically last year's class. I know that there is always hope for this years, but probably not at the speed as last year.
- I've been involved in NO Limit since I began teaching.
- Being part of the PLC, I use more math in my class than I would without being a part of the PLC
- The process of getting the technology has been very slow.
- I am trying to change how I teach the math.
- I haven't decided yet if No Limit has changed the way I teach or the way my students learn. I strongly believe that it has benefited both my students and me, but I'm still not sure on the change part. I'll hopefully have a better answer next time.
- I would not have had the technology I have without NO LIMIT.
- I am a very old teacher (29 years of experience) learning new tricks, and I am loving it!! The kids are very much enjoying all of our new "toys." They seem to retain concepts better due to the technology. Example subject and predicate - Who would care or want to remember that as a fourth grade student, but because we used the document camera and Smart Board for part of the lessons, they seem to remember it better than students I've had in past years.
- I wasn't a part of the NO LIMIT grant last year so I can't answer the previous questions.
- Having been in No Limit two years ago, then out of it last year, I feel a bit rusty in addition to teaching a new grade and concepts this year. But I do feel that I learned a lot, use many of the skills I learned and need some help to go further.
- I am predicting that these will be my answers since this is the first year of participation.

- I am new to NO LIMIT and my answers in no way reflect my view that this PLC will greatly influence my teaching. However, this early in the game I cannot honestly say we have moved forward enough to change our instruction.
- I have not had the benefit of much training from no limit as of yet. I feel like No Limit is just an extension of my education at Evergreen State College.
- I just became involved in the program and have not done much with it yet.
- Since I have just started on no-limit, I feel that my responses are accurate for the stage that I am in. I have thus far not received training except to be observed on one occasion. While the feedback received was greatly appreciated and instructive, one experience is certainly not enough to adequately weigh a program.
- This is my first year teaching

December – 06:

- I find myself constantly trying to figure out new strategies with various students. I also try to come up with new strategies that help my lower math students, and also challenge my high learners.
- NO LIMIT allows teachers the time they need to collaborate. We are expected to teach in a collaborative way, yet teachers aren't always given the opportunity to collaborate with each other to accomplish this.
- I love it when I can have the math specialists come into my room to model lessons for me and show another way of approach to a problem.
- The last information concerning test item specification will help align the curriculum.
- I am more confident with Inquiry style teaching/learning.
- This year in No limit, it is not as focus and not benefiting our group. The time together though is very important.
- Being a part of No Limit has inspired me to join NCTM, and attend OSPI conferences. I felt driven to score 5th grade released math last summer and feel more aware of materials my classroom needs to fill in the gaps that the EveryDay Math curriculum has in order for my students to learn the GLEs . I still don't have any graphing calculators and really don't know how they would be used in the 5th grade. Just having a copier in my classroom has helped when a student needs one more copy of an assignment or I want to keep a copy of their work.
- The tech piece has been extremely beneficial to my students and their mathematical discourse.
- Can't ever go back to the old way of teaching!
- This year we have had NO interactions with our coordinator. We have had NO PLC meetings regarding No-Limit!!!
- Students visit online resources related to math more often than they would, if I were not part of the NO LIMIT! project.
- We benefit from collaborating with my colleagues and learning more math me. We have not done anything with learning how to use technology.
- No limit gave me the tools to use technology in my classroom. It has also caused me to be aware of the tasks I give students. I try to give them more they can share with each other. I am not so sure that the visits from the ESD mentor are helpful.
- It's hard to say that my involvement has benefited my students, because at times, I think it has hurt the flow and community of the classroom.

- The No Limits grant provided some of the funding for my Smart Board. Although not the end-all to math, the kids sure have a lot of fun with it and seem to retain the concepts better.
- I am new to the no limit this year. I did not receive the benefit of the technology purchased the previous years. Fortunately I have some of the items thanks to our District.
- DOCUMENT CAMERA!!!
- Having a document camera and projector has greatly benefited my class. As far as the style of teaching, I don't think I've changed that. I am working toward becoming a better facilitator, but this is not a new concept for me.
- I am a new teacher and I have had limited No Limit training.

February – 07:

- Quizdom is not a workable technology. I am very frustrated with all of its associated issues. The idea is great and the students love it (so do I), but it hardly works. Software and hardware problems. I have informed the ESD about all of this with no action on their part.
- The camera alone has made it sooooo nice to be able to have students be able to moodle good work and sometimes even show some not so good work.
- There is not doubt that No Limit has changed the way I teach. I was lucky to be a first year teacher and included in the grant, I didn't have to work with the overhead for very long!
- Students in my classroom are learning more as a result of no limit.
- I have been very frustrated with the Quizdom Interactive materials. The initial training last August and September was not good. When our ESD took over the training, there was a marked improvement, but there are still numerous "glitches" in the hardware and ease of using the software. I am on the high end of technology users in my building, serving as the tech specialist for the building, and I am not using the Quizdom materials on a regular basis. I tried one day last week only to have my computer continually freeze despite repeated restarts.
- I have become increasingly more confident in letting students find more than one way to solve an answer and leading discourse about that in my classroom. It has allowed the students to feel more comfortable in trying new ways.
- The technology has changed my methods.
- Could never go back the old way. The technology has brought math to life - now possible to entertain the students while they are learning.
- I am more aware of using technology even if it is just the use of calculators to build concepts. I don't use tech as much as I should though. The greatest benefit for me is the time spent with my PLC group.
- I have students use more math related web site because of NO LIMIT!
- In the 2006-7 school year, NO LIMIT! has not benefited my student or me as much as in the previous year. Reliance on a poorly researched/selected student response system has resulted in a wash for the year in regards to the implementation of new technology.
- The benefit we have received has come from the acquisition of LCD projector and document camera
- Discovery of useful applets and sites containing applets have positively augmented instruction
- A lot of what we do in NO LIMIT! is what my teaching program taught me so NO LIMIT hasn't really altered what I believe but just reinforced it.

- These comments are geared at this months activities. No Limit has not really impacted what I have been doing the past few months. We haven't really met as a no limit group. No limit has had an affect on my teaching from last year but this month it has affected my teaching very little.
- I love my technology and have a few colleagues who are really jealous!!!! They are still using overheads.
- The opportunity to use a document camera has greatly helped the way I teach.
- The instruction practices I have learned during my time at NO LIMIT has changed how my students view math. Many have become better math thinkers and I am hearing very few "I hate math" comments.
- I am new to the program and feel as though I am technologically capable. I would like to be trained in something new like the software we have or the smart slates.
- This year I do not feel as connected to the NO LIMIT project as last year ... we still have not been able to access our funds and we have much less time working with (Sandy) NO LIMIT.
- This is my first year teaching math. I am a science instructor and this would have been impossible without the technological assistance. I would have felt like a duck out of water without gravitating toward developing my pedagogy with the technology in my classroom.

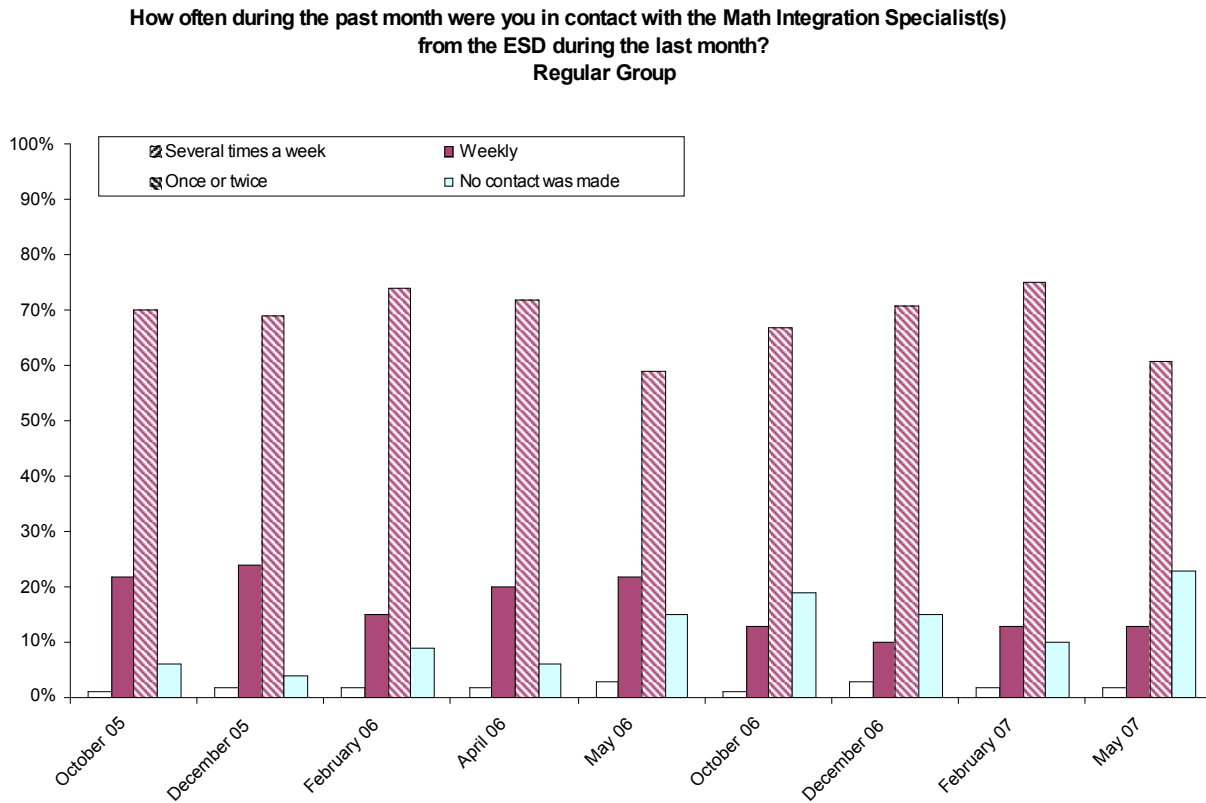
May – 07:

- Before I had technology in the room, the sharing of ideas was really limited. Also, students had a hard time reading my writing!
- I always try to approach a concept from multiple angles to meet the needs of the diverse learning styles in my class. NO LIMIT has helped me do that more effectively.
- I have used a great deal of technology in my class for a number of years. The document camera made a decided improvement in my classroom to encourage student discourse and share multiple approaches to solving problems. We were very disappointed with the Quizdom system, partly because the training was not well done and partly because the upgrades to the software have actually sent us back a step. Now, at the very end of No Limit! money is available that will allow several of us to purchase active white boards. I wish these could have been purchased at the beginning of the 2006-07 school year and all of us could have received training and support during this year.
- Anytime you add technology to a classroom, you make learning more accessible for students.
- The best thing that I have experienced in this profession - it totally elevated my teaching to the next level.
- I appreciated learning how to incorporate technology into my lessons and having the finances to purchase equipment. I certainly think I have gone more away from direct instruction and more to active participation in with manipulatives, project based problems, etc than I would have if I hadn't been involved in the grant.
- I'm a computer lab facilitator
- I haven't been involved in NO LIMIT really this year
- I was already using best practices and technology. The benefit has been in having the time to collaborate with colleagues.
- The biggest impact has come from using tools on the laptop to combine student data in spreadsheets or inputting them into PowerPoint spreadsheets; using PowerPoint to create lessons that actively capture student attention, using applets to capture student attention

- Getting the Document Camera and the Projector are the best things that have come out of this grant.
- I don't know what I would do without my camera and projector!
- I am a new addition to the math team at my school. Being a first year math teacher my methods have not been changed by No Limits, but I do enjoy the technology that was provided and I have been helped by our site visitor.
- This has been a rewarding process for both me and my students. All of us are more excited to take pictures, share, explore and experiment with problems in math and use the camera and projector.

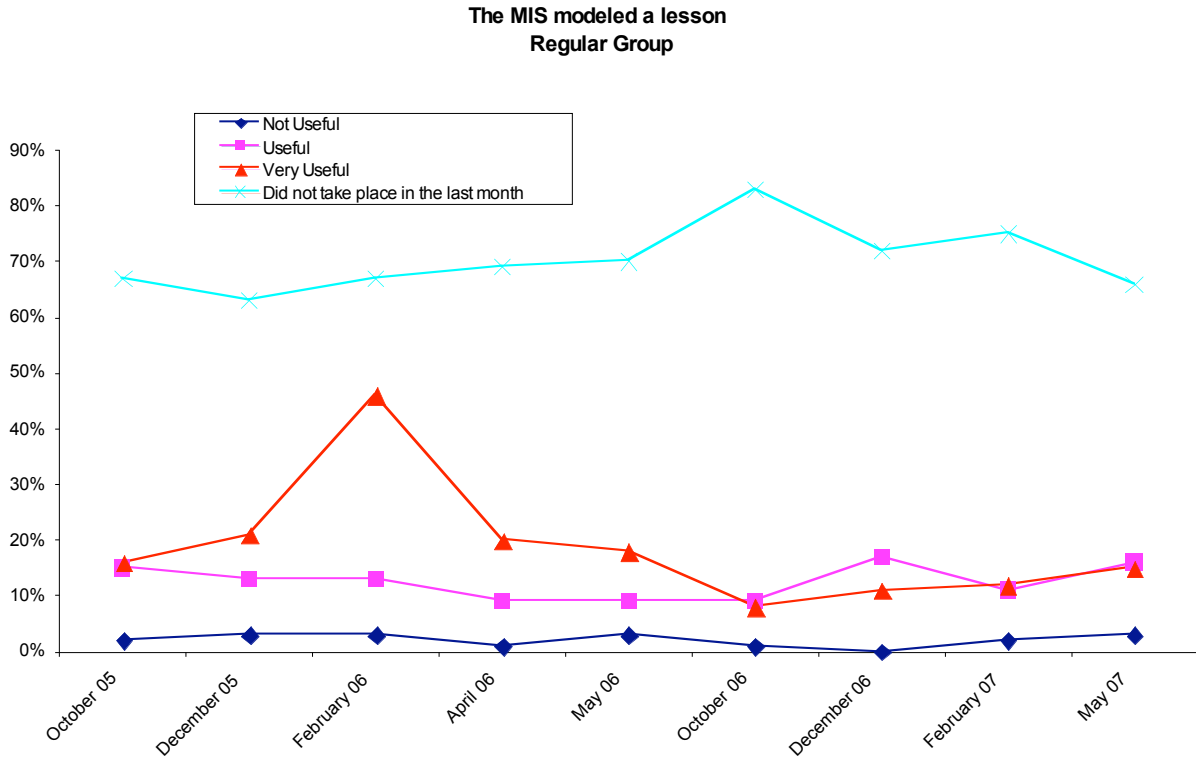
Item 16:

How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?

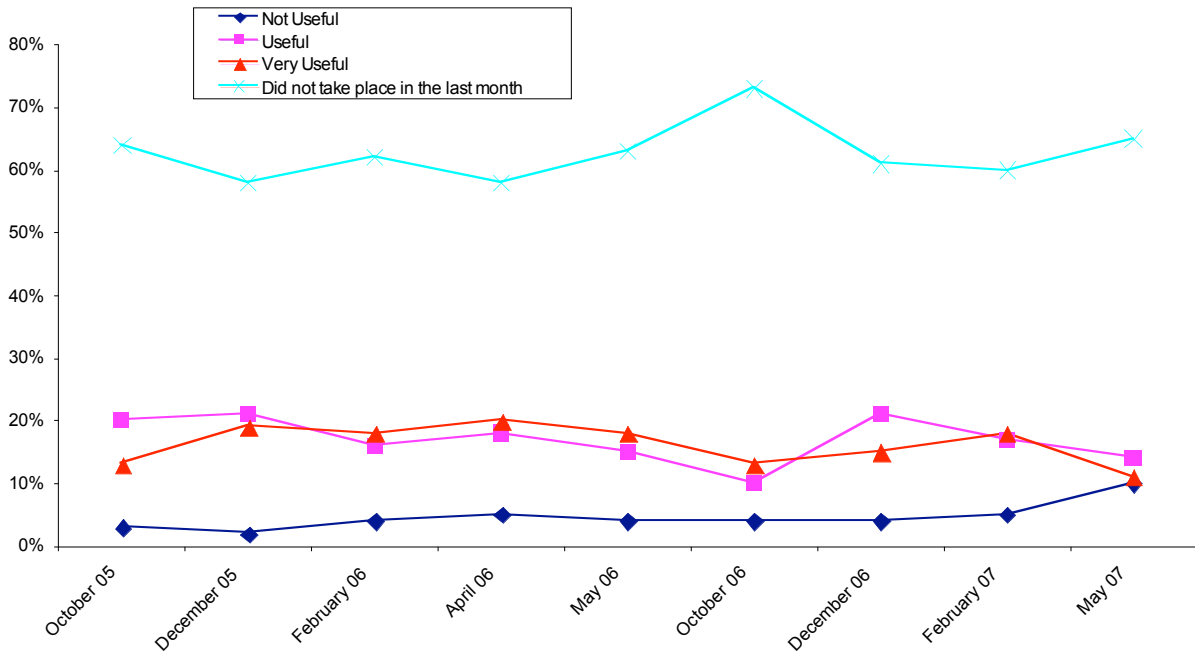


Item 17:

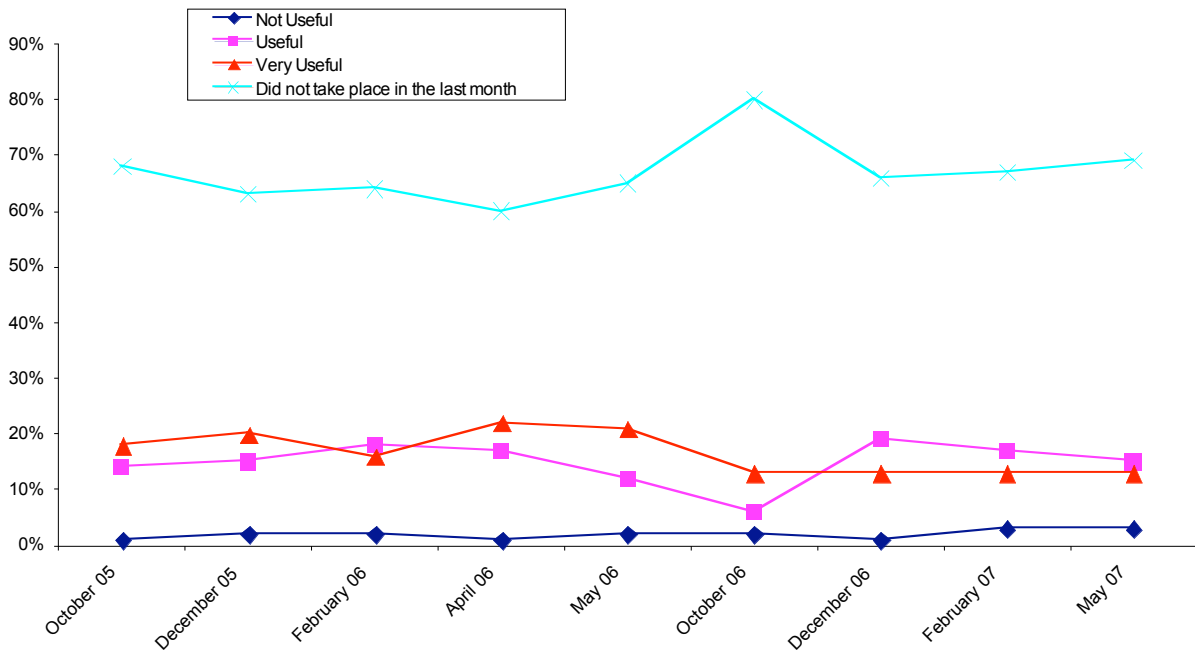
Please evaluate the following MIS activities over the last month.



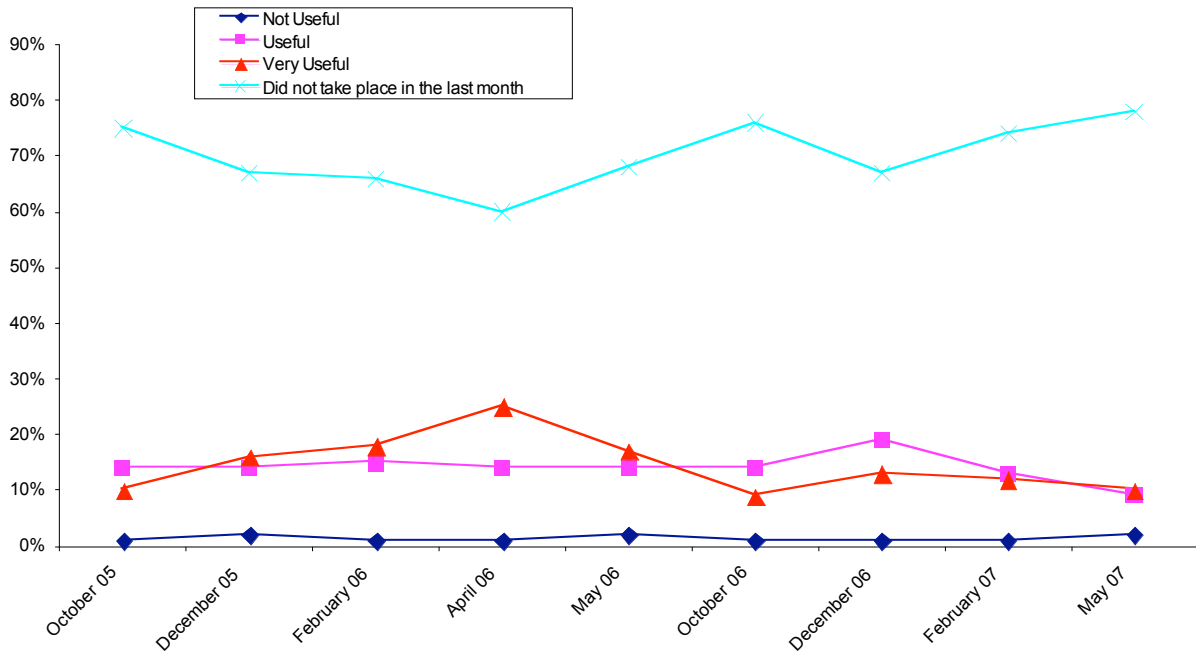
**The MIS coached, observed, or team taught a lesson
Regular Group**



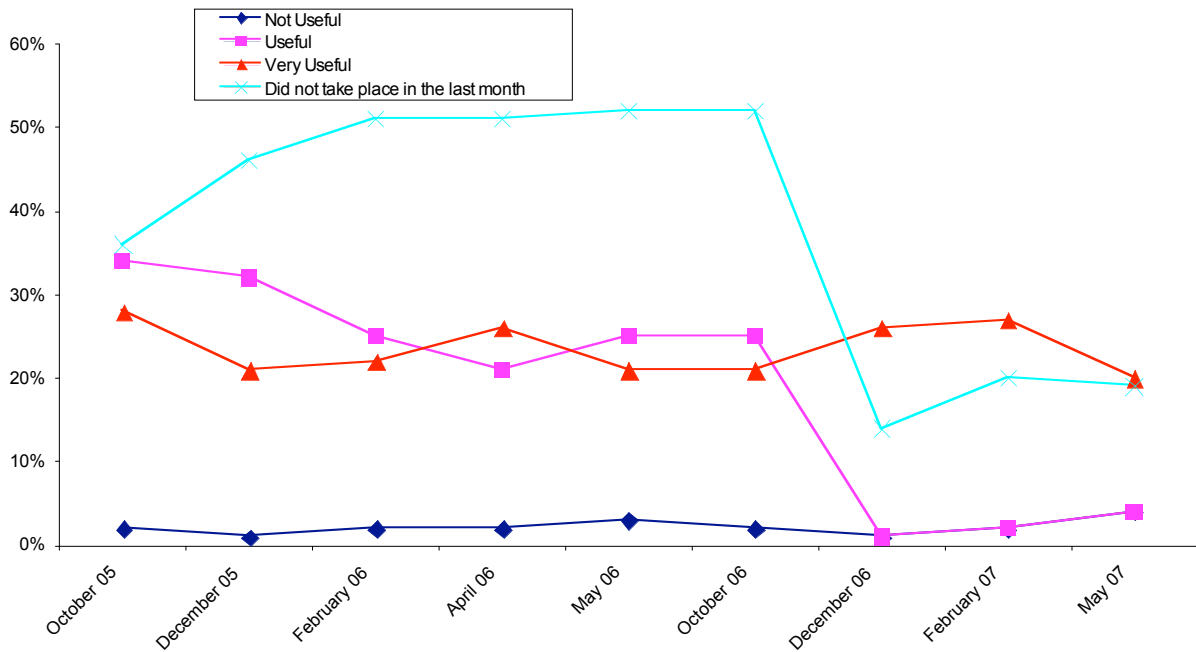
**The MIS worked with students
Regular Group**



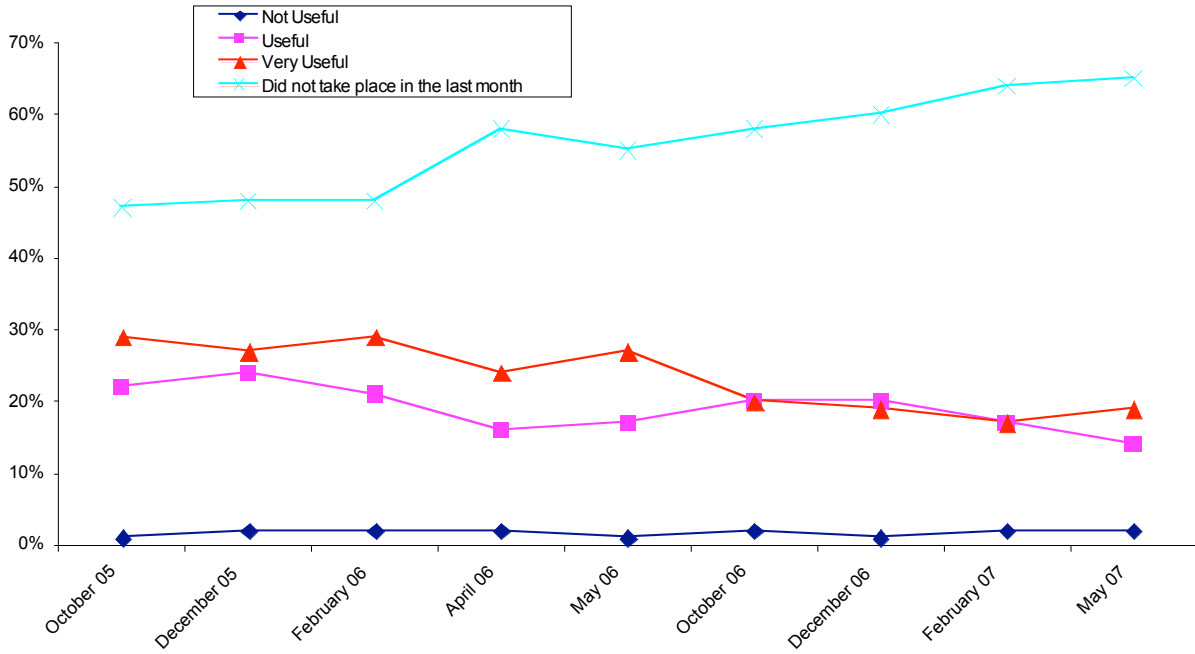
**The MIS helped with planning a lesson
Regular Group**



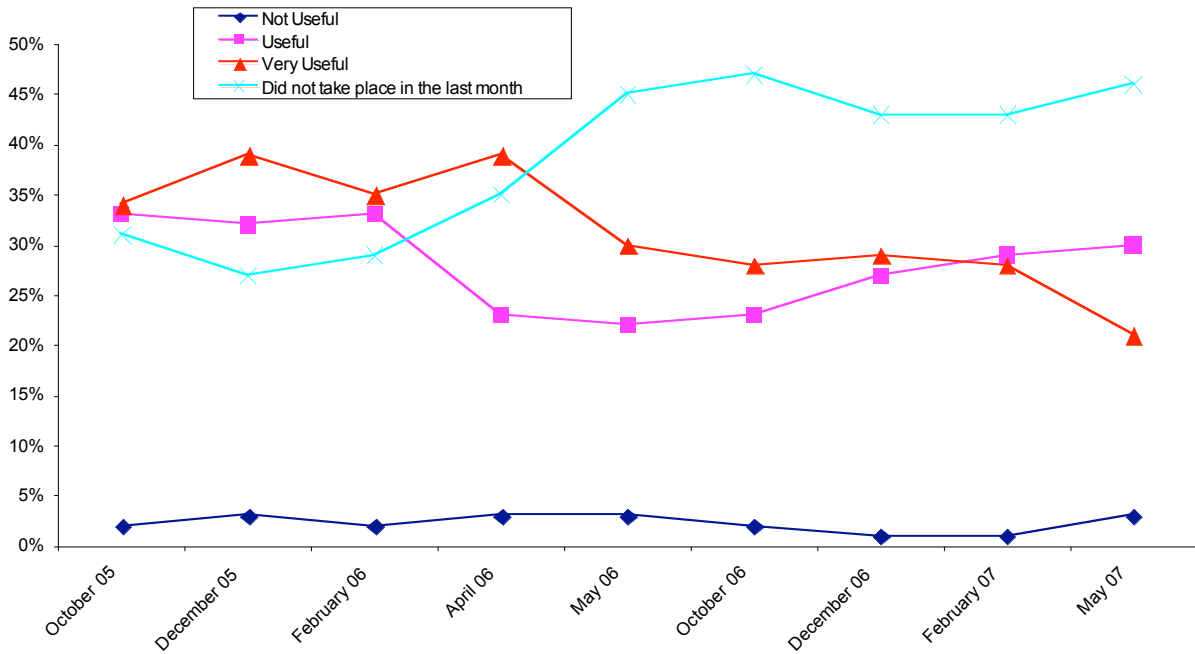
**The MIS helped with schedules, logistics, or administrative issues
Regular Group**



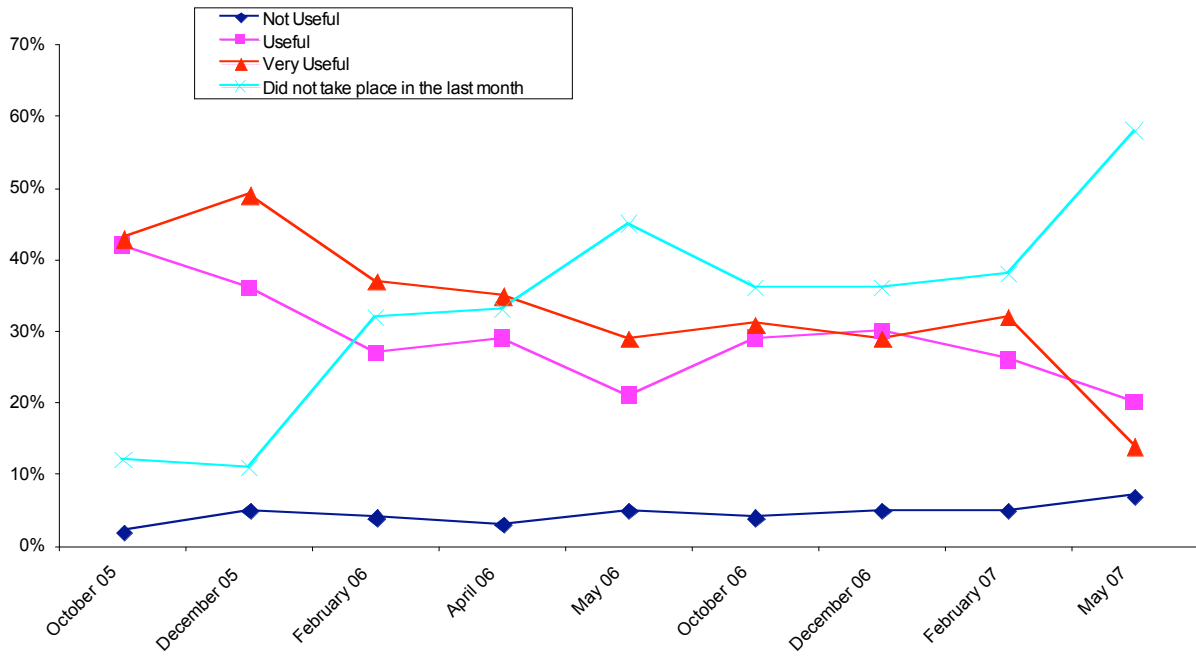
**The MIS helped with technology
Regular Group**



**The MIS provided instructional resources
Regular Group**

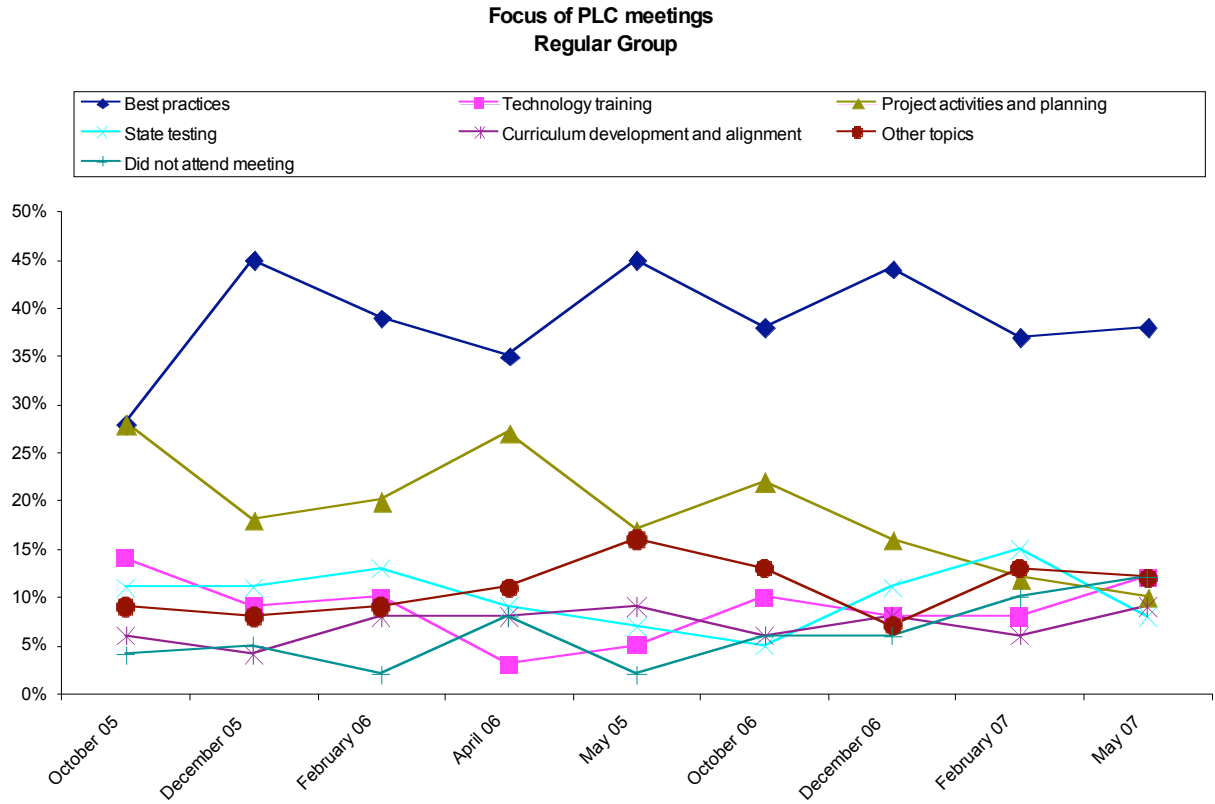


The MIS facilitated a Professional Learning Community meeting
Regular Group



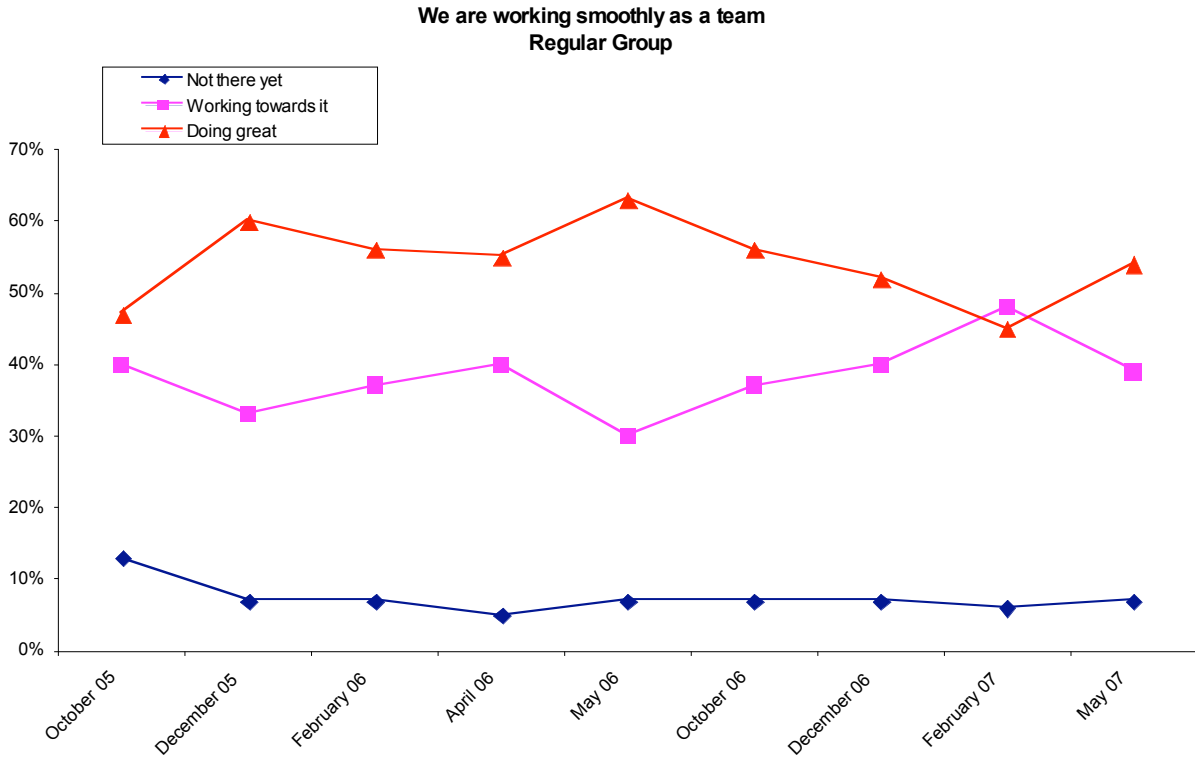
Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

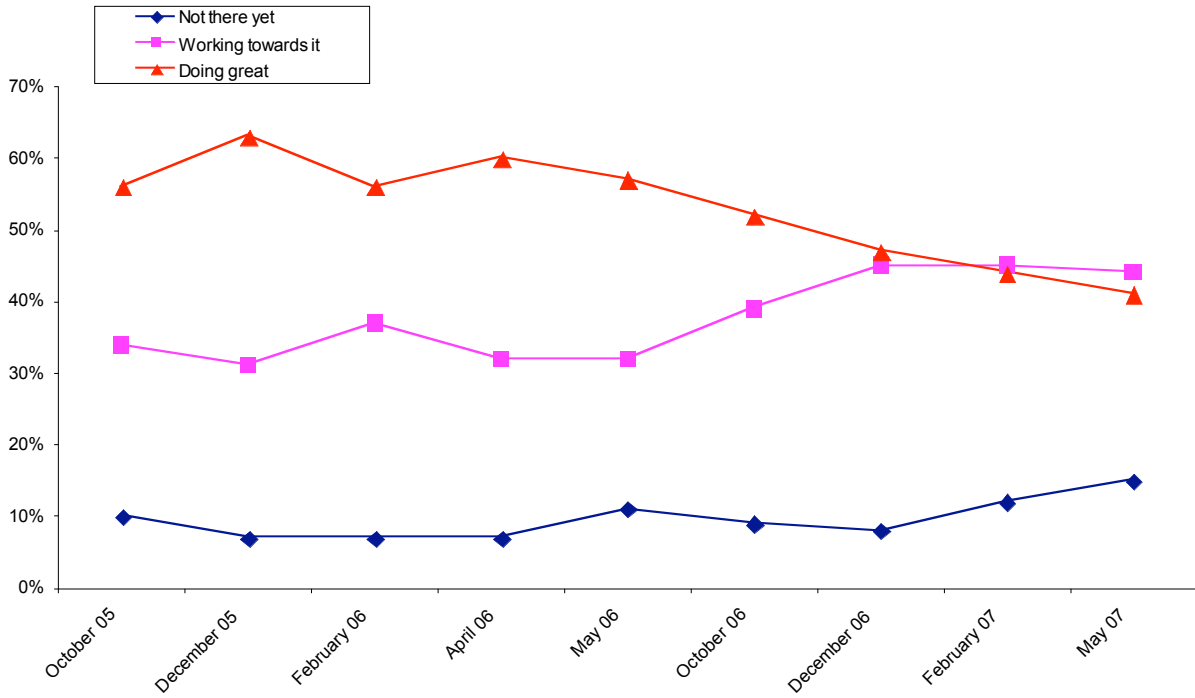


Item 19:

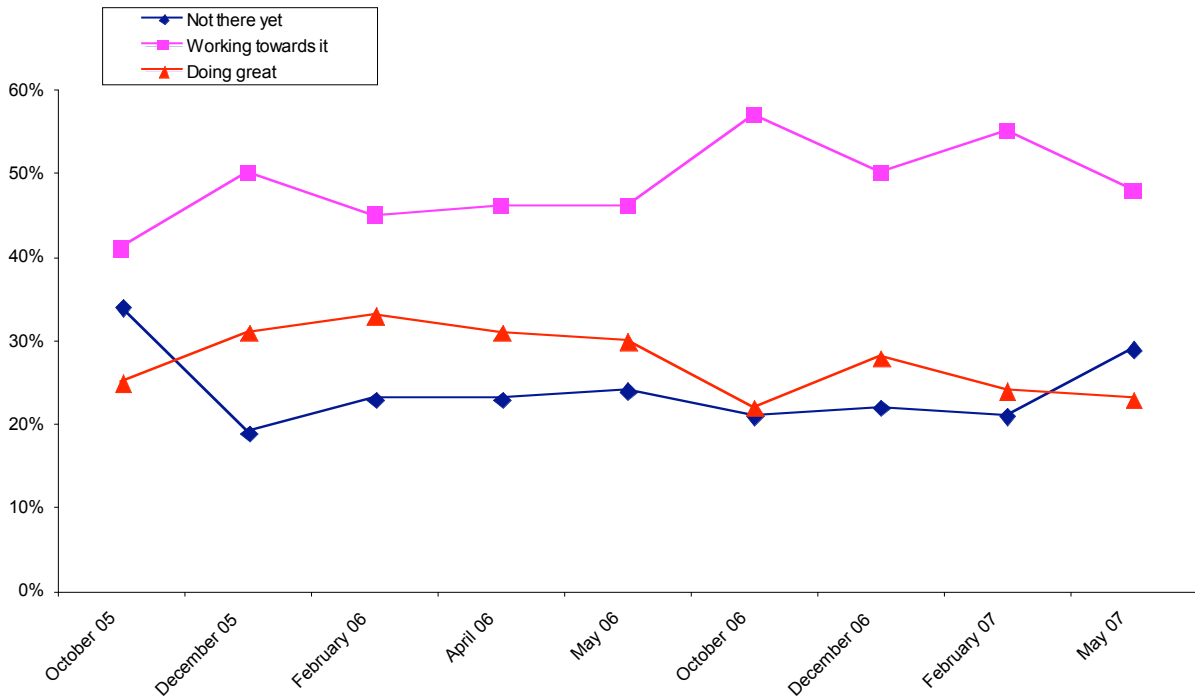
Please evaluate the effectiveness of your PLC meetings.

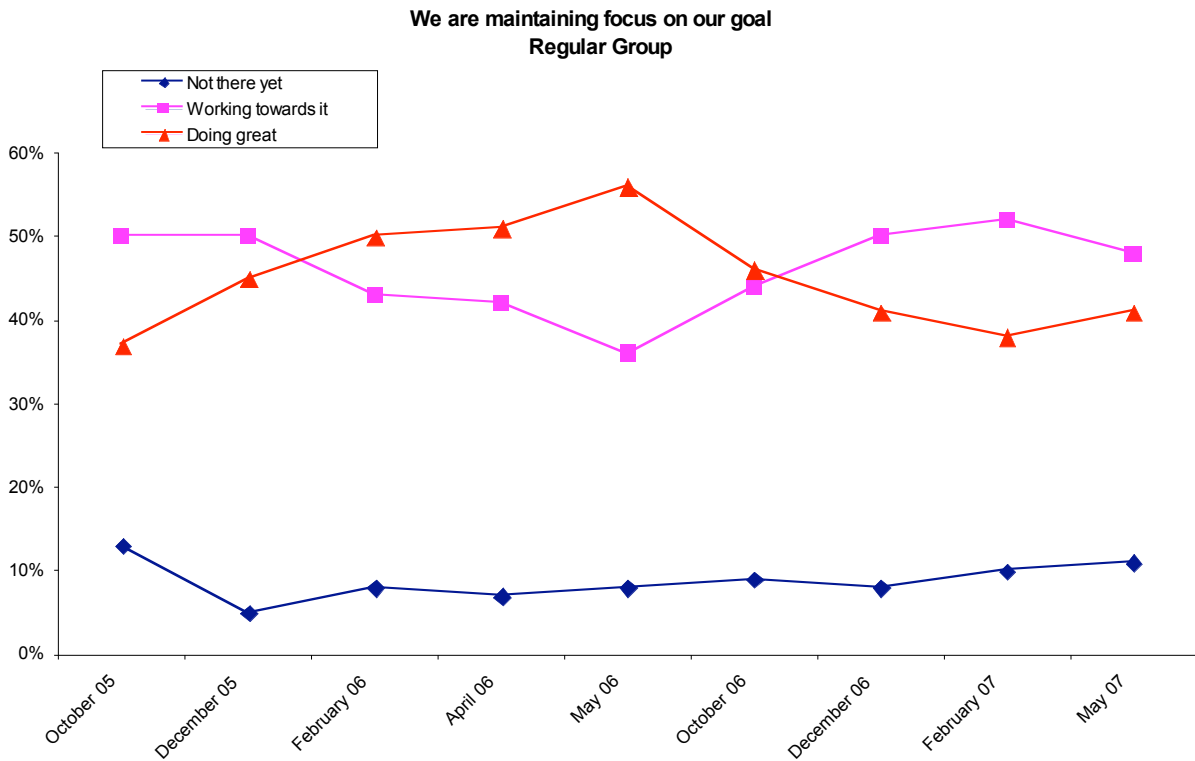
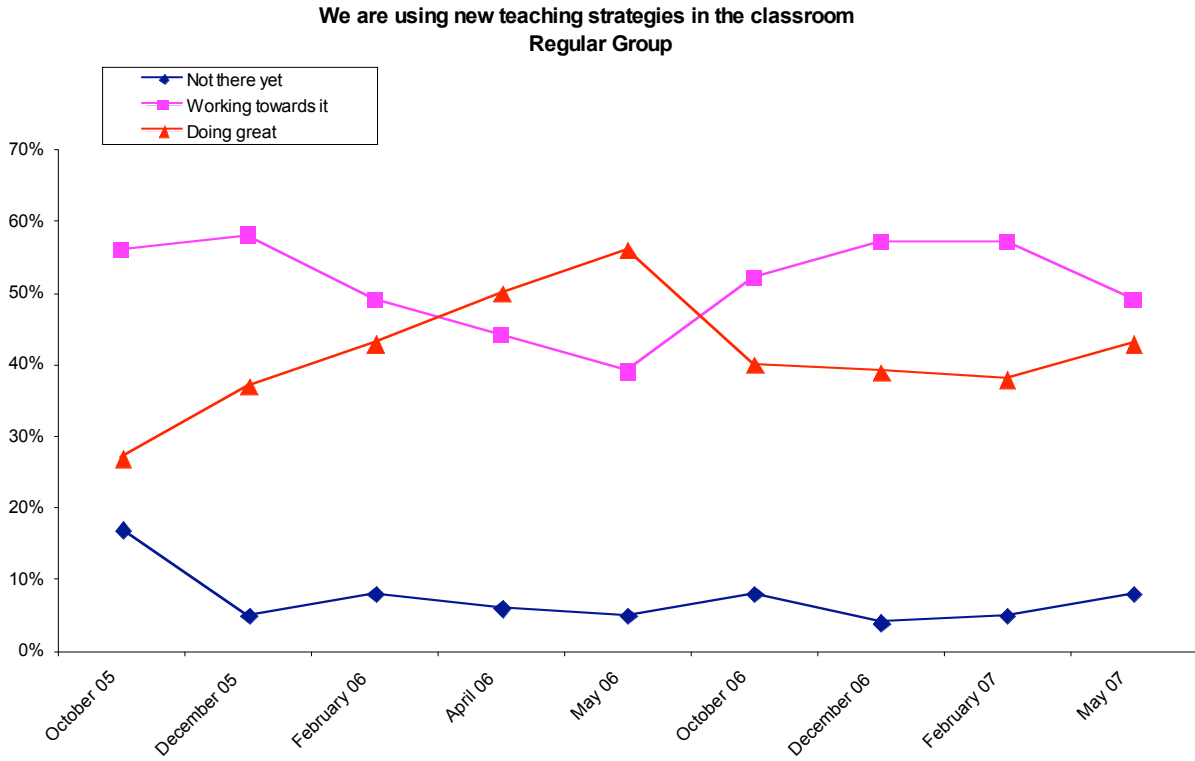


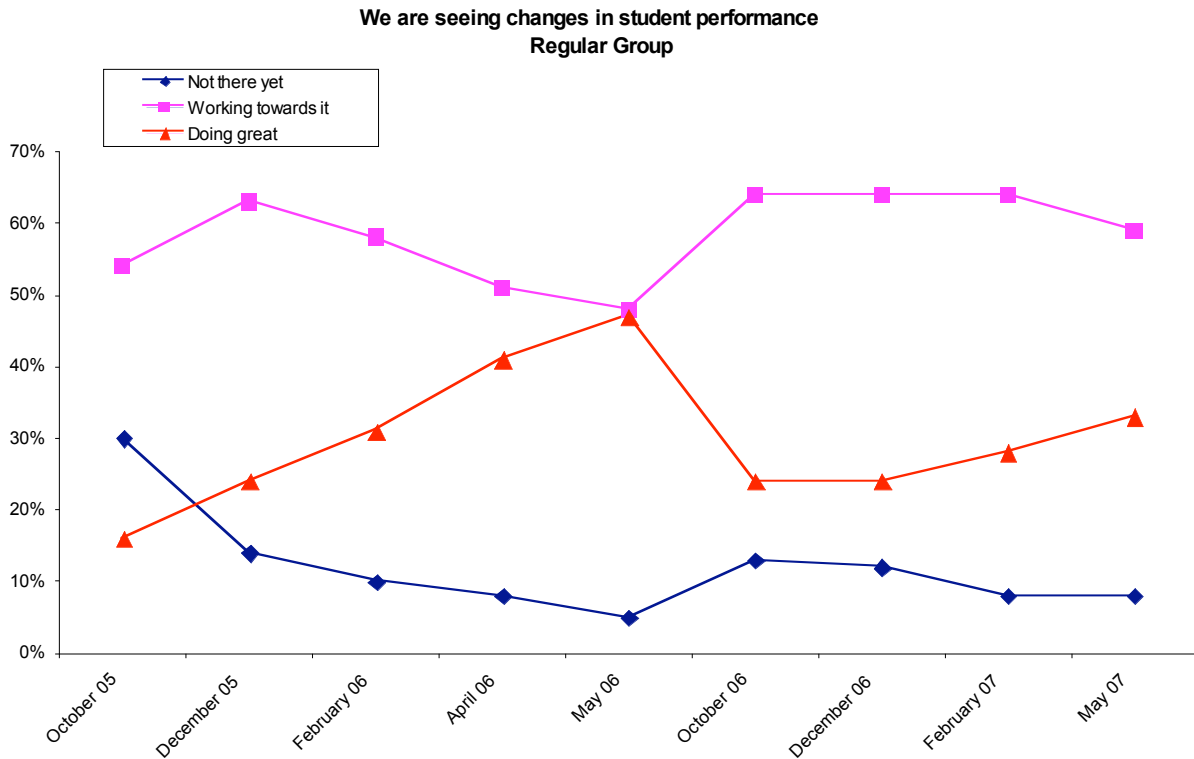
We are maintaining a regular meeting schedule
Regular Group



We are reading and sharing research
Regular Group







Comments:

October – 05:

- Looking forward to all of the above
- We have a terrific team and are well on our way to reaching our goal(s).
- Now that we have some technology in the school, I expect that student math performance has already improved.
- First meeting - we will get better
- Our team is working very closely together with very specific goals.
- I do not think this is necessarily the fault of our PLF team but we just haven't had the technology.
- We discuss our success & weaknesses every day after our math lessons. What worked? What did not? It's very valuable to compare lessons. We're working toward rubrics for particular lessons and assessments, so that we are consistent.
- Have not had enough time to evaluate some of the above comments
- This is my second year at CMMS. It is wonderful to be surrounded with experts in the field. Our entire team works together very well. It is great to be part of such a caring team in such a supportive atmosphere.
- We haven't discussed student performance yet, so I answered for myself and my classroom.
- My husband died suddenly in September and that has impacted my attendance and participation in out-of-classroom experiences. I have missed quite a few days of school, but I am attending more and more days per week. I should be up to full time by November.

- Again, in a small district like Tekoa, we're teaching 6 classes, coaching, etc. so it is difficult to find time to meet.
- 4 of the 5 of us are already working together as a 5/6 team and meet every Tuesday during a common prep period. Our discussions are not always about Math/No Limit!, but we do discuss math regularly. In terms of the entire group of 5 meeting specifically as a No Limit! PLC, we've got a ways to go.
- We are new to the No LIMIT grant and are just beginning to form a team.
- Need more time to get started.
- No PLC meetings have taken place yet.
- It's pretty early in the process and we've been swamped with parent conferences and mid-terms.
- This is my second year in middle school, and I have a LOT to learn. My team has been a great resource and support for me. They have contributed to my success and sanity!
- I have only seen one of the members at the most recent No Limit day with everybody! We have never met as a group with everyone there.
- We are still getting our feet wet attempting to collaborate on the issues and coming up with some type of rubric.
- Again, it's the issue of not having the tech. One of our guys shares links and research all the time. What little we have tried with the document cameras (w/o lcd projectors) is highly encouraging and has immediately impacted student performance in participation, and meaningfulness of student conversation. I'm astounded that one piece of tech has such an enormous impact. We are working towards making our PLC meetings more student driven and getting back onto track despite the lack of tech.
- The use of the PLC is a great way to share students' work and discuss strategies and their effectiveness.
- What goals, what focus? I have no idea what the PLC consists of or what the purpose of the last meeting was. I would like to meet with other 6th grade teachers and go over curriculum.
- We are on track and will be examining more pieces at our next meeting.
- Many of our students need a basic foundation on concepts in the strands.
- We are just getting started with the process.
- We have room to grow.
- We are still determining ways to implement instruction and technology to increase student involvement.
- Again, we have not been able to implement technology yet because the technology has yet to be delivered.
- We just don't know what to do!!! How do we find a goal (other than we want to improve WASL scores!) We analyze the data incessantly, but we are fumbling in the dark in the setting up of the PLC>
- doing great is really where were we are I just see it as an on going process
- Our own PLC meetings are invaluable for us in terms of pulling together a brand new cadre of folks and making the situation work for all of us.
- Many new members were added to the grant from the previous two years.
- Are we to meet when our MIS is not here?

December – 05:

- So far so good.

- An incredible team spirit has developed
- ESD contact came to our book study "Classroom Discussion" and shared her views, as well as how she knows the authors.
- Grade level assessments to be consistent
- We would like to spend more time on WASL prep and are deciding on common graphic organizers and format.
- It's easy for us to say we are using new strategies because we have started using CMP and you have no choice but to use new strategies. (That is a good thing!)
- Our goals were somewhat vague until recently. Pinpointing our goals has been helpful in giving direction to instructional strategies we hope to incorporate; assessment tools we plan to use; and results we open to observe.
- No problems that I know of.
- our question is hard to quantify but we are having a meeting next Monday and I am looking forward to sharing with my colleagues on what we have found so far
- I appreciate the collaboration opportunities.
- Listening and being open to new ideas is hard for some people. Sometimes people are late. I want more guidance from our NO LIMIT coordinator to help us proceed forward.
- I am very please with the way my students are kicking it up a notch in terms of their communicating understanding in math. Not only are they showing their work more clearly, but they are becoming better at articulating problem solving strategies, etc. orally.
- Still too early to tell about some of this.
- The feedback we get from each other in our Kittitas unit is very helpful.
- On the 9th of December we will be starting a k-12 math committee. Alignment across the grade levels with WASL and other areas of curriculum will be our main focus.
- Our PLC has hit a lull in our progress.
- TOO MUCH SHOTGUN APPROACH
- We are frustrated.
- We have a new member (replacement) for one of our team members and scheduling has been rough because of other commitments
- November has been very "chopped up" for academics. There has been a lot of lost time due to conferences and holidays.
- This is how I perceive the above questions, but I am not a mind reader.
- We all agree that the document camera has increased the participation and confidence level of the students.
- Students I am receiving from the 6th grade are starting at a much higher level with regards to extended response skills and competency. I believe it has a lot to do with our efforts last year with extended response work.
- At this point, we are working towards our goal. It has only been three months, and we are a new school. I imagine we will see greater results as we approach the end of the year.
- We are a mess. Most PLCs have ended in fights and/or tears. Our requests for team building activities have fallen on deaf ears.

February – 06:

- also doing some presentation to the school staff so that students can get more knowledge from other subject area.

- Several of our members do not share the same enthusiasm for meeting. This isn't of course the most fun.
- Scholars are working on problem solving using the WASL format throughout the entire building (K-8) on a weekly bases, competing to be first place winner(s) at individual grade level(s).
- Teachers have been attempting to be more focused in their questioning of students. In doing so, the students are getting better as well. Starts with the teachers.
- We are all working on common goals and student achievement.
- It would be beneficial to meet more times on our own to accomplish our goal.
- Our students are adjusting to problem-based math and being more successful with each new unit.
- Our book study isn't going as planned
- Should we be meeting more often?
- Our meetings are fruitful and stimulating.
- We have been working on creating a lesson, but have not had a NO Limit Math lesson demonstrated in the classroom.
- We are doing well. Sometimes frustrated with all the meetings that take place in our teaching lives. To have to meet for No Limits often can add to the stress.
- Still not happy with results, but this may be due to socio-economics as well as past learning experiences of our students. We are optimistic, however, that eventually this will change.
- Scott keeps us focused. He keeps us working toward our goals.
- The meetings are going in the right direction. I do believe that to make them beneficial an administrator should be required to sit in and be an active member of the grant.
- Some more than others
- The student talk moves that we do are showing that others do understand others thinking and their own by what is said and written.
- I feel like the team is kind of falling apart
- Observing how a particular lesson is taught, then analyzing it to help the other members create a successful lesson has been very useful.
- Student writing and participation continues to improve.
- Using records of student portfolios school wide has been a powerful tool for enhancing students' abilities with problem solving strategies.
- We switched from differentiated instruction to effective writing and mathematics
- It's so bad our principal has cancelled our remaining meetings until he finds a "better" set up.

April – 06:

- We are still enthused about the WASL Olympiad we held and looking forward to our next NO Limit meeting.
- We are a new school and staff doesn't know each other that well. Taking that all into account our PLCs are making gains, but maybe at a slower pace than other established schools.
- Have shared chapters from books, did a book study, and have used "Talk Moves" in our classes. Have the "Talk Moves" posted on our desks or Document Cameras to constantly reinforce the strategies.
- Collaboration, along with team planning and same assessment has provided benefits for student achievement.

- We all have been working closely with our own school TOSA specialist, and she has been of great help in working with our students!
- As the year draws to a close we are winding down, but it is easy to look back over the year and see how the meetings became more meaningful as the group got to know each other better and became more comfortable. The meetings during the last half of the school year were more meaningful than those earlier in the year.
- We do not spend time with student work (except for portfolios and that is not on all the teams). The teams are very different in what they accomplish with student work.
- The 5 No Limit teachers at our building have worked had together to create lessons and find on line resources to support them. We have not had time to observe each other or even video each other. Preparing for the WASL with released items and trying to cover enough material before the test sucks the creativity out of instruction ,and the individualize learning "aha" out of some lessons.
- Our students do seem to be writing about math more eloquently, although still not what we had hoped for
- Is the PLC the group of people involved in the No-Limit at our school? If so, we do lots of these things. If we're supposed to be working with some other groups, we need to know who they are so that we can begin communicating.
- We have a set schedule, but it isn't enough time to really do the job.
- The changes in our student's performance have come from the focus on instruction that occurs neither throughout our district nor because of the No-Limit grant.
- Our team is very strong and work well together. Debbie, Our building math coach has been great with resources and information to help us.
- I am involved in the Math Data Team for our school, so we spend time discussing progress and performance based on the Power Standards, mini-goals, pre/post tests for those goals for our different levels. Things that we talk about in our Grant meetings are useful in helping us set and obtain goals of improvement for our math classes.
- We did not have a PLC meeting in the past month.
- People are starting to get tired. My perception is we need to be more structured in our approach to the process. WE will work on this for next year
- Very effective.

May – 06:

- We had a successful year as a PLC.
- Our research project was a good one and everyone in the PLC participated in it. Our students' math performance also improved.
- Portfolios still need some development. Effectiveness hasn't been observed yet.
- Book study "Classroom Discussions" has changed the way I teach.
- We maintain a regular meeting schedule however no everyone gets to attend
- Not given release time to meet
- WASL focus took away from work time. We all became frantic...
- Good year, thank you!
- Time is always an issue. I work in a separate wing than the others. We do not have common preps and we are often committed to other things after and before school.
- The meetings were usually good except that one teacher used them as a personal soapbox to talk at length about his views on the WASL, new curriculum, etc. This got to be very tedious

since the other teachers had to work with him. There was little productive advantage to his opinions.

- Still need more time to collaborate and implement.
- Looking forward to this year's WASL results to see if we've made an improvement in probability.
- The circles above are a reflection of the core-teachers I'm working with in our grant.
- This is varied. I feel like I, personally, have made real strides in the teaching strategies, my individual goals, and student performance. I'm not sure that's true of our PLC as a whole. We haven't done much reading of research as a whole, though one of our members does so constantly.
- Last month we didn't meet because of our schools schedule. Also, since we are a small school in a remote location, we've had to cancel a meeting because there wasn't enough sub coverage.
- The hardest thing is trying to gather student evidence that our focus is really working.
- I have seen a huge change in our student performance by using student talk
- Because of two of us being half time and sharing a job so not able to meet at the same time and two of the others with coaching responsibilities, our PLC has not met as we would have liked. However, we have done the "catch as catch can" model and done a terrific job, I believe, of providing resources for one another even though we don't necessarily get to discuss things.
- This year's main focus was student portfolios using WASL-like questions. Very powerful learning/teaching tool. Great to see progress over time. These portfolios will be handed up to the next grade level for those teachers to use as a resource.

October – 06:

- Great effort on our part
- Regular meetings are scheduled, however, we do not always get substitute teachers in the classroom so we can attend
- We are much further along this year and have set firm goals and meeting agendas. We are better able to stay focused and use protocols for meetings. We work tremendous together as a team. We hope to include 2 new members (who were previously involved, but moved to lower grade levels) in our PLC and continue the wealth of working as a collaborative team, across the entire school.
- Our school is so driven to be focused learning by use of grade level and subject; we have no time to meet as NO LIMIT.
- Look forward to starting.
- I teach at a different building and grade level from the others so it is tough to work together.
- We use student evidence to help guide our decisions.
- We are making a lot of progress in our Data Teams at school that meets every other Wednesday to discuss progress of power standards and areas of concern in the curriculum.
- It is too early to tell if we are having an effect on student performance.
- The number of NO LIMIT participants from our building was just downsized by 3 teachers due to budget issues in our building.
- Our MIS is out until November I believe
- Great meetings. Brent Howard is working his tail off for us. Very flexible....very, very helpful!

- We have a new mix of teachers and everyone is trying to get to know one another. Trust is still being built.
- We have not had a PLC meeting yet
- Again, not sure I can really answer as this was my first meeting just a few nights ago.
- We're HOPING to see changes in student performance, but we won't know for sure until we test them in January. Not that we can't see growth all along, but we want an ironclad way of measuring their growth.

December – 06:

- Some work more than others
- Have not met yet
- Our PLC focus has been confusing. We are very disjointed right now. Many changes in our building/district have impacted the effectiveness of our PLC.
- Collaboration time is almost non-existent.
- The day we met as a team for the whole day we got a lot accomplished. We felt like a team and enjoyed the discussions about articles, and classroom practices. The longer we go between whole group meetings the more I loose track of our focus. If we had a MIS in the building I would feel more driven to communicate on a daily basis.
- We are behind.
- We are constantly changing our lesson plans to become more effective with our students.
- Our last meeting planned was snowed out so we have rescheduled for January.
- As a building team, we are working smoothly.
- We are off to a slow start this year. We have had no contact with an MIS this year. I question if we are receiving the support as outlined under the terms of the grant and for which we are "paying" out a large portion of the grant monies.
- Still, as a new participant, I am unsure of the goals.

February – 07:

- We will implementing new strategies starting next week.
- Has not met yet
- Our PLC meets every Thursday morning.
- Our goal is our SIP goal-not addressed by PLC meetings.
- We have scheduling issues with our PLC person. She is stretched thin and our schedule is almost absurd to allow more meetings.
- Students are doing better on extended response items.
- I am at a different school and grade level so it is difficult for me to fit into this group.
- Having a team of five is huge in making changes. You have 5 people willing to work together to change and grow together. It would never happen if you only had 1 or 2 from your department.
- We are comparing 3 papers at different times during the year to see if students are getting the process down.
- We have had interruptions to meeting schedules due to inclement weather and last minute changes in district meetings
- This is a group that is in its' second year, things are not going as smoothly as they did last year, as we are where research says 'past the nice stage'. We are all busy professionals, and some off the people are not 'playing' as nice as they could.

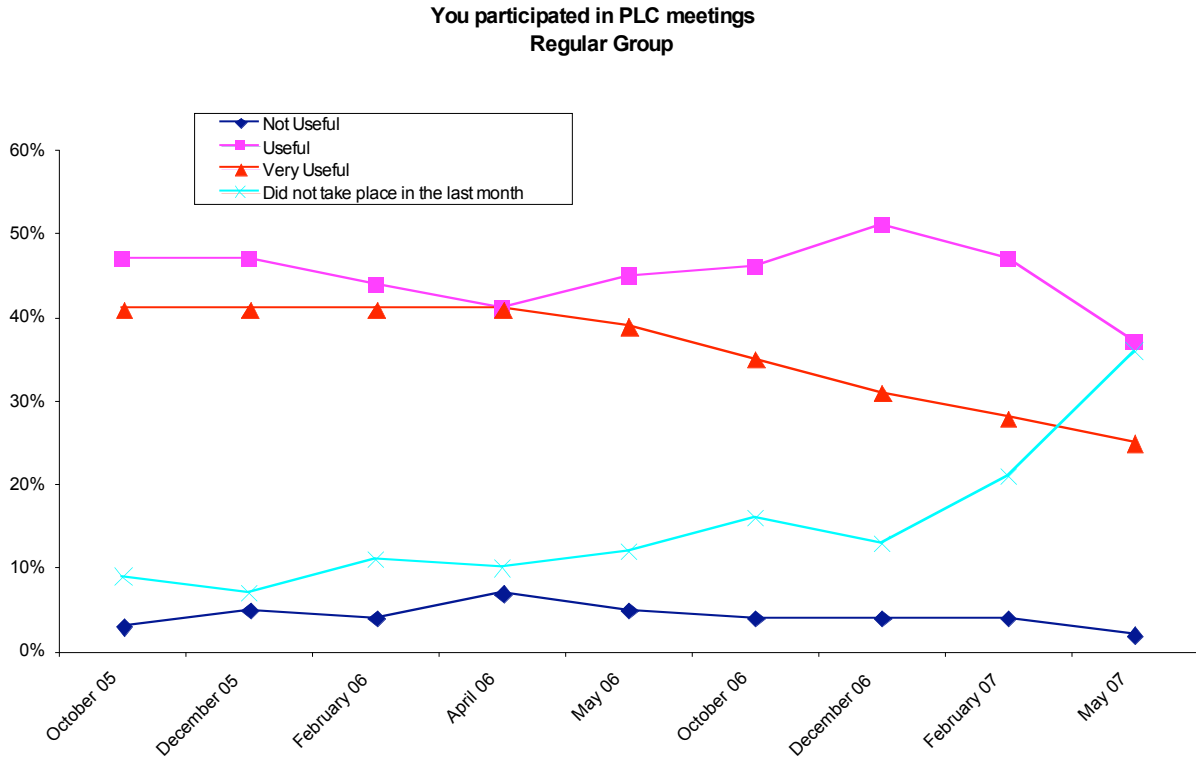
- As a school we are doing a book study and several members of the team are also part of another book study. Also, we are meeting with peers from other East Tacoma schools to look at ways to improve mathematics learning for our students. This has been a BUSY math year for us all.
- Hard to work with this group and get everyone motivated and on the same page. I want us to improve in the above areas, we are a great group:-)
- We have no goal as a group. We have been told the goal is to look at student work, but that doesn't happen.

May – 07:

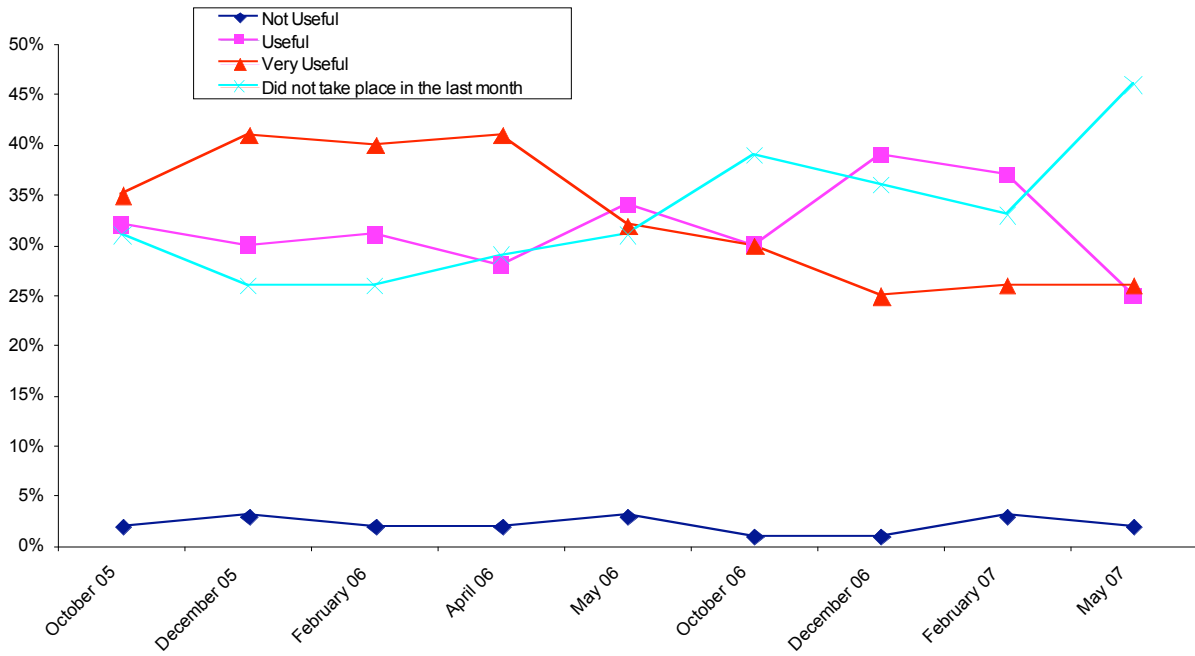
- We have seen nothing but great changes.
- We collaborated more last year. I don't think we really understood our goal or even had one this year.
- We have not done much lately.
- Our second year was much more difficult to stay focused compared to our first year.
- Since I am in a different building it was difficult for us to meet together and I felt I was never part of the team.
- Always a work in progress
- Our vision underwent change at the district level. These changes took us off course from our goal. There was not much we could do about this.
- Over 50% of my students missed 10 or more days of math instruction. (Some over 30). It is very difficult to maintain continuity and classroom disruptions with a revolving door of students who do not regularly attend class. This is part of the reason I have over 70 students on ALEKS. This program takes students where they are at, not where I'm teaching.
- I can't evaluate something that has not taken place.
- As an individual teacher, I am meeting all of the goals. As a group, we mostly back bite and pick stuff apart.

Item 20:

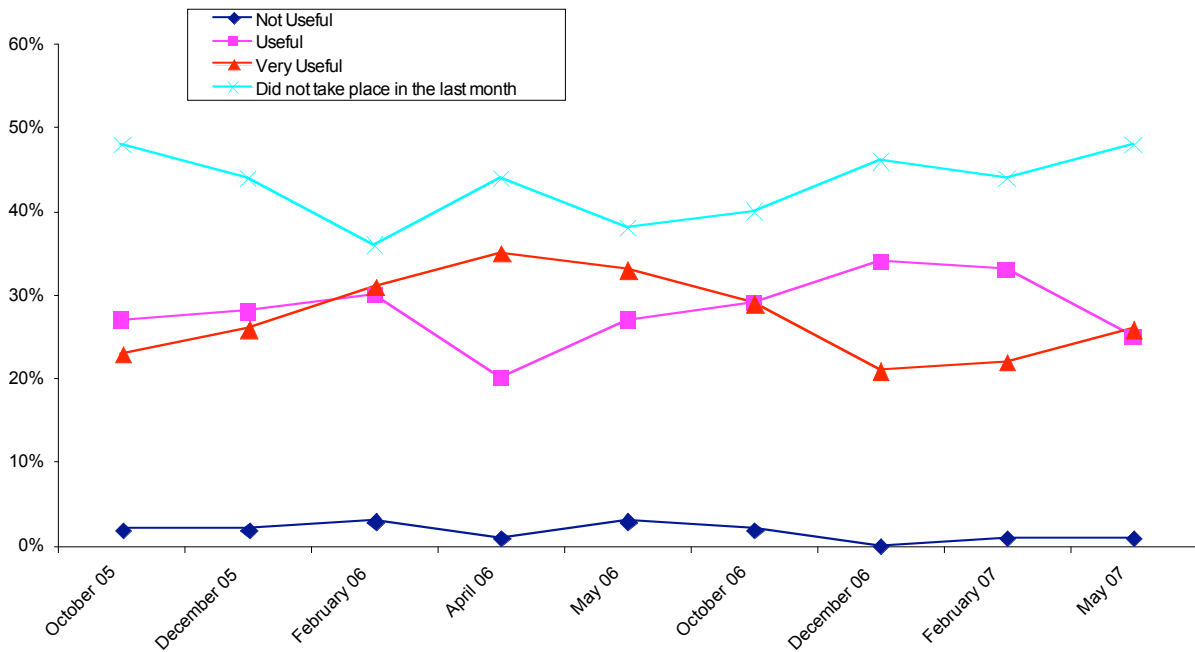
Please evaluate your PLC over the last month.

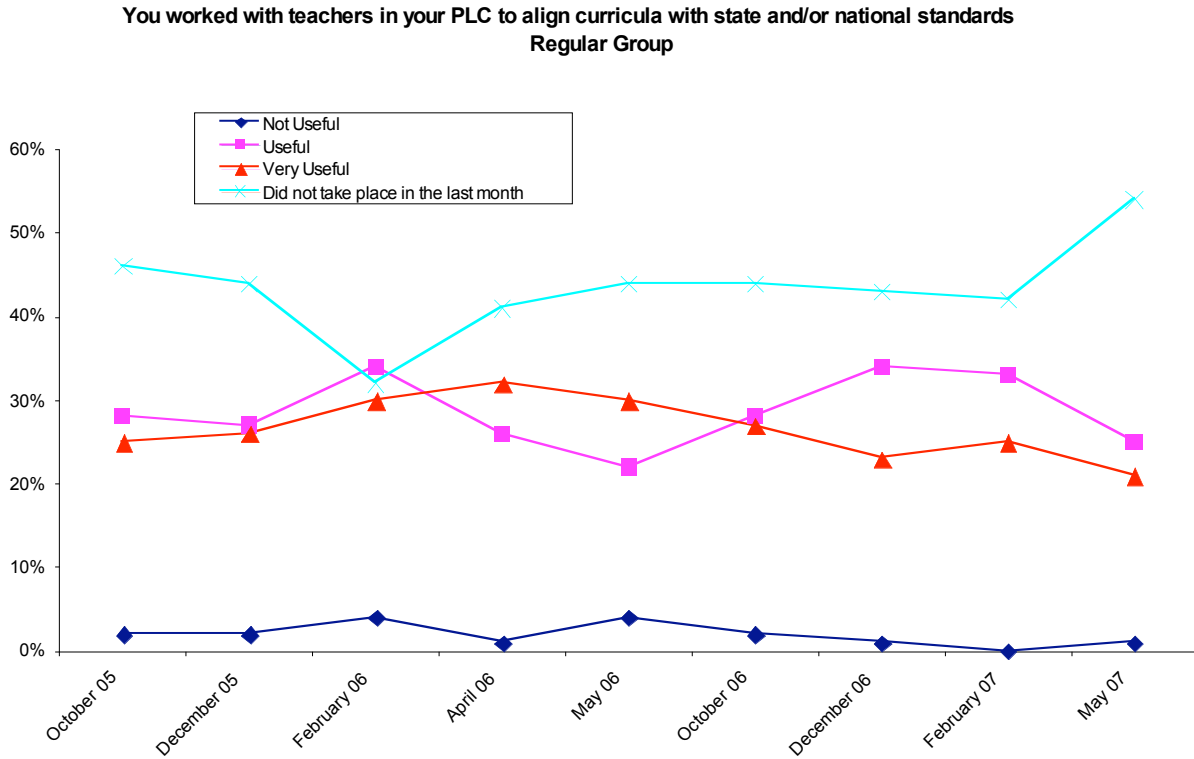


**You collaborated with other teachers in your PLC to plan or teach lessons
Regular Group**



**You worked with teachers in your PLC to align curricula across grade levels
Regular Group**





Comments:

October – 05:

- Would like to do deeper curriculum alignment-work with the GLE document more. I am sure that will come in the future-all takes time! Thank you for allowing me to be part of this grant!
- We did not plan anything or discuss aligning any curricula at our PLC meeting. We did discuss team dynamics and what it takes to make everyone feel important with the PLC. That was helpful b/c it creates a supportive environment (hopefully)!
- I did observe/help monitor with another teacher. It would've been nice to have time to pre talk the lesson; as I was pretty much an observer with my students and then helped monitor the class. Overall, good start.
- Time!
- As a school, we have already done the alignment-we do not need to do this as a PLC team.
- It would be nice to have an ESD representative talk with us as a team and take us through the different tasks we should be working on.
- We seem to be getting a slow start and need a PLC from the ESD to take us through all the websites and directions again.
- Too soon for these questions.
- I am glad to be part of this grant! Thank you!
- The other teachers in my PLC teach at a middle school and I teach at an elementary school! It's hard to work together when we aren't in the same building.
- We've spent a lot of time over the past few years aligning curricula and are working on the extended response aspects at this time...

- Attending the PLCs does require additional commitment of time but I feel it is well worth the time invested!
- We have started and will be making ground over the next few months. The first monthly meeting laid the foundation for what we plan on attaining.
- We need to work on these areas.
- We are in the beginning stages.
- We have had two meetings and we are just defining what each other's role is right now.
- We are just beginning to work on aligning curricula across grades, we did this many years ago however different curricula is being used now. Our new Math Committee is going to make sure that our curricula is meeting state and national standards and above all meeting the needs of our individual standards. We have a 30% American Indian population that is continually not meeting standards in Math, we are looking into speakers, books and any information we can find about how culture impacts the learning of Math, and what is the best way to teach it, so that all the students, "get it".
- another area for growth.
- We have been aligning curricula with all district teachers at this grade level.
- As for our PLC meetings a lot of this has not happened but the same teachers that involved in NO LIMIT are also working with Tom Boyce for our math grant and we have done all of the above with him.
- We have had two meetings and that has been to determine our focus. There is more than one grade level involved.
- Our math department met during the summer to align curricula to the GLE's. Again, how do we use PLC's EXACTLY? How are they managed? Is there any training on facilitating these PLC's. We are suppose to have them because of the grant but we have received very little support in the implementation of them.
- As I said we are still just "getting going".
- We are involved in curriculum alignment outside of our PLC
- We are still spending a lot of time spinning our wheels. The time for collaboration is not free. I am working with one 1st year teach and the sped teacher. Our goals and practices are quite different. The alignments is taking place as a district directed activity. We work on this once in a while.

December – 05:

- Thank you once again for the opportunity to participate in the very worthwhile project! Lynn Monahan
- Within our district, alignment of curriculum with the EALR's has been an ongoing process for 5-7 years. I really feel this year that we are not only fine-tuning this process, but the practical application of curriculum is becoming much more evident. In the past, the application was still too "lofty" without specific, attainable goals.
- This is a process that probable should be ongoing.
- I was unable to attend the November meeting due to a Doctor's appointment out of town.
- We had already aligned our math program to state standards in each grade level last year with our math coach.
- We need more time to work together. The collaboration is really appreciated.
- As I mentioned previously, we did not have a scheduled PLC meeting this month. We (No Limit teachers) always talk informally about students and our work.

- Since I am the only teacher in my building (the others are at a middle school) it is difficult for us to get together.
- I am not actually sure if aligning curricula took place last month or the month before. It seems like it has been part of the discussion actually every month at least a little.
- My group had a PLC meeting but I was not able to attend.
- Our team is moving full steam ahead and working well with each other.
- Again this will be implemented on the 9th of December with half days every two weeks to continue the process.
- We're really finding areas of foundational teaching that is either skipped or not reached during a year. It's good to be able to talk to the 6th, 7th, and 8th grade math teachers to see what areas we need to pick up at the 5th grade level. We are in the second year of our Math Trailblazers, so we are seeing a big difference in skill building especially in the area of fractions that will help the upper grades.
- We had parent conferences this month, which whacked out our schedule
- Would be useful if everything was not done in a big hurry
- Worked on scoring rubric for portfolio question.
- The meeting we had about items specs was interesting but what did our Mission statement have to do with it?
- I value the time we do are able to work on curriculum with other colleagues from our grade level. We have shared problems, ideas, and supplemental resources.
- I was at a class on our last PLC meeting date and did not attend.
- I was unable to attend due to a death in the family. I did receive notes when I returned but I have not met with anyone, yet
- Love the teaming approach both within my grade level and within the entire building as a math department.
- This really is a focus of ours. We have a TOSA who is awesome to work with, who helps us align our curriculum and goals.
- I am working with teachers in the PLC on other committees in my school and in those committees we are working on aligning curriculum and national standards, but just "our" group has not gotten together to do these things.

February – 06:

No Comments

April – 06:

- It is always good to dialogue with others.
- We have recently had a tragedy in my school. My student teacher died in my classroom. I have not been as involved in PLC matters since that time because I'm a bit overwhelmed.
- PLC meetings have been very useful
- We already have a set calendar, so the aligning curricula with standards is sort of a done deal for now.
- As is the case in all areas of teaching, we could always use more time. This past week was a treat as we were able to use building early release time to work as a PLC.
- Our curricula has been aligned for a while. We did not need to do that again.
- The meetings in our building have been great, but the meeting at the ESD #113 with other participants in the NoLimit project was very effective

- Not a good month for No Limits
- I teach at a different school and a different grade level than the other members so it is difficult for us to work together.
- Again, these answers are only valid if the group members exist OUTSIDE of our building. Otherwise, we've been working together on lessons and sharing materials quite well.
- The PLC meetings are great, but as I stated earlier, we've taken longer than some to develop a focus. I think we've come a long way, but honestly, some of our meetings are more useful than others. I'd like to keep working on it, because we have come a long way, and I think it's important that the dialogue continues. We certainly haven't achieved as much as I would like, but we've achieved far more than we would individually.
- As I mentioned before, PLC time is taken up with scheduling and clerical issues.
- Our Math department has already aligned our curricula with state and national standards before becoming involved in this grant.
- The John Vanderwall seminar was a great thing to do!
- The meetings aren't frequent enough to keep any momentum going. We rarely see each other than during these meetings. We teach in different buildings and have similar yet different challenges. It takes a significant chunk of our time to get in synch. I would recommend if this model is continued next year, that meetings either be all day or more often, which is also problematic in a small district with a sub shortage.
- The alignment had already been done, so we didn't need to take that on.
- We did not have a PLC meeting during the last month.

May – 06:

- We are communicating with other teachers as well.
- We worked together to bring the 4-square strategy into every math classroom in the school.
- Again I was unable to attend last meeting as scheduled
- Would like to see more cross grade level alignment.
- We each worked with own grade level PLC to get new program going
- We didn't align curricula, this had been done earlier.
- Share fair was effective as a team.
- It has been too difficult to meet with teachers from other schools.
- Again, I teach at a different school and grade level than the others. I felt like the work they were doing was only affecting there school.
- It would be nice if the window to answer the survey was open a little longer (say, the end of the month). The last survey came right before spring break and then I was gone on paternity leave. By the time I went to answer the survey, the web link was dead.
- The only good thing to come out of the PLC meetings is the Vanderwahl presentation back in February.
- We were getting ready for the Share Fair.
- We have been given early dismissal time on Wednesday to work in our Math Data teams which involves all the levels and para pros. This has been a great time to look at what is being accomplished at each level and set goals and assessment objectives with input from the whole group.
- I'm teaching at the upper grade level; the others are working with lower grade levels
- I find the intense focus on making all math look like the WASL offensive and not necessarily in the best interests of all of our students. Having high standards for students does not mean

all students go on to a four-year institution, but with our excessive work on this, we are leaving out the workers of our future.

October – 06:

- We are starting off to a fresh start.
- Worked with some, but not all; many other building requirements for meetings this month; too little time for meeting
- Regular meetings set for Mondays after school. Team Time during our Late Start Mondays, devoted to PLC. Training is emerging throughout school. Our PLC has trained all grade levels and supported by principal
- All of the above was done within my 6th grade math/science PLC
- Time was spent with entire math department aligning 6th - 8th grade curriculum
- We have already aligned our curriculum as best as possible at this time. Now our group focus is on discourse in the classroom. We are in the preliminaries on setting up lessons together.
- We have done the alignment many times across the school. We did not need to do it again with the PLC.
- Our next PLC meeting is tomorrow to reorder the equipment lost and to organize what lessons were lost.
- Again, I work in a different building and grade level.
- In our last PLC meeting we were discussing our PLC focus and how we could narrow it down so that we can find better ways to measure our success and gather data.
- We met in pairs, not in whole group because of scheduling hassles
- We looked at the OSPI math modules and how they could be incorporated into a class to help students who didn't pass the WASL the first time, be successful on their 2nd attempt.
- Last year we worked with our NO LIMIT people to align curriculum through mapping. This year we have other math teachers in our building working on this.

December – 06:

- Have not met yet
- We have already aligned the curriculum. We don't need to do it again!
- As a building each grade level (4th, 5th, and 6th) did a WASL released item and scored it together as a grade level team. With the data that was gathered teachers are adjusting instruction to improve student learning. Weekly suggestions from our MIS on projects, tech tips, articles, or even just a checking in would help me stay focused on the NO LIMIT project. I tend to get caught up in correcting papers, going to other meetings, and making lesson plans instead of taking time to visualize how to improve my math instruction tomorrow.
- We also have teachers who are not on no limit, who were are working with to do these activities. We have a math TOSA who does a lot of this work!!! So not just a PLC focus.
- These things have been done on an "as needed" basis. We have not set aside time to work on these areas.

February – 07:

- Has not met yet

- I would like to accomplish more during our PLC meetings. Our district math coach will shadow our facilitator this month. Perhaps this will help.
- We have already aligned the curriculum! We will be realigning after the new set comes out sometime this summer.
- We meet every month as a grade level to discuss one subject or another. Since we started No Limit, all of our sixth grade staff now have the same technology and we have been sharing our ideas with them.
- Again, I am in a different building.
- We worked on setting up teacher/class web pages.
- We also do a lot of work with our district math TOSA. It seems to run a lot smoother, as she is a leader. And our No Limit group is struggling with a 'leader' position.

May – 07:

- Maternity leave during month of April
- Again, I'm in a different building and we were all giving the WASL so we did not meet this month.
- Even though I was unable to attend our last PLC meeting, I've been told by my colleagues it was helpful and beneficial
- We actually have another committee at our school outside of our PLC doing curriculum alignment. Most of us are not part of this group due to other commitments.
- The biggest problem with the state of Washington, is providing curriculum that matches what they want taught. Alignment becomes a teacher-by-teacher effort to drop this or add that. (A very ineffective way to raise the bar.)The CMP series has it only half right. My students struggle with the simple computational aspects of math while trying to learn high-level concepts such as exponential equations.

ESD and Network Learning Community Component Summaries

Summaries of activities in Years Five and Six were solicited from each ESD and the Network Learning Community component. The following areas were to be addressed in each summary.

- Training and professional development provided for teachers: amount of time, dates, and content
- Conferences attended by teachers (note if any presented at conferences)
- Conferences attended by Math Integration Specialists (note if presented)
- What cluster structures were in place in Years Five and Six? Why were they structured in that way? Were they different from previous years? Why?
- Math curricula in use by NO LIMIT! teachers
- Technology purchased in Years Five and Six. How were the choices made? Were teachers happy with choices? Were you? Why or why not?
- Successes and challenges of Years Five and Six.
- Anything else you'd like to add.

Each ESD section includes summary information (which was unedited) provided by the Math Integration Specialists and Network Learning Community leadership, followed by Teacher Log data for the ESD. This may allow for more detailed analysis and comparison with state data.

ESD 101

Year Five

Training and Professional Development Year Five

Training	Content	Date (s)	Time
<p>NL! Summer Training Institute</p>	<ul style="list-style-type: none"> -Introduction to NL! -LASW -Text Based Discussion Protocols (What is a PLC?) -How to use eCoach, -ESD 101 NL! Website -Document Camera Use -NCTM Illuminations, -Beginning of Building PLC Focus/Teamwork -Online Collaboration with ESD 113 	<p>8/9-8/11 2006</p>	<p>8:30 – 3:30 Each Day</p>
<p>NL! Regional Meeting <i>(Voluntary Training)</i></p>	<ul style="list-style-type: none"> -SmartBoard Training -NCTM Illuminations Correlation w/GLEs 	<p>11/30/05</p>	<p>8:30 – 3:30</p>
<p>NL! Regional Meeting</p>	<ul style="list-style-type: none"> -Life of a WASL Item -Item Scoring -Online Grade Level Resources -Interactive Fishbowl: Consultancy Protocol -Probing Questions Exercise -Small Group Sharing -PLC Planning Time 	<p>2/22/06</p>	<p>8:00 – 2:30</p>
<p>NL! Regional Meeting <i>(Share Fair)</i></p>	<p>Each PLC Sharing Inquiry Focus for 2006 Content/Focus that was presented:</p> <ul style="list-style-type: none"> -Data Analysis to examine content holes/development of probability unit -One Day Projects, Geo. 	<p>5/24/06</p>	<p>8:30 – 3:30</p>

<p>NL! Regional Meeting (<i>Share Fair</i>) cont.</p>	<p>Sketchpad, ppt. Flash Cards, Item Spec/GLE alignment with CMP, Developing Numerical Fluency, -Peer Observation (examination of student communication) -Problem Solving Strategies -CBR Integration -Vertical Curriculum Mapping -LASW (one task for grades 5-8)</p>	<p>5/24/06</p>	<p>8:30 – 3:30</p>
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<p align="center">ESD 101 NO LIMIT Year 5 Attendance of Participants at Conferences</p>												
First Name	Last Name	NWMC	Hands-On Equations	WERA	OSPI Jan. Conference	NWREL	Tools for Schools	T3	NCCE	NCTM	NSTA	Environmental Education Association of Washington
Curlew												
John	Bell	1										
Seth	Cribby											
Betty	Davis	1										
Jim	Craw											
Larry	Schmitt											
Rosalia												
Doug	LaMunyan											
Lisa	Loucks	1										
Rob	Watson											
Rob	Hudkins											
Brenda	Kjack											
West Valley												
Tom	Struthers	1										
Myrna	Rose	1										

Terra	Davison										
Peggy	Wells	1									
Tekoa											
Andy	Mattson										
Andy	Stinson										
Tammy	Mendoza				1**						1**
Endicott											
Rich	Hallenius										
Aaron	Krantz										
Ritzville											
Martha	Heidenreich										
Maureen	Harder										
Wellpinit											
Mark	Gray										
Karen	Wensel	1									
Debby	Peone	1									
David	Karas										
Kim	Gabble										

** Presented at the conference

NO LIMIT MIS Conference Attendance 2005-06			
ESD 101			
Month	Year	Description	**Denotes Presenter
Sally		Sally Stratton	
Jan	06	OSPI January Conference	**
Brent		Brent Howard	
Jan	06	OSPI January Conference	

ESD 101 Cluster Structures

For Year Five the clusters were less diverse in grade level than years 3&4. It was still our intent to provided training for our teachers that was meaningful for all grade levels. Having elementary

through high school teachers involved was conducive in helping teachers examine how children learn mathematics at different developmental stages. While these groups were diverse in grade level teaching assignments, they were also diverse in their understanding of how to successfully integrate technology into the mathematics curriculum. We found that teachers were very willing to help each other as they developed their ability to integrate technology. Our biggest challenge was developing PLCs which had a clear focus that was central to their collective inquiry.

It was our goal to develop Professional Learning Communities (PLC) within our clusters. In order to focus the groups to engage in collective inquiry we had them examine their district narratives, the statewide NO LIMIT! goals and their own personal goals. It was our hope that by examining these goals through multiple lenses the group would be able to generate a focus that would later be the backbone for an inquiry question. We had high hopes that teachers would embrace collective inquiry and a constructivist approach to our professional development model but we were somewhat surprised when we experienced resistance from some schools. We feel that we have not fully met our goal of developing PLCs in each of our schools; however, we anticipate that these teachers will continue to grow as a PLC as we continue to facilitate trainings and meetings in Year Six.

Monthly PLC meetings were required for each of our schools this year. These monthly meetings were very helpful as the PLCs explored their inquiry questions. Meetings lasted from anywhere between one hour to all day depending on the topics that were explored. Topics and sessions varied widely depending upon the established PLCs focus. One thing that each meeting had in common was the use of protocols and reading, discussing, and reviewing current educational articles, instructional resources, and educational research. Most of these meetings were paid for by in-kind contributions from district administration.

Cluster training was also structured differently in Year Five. Clusters were required to attend five regional days of professional development, three full summer days, and two other days of PD throughout the year. Outside of the ESD very few of our participants attended other PD opportunities. We suspect that the reason we didn't see a larger interest in conference participation was due to the reduced funding for participating teachers.

2005-06 NO LIMIT Math Curricula ESD 101				
School	Grades/Teachers	Elementary	Middle School	High School
Tekoa	1 6 th gr. Self-contained classroom 1 7-9 th gr. math 1 7-8 combined math	6 th grade Connected Math	Saxon Connected Math Algebra with Pizzaz	Saxon Glencoe
Wellpinit	2 5 th gr. Self-contained 1 6-8 gr. Math 1 6-8 gr. Alternative classroom 1 gr 9	Everyday Math	Connected Math University of Chicago School of Mathematics Project: Transition Math	University of Chicago School of Mathematics Project: Algebra and Transition Math
Ritzville	1 5-6 gr. 1 7-9 gr	Houghton-Mifflon 6 th Math	Saxon	Saxon
West Valley	3 Grades 9-12			College Prep Math
Rosaila	1 Grade 5 1 Grade 6 1 Grade 7 1 Grade 8 1 Grade 9-12	Glencoe Course 1	Glencoe Course 2-3 and Pre Algebra and Algebra	Glencoe Geometry and Algebra
School	Grades/Teachers	Elementary	Middle	High School
Curlew	1 Grade 5 1 Grade 6 1 Grade 7/8 1 Grade 9-12 1 Applied	Trailblazers	CMP	Discovering Algebra/Geometry Applied: CORD
Endicott	1 Grade 5/6 1 Grade 7/8	Scott Foresman Math	Scott Foresman Math	NA

Technology Purchases Year Five 2005-06

First Name	Last Name	LCD Projector	Document Camera	TI 15s, books & cases	Graphing Calculators	GPS Units	Classroom Response Svstems	Manipulatives	Classroom Multimedia Screens	Digital Video	Digital still camera	Inactive White Board	Laptop	Wireless Access
Curlew		0												
John	Bell	1	1										1	
Seth	Cribby	1	1										1	
Betty	Davis	1	1										1	
Jim	Craw	1	1										1	
Larry	Schmitt	1	1										1	
Rosalia		0												
Doug	LaMunyan	0	1										1	
Lisa	Loucks	1	1										1	
Rob	Watson	1	1										1	
Rob	Hudkins	1	1										1	
Brenda	Kjack	0	1										1	
West Valley		0												
Tom	Struthers	0	1										0	
Myrna	Rose	0	1										0	
Terra	Davison	0	1		30								0	
Peggy	Wells	0	1		30								0	
Tekoa		0												
Andy	Mattson	1	1		20				1				0	1
Andy	Stinson	1	1										1	
Tammy	Mendoza	1	1								1		1	
Endicott														
Rich	Hallenius	1	1										1	
Aaron	Krantz	1	1										1	
Ritzville														
Martha	Heidenreich	1	1										1	
Maureen	Harder	1	1										1	
Wellpinit														
Mark	Gray	0	1										0	

Karen	Wensel	0	1						0	
Debby	Peone	1	1						0	
David	Karas	0	1	25					1	
Kim	Gabble	1	0						1	
Total		17	25	105			1	1	2	1
									0	

This document represents the technology purchases made by the NL teachers’ in Year 5 (2005-06.) The participating teachers’ and school districts were ultimately responsible for choosing their technology as required by the Tier I and II approved list provided by OSPI. All teachers were required to have a laptop, projector and document camera. Various teachers had laptops which allowed them to use their money for purchases from the Tier II of purchases per OSPI We believe the document camera has been a critical piece of technology that enhances teachers’ ability to facilitate student presentation and increase embedded classroom assessment. All but two of our teachers have decided that they no longer need their overhead projector. All teachers continue to work hard to integrate the document camera and their other technology into their instruction.

YEAR 5 Strengths and Weaknesses

Successes	Challenges
Trust developed with teachers <ul style="list-style-type: none"> • Created a willingness to use technology • Laid the groundwork for developing PLCs 	Helping teachers see more opportunities to integrate technology; lack of buy in from some teachers
Seeing Teachers Integrate Document Cameras	Establishing and maintaining Second-Order Change
Teachers Commitment To Improvement	Decreasing teachers anxiety when it comes to training & meeting
District Administrators Support	Dealing with teachers who bluff to protect themselves (faking technology knowledge and usage)
Multiple Day Visits & Trainings	Finding the time to use eCoach effectively
Support & Implementation of New Curriculum	Teachers who have no buy in and are unwilling to try new things and change.
Seeing teachers give students more access to technology	Lack of OSPI leadership at MIS meetings
Seeing teachers move from isolation towards a collaborative community	Keeping up to date with current research books that people recommend for both MISs & teachers

Positive working environment	Helping Secondary teachers see a need to change some instructional practices.
Support from Ed Tech director	Spending time in poorly managed classrooms
Attending Conferences and regular meeting with other MISs funded by OSPI	Lack of funds for adequate prof. devel. of MISs
Attending conferences and meetings grant participants	Fewer teachers attending conferences this year.
Location choice for regional trainings	Teachers not willing to use technology with kids – but more interested in using the tech. for themselves
Adapting to decentralized PD	Presenting the PD at four different sites
Use of protocols in meetings increased teacher input and collaboration	
Separation of district assignments did not stop MIS collaboration.	Traveling separately and not being able to collaborate and facilitate meetings together.
Vertical Alignment with small schools (having the whole department in one room was key in collaboration efforts)	
PLC that is not going to be funded will continue to collaboration beyond the life of the grant	
Increase in communication among district math teachers administration and ESD staff.	

Changes for ESD 101 NO LIMIT! Year 6

ESD 101 has had to make some hard decisions with regards to staffing for the 2006-2007 NO LIMIT! Grant. ESD 101 will have only one 1.0 FTE MIS for the 2006-2007 school year. This MIS will be expected to service six schools with both onsite and online support for participating teachers. The MIS will have limited office time and spend most of their time working onsite with each school for approximately two days per month. The MIS will also provide some “value added” professional development through the use of online asynchronous and real-time collaboration tools. Depending on budget costs, some funding may be used to contract part time with local expertise as it relates to the focus of individual PLCs.

Year Six

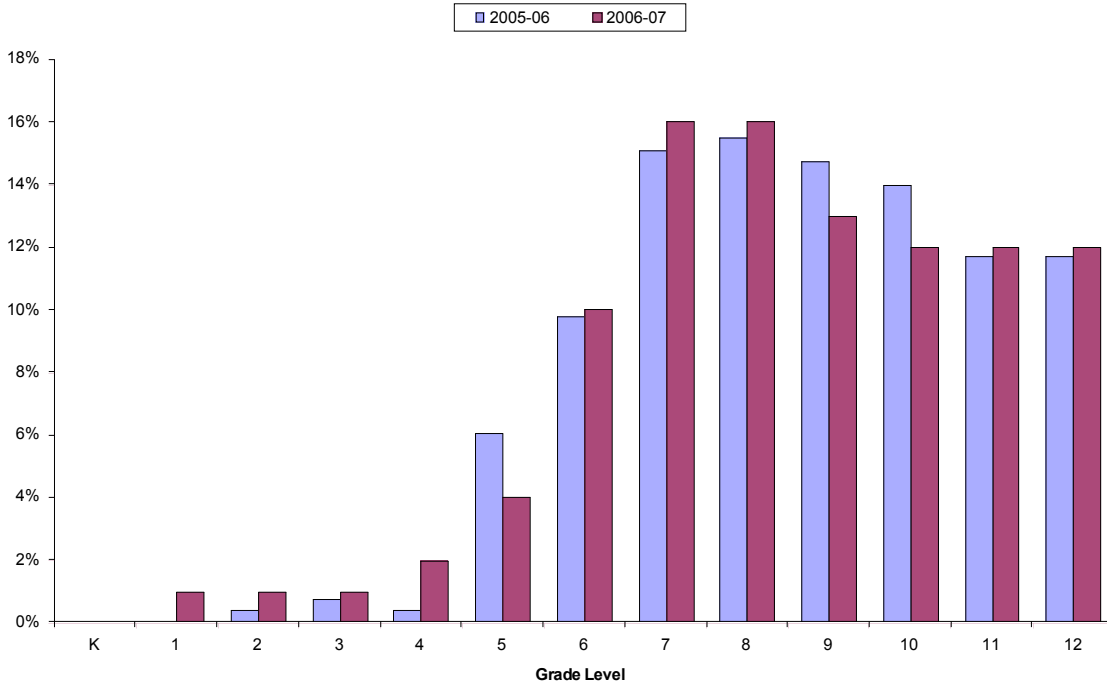
No report received from ESD 101. Teacher Log data for Year Six appears with Year Five below.

Log Report 2005-2007 ESD 101

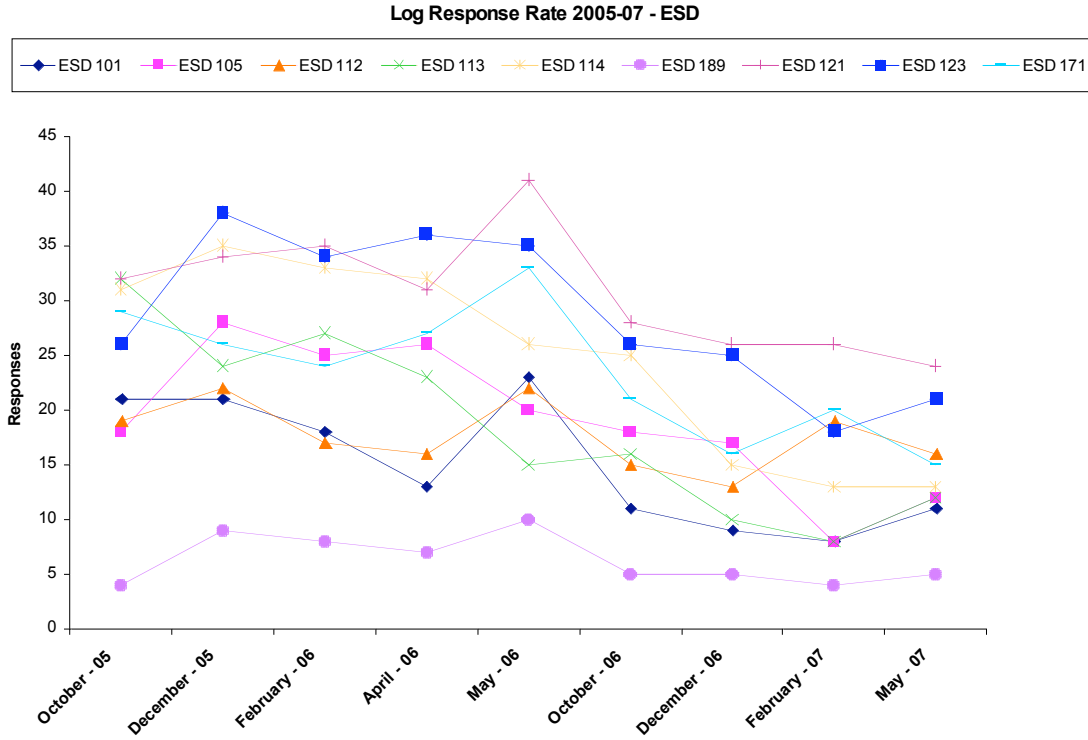
Item 6:

The grade levels you teach:

2005-07 Grade Level Participation - ESD 101

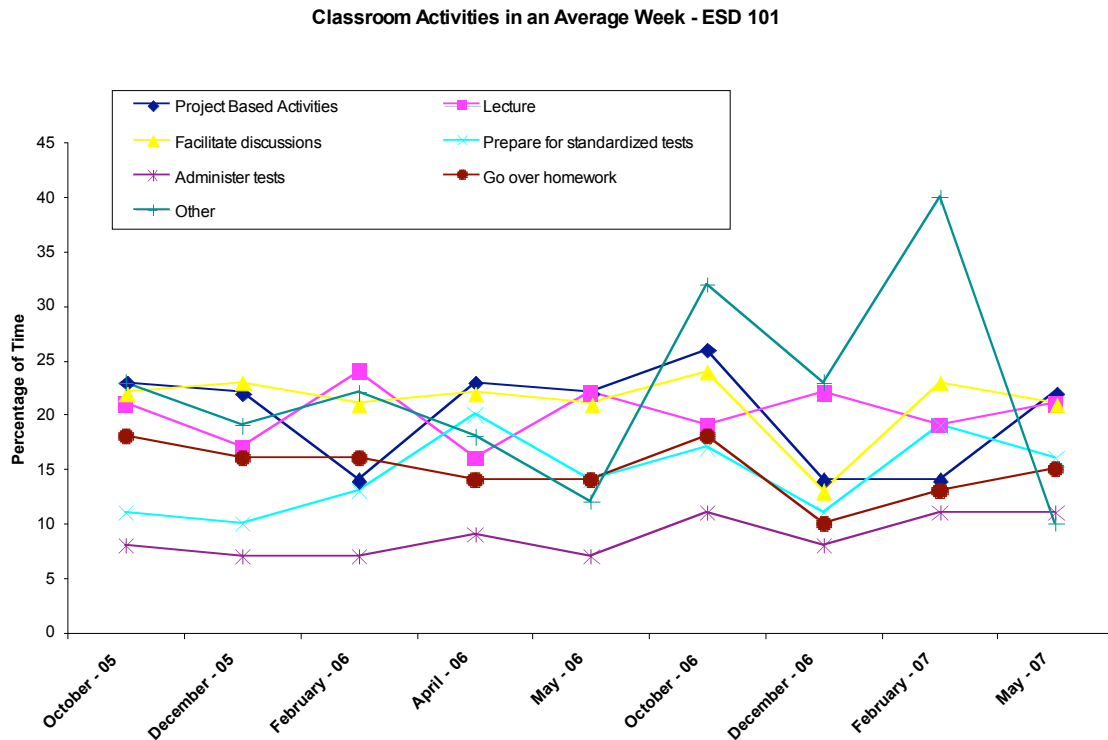


Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?



Other, please specify:

October - 05:

- Individual instruction for four students.
- Roaming while students work, answering individual questions, being available for individual assistance.
- Students involved in problem solving and investigatory based activities.
- Most of the time students are learning the subject matter that is related to the text.
- Planning, making parent contacts, following up on attendance issues, etc. I teach in an alternative classroom for at-risk students who have a high rate of failure for the past two years.
- Wasted time due to tardiness, inappropriate behavior, interruptions
- Guided practice
- I took this question to relate to math only. In Connected Mathematics I feel the curriculum matches WASL questions, but that is not really a standardized test.

December - 05:

- I am hoping to collaborate with 8th English teacher to do project on stock market next semester
- Warm ups - reviewing concepts to make sure we do not forget what we have learned.
- Preparing students to take the WASL, which is not a standardized test... We spend time modeling and discussing communication of information in math as well as problem solving strategies and techniques. Maybe this fits in projects...
- Guiding student teams through a problem solving based curriculum.
- Students working on individual or partner homework assignments.
- We follow the text and improvise as we go through the text.
- Down time
- Working with students struggling with a concept that was discussed the previous class
- This has been a high activity month

February - 06:

- I have been working Brent Howard, ESD 101 Math Specialist, to begin a project with my students using graphing calculators/spreadsheets.
- Extra practice on fundamentals in mad minute, or warm up activities.
- Involving students (working in teams) in a problem solving based curriculum
- Planning for improvement both alone and with team members
- Class behavior issues

April - 06:

- Warm ups - review of previously learned concepts
- Reviewing other related items
- WASL Prep lessons and administering the WASL

May - 06:

- Reviewing previous concepts and using technology for math activities.

- Helping individuals and small groups work on projects or practice 22%. Whole class work through of projected math activities and their discussions e.g. Math Talk, How the West was 1+3X4 illuminations: 10%
- Supervising, redirecting students and creating lessons
- Dealing with disruptive off task students.
- Students have time for independent work also.

October - 06:

- This question is difficult to answer. Too many of these tasks are done simultaneously to answer this accurately.
- Students working on math assignment (usually with a partner or group).
- Independent practice within classroom; students working together to solve problems, student demonstrations using the document camera and Smart Board.

December - 06:

- I am using the Connected Mathematics Curriculum, which lends to a great deal of discussion and group activity. I also have students discuss and explain their work to the entire class. This leads to a deeper understanding of key concepts.
- Allowing students time to complete assignment.
- Multiplication facts - drill and kill. Smart Board activities based on concept were on Individualized practice on skill. Group activities and games based on the concept
- I combine homework assessment with discussions.

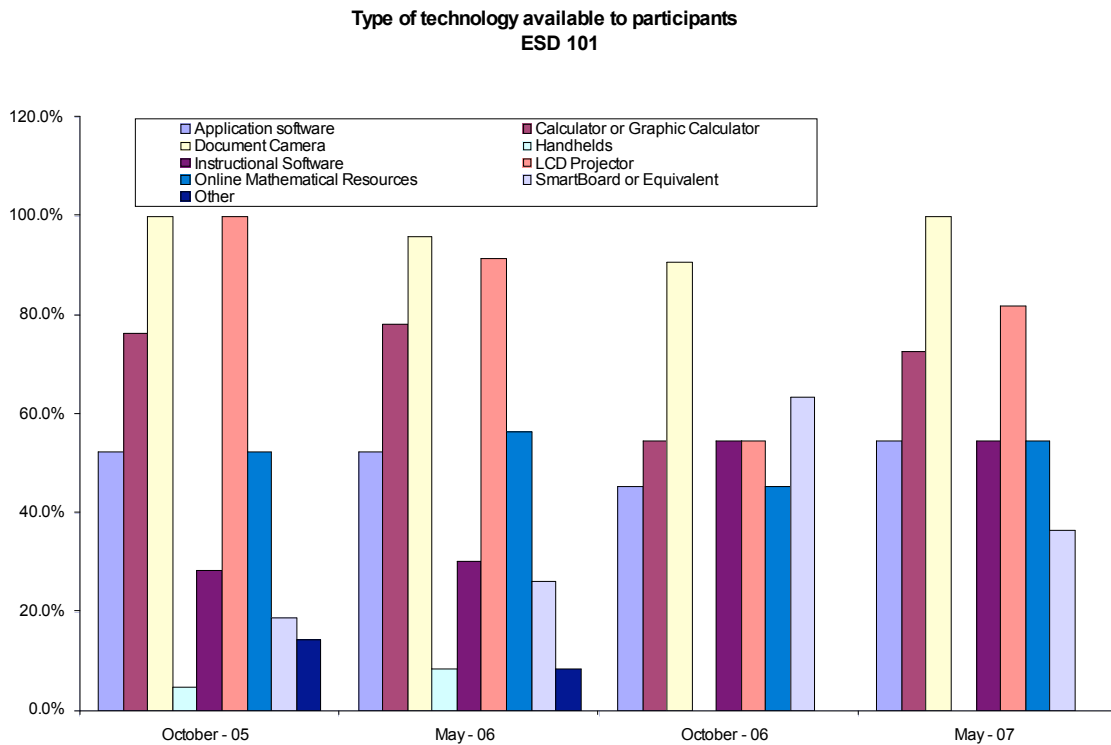
February - 07:

- Hands on activities
- Working on daily assignments/concepts.

May - 07:

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.



Other:

October - 05:

- 5 student computers
- CBRs
- Computers

December - 05:

- I have just received a SmartBoard and it will be mounted next week.
- Scanner

February - 06:

- SmartBoard is mounted but not hooked up yet.
- Laptop
- Scanner

April - 06:

- Instruction CPS device

May - 06:

- I sometimes take my class to my Business Ed. computer lab
- Scanner, Laptop, iEnstruction CPS device, CBRange Finders, Video Conference Camera

October - 06:

December - 06:

- Class set of laptops, Scanner, Printer and 9 desktop all connected to the internet, TV and DVD player, speakers. What else is their, and I probably have it!

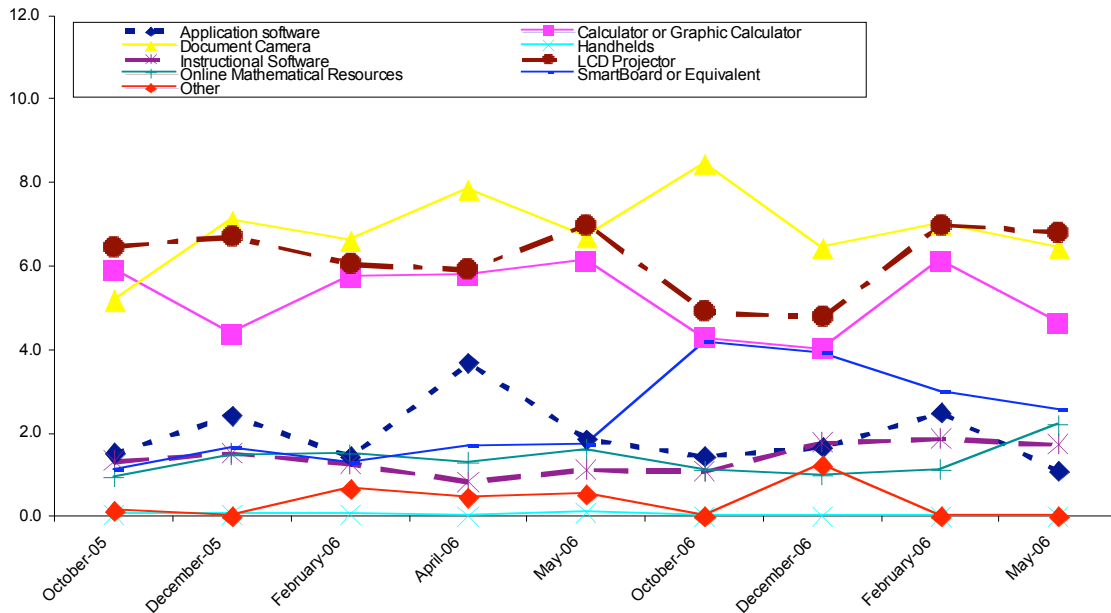
February - 07:

May - 07:

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.

Frequency of use of technology over the last ten lessons
ESD 101



Item 11:

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- Explaining solutions to story problems to the group using document camera and LCD projector
- Use a graphing calculator to plot points on a graph, to find the y-intercept and to discover where two lines meet.

- Students are required to complete a math entry task. Each day a different student is called upon to show their answer and explain to the class their thinking
- Used the graphing feature on Geometer's Sketchpad to predict what absolute value graphs would look like.
- Used the internet
- We use the document camera daily to view various math lessons/papers, including student work. Use could be to explain a problem, discuss a result, model solving a problem
- Presentations by students reviewing concepts for unit tests
- Students used graphing calculators to explore the shifts of various functions (such as x^2 and x^3)
- Showing various problem solving strategies on the overhead (my overhead cart has been on backorder for a few weeks now-- once it comes in we will be using the document camera instead).
- Students were examining conjectures. They used the geosketch pad to establish that the midpoints of a quadrilateral always form a parallelogram.
- A student demonstrates to the rest of the class how he/she solved a math problem using the document camera/projector
- We use autoskills academy of math for 1/2 of each period.
- In a "getting to know your calculator lesson, a student tried several options on her calculator, then explained how her calculator works in relation to order of operations, truncating, displaying decimal numbers, etc.
- Students sharing work using the document camera that is then discussed. Students who solved the problem differently then present their approach and explanation.
- Have not used the equipment yet.
- Using the projector and geometry sketchpad to predict absolute value graphs and checking our predictions
- Used the camera and projector to display problem solving examples
- Used the Smartboard to build a guess and check table that led to creating an equation to solve a word problem
- Brain teasers- As an extension. Illuminations- Showing fractions
- Showing and explaining their work

December - 05:

- Students have used the document camera to demonstrate their different methods of solving story problems.
- By doing a problem on paper (using a calculator) and sharing with the class how she/he did the problem (using document camera).
- Presented how they solved a word problem using the document camera.
- Working out a problem that had a shadow for reference
- We used it to help them visualize the way the interior and exterior angles of a triangle work. I also use it daily for math. Students have done examples of problems on SmartBoard and have explained them to the class.
- We use the document camera daily to model problem solving and discuss strategies and methods to solve problems
- Student presentations using their choice of document camera or smart board after lab with TI 84's and CBR's on graphing

- Students used calculator-based rangers to detect their motion in an effort to interpret various graphs.
- Sharing problem-solving techniques with the class via the document camera and projector.
- Students have started using Excel to produce spreadsheets to verify mathematical concepts.
- Daily using the academy of math.
- Graphing Calculator: entering lists, sizing window, setting scale to plot a picture. Discussion occurred about what would be effective, along with students trying to send info from one calculator to another and troubleshooting when it did not work.
- The use of the camera and projector was used extensively in modeling long division instruction. Students modeled their work and explained how they used different approaches.
- Document Camera - To demonstrate difference solutions to a challenging ratio problem that was solved using manipulatives.
- Going over their papers and projecting them on the board using the document camera and LCD projector.
- Students analyzed data based on water quality testing. Students used software to prepare graphs in order to analyze their data.
- Using the calculator to calculate angles and sides of right triangles use trig functions and then analyze reasonableness of response

- Creating different graphs for budgets
- With the use of CBR and Graphing calculator students discovered the slope of a line and the y intercept.
- The document camera is used to show the use of angle rulers, student work in figuring degrees of an angle, and student answers in math. We have a teacher study group on assessing student math work, and we used the document camera to compare student work.

February - 06:

- Used document camera and LCD projector to demonstrate their different methods of solving problems.
- Students do a WASL problem every Friday. They can use a calculator to solve it, if needed. I discuss how a student can get a score of 2, 1, or 0 on a 2-point problem or a score of 4, 3, 2, 1 or 0 on a 4-point problem. A student who gets a perfect score of 2 or 4 will then present to the class how she/he got the answer using the document camera. He/she then answers questions, from the students or me, about the problem.
- Used the document camera to share ideas and get student feedback
- We used the smart board and graphing calculators to administer probability problem solving activities. We wrote equations for sequences at the site www.mathematics.hellam.net
- Used lap top computer to test cars they had gotten data from testing on a track, tried this information to see how accurate it was.
- Presented answer and explained strategy to solve math problems.
- Students used graphing calculators to solve matrix equations.
- We developed a hierarchy of quadrilaterals. Then we tested the theories on Geometer's Sketchpad. Finally, we used our hierarchy to answer questions about other quadrilaterals that had not been drawn on the Geometer's Sketchpad.
- Daily on our Academy of math software.

- They showed their extended response math problems on the document camera, and then helped each other score them using a rubric.
- Used the Smart Board to show fractions on a number line.
- Using the document camera to show their graphs of the mean and median to others in the class.
- We use geometry sketchpad to discover relationships of shapes and angles. We are going to use it to start checking correct graphing techniques of lines. We use the document camera to present student work and analyze for improving other work.
- Created spreadsheet for a budget
- Students were required to present "The Big Problem" that their Team (of 3 or 4) completed to the rest of the class using either the Document Camera or the SmartBoard and Projector. Each presentation took 5 to 10 minutes.
- Showing their papers so we could see different ways of doing the same problem. They also could have demonstrated using manipulatives.
- Sharing answers - presentations

April - 06:

- Demonstrating how they solved story problems.
- Performed transformations with the activboard
- Using basic calculators
- Students teach students problem-solving strategies for problem of the day, share mathematical thinking to prove their answers. Allowing sharing of multitude of problem solving strategies stimulates mathematical thinking.
- Students used the Smartboard to work percent problems. Explaining the steps and logic behind their work.
- Math Software
- Presenting WASL sample problems to class using document camera
- Students used excel spreadsheets to show their data analysis of our watershed. They collected and analyzed the data that was collected over the past year. They also produced a power point to share their data with others.
- Calculating Standard deviation and interpreting the SD using the normal distribution curve. Graphing lines on geometry sketchpad to check their own work.
- Students created spreadsheets and graphs to display information from surveys
- Students were required to complete a problem that included tables and present it to the class using either the smart board or document camera.
- Coordinate graphing using virtual manipulatives
- Showing how they solved a problem, sharing within the classroom different ways to solve a problem.

May - 06:

- We have been using similar figures for indirect measurement and have been working with percentages so they have been using calculators
- Students used excel to go through the process of finding standard deviation in order to understand it.

- I introduced Excel to my class... gave the students data ... showed the students how to create a "scatter plot" graph. Then I gave the students another set of data, and they created a graph on their own.
- Calculators to check their calculations
- Presented how they solved word problems algebraically using the document camera. In addition, doing practice SAT problems online.
- Tom Snyder's Math Talk series, Illuminations applets to illustrate and practice, United Streaming teaching videos and lessons, WASL tools day and practice, - between daily and weekly- some days we don't use technology for Math HOTS
- Figuring out the price for square footage of tile needed to cover a certain area.
- Presenting projects or ways to solve problems on overhead projector.
- Students shared their solutions to problems with the class using the document camera or smart board
- Combinations of geometric figures, finding their area and perimeter as combined shapes.
- Sharing word problem solutions with the class via the document camera and projector.
- President Garfield's proof of the Pythagorean Theorem was emulated on GeoSketch Pad and the students worked the proof using a parallelogram to show that $A^2 + B^2 = C^2$.
- Sharing conversions of measurement with the class
- Daily math program
- We used the projector to share work and discuss/score it according to rubric
- Using calculators to check their work and using the document camera and LCD projector to show their work.
- Analyzing data, producing power point presentations
- Document camera to analyze graphs of conic sections
- Students used a virtual graphing calculator to show other students how they figured out a problem.
- Proving the Pythagorean theorem, used life skills applications
- Used ratio to determine estimated number of fish in an imaginary lake. They then presented their findings to the class. Some used the document camera and some used the Smart Board. I had one team that used the scanner to save the findings to the server.
- Travel planning and finding best price on flights and other travel costs and supporting their findings.
- They share their work, showing different ways to reach answers.

October - 06:

- When presenting their work using the Elmo and computer
- When discussing lines of symmetry, students showed examples of geometric figures with lines of symmetry. When discussing graphing of points on a coordinate grid, students showed examples of locating points. When solving "consumer problems", students shared examples of finding unit prices, amount saved per day when purchasing one brand over another to amount saved per year.
- Money manipulation, smart board and projector
- Used the internet to create the Pythagorean Theorem created by Pres. Garfield.
- Discussion about the value of mental math vs. the use of a calculator. In addition, we viewed a film and took notes in order to facilitate a discussion and write a multi-paragraph response.

- We use our document camera daily when discussing mathematical concepts. We are just beginning to use the Smartboard.
- We worked with linear regressions given data and the graphing calculator
- We used grids on Smartboard to do arrays for our Prime Time book in math, and now for graphing in Data about Us. Calculators were used daily in Prime Time. The document camera is also used to share student work, display examples, and read selections together
- Students wrote their own word problems, and then presented them to the class to solve by using the document camera.
- Not sure - students used Smart Board to discover equivalent fractions and their relationships

December - 06:

- We worked with some story problems and students showed their work on the board to demonstrate different methods of solving problems.
- Students used their graphing calculators to find where the lines intersected on a linear programming problem in Algebra II.
- Students use document comers, Smartboard, and graphing calculators to present solutions to problems to the rest of the class on a regular basis
- Regressions, creating quadrilaterals and proving it, creating parallel lines and proving it.
- By demonstrating their understanding of concept using the document camera. Showing the class their understanding. They also use the Smartboard to work problems.
- Students shared problems they had written with the rest of the class for their peers to solve.
- Students used the Smart Board to demonstrate perimeter and area competency, solved magic squares, demonstrated the use of compasses to measure angles
- Graphing
- We use document camera almost everyday for math idea exploration and discussion.

February - 07:

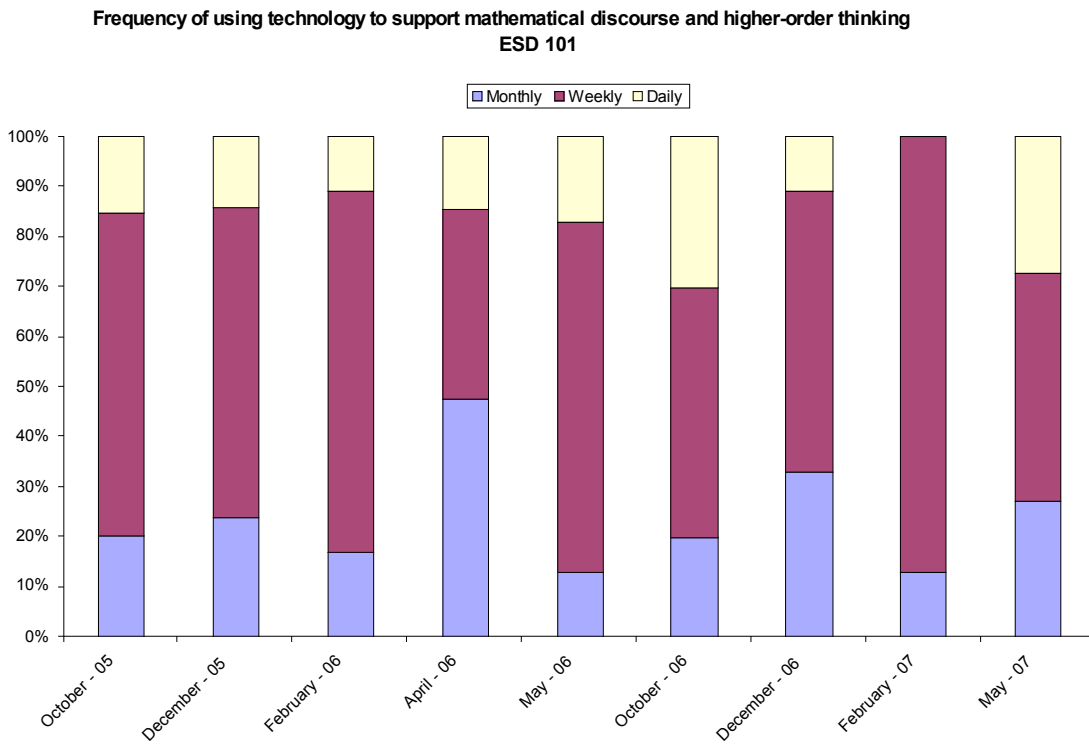
- Used a function machine game to strengthen skills on writing the nth term for a sequence.
- Students used document camera to present alternate solutions to challenging problems
- Students used the calculator to discover the best sailing times using a SIN curve.
- Calculators to do extended length problems - not so bogged down with the computation. Document camera - looking at work samples
- Used an online spreadsheet to create graphs to go with their project. Used the document camera to share individual solutions to WASL type problems
- Geometry sketchpad to construct circles with inscribed angles to determine relationships between different angles within the circle, central angles etc...
- Working through problems and describing how the answer was obtained to the rest of the class.
- Students developed probability-based math games using the graphing calculators and the ProbSim feature. S's discussed how the outcomes of the games could be changed based on changes made to the game (Example size of sections in a spinner)

May - 07:

- During sample WASL questions, students presented their solutions to the class and we analyzed them.

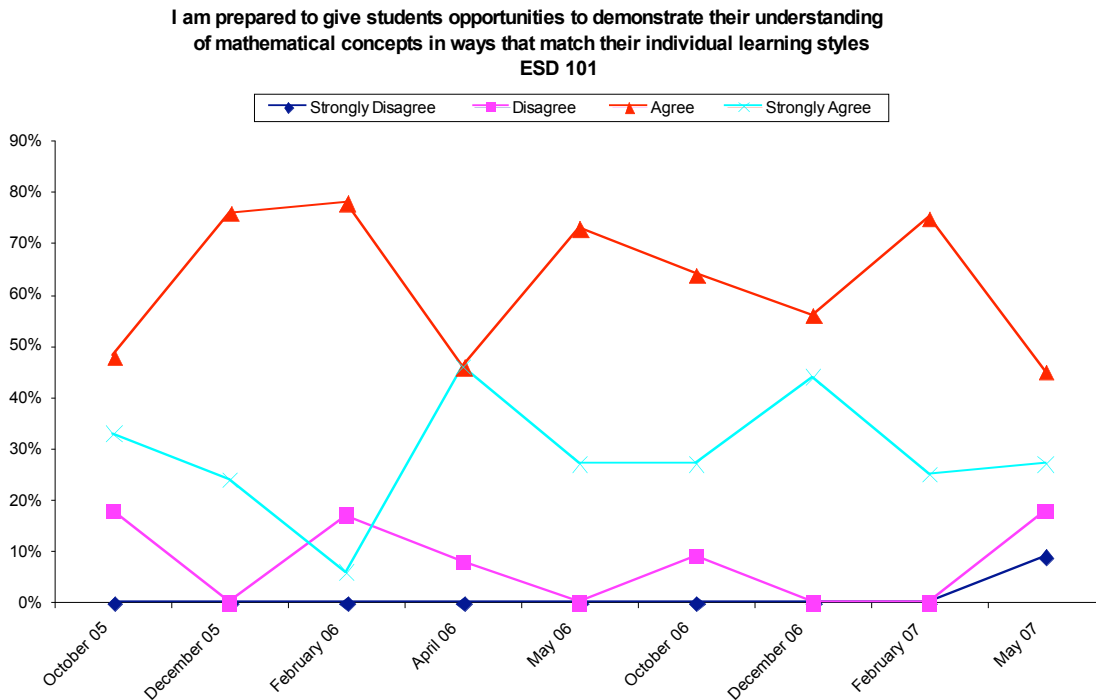
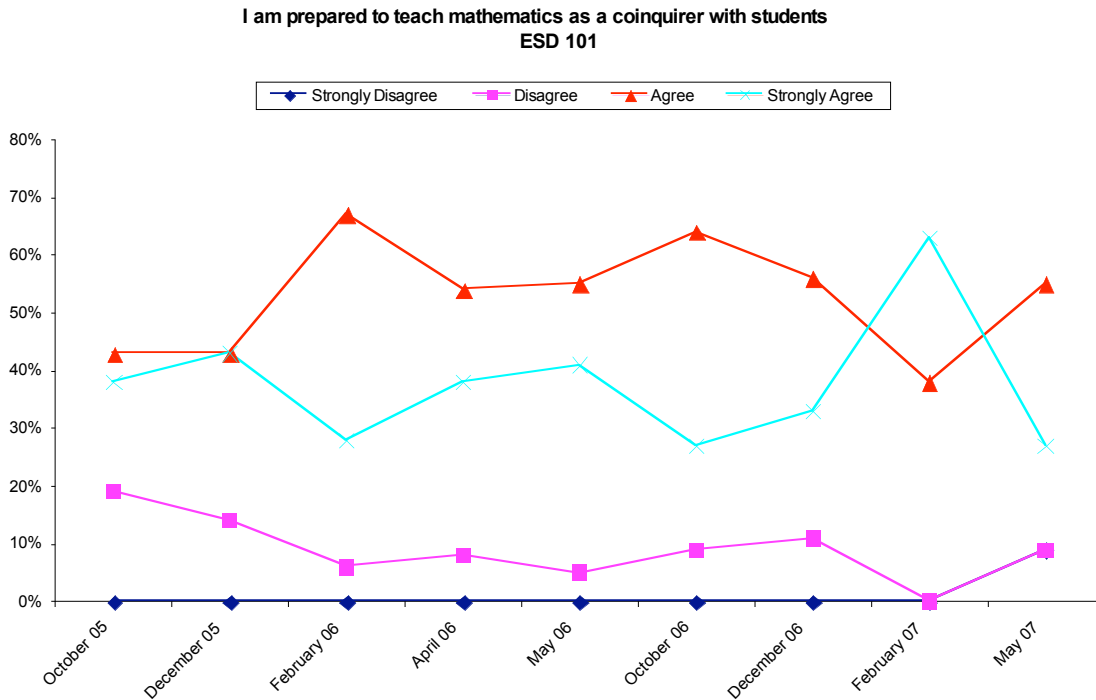
- Found x intercepts in a quadratic equation and then calculated them on a graphing calculator to check their answers.
- During WASL Testing
- SmartBoard use in grouping multiplication problems
- Students built boxes and designed nets of the boxes to write a proposal for the cost and material that would be needed.
- Present to class their process of solving multi step equations to graph
- Students put their work under the doc cam and discussed pros and cons of each others' solutions
- When preparing for the WASL we used the document camera to cover common mistakes made by students when answering WASL questions
- Students came up and shared their ways of making number sentences for subtracting using unifix cubes. Displaying them on the document camera helps all to see and gives the students an opportunity to explain and show their work in a positive way.
- Computer online

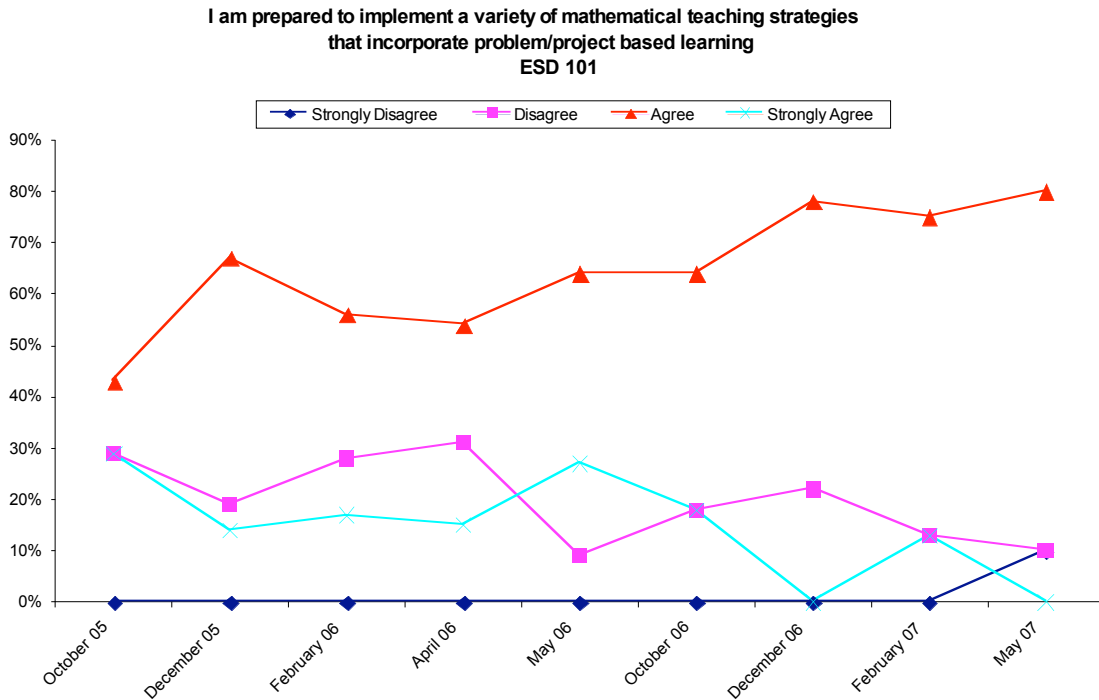
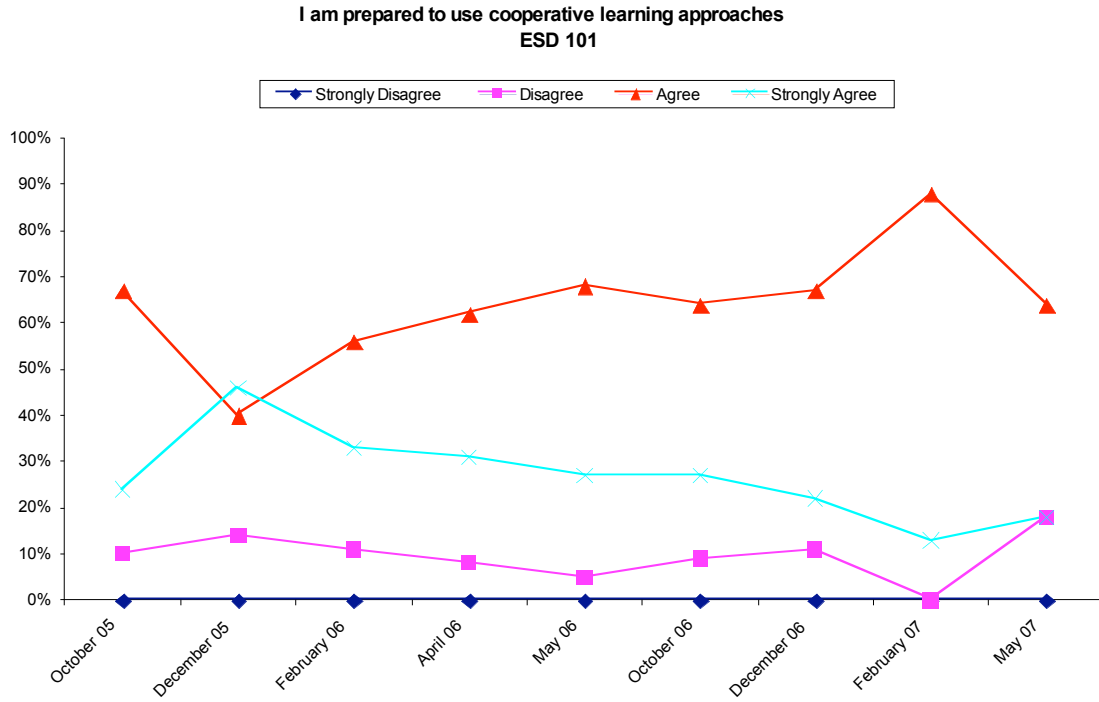
How often does something like this occur in your classroom?



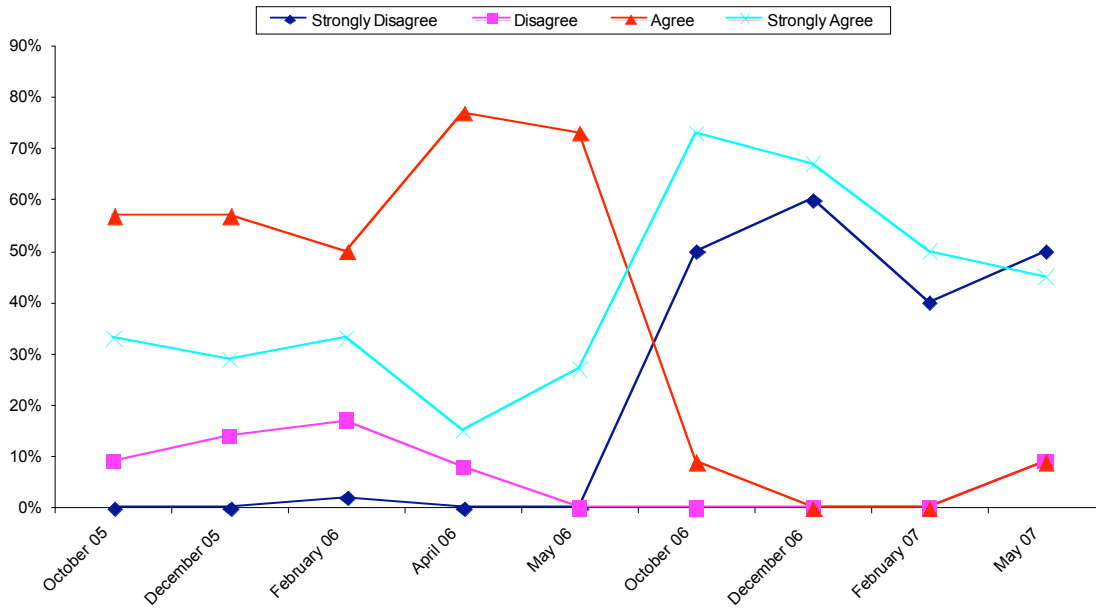
Item 13:

Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.

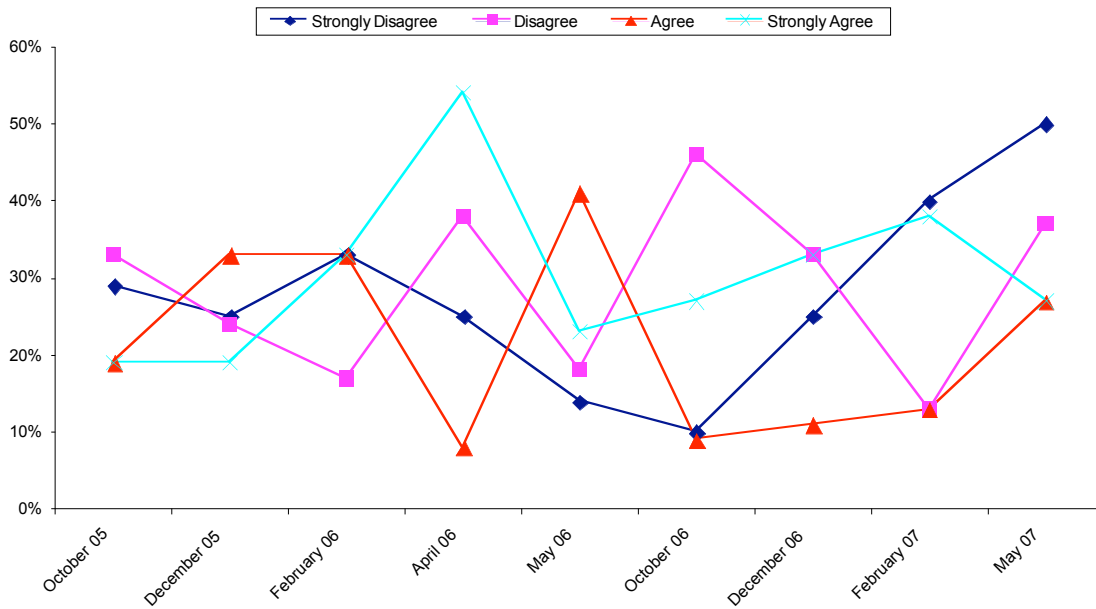




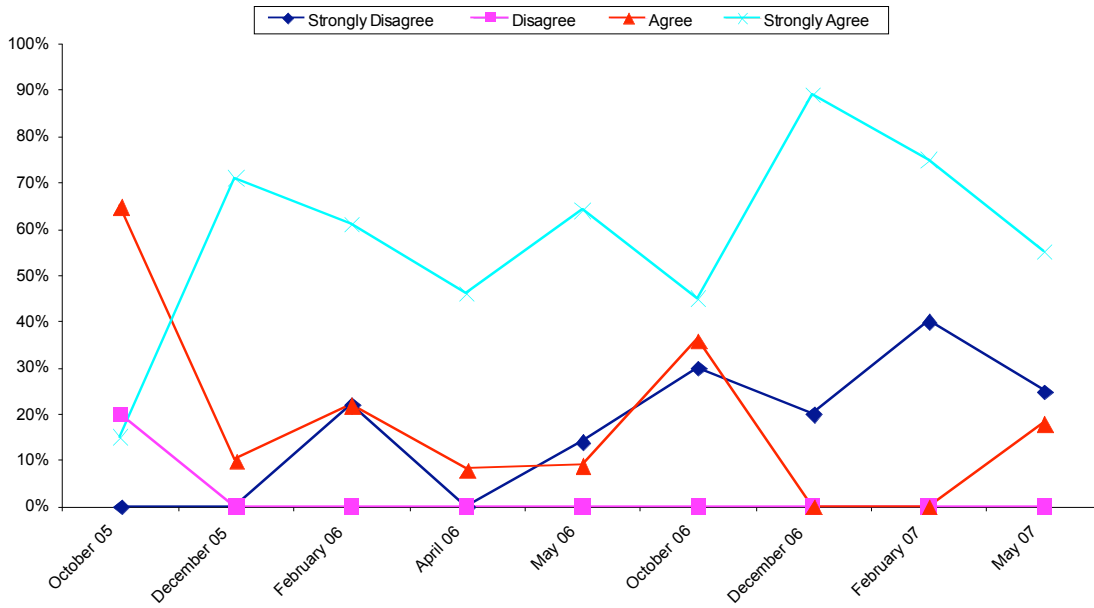
I am prepared to involve students in hands-on, concrete mathematical experiences
ESD 101



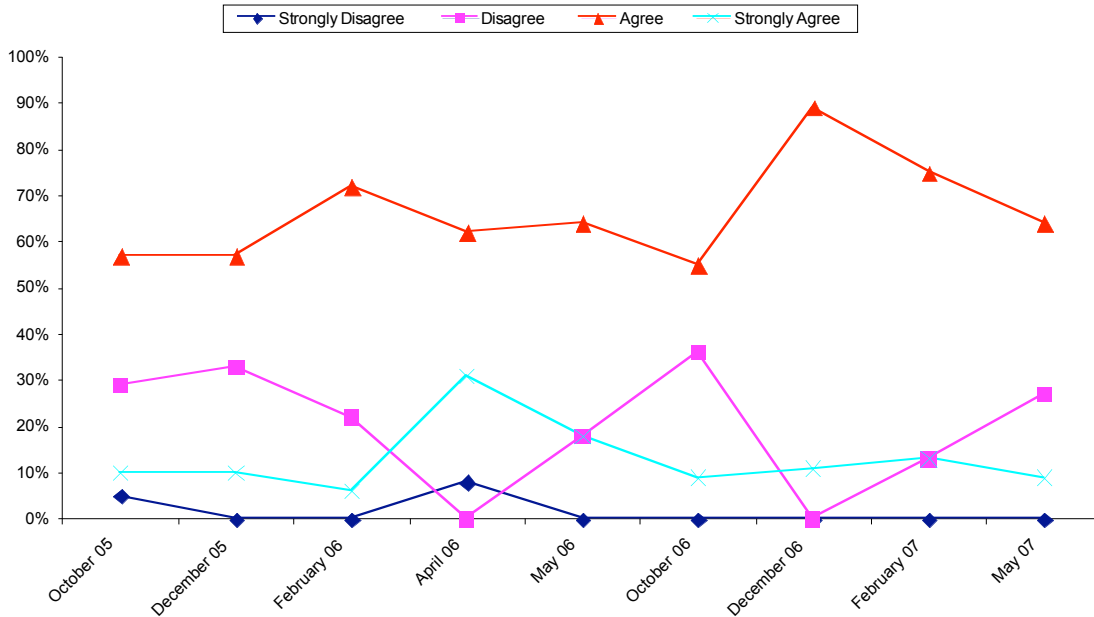
I am prepared to teach mathematics lessons that include the use of graphing calculators
ESD 101



I am prepared to locate online resources in support of mathematics learning
ESD 101



I am prepared to integrate computer-based activities
in support of mathematics learning
ESD 101



Comments:

October - 05:

- Time is the issue in a small school like ours - it's difficult to find the time to do all of these things and still meet our requirements.
- I do not really know what a "co-inquirer" is...not sure what that would look like.
- I have felt comfortable with calculators and am starting to experiment with Geosketchpad. I will be trying to add a math technology class to our electives at Wellpinit. We did this three years ago and that is how I became stronger with the calculator.
- It is not that I do not want to do some of these activities, but my ability to do them is not there.

December - 05:

- It is a "work in progress" for me to change my style of teaching I am learning.
- Finding time to do all of these and still be ready for the WASL is the issue.
- I do not have enough technology to integrate computer-based activities yet. I only have 5 computers for student use and 23 math students. I am just not comfortable with the management of that. I am not prepared to teach pre-algebra using manipulatives at this time. I have very limited knowledge.
- I believe I have started to use computers more often to supplement my teaching strategies.
- All levels are developing. I feel I am improving.
- Agree means better than before but not sufficient
- With the lack of access to the computer labs it is more difficult to use the computer technology on a regular basis. I do use a laptop and Smartboard along with the document camera.

February - 06:

- I am not sure what is meant by "co-inquirer" in the first statement.
- More training would be great - or if we were given a list of great activities that have been used by other teachers or websites that are effective, that would be helpful as well.
- I believe I am prepared to do most everything in the classroom. Our biggest problem is time. A lot of the activities that I would like to do would take too long. We only have 50 minutes classes and a lot of material that needs to be presented before students take the WASL.
- My Smartboard was just installed today, so I will be learning it and using it frequently in the future
- The problem is always the amount of time I have to prepare for the lessons!
- I use Connected Mathematics in my class and I do not have the time to do all the group work suggested, so I do not feel the need to extend lessons by getting online.

April - 06:

- Lack of time is the only issue
- Time limitations on preparation using technology play a role in how much technology can be implemented.
- The last two I am very weak in my ability, so do not do it readily. Also, I feel my math series has enough for them to do and have not felt the need to supplement in math.

May - 06:

- It is my goal for the 2006-07 school year to have the students use graphing calculators more. Our school district will, hopefully, be purchasing calculators for classroom use.
- The fact that the grant has been discontinued will now hinder my ability to learned practice further.
- I have gained a lot of different strategies using technology this year, thanks to the grant and Brent Howards expertise. I still need more work with the graphing calculators to feel comfortable using them with my class.
- I am getting stronger in some areas but am not confident by my self. Also, the math program is so full of ideas I haven't seen the need to get on-line for more activities.

October - 06:

- This is the first year that I am using on-line math sites to extend the students' learning of concepts. I have always stuck with the math curriculum. I am venturing out!!

December - 06:

- I have to go to a computer lab to have use of individual computers.

February - 07:

- Computer based activities are very rare due to the size of our student population and the fact that we only have one computer lab available to the school.

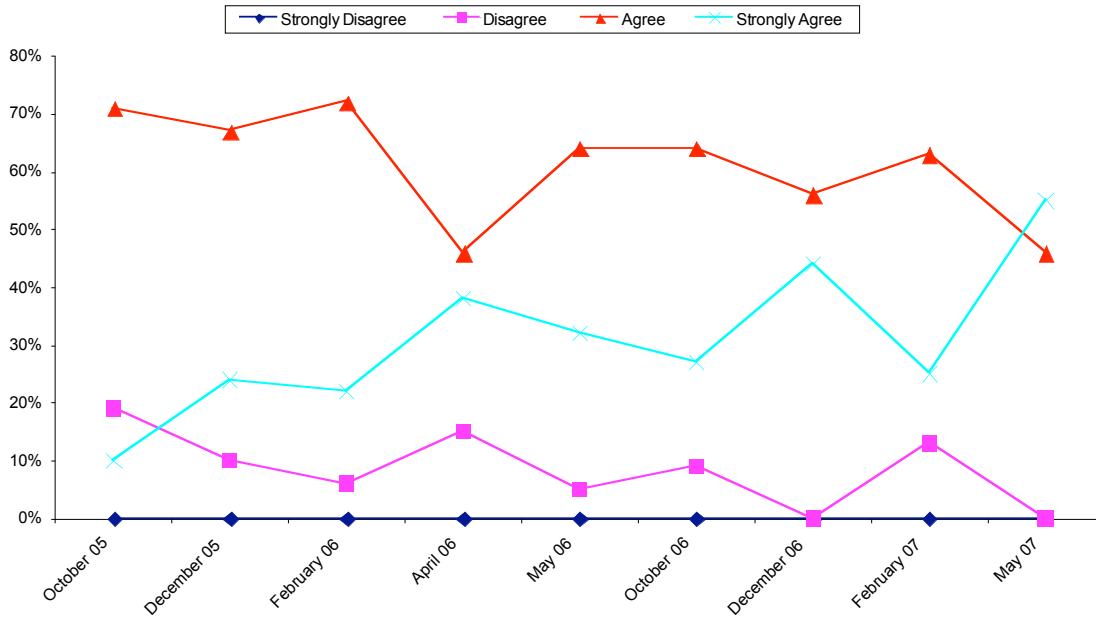
May - 07:

- I've found that along with lessons that are verbally approached and have something to look at are fine, but hands on learning is extremely important in reaching many more students who learn better spatially and are tactile learners.

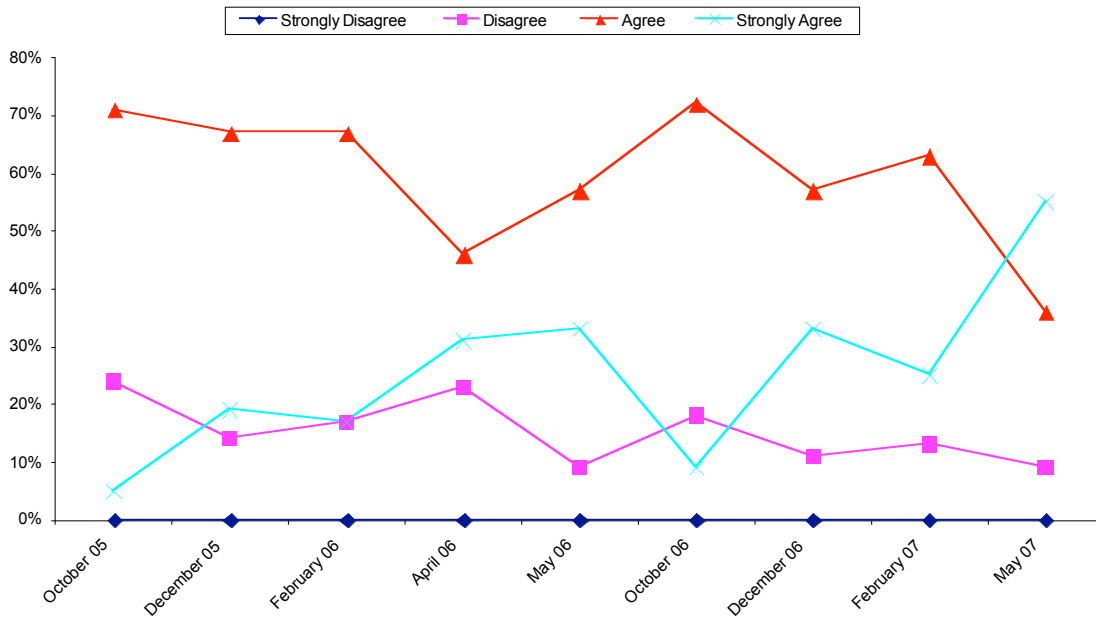
Item 14:

Please tell us how NO LIMIT! Has impacted your classroom. We are interested in your frank responses.

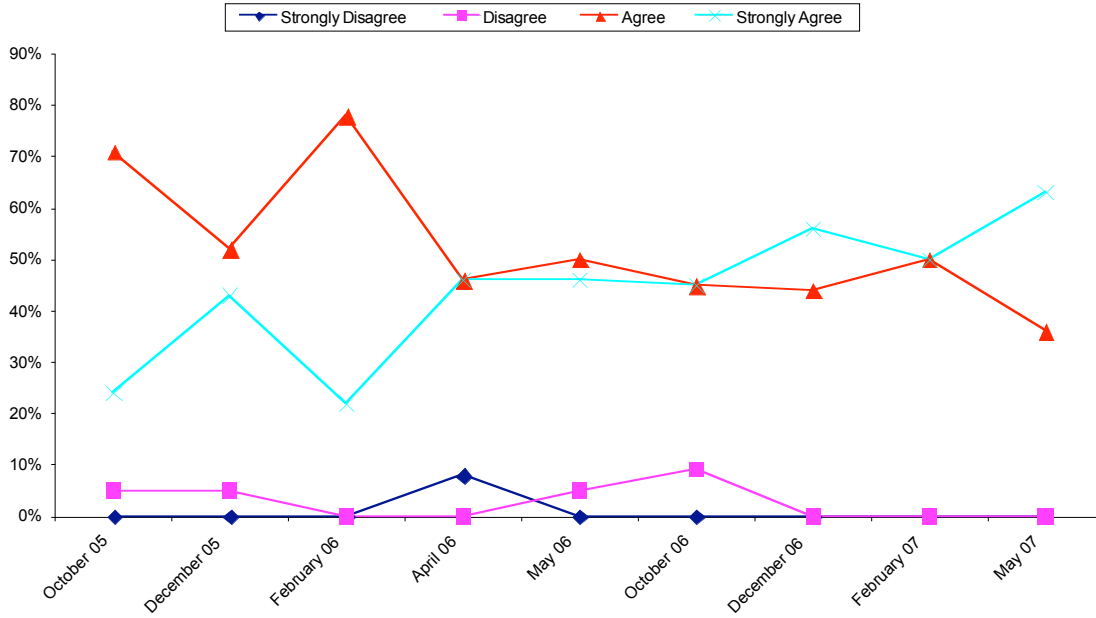
**NO LIMIT! has changed the way I teach math
ESD 101**



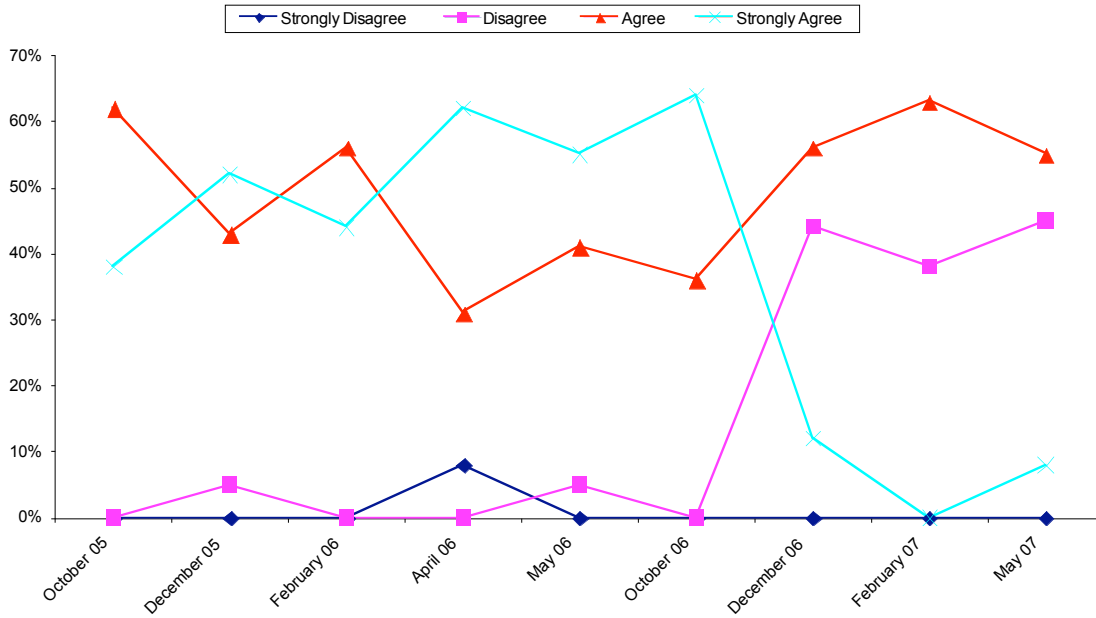
**NO LIMIT! has changed how my students learn math
ESD 101**

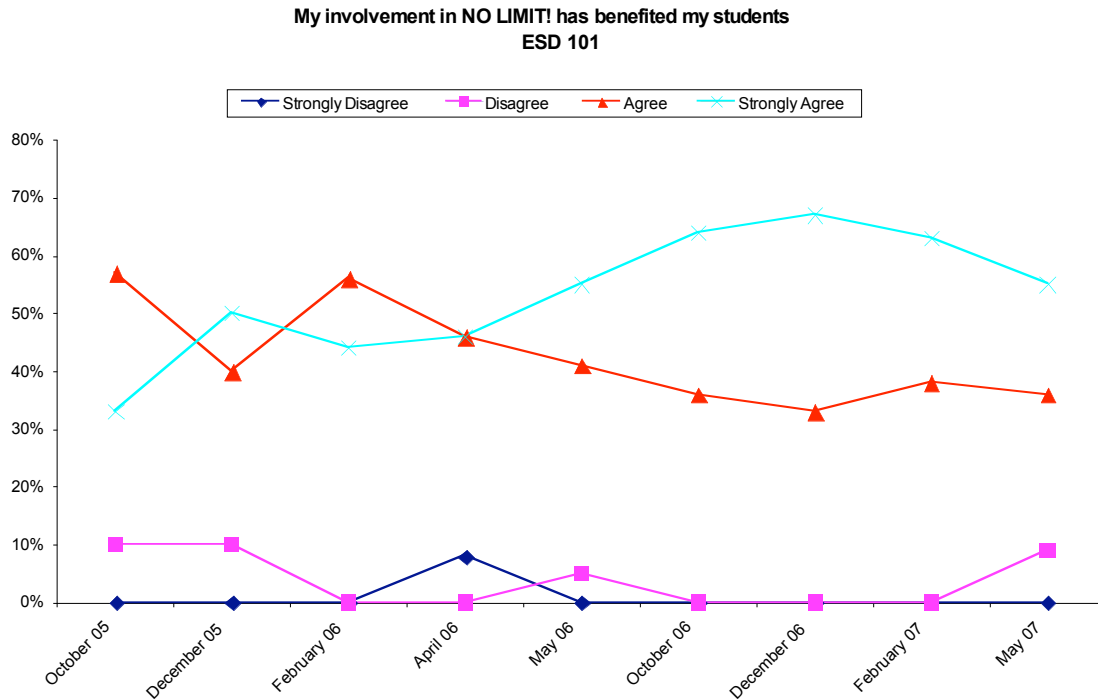


I feel more comfortable using technology to teach math
ESD 101



My involvement in NO LIMIT! has benefited me
ESD 101



Comments:October - 05:

- I do use my document camera each an every day in math - since the day I hooked it up, however, I don't use computers in math instruction, even with my projector, because I don't know what to have the kids do that is more than just "playing" on a web site, and my lap top cannot connect the internet yet.
- We still are swaying on our school to purchase all of the technology that we have requested. So far the only thing that I have seen is the sketchpad and it has had a very positive effect on my students. When we see the rest I am sure it will benefit my students greatly.
- I am just in the beginning stages of learning different teaching strategies.... this would be a good question for later in the school year.
- Having a supportive person observe and give me feedback and suggestions is invaluable.
- No Limit has just begun to teach me what I can do and where I CAN GO!
- To totally say "changed" me is not correct, as I am beginning to see more and more what I can do. To say disagree would not be correct at all.

December - 05:

- NO LIMIT has changed the way I teach in a few minors areas.... but, I still need to work on how students learn (the different strategies that will help ALL students).
- Absolutely! I am getting better at teaching, and my students are getting better at learning the things they need to be successful in subsequent math classes!
- The biggest area that NO LIMIT has played a part in my teaching strategies is using Geometer's Sketchpad. I have started using it to demonstrate more often and have started to save files for future use.

- I think my continued involvement, will eventually change my answer to the last question.
- Our personal trainer Brent Howard has been extremely beneficial to my teaching.
- I do not know the answer to the question about the Tucker group, so will say no

February - 06:

- Becoming more confident with technology.
- I do not feel like we are going anywhere. I do not feel like I am contributing to the PLC's progress.
- No Limit has taken me out of the classroom, which I normally hate, but this has been a very legitimate reason for being out of my classroom. Brent has been extremely helpful with my teaching style and the students have benefited greatly. I work with the lowest functioning students of math in the High School and the new knowledge has been most beneficial!
- Again, my curriculum has changed me the most in how I teach math, NO LIMIT has opened my classroom up to technology and the possibilities there. Any new technology has helped me be a part of the 21st century.

April - 06:

- Integrating it more and more
- I do not know the answer to the last question on this page. Who is Tucker Group?
- The biggest impact in my math teaching was going to "Connected mathematics" As I become more familiar with using the technology I know it affects my students. They love using the document camera and sharing their work.

May - 06:

- I need to use technology more next year.... doing more projects (getting out of the textbook).
- It is very sad that we will not be continuing our No Limit training next year. It has been very valuable.
- Having more technology in the classroom makes us all more familiar with it possibilities.

October - 06:

- I have been involved in NO Limit since I began teaching.
- I would not have had the technology I have without NO LIMIT.
- I am a very old teacher (29 years of experience) learning new tricks, and I am loving it!! The kids are very much enjoying all of our new "toys." They seem to retain concepts better due to the technology. Example subject and predicate - Who would care or want to remember that as a fourth grade student, but because we used the document camera and Smart Board for part of the lessons, they seem to remember it better than students I have had in past years.

December - 06:

- The No Limits grant provided some of the funding for my SmartBoard. Although not the end-all to math, the kids sure have a lot of fun with it and seem to retain the concepts better.
- Document camera!!!

February - 07:

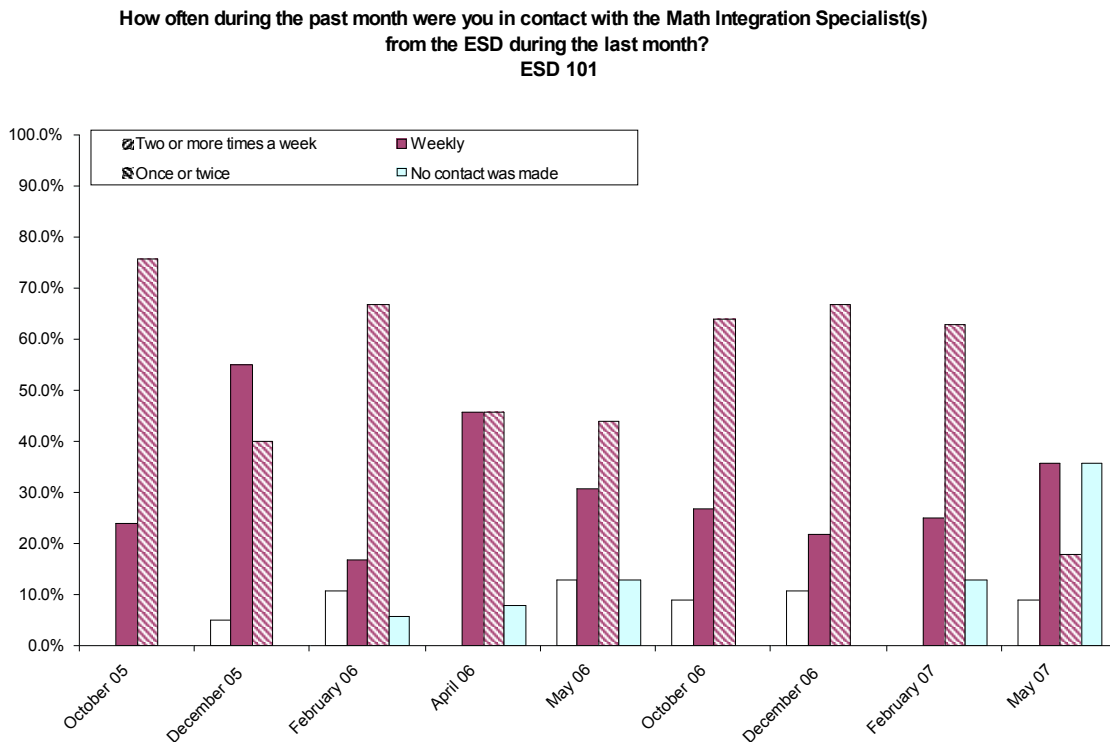
- The instruction practices I have learned during my time at NO LIMIT has changed how my students view math. Many have become better math thinkers and I am hearing very few "I hate math" comments.

May - 07:

- I always try to approach a concept from multiple angles to meet the needs of the diverse learning styles in my class. NO LIMIT has helped me do that more effectively.
- This has been a rewarding process for both my students and me. All of us are more excited to take pictures, share, explore and experiment with problems in math and use the camera and projector.

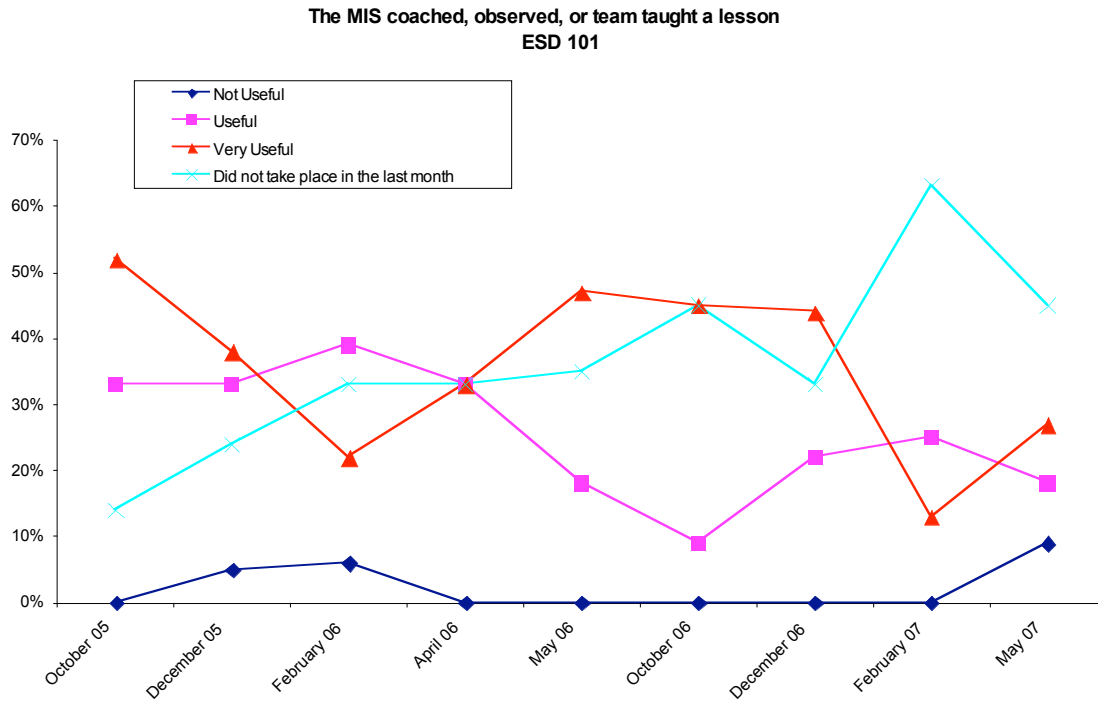
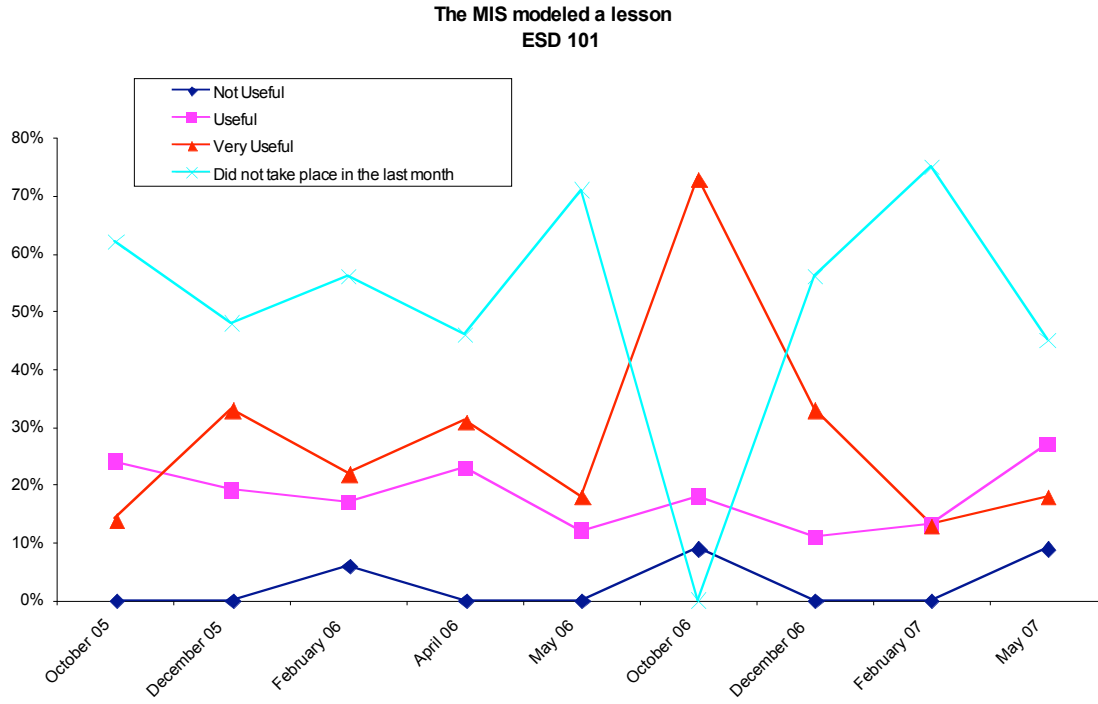
Item 16:

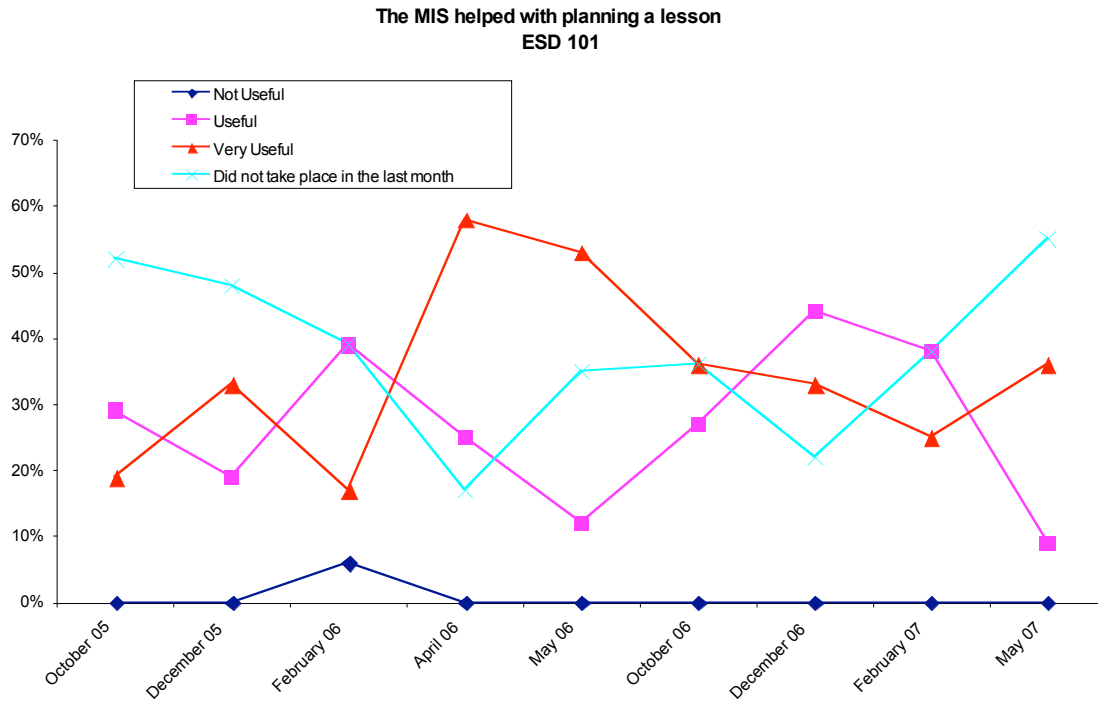
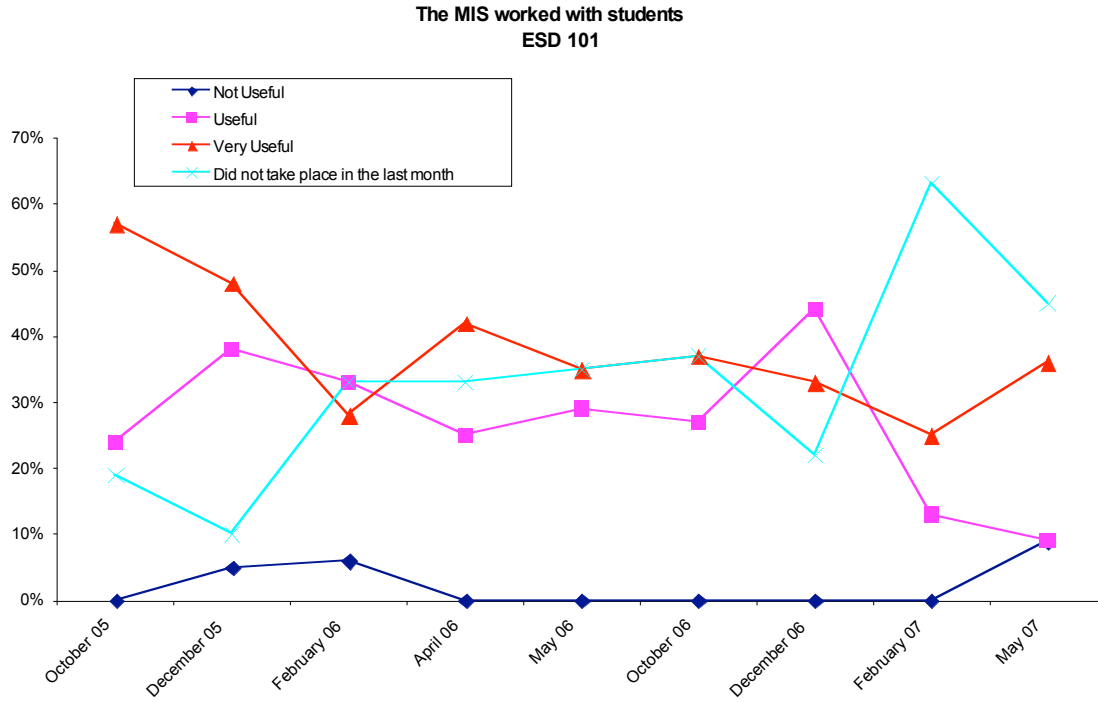
How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?



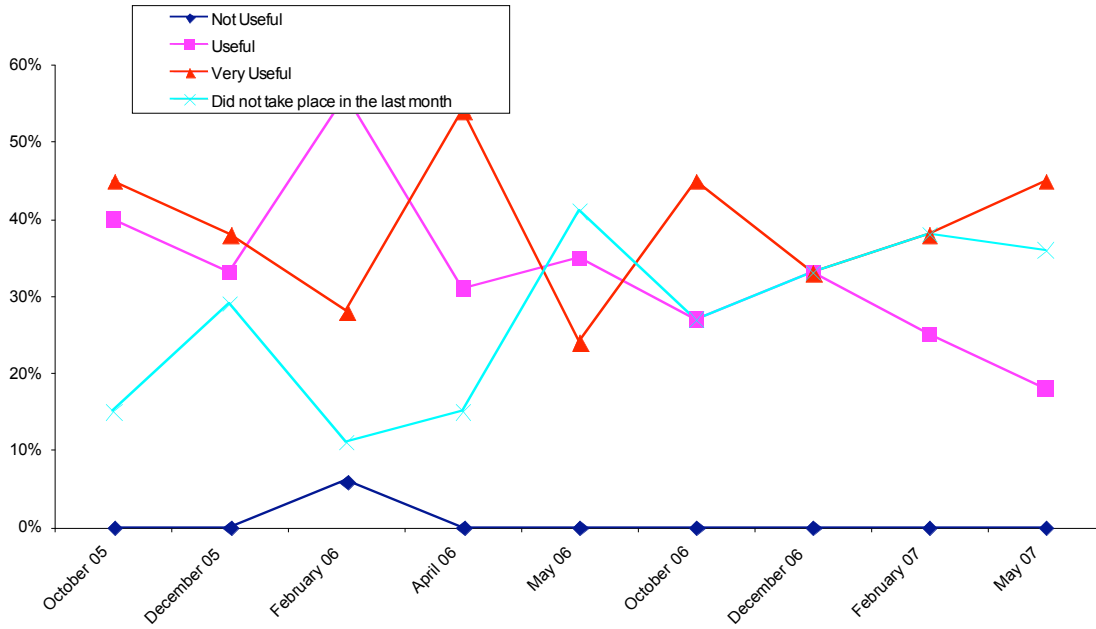
Item 17:

Please evaluate the following MIS activities over the last month.

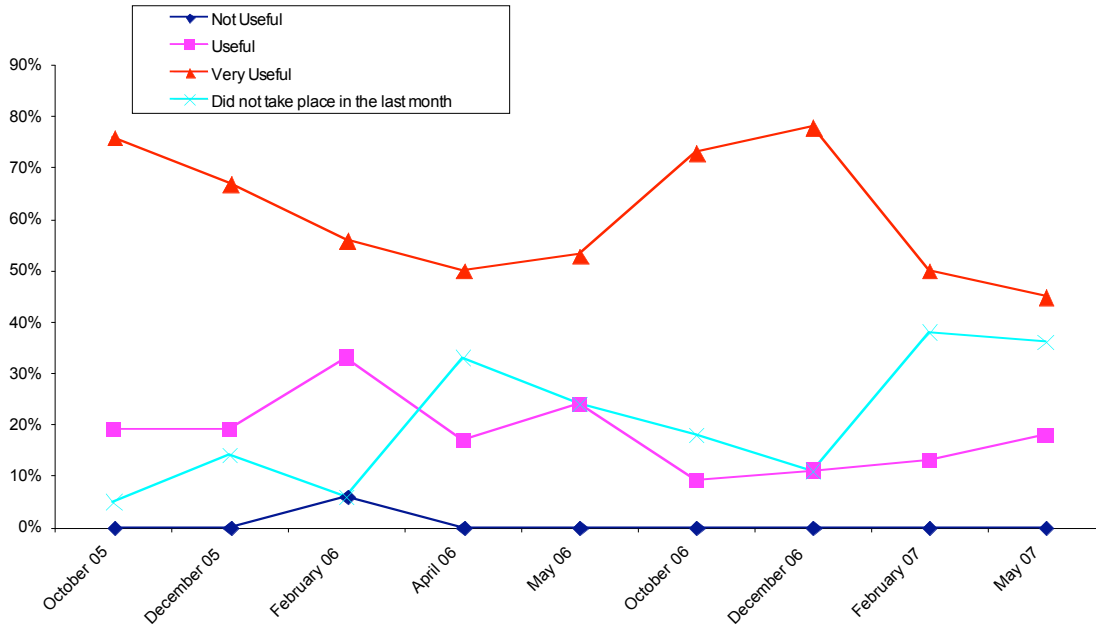


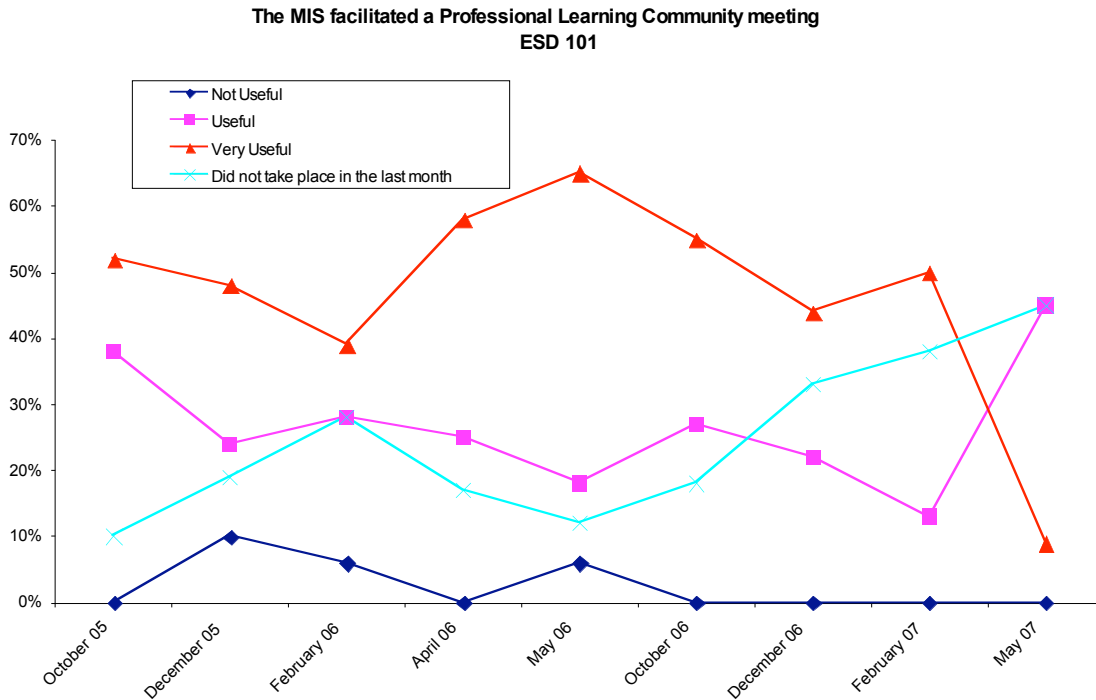
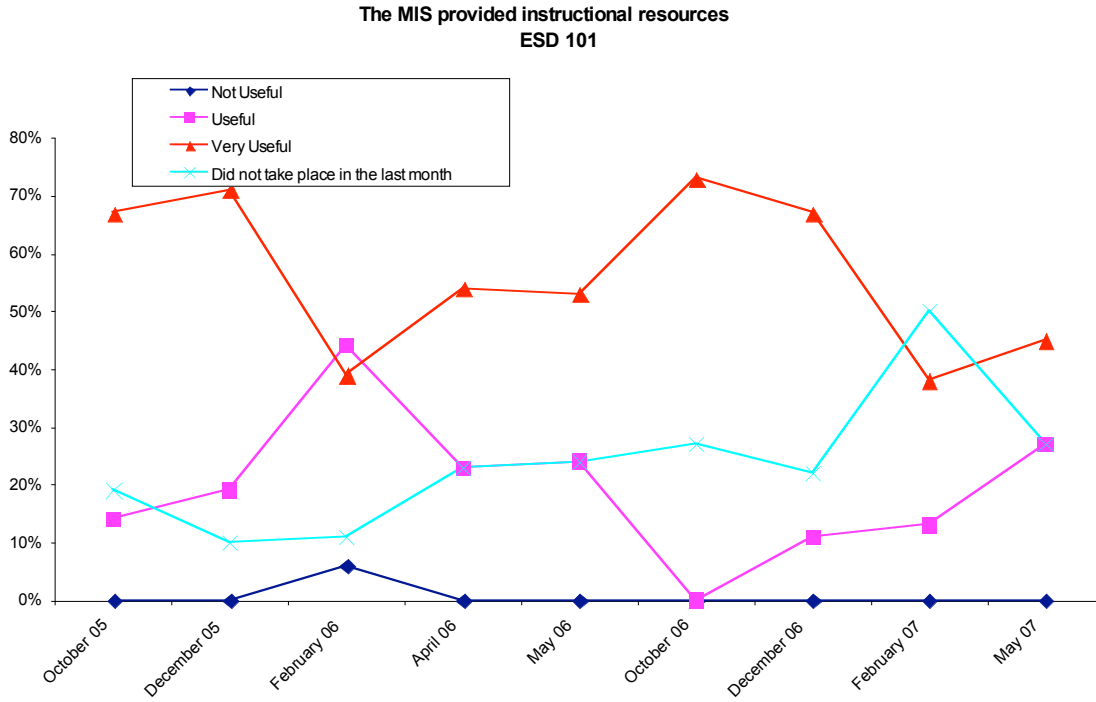


The MIS helped with schedules, logistics, or administrative issues
ESD 101



The MIS helped with technology
ESD 101





Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

October - 05:

- Teaching EALRs through a problem-solving approach
- Discussions and planning for the year
- To improve our skills and test scores.
- Talked about the different uses of the equipment.
- Our focus was setting goals and discussing norms for future meetings. We each did have student work to analyze, but ran out of time.
- Integrating technology into our lessons and utilizing the technology to enhance student learning
- We focused on improving our math instruction through technology (especially with the smart board and document camera)
- We are currently exploring the idea about teaching an entire math unit through relevant word problems.
- The focus was on examining WASL scores. We also piloted a WASL type questions to review at our next meeting.
- We are reading chapters from John Van de Walle's book on Elementary and Middle School Mathematics.... then sharing ideas/thoughts in E-Coach. In addition, we are discussing what is happening in our classrooms (especially the areas of frustration).
- We are figuring out how to set our goals and what goals we have for this year.
- Looking at how to do action research, and trends in our district's WASL scores.
- Looking at student learning
- We developed a discussion about what mathematics communication meant we also brainstormed ideas for a frustrated teacher with working with students that tend to ask first before making an attempt
- Brainstorming as well as problem solving, solutions and planning
- We have come up with strategies and ideas for how we want to use our coach over the next month. Our coach will build a lesson with us around technology use.
- We are getting our technology set up and learning its basic use.

December - 05:

- Creating classroom assessments that involve probability.
- Our focus for the school year is "Communication". During our last PLC meeting, our Math team (group of five teachers) and our MIS came to a consensus on what "communication" actually is. It was a great discussion. Our Math team will be sharing with all of our MS/HS staff next week what "communication" means in the Math area. In addition, each teacher had the opportunity to share student's work ... using this activity to help define "communication".
- Improving the quality of student work.
- The focus of our plc meetings are to use tech in classroom to motivate and encourage student success. We looked at WASL scores and how we can improve.
- This month (December) we did not meet as a PLC, nor did our MIS come to our school. This was by design. We are all too busy and time is too short. Some of us involved in NO Limit participated in peer observation as part of our Professional Observation required by our contract. Our focus was the same as the NO Limit focus and quite productive, I thought. Oh, I almost forgot, our focus is communicating in math.
- Improving instruction using technology
- The focus is on evaluating student performance over time.
- How to increase school scores in the area of probability across all grade levels.

- This month it fell through on our part. We scheduled and could not make the date.
- We are focusing on improving student work that we hope will help them on their overall outlook in school and on the WASL.
- Improving instructional practices
- Right now we are focusing on our equipment; we have had problems in ordering and getting the correct supplies in our hands.
- How to use the Smart board, we will be getting.
- Our PLC meetings have focused on looking at student work, analyzing what we feel students need to show as their "best work". We are discussing what quality work looks and sounds like, and how we can best provide opportunities to observe this in our classrooms.
- We are trying to define and improve communication in Math as a school wide goal.
- Looking at trying to implement a lesson study with our group. I would love to see this occur.
- We have come together on how to best implement technology in a meaningful way that engages students in higher order thinking. We plan lessons together and on very willing to ask each other for help when needed.
- We have been practicing with the use of protocols, and have discussed MAPS. We have all been getting cameras in use and in a useful place in the classroom. I believe we are all learning how to use Brent as a resource.

February - 06:

- Creating an assessment for Probability for 4-8 grades.
- We have been in the process of looking back at our original goals and evaluating what direction we would like to move toward. The group is feeling a bit overwhelmed ... we are going in so many directions in other aspects of our school responsibilities. The PLC is a great format for sharing concerns and frustrations.
- Help students become better problem solvers and produce high quality work.
- Working on mapping
- Informal, occasional, helpful.
- The focus of our last Professional Learning Community meeting was Smart Board Movies and how to integrate them into our classrooms.
- Our focus was on using the document camera.
- Quality of student work.
- Improving instructional practices; using manipulatives to teach fractions
- Mapping the math curriculum throughout the school starting with the third grade.
- We are trying to determine the best way to use each other because of the unique way our curriculum is aligned. We have 5 teachers all teaching a different subject so we are having difficulty aligning what we need to do to be useful for all. We are about to begin peer observations to help with instructional techniques.
- We are currently mapping our curriculum. We discussed and looked at the various maps that were available, finally creating one that we all agreed on.
- I could not continue making changes without her support.
- We are getting together and planning lessons and sharing how things worked out. Often times one of us has discovered a new resource and we share it and how it works.
- Right now we are mapping our curriculum.

April - 06:

- Creating a probability assessment and associated unit
- Improve quality of student work and help them become better problem solvers.
- Did not exist.
- Our focus was to bring all of our projects together to present a summary of our work.
- Neatness of work
- Reflecting upon our year in preparation for the Share Fair using e-coach.
- We are trying to determine a method for peer observation that is safe and will be useful.
- We focused on shared experiences and how we were working in our classes.
- We did a survey to see which GLE's we had not covered. Then we found materials and planned to teach coordinate graphing.
- Right now we are mapping our math programs.

May - 06:

- Creating probability assessments for grades 4-8
- We are working on mapping our curriculum
- Our focus, this year, was on "peer observation". Each of the team members had the opportunity to observe the other's class for a lesson. Before we did this, there was a pre-lesson meeting and then a post-lesson meeting with the PLC.
- Produce problem solvers that produce high quality work. Also, curriculum mapping.
- Working the maps for the upcoming year.
- Our last meeting focused on our targets for next year and finishing up our CBR/graphing project from this year
- Communication - year end presentation
- Find examples and ways to teach probability to students.
- The focus was to prepare for the end of the year share fair. We went over the growth that we exhibited for the year.
- Neatness of work, quality of work.
- Preparing for a presentation of our work this year.
- We are focusing on the unique needs of a small school and trying to motivate certain participants to help the learning community become more effective
- Looking at mapping our math curriculum k-12.
- Gathering resources, trouble shooting and planning our Share fair event
- We are meeting tomorrow and all the Districts are going to share one lesson using technology. I am actually looking forward to the meeting to see how much growth the other districts have made.
- The focus each time was specific and useful.

October - 06:

- Great Involvement and good communication.
- Creating a focus for this year.
- Smartboard integration into the math curriculum
- Examined ways to improve student discourse.
- Discourse about an article, organization of our team, discussion of implementing student surveys
- Increasing use of smart board and other technology.

- We are focusing on improving the problem solving strategies that are students use daily within our classroom.
- We are taking a more individual needs approach to the PLC this year since we have such a diverse group of curricular needs. WE are focusing on more integration of technology within the classroom. Specifically for me is the use of graphing calculators.
- We had time from class to work with our Smartboard and familiarize ourselves with it capabilities. We also planned a lesson using the Smartboard.
- How to increase student discourse with standards-based math curriculum.
- We are working with our Smart Board and on line resources to be more effective with the Smart Board in our classrooms. We have also created a student survey to present to students about their perception of their math skills, plus pre-mid- and post math tests to give to students.

December - 06:

- Increasing student discourse through discussion
- Improve student discourse and students' abilities to problem solve.
- We are working to provide a vertical team for the district with our middle school to coordinate instruction. We hope that by intentional lesson study and technology integration and alignment to ease the transition from middle school to high school.
- Determine lessons appropriate to match the school's SIP, also determine if our curriculum is vertically aligned with the updated GLE's
- I was unable to attend the meeting this month but my MIS informed me of the discussion and that we were going to all plan a lesson that will be observed by the other team members and we will meet prior to the lesson to go over what we want observed and then we will meet again after the lesson to go over strength and what we all think could be done to improve the student engagement. I agreed that this was a great idea!
- Since I will be receiving a Smartboard, the focus of the last two meetings was how to integrate a Smartboard in instruction.
- Brent is on maternity leave at this time, so we have not met for a month.
- Motivation
- Use of test data to instruct.

February - 07:

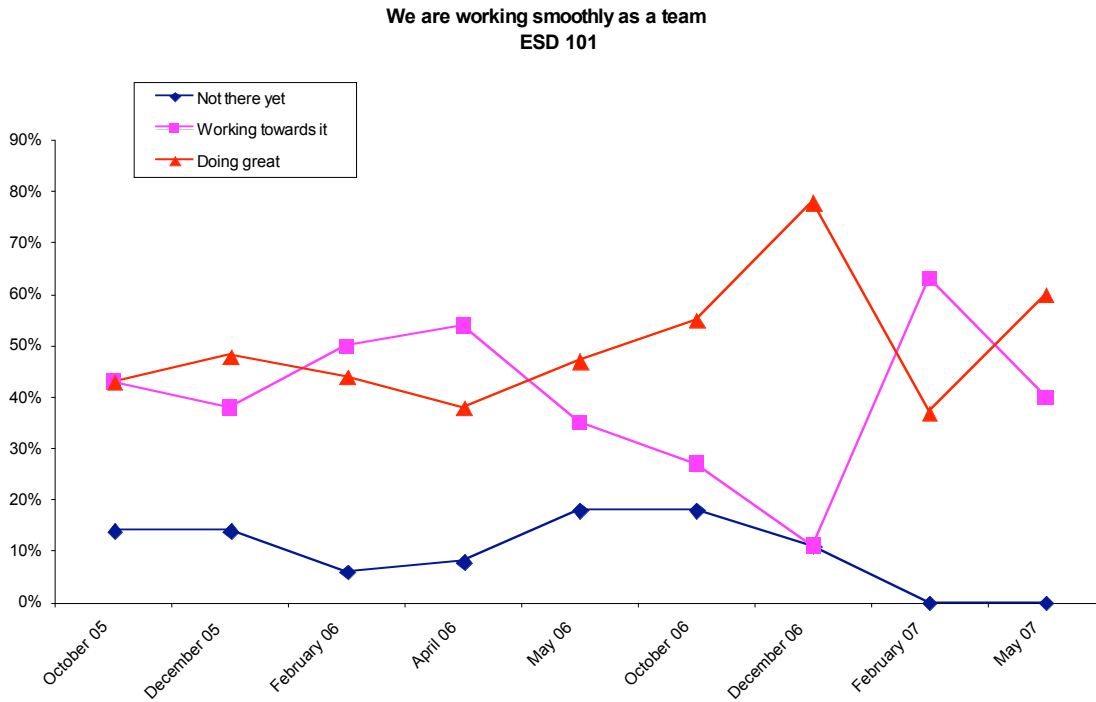
- Improve problem solving skills and student discourse
- To coordinate a vertical team with our middle school to provide a better transition for math students by improving lesson design and instruction
- Setting up web sites for all members of the PLC.
- Online survey of students' approaches to learning math developing classroom web pages
- Student motivation and integrating technology more effectively
- Working individually towards our math improvement goals to be shared at our next PLC meeting
- Increasing student engagement.
- We have worked to develop Summative assessments for both math and science.

May - 07:

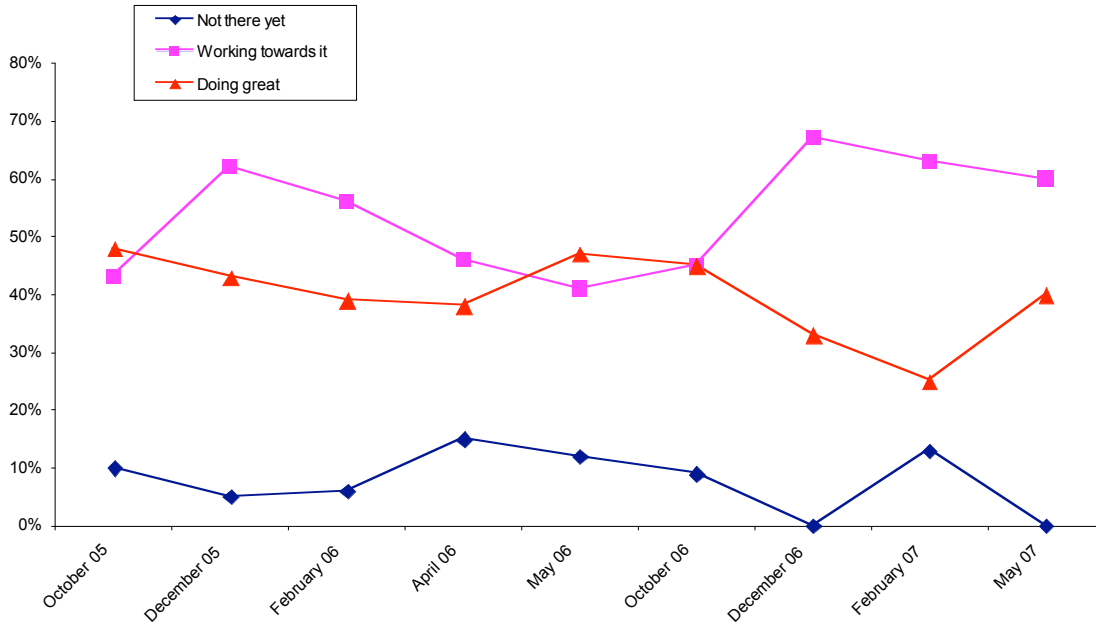
- Continued focus on teaching of mathematics
- Helping our students become better problem solvers.
- Everything was focus on student achievement
- Smartboard technology, curriculum setup
- The focus of our meetings was dealing with technological issues.
- Improving student performance at all grade levels
- None were used this past quarter due to the WASL exam and family emergencies
- Each meeting I had with the PLC was helpful. If I was not ready for that specific step, then I had to be shown again later. However, any time I had a question or problem it was addressed quickly and positively.
- We would discuss the workings of the document camera and our projects.

Item 19:

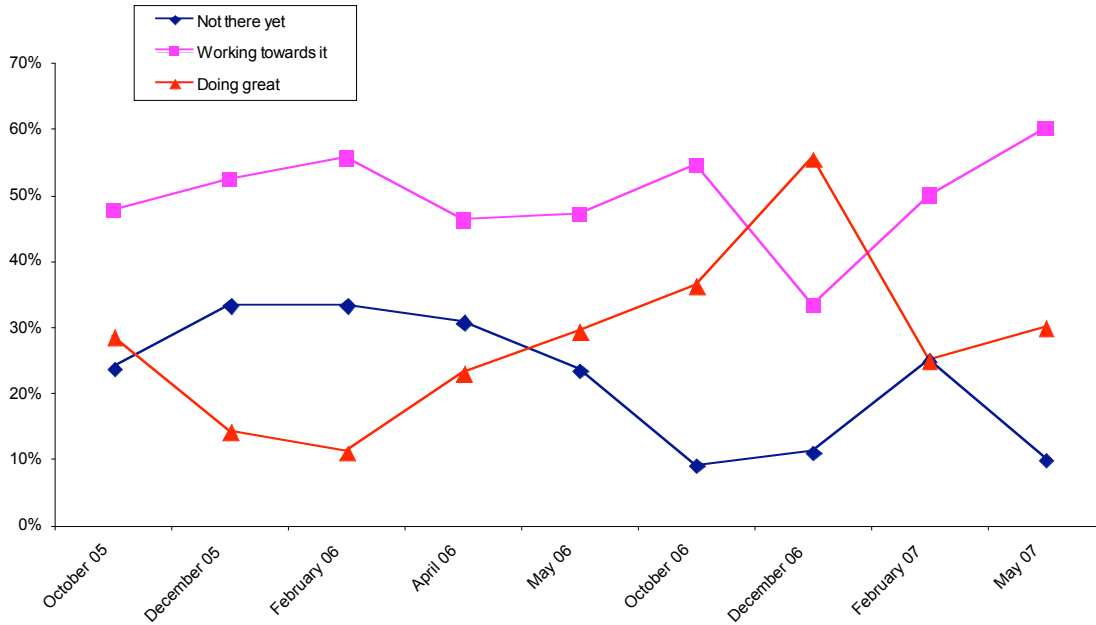
Please evaluate the effectiveness of your PLC meetings.



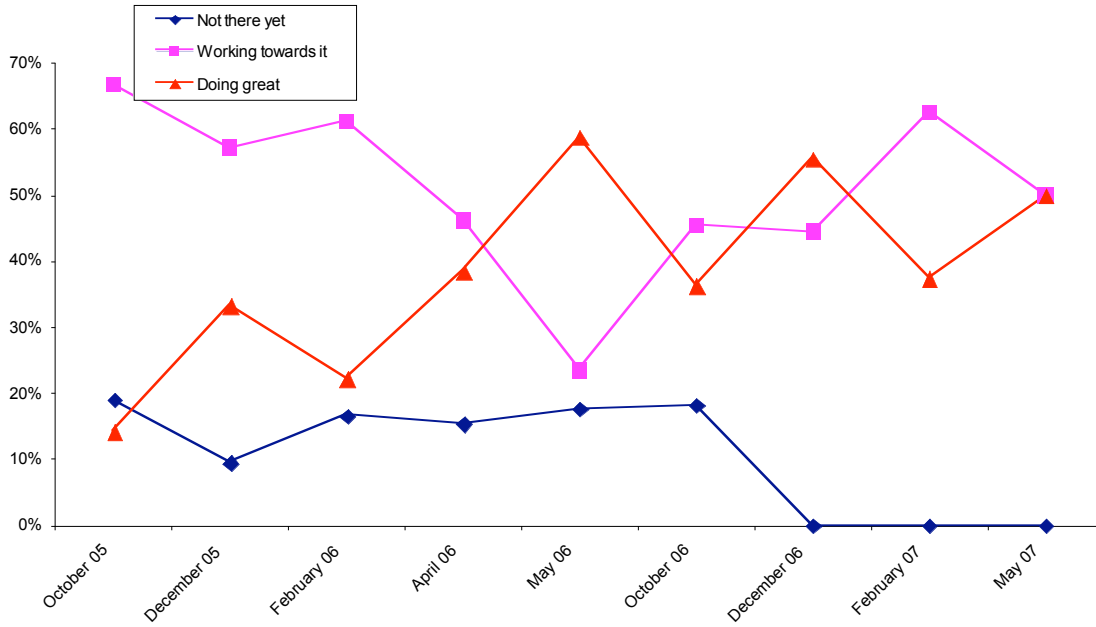
**We are maintaining a regular meeting schedule
ESD 101**



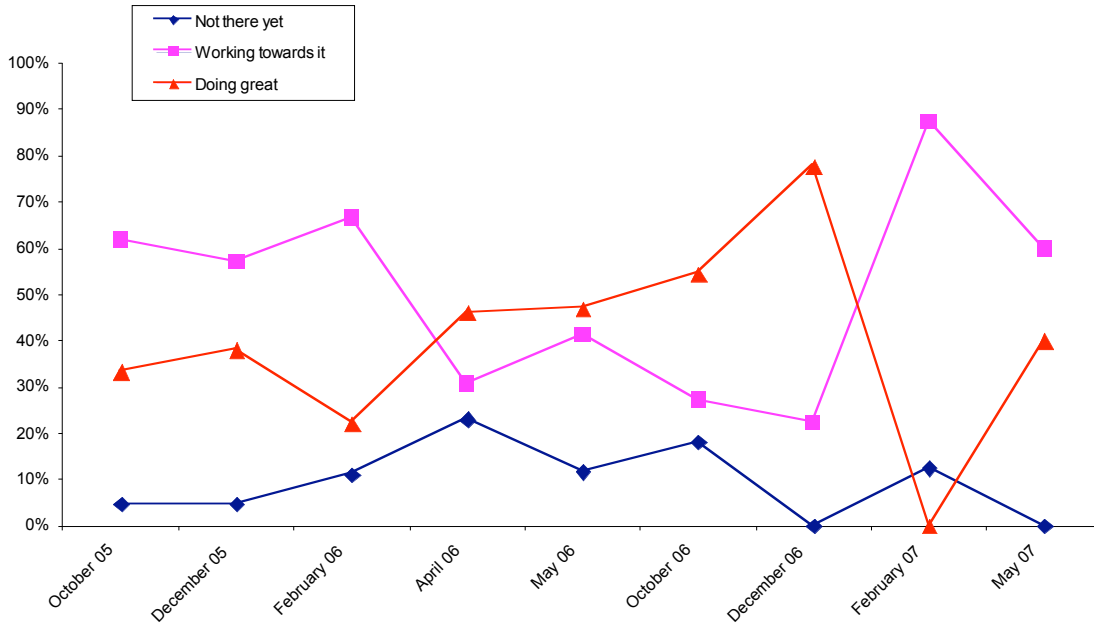
**We are reading and sharing research
ESD 101**

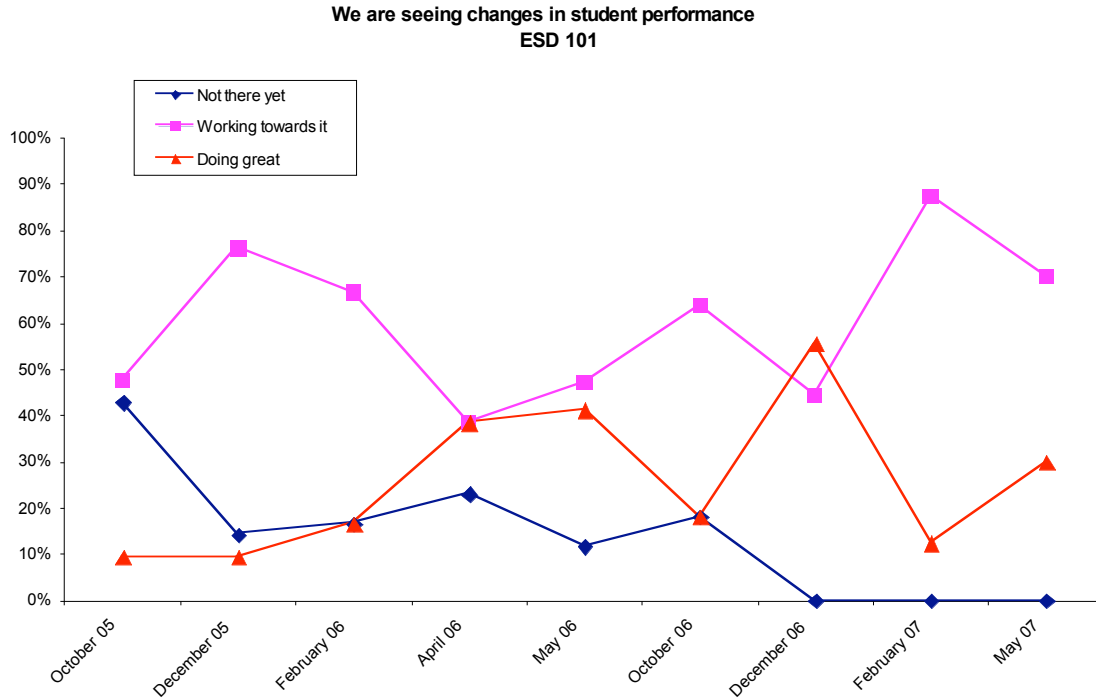


**We are using new teaching strategies in the classroom
ESD 101**



**We are maintaining focus on our goal
ESD 101**





Comments:

October - 05:

- Again, in a small district like Tekoa, we are teaching 6 classes, coaching, etc. so it is difficult to find time to meet.
- We are on track and will be examining more pieces at our next meeting.
- doing great is really where were we are I just see it as an on going process
- Are we to meet when our MIS is not here?

December - 05:

- I am very please with the way my students are kicking it up a notch in terms of their communicating understanding in math. Not only are they showing their work more clearly, but they are becoming better at articulating problem solving strategies, etc. orally.
- On the 9th of December we will be starting a k-12 math committee. Alignment across the grade levels with WASL and other areas of curriculum will be our focus.
- This is how I perceive the above questions, but I am not a mind reader.

February - 06:

- The meetings are going in the right direction. I do believe that to make them beneficial an administrator should be required to sit in and be an active member of the grant.

April - 06:

May - 06:

- Good year, thank you!

- Last month we did not meet because of our schools schedule. Also, since we are a small school in a remote location, we've had to cancel a meeting because there wasn't enough sub coverage.

October - 06:

- Great meetings. Brent Howard is working his tail off for us. Very flexible....very, very helpful!

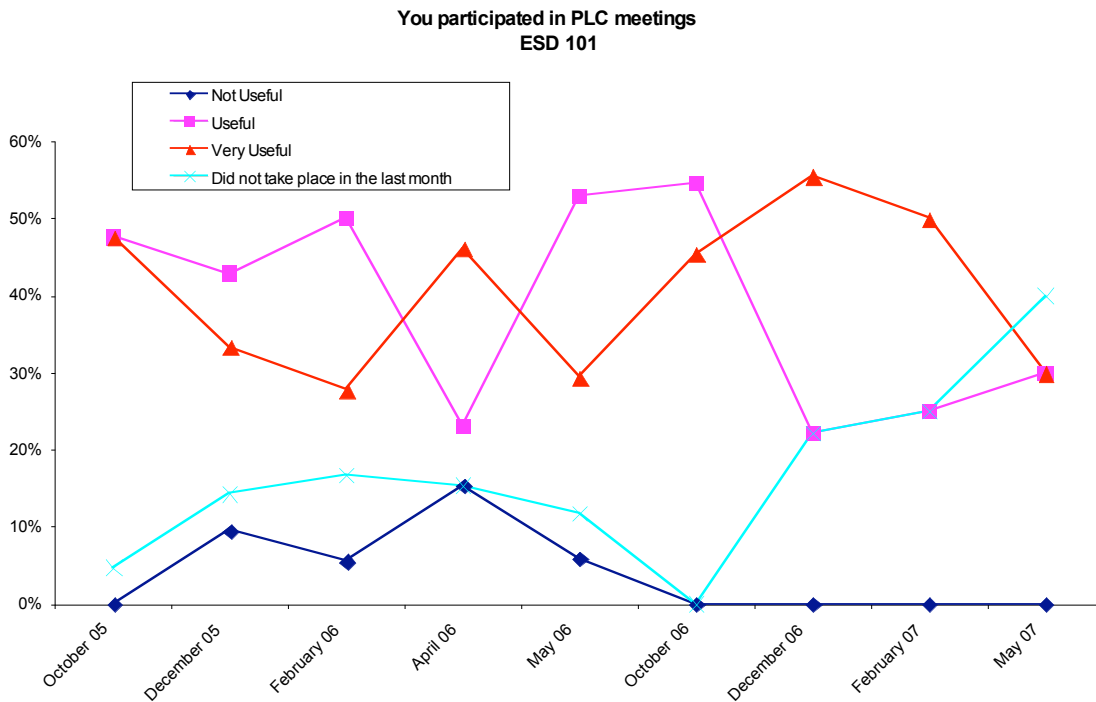
December - 06:

February - 07:

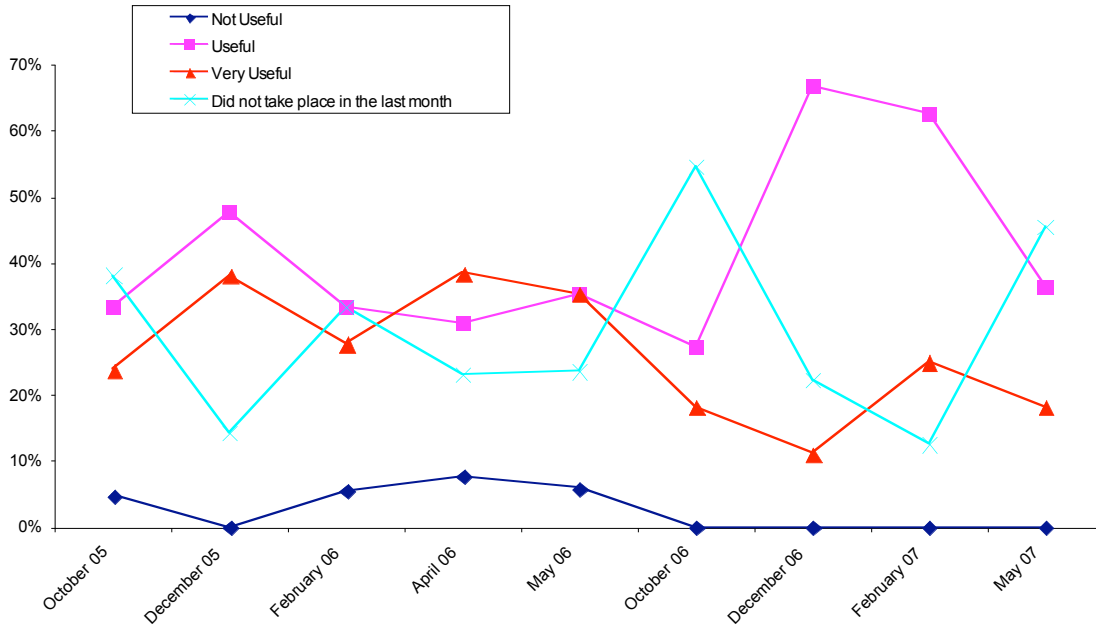
May - 07:

Item 20:

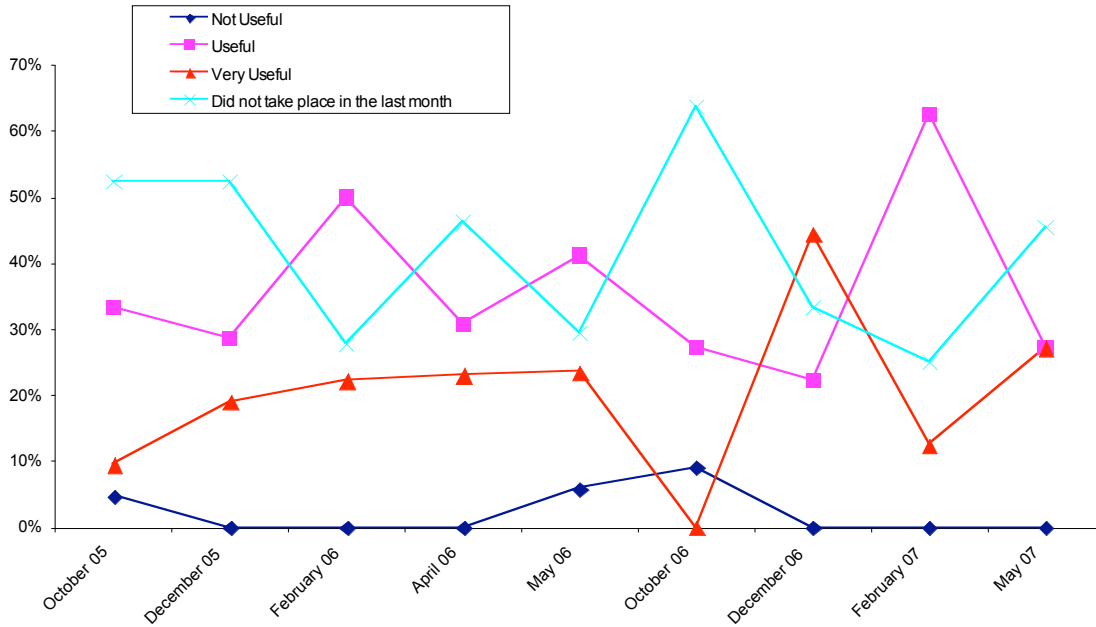
Please evaluate your PLC over the last month.

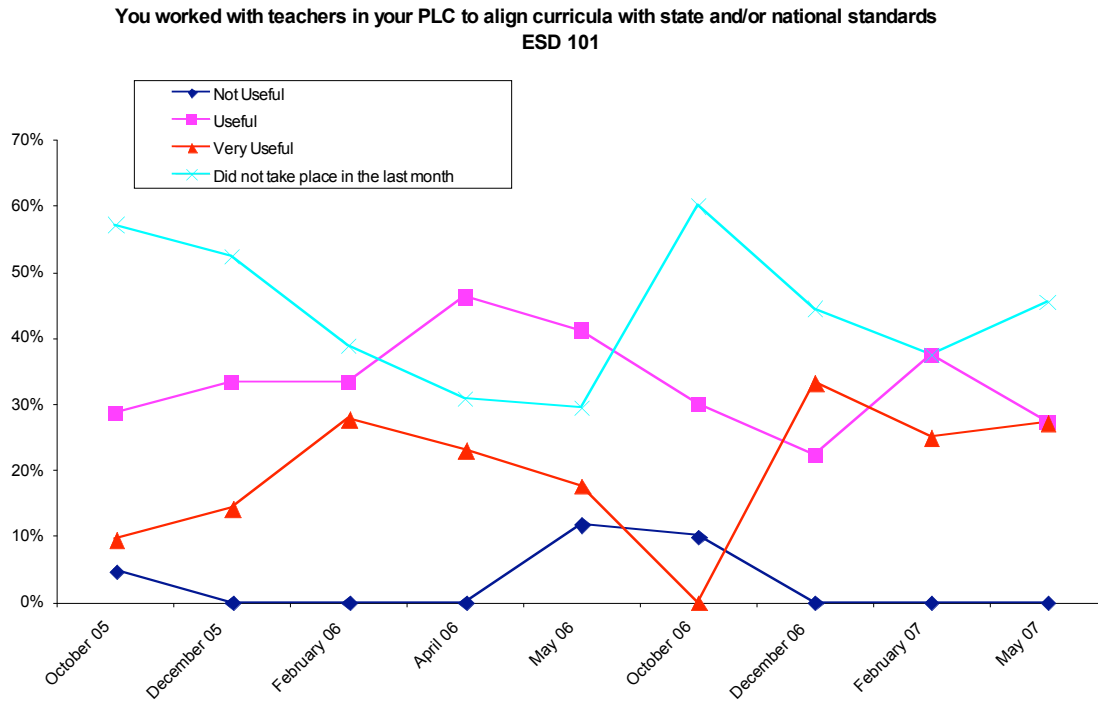


**You collaborated with other teachers in your PLC to plan or teach lessons
ESD 101**



**You worked with teachers in your PLC to align curricula across grade levels
ESD 101**





Comments:

October - 05:

- Time!
- Too soon for these questions.
- We have started and will be making ground over the next few months. The first monthly meeting laid the foundation for what we plan on attaining.
- We are in the beginning stages.
- We have had two meetings and we are just defining what each other's role is right now.
- As I said we are still just "getting going".

December - 05:

- As I mentioned previously, we did not have a scheduled PLC meeting this month. We (No Limit teachers) always talk informally about students and our work.
- Again this will be implemented on the 9th of December with half days every two weeks to continue the process.
- I am working with teachers in the PLC on other committees in my school and in those committees we are working on aligning curriculum and national standards, but just "our" group has not gotten together to do these things.

February - 06:

April - 06:

- The meetings are not frequent enough to keep any momentum going. We rarely see each other than during these meetings. We teach in different buildings and have similar yet

different challenges. It takes a significant chunk of our time to get coordinated. I would recommend if this model is continued next year, that meetings either be all day or more often, which is also problematic in a small district with a sub shortage.

May - 06:

- It would be nice if the window to answer the survey was open a little longer (say, the end of the month). The last survey came right before spring break and then I was gone on paternity leave. By the time I went to answer the survey, the web link was dead.

October - 06:

- Last year we worked with our NO LIMIT people to align curriculum through mapping. This year we have other math teachers in our building working on this.

December - 06:

- None

February - 07:

- None

May - 07:

- None

ESD 105**Year Five****2005 – 2006 NO LIMIT! Summary for ESD 105****Training and professional development provided for teachers: amount of time, dates, and content**

- Regional Trainings:
 - August 10 & 11 or August 16 & 17, 12 hours: Introducing NO LIMIT!
 - September 29, 6 hours: Mathematic & Technology – Welcome to NL
 - December 1, 6 hours: Item Writing training, WASL discussion – Life of an Item, e-Coach
 - March 1, 6 hours: TI Calculator training, Looking at Student Work
 - May 16, 6 hours: Share Fair
- Total Regional Training Hours: 36 hours
- Total PLC Hours (meetings throughout the year): 70+ clock hours

Conferences attended by teachers (please note if any presented at conferences)

- Northwest Mathematics Conference
- OSPI Winter Institute

Conferences attended by you (again, please note if you presented)

- **Laurel Carpino:**
 - Northwest Mathematics Conference
 - OSPI Winter Institute – Presenter for 2 sessions with Sandy Gady
 - Teacher Development Leadership Seminar
 - Richard Murphy School – Mary Russo training (ESD 105)
 - Lucy West Coaching Training (ESD 105)
 - OSPI Summer Institute – Presenter for 3 sessions with Sandy Gady
 - OSPI Mentor Academy
 - OSPI:
 - Item Writing
 - Range Finding
- **Catherine Ball:**
 - Northwest Mathematics Conference
 - OSPI Winter Institute
 - Richard Murphy School – Mary Russo training (ESD 105)
 - Lucy West Coaching Training (ESD 105)
 - OSPI: Washington State Para-Educator Conference – Presenter
 - OSPI Mentor Academy
 - OSPI:
 - Item Writing

What PLC structures were in place in Year 5?

- Nine districts were divided into equal participants. Catherine serviced 20 teachers and 4 districts/buildings. Laurel serviced 20 teachers and 5 districts with 6 schools. We were each responsible for our own PLC meetings. Meetings were held all day once a month or

every other month all day or whenever we could find the spare time when we could meet. School visitations were weekly most of the time.

- ***Why were they structured in that way?*** Every district or building had their own individual needs and we needed to support them in any way we could. Some districts did not have the funds to pay for all day subs.
- ***Were they different from previous years?*** I'm not sure because Catherine and I are new NL MIS's. We tried to be consistent with what Larry and Jim did, although we had a few more districts.
- ***Why?*** To keep continuity between years of the grant.

Math curricula in use by NO LIMIT! teachers:

- CMP, Core Plus, Everyday Mathematics, Glencoe, Investigations, McDougall-Littell Integrated Math – high school.

Technology purchased in Year 5. How were the choices made? Were teachers happy with choices? Were you? Why or why not?

- The primary selections of the laptop, LCD projector, and the document camera were made by the technology directors during the summer. The teachers seemed happy with their equipment. One teacher did not receive a laptop; instead he received the CPS units. We were happy with the selection of equipment. With remaining funds, the teachers were able to order their own.

Successes and challenges of Year 5:

- **Successes:**
 - Increased Technology implementation (document camera, LCD projector, laptop, calculators, Qwizdom, Mimeo SmartBoard, TI's SmartView & Navigator) in the classroom.
 - Increased teacher knowledge and skill level of using technology in the classroom to impact student learning & discourse.
 - Students using the technology in the classroom to enhance mathematical understanding.
 - Increased content knowledge in Mathematics and state expectations using the GLEs, the Item Specifications, and NCTM standards.
 - PLC increased the collaboration between NL teachers and other staff in their building and district. One district is implementing the PLC model within their district because of the success they saw with their NL group.
 - One teacher became highly qualified in mathematics because of NO LIMIT! training, thus enabling her to be hired for the middle school mathematics position that Laurel left. She is a participating NL teacher who taught all content areas, including mathematics and technology, in a resource room in the same middle school.
 - Teachers were able to implement what they learned in NO LIMIT! in their Pro-Cert and Master's classes.
- **Challenges:**
 - Finding the time to meet with the PLCs that coordinated with district expectations.
 - Having a district replace stolen equipment in a timely manner (this was resolved in the middle of May – equipment stolen in December.)

Plans for Year 6.

- Focus on Student Discourse and common NL strands.
- Not sure how much it will change because of ½ time less NL support person and she is new to the program.
- Because of the unknowns at ESD 105 for staffing and funding, it hasn't been established what will be happening next year.
- The No Limit staff has not met yet to decide on how our services will be delivered for the 06-07 year.

How is your ESD adapting to the reduction in funding?

- Initially, Laurel and Catherine were let go to restructure ESD 105's plans for the NO LIMIT! program. A new person was hired for ½ time NO LIMIT! As of June 9, Catherine was rehired because the funding allowed for 1 additional full time person. In other words, a bump in the road for consistency between the first year and the second year. For 36 participants, 8 districts, and 11 schools, it will be a challenge for 1 ½ persons to service all the participants.
- The 2005-06 NL two full time MIS were notified on March 15, 2006 that they needed to plan to go back to their districts because of the reduced funding in NL for the upcoming year.
- The 2006-07 NL budget at ESD 105 was finally settled the week of June 5th. On Wednesday, June 7, 2006 the four math employees at ESD 105 were all contacted by the Human Resources Director to see if they were interested in a full time position with NL for the 2006-07 school year. Catherine Ball was the only current math employee to express interest in the job. Catherine Ball was told on Friday, June 9th that she had the NL position because she was the only current employee who was interested in the job.
- A new Math Coordinator at ESD 105 has been hired for 2006-07 who will be .2 NL, Sasha Hammond. Terrie Geaudreau, Teaching and Learning Coordinator will also be working in NL next year as .2 of her position. So our NL staff has gone from 2.0 full time people to 1.0 full time and 2- .2 positions. There should be consistency from year five to year six because we have a full time person carrying over. The 2006-07 NL staff has not done any collaborative planning for the upcoming year. We have scheduled six Regional Training Days, we expect to continue our focus on Professional Learning Communities, and we are looking forward to working together to offer Professional Development for our NL participants in the upcoming year.
- It is a given that services to our districts will be reduced next year, and will be different in some ways. However, the ability of the NL staff to work as a team should produce similar results as year two for these NL teachers.

Year Six

Training and professional development provided for teachers

- We offered two days of summer training on August 15-16, 2006. On the first day we focused on discourse, and on the second day we focused on the collaborative lesson study model.

Conferences attended by teachers

- We sponsored a Mathematics Leadership Institute here at ESD 105, featuring 6 days of training with Lucy West. Ten of our NO LIMIT! participants attended this series.

Conferences attended by you

- Catherine Ball attended the Northwest Math Conference

What PLC structures were in place in Year 6?

- There were a variety of PLC structures in place, which was defined by what the districts were willing to support.
 - **Sunnyside** had grade level PLC time 90 minutes each week. Catherine attended once a month.
 - **Granger** teachers received 8 7-hour days of training from Sasha Hammond.
 - **Wapato** teachers received 12 days of lesson study model training from Lucy West and Sasha Hammond.
 - **Mabton** mathematics teachers met as a PLC one afternoon a month, which Catherine attended. Laurel also met with their teachers in a lesson study model.
 - **Toppenish** teachers met in grade level PLC's once a week. The NO LIMIT focus in Toppenish this year was to work with one specific teacher who was on an improvement plan.
 - **Zillah** teachers did not meet as a PLC, but Catherine spent a day a month in each classroom.
 - **Kittitas** teachers met monthly as a PLC, which Catherine attended.
 - **Royal City** met as a PLC three times, which Catherine attended.

Why were the PLCs structured in that way?

- Some of the districts were committed to the PLC's and built them into their contractual planning times and other districts did not have this time embedded into the schedule. They did not hire subs for teachers to meet.

Were they different from previous years? Yes.**Why?**

- With the reduced amount of funding per teacher, there was less enthusiasm about participation in the grant.

Math curricula in use by NO LIMIT! teachers.

- All of our districts use CMP or CMP2. This includes Royal City who bought and implemented CMP2 mid-year. We were very instrumental in helping them with the decision to change and in providing professional development through NO LIMIT.

Technology purchased in Year 6.

- Districts are still making their purchases. We were not a part of the decisions. One district bought a TI Navigator and we participated in training them.
- One district purchased laptop computers because it was a district decision to not take the NO LIMIT equipment to a new building that opened. LCD projectors and document cameras were a part of the new building.
- One teacher bought a mimeo. Some bought calculators. One bought an individual response system.

How were the choices made?

- Individual teacher and district decisions.

Were teachers happy with choices? Yes**Were you? Yes****Why or why not? We left the decisions up to them.****Successes and challenges of Year 6**

- On one hand I (Catherine) am encouraged because there have been successes with teachers who wanted to work with us and were committed to improve their practices. They have made changes that will impact student achievement.
- On the other hand, there have been other teachers who found it challenging to change their belief systems and practices in ways that benefited students.
- Here in the Yakima Valley there are the issues of poverty, ELL students, and low achievement...along with teachers' belief systems. It is a really steep hill to climb.
- Thank goodness we see progress, but there is a long way to go!

Anything else you'd like to add

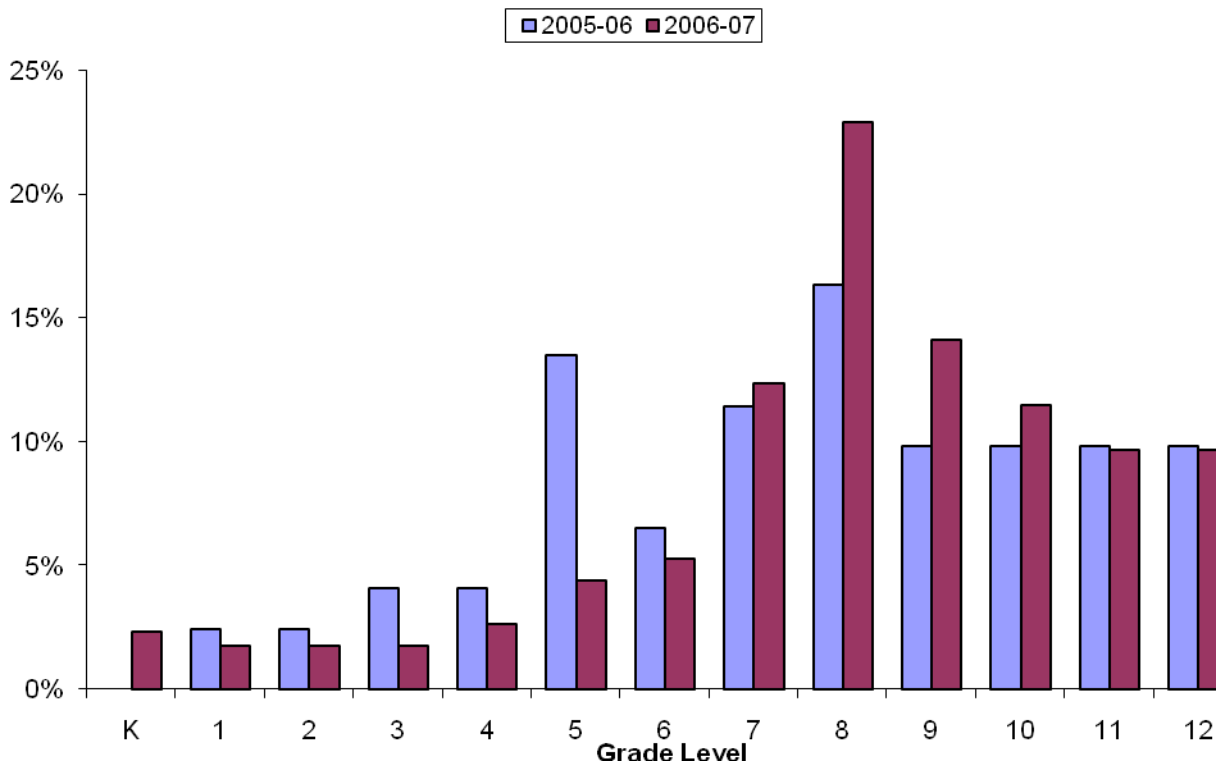
- This information is being provided by Catherine Ball. Sasha Hammond served 3 of our districts and I served 5. Sasha's services consisted of providing training days. I spent significant time in individual teachers' classrooms. My time led to reflective observations and conversations, some of which were considered and some of which were not. I am a really strong believer that if you keep doing things the ways you've always done them, you can't expect different results. We need different results with our students here in the Yakima Valley! There is a lot of work still to be done.

**Log Report 2005-2007
ESD 105**

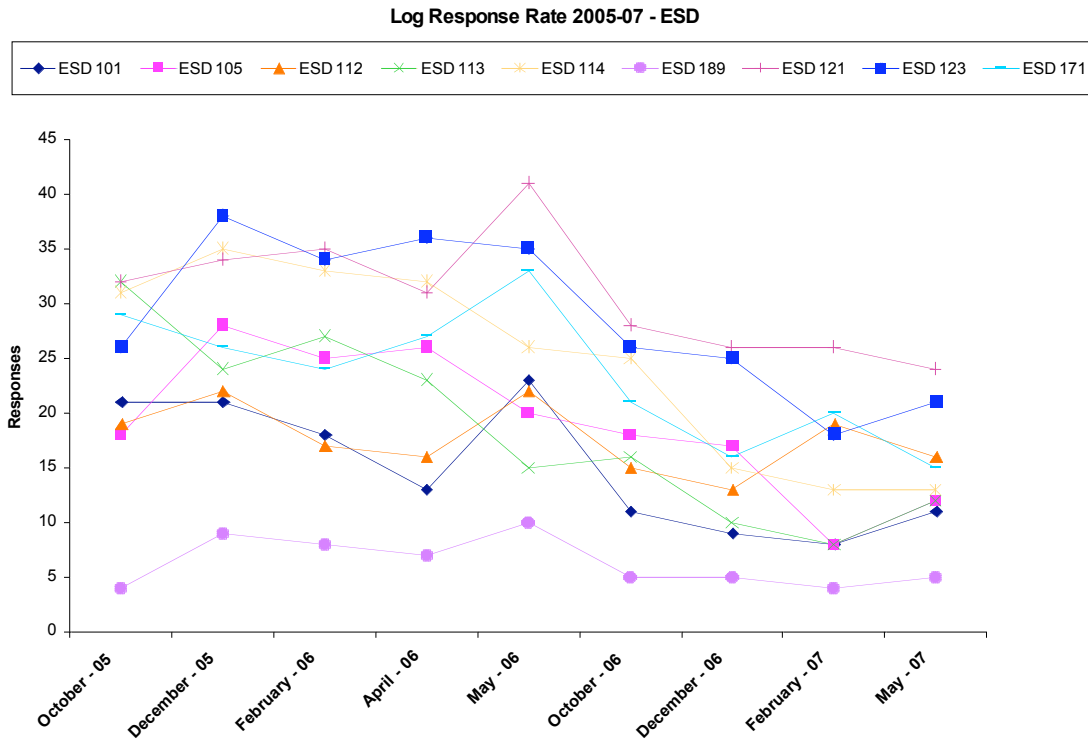
Item 6:

The grade levels you teach:

2005-07 Grade Level Participation - ESD 105



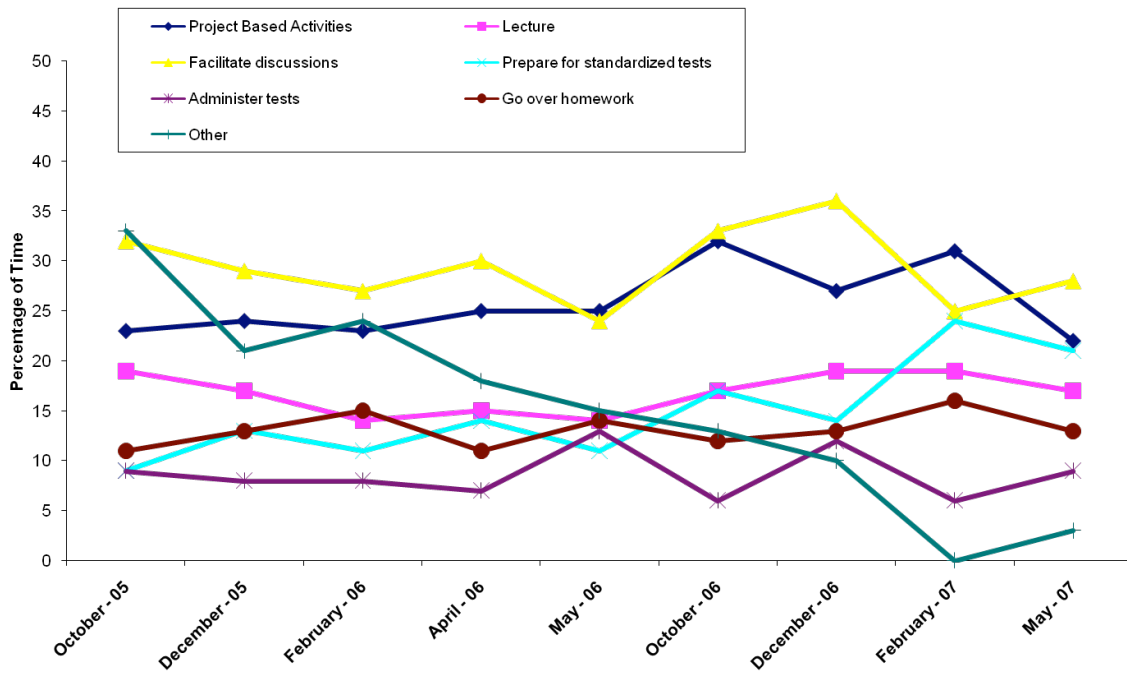
Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?

Classroom Activities in an Average Week - ESD 105



Other, please specify:

October - 05:

- Self help skills
- I am a math coach so my focus is on teacher development and support in the teaching of mathematics. I do that by providing material and instructional support. At times this involves teaching inservices and/or classes of students, but none of this is really my focus during the week. Each day is a different experience and blocking in times is extremely difficult.
- Attendance, lunch count, athletic grade sheets signed, announcements, pledge of allegiance, behavior issues.
- We spend a small amount of time going over how to read questions and interpret what is being asked. As well as spending some time review some basic skills that we find students get sloppy with. We also spend some time looking at each others work as well as working on class problem solving activities.

December - 05:

- Reading instruction/practice and writing instruction/practice.
- Coach teachers of mathematics - professional development, ongoing support, model/co-teach lessons, etc.
- All our activities are geared towards preparing them for the standardized tests by having them show work and justify their answers on a regular basis.
- Our math curriculum is set up to deliver in student project based activities. There is little teacher lecture and much discussion.
- The Investigations Math Curriculum is mostly project based student activities with sharing of strategies and mathematical discussions. Many other activities are also based on student sharing and reaching a consensus.
- Students working on in class assignments
- I am not counting WASL prep as standardized testing. It is in the "other"

February - 06:

- Working in small groups.
- Student work time
- Preparation for technology (lesson plans): taking students to computer lab for instance teaching them Excel (making graphs, tables, x and y, what type of graph, labeling).
- I work hard.
- Preparing materials.

April - 06:

- Using 6th grade sample math WASL
- Coaching teachers in mathematics
- My project-based learning experiences increase at this time of the year, as do discussions about problem solving and math concepts.
- We are currently looking at WASL released items.
- Much of the Math discussion comes from talking about the homework
- The curriculum if rich should do the preparation for any standardized test. You shouldn't teach to a test. What does that tell about how good your curriculum is?

- We do a lot of sharing of students works using the document camera

May - 06:

- Going over homework is done one on one looking at corrections from computerized program (Accelerated Math)
- Computer assignments, group work
- Using calculators and TI navigator to find deeper meaning of math topics
- Working, re-teaching

October - 06:

- QDivideCmts
- If the total is over 100%, it is simply because many of the categories overlap. For example, discussing a student's answers and solutions to homework is also facilitating discussions about mathematical concepts.

December - 06:

- Word problem and reading
- We have a new activity based curriculum
- Keeping my students organized with their portfolios and notebooks...many of my students loose points in class solely based on their lack of study skills and organizational skills.

February - 07:

- These categories over lap

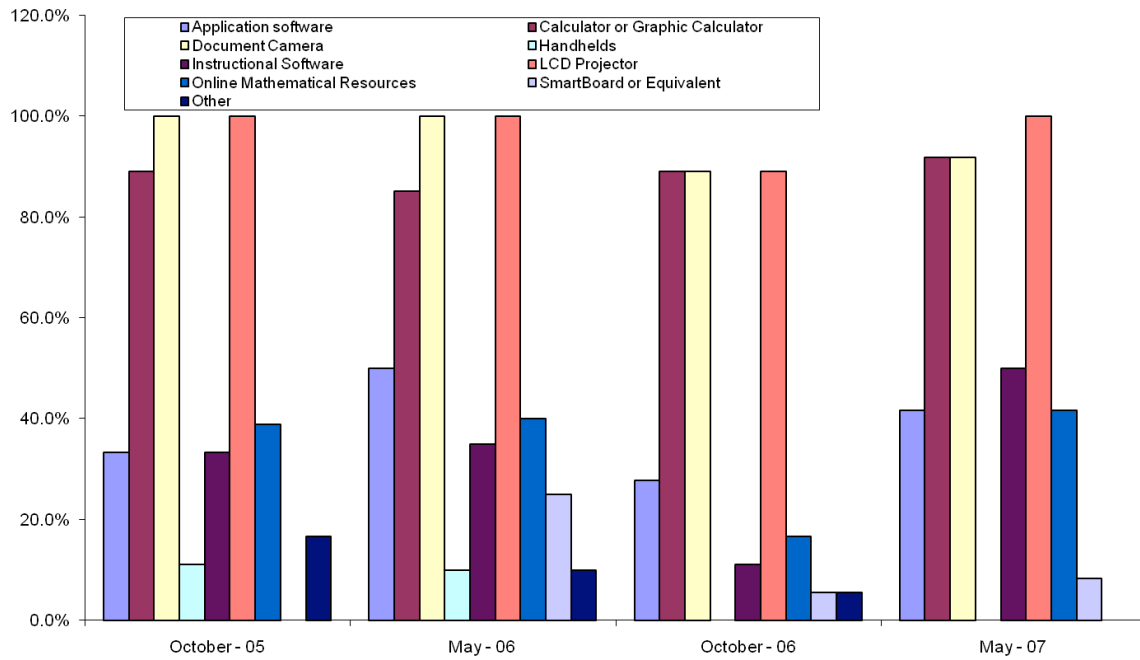
May - 07:

- We are preparing for the WASL this month
- It will not accept my percentages above

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.

Type of technology available to participants
ESD 105



Other:

October - 05:

- Laptop
- Individual Whiteboards
- Accelerated math

December - 05:

- Laptop with internet

February - 06:

- CPS units
- Whiteboards

April - 06:

- Whiteboards
- Flash masters
- Accelerated math

May - 06:

- TI Navigator
- Accelerated math

October - 06:

- Lynear data collection hardware to go with graphing calculators

December - 06:

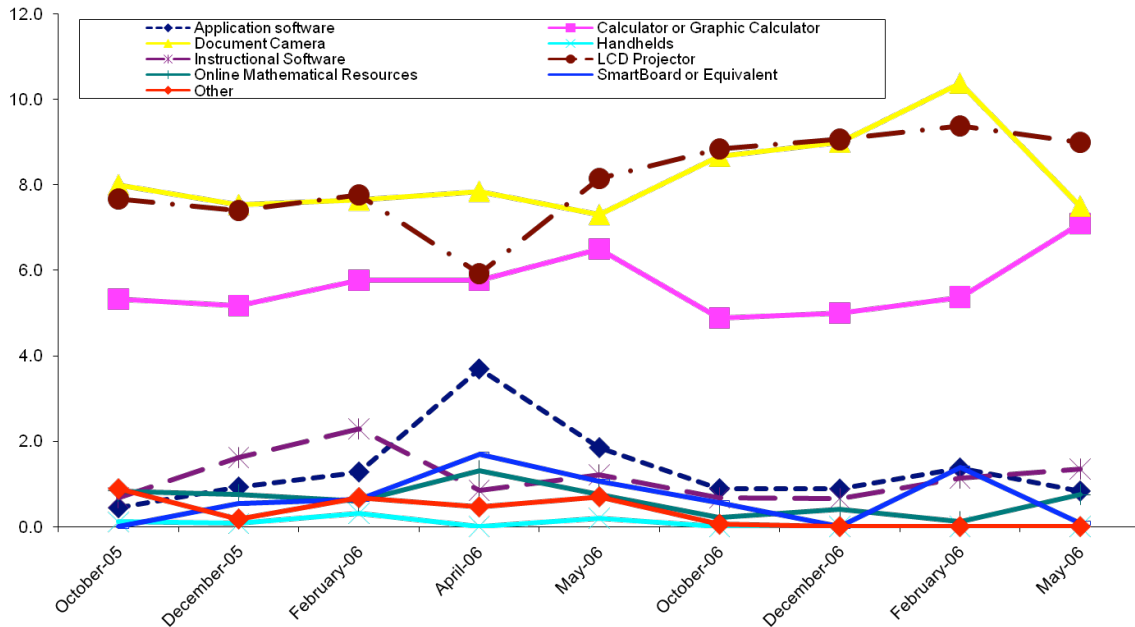
February - 07:

May - 07:

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.

Frequency of use of technology over the last ten lessons
ESD 105



Item 11:

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- They brought up a paper that they finished a story problem on and explained to the class their thinking
- Sharing/correcting homework and other problem solving activities

- Sharing of thinking during discussion of strategies for addition - used document camera and projector to facilitate discussion. Also, used calculators to check responses.
- Used an on-line spinner feature to enhance understanding of probability.
- Graphing systems of equations to find the solution and comparing that to using matrix operations to find the solution (also on the calculator)
- Every day I use the document camera to utilize students' work as examples of different ways of thinking and communicating thinking. Today, for example, I demonstrated a strategy for solving a problem on the document camera and the students saw the solution appear before their eyes with wonderment and appreciation for the process. It is like a live video and keeps their attention.
- Students used the graphing calculators to compute problems. They used the document camera and LCD projector when showing the class their work.
- My students learned to link on website and collect data.
- Using calculators to make sure they had their Venn Diagrams completed with all factors and multiples of various numbers.
- Sharing their work on problem solving and discussing it with peers
- Students use document camera to demonstrate their solution for problems. Students used websites to practice math facts.
- They used the document camera to show their solution to problems and had an open discussion about their solutions.
- Groups sharing their answers with the class using the document camera
- Daily discussions using the doc camera.
- Students share their work that is done, in their composition books with rest of the class. (We use the document camera and projector)
- We used graphing calculators the overhead and document camera to discuss what was going on with systems of linear equations and how we could relate that to a company's growths and loss's.
- Students displayed their work using the doc camera and projector. Discussion followed.

December - 05:

- My students frequently use the document camera to show other students their strategies. We have been using it to show different angles and similar shapes in our current unit.
- My students brought up their math solution and shared how they got their answer with the class. My students spend time on a math computer program working on addition skills.
- I gave them a problem solving activity which they were asked to write up in a WASL prompt format. They then took turns sharing their results with the document camera. We discussed their findings and strategies that they used.
- Students use document viewer constantly to share strategies; Students also double check their work using calculators and we have software to support our math program.
- Using the document camera to show their work, comparing different approaches to solving systems of equations
- Today, for example, students came up and explained their thinking processes concerning the group project about a remodeling topic. With their own work as the resource they had to justify their strategy and answers. Other students would evaluate and comment on that work. Today another class worked on notes from the text while a student exemplified their note-taking style.

- Students often use calculators as mathematical tools to help determine answers.
- Students on a regular basis share their strategies over the document camera
- They use the Doc Cam and LCD projector to teach other members of the class how they got a solution to a problem regarding proportional reasoning.
- The students use TI 83s every day to answer the calculations of answers to questions that are of higher level thinking.
- Students use the document camera to display their work to the class and to lead discussions about processes.
- We are working on making polygons using geologo. Some students were having difficulty with constructing triangles that follow specific rules. They had to get onto the computer and work it out. Some of the students still don't agree it can be constructed.
- Finding the square root of a number; renaming powers of ten to standard notation
- Using document camera to share efforts to solve problems and discuss alternative methods
- Sharing strategies on document camera.
- Going over their problem of the week, they discussed solutions and why or why not the solution is correct.
- **SHOWING THEIR WORK**
- Presenting findings and examples in front of other students using technology
- Students use calculators to prove or disprove their strategies. Students use software for fact practice and place value representations. Students use document camera and projector to share student work and strategies.
- Using the document camera to explain how they achieved their answer
- Students constantly explain their strategies for solving problems in front of the room using the doc camera
- Students are called to bring their daily entry work and class work to be placed under document camera.
- Graphing calculators to explore linear relationships.
- Students display work and discuss appropriateness of reasoning, communication, etc.
- Academy of Math

February - 06:

- Weekly they are on the computer doing math drill and practice 2-3 times to allow me to work with my other students in small group settings. I have a self contained classroom so it is necessary that I am able to spend time with small groups regularly.
- Finding missing angles in polygons: calculators, document camera and projector for discussions
- We complete a problem solving activity each morning as an "opening activity." And then use the document camera to discuss different strategies that were used.
- Daily use of the graphing calculator is built in to our curriculum. Today they were experimenting with quadratic models, looking at tables and graphs.
- Today, for example the students viewed a three dimensional figure under the document camera, and they saw it disassembled into a net. We then discussed ways that we could calculate the total surface area of the 3-D figure.
- Students use calculators daily and present their entry tasks, homework, and daily work (Investigations) using a document camera and laser pointer (when needed).
- My students share strategies for how they problem solved or simply got an answer.

- Calculator: finding equivalent fraction and simplifying or reducing taking one part at a time after the students tries to figure the answer then they check their results.
- They used graphing calculators to graph linear equations and check their work.
- Graphing calculator and document camera/LCD to show student work.
- A calculator to change fractions to decimals and decimals to per cents.
- Each day students use the document camera to show the class how their problems were solved. We encourage students to show different methods for solving the same type of problem and how that develops into possible algorithms. We encourage students to take risks sharing incorrect solutions as well to facilitate discussion about why and how the solution went the wrong direction.
- They do a lot of evaluating their peers' work with the document camera.
- Sharing work using the document camera and having a class discussion about the work.
- Students share work on complex problems. We discuss what is correct and "smart" and what things we could do to improve responses
- I had students present their findings of a problem solving task that involved area and quadratics by showing their work through the document camera. They have also numerous times presented their methods for answering WASL type problems, explaining why they did what they did and what they thought their score should be. Their classmates also are given an opportunity to critic their work. We also use the graphing calculators to look at problems from different angles.
- My students have used the calculator in order to solve for substitution plus we use the LCD and document camera daily to evaluate each other's work.
- Students created spreadsheets with fact practices and used data to make a graph showing their progress. Students used this information to document comparisons and trends.
- They were using calculators to determine the equation of a line that would fit a set of data.
- Students show and explain how the solved problems in front of the room.
- My students use calculators to solve story problems and Academy of Math to work on math skills at an individual level.
- They frequently use document camera & light projector for showing/sharing work and discussing reasoning for strategy.
- They are asked to come up and share their work on the document camera.

April - 06:

- My class uses math programs to help develop their basic facts. They also use the document camera and projector to share their work with the rest of the class.
- Used calculating and graphing of means of plants heights and number of seeds developed per plant to draw conclusion to science experiment
- We went over a problem solving activity with a write up. My students peer edited each other's work and then presented their findings using the document camera.
- Doc cam with projector to share work and give feedback to each other.
- Graphing quadratic equations and using the graph (or table) to solve quadratic equations
- Students are required to bring their current work up to the document camera and justify their strategies/calculations to the class at any given time.
- My students looked for patterns with multiples and then shared their work using the document camera and the projector so the class could discuss the patterns as well.
- Students present entry tasks, homework, and their investigations using a document camera.

- The student share their strategies on the document camera and others help edit them to be quality responses
- Students demonstrated work samples that showed how they solved a particular math problem
- Students used the document camera to showcase their work to the rest of the class.
- The students will put their work under the document camera and discuss with the class.
- When working on a problem with fractions, Students could not reach an agreement about what group would be larger. They finally settled it by using a calculator.
- We learned commands on the calculator that support fractions.
- The students when sharing their strategies on an investigation they bring their work up to the Document camera and point what they did, how they did it, and their reasoning behind what they did.
- Creating spreadsheets and using them to create graphs to facilitate understanding of and use of graphs to display and interpret data.
- We used the graphing calculators in conjunction with the TI navigator system to analyze sine and cosine waves as they relate to the unit circle. We were able to share data and graphs that brought about discussions of what translations occur to a sine and cosine wave.
- Students used the computer program with Investigations to create figures on Coordinate grids, used Excel to create spreadsheets and graphs, and used computers to demonstrate graphs to parents, used document camera and projector to share spreadsheets, graphs and charts with class.
- The used the "Mimio" to convey their ideas to the class by showing their thought processes.
- Showing how they solved problems using the doc camera.
- Sharing/explaining their problem-solving strategies & thinking processes
- TI 73's to explore and discuss choice of roller-skate company for class outing.

May - 06:

- Sharing their answers and strategies for released 6th grade WASL test
- Sharing responses using doc camera and projector. I've also modeled the use of tools using the projector.
- Students used a paper model to measure distances related to a circle. They then graphed these manually and shared them under the document camera. This was followed up by an activity that used trig ratios to calculate the same distances they were measuring before and then using the graphing calculator to look at the graph of the trig function and compare it to the one they did manually.
- Students share and explain their problem solving skills and strategies w/ each other on the document camera.
- Today they shared their strategies for solving multiplication clusters. They showed what they did using the projector and the document camera.
- Sharing student strategies
- Using the document camera to display work.
- Students creating spreadsheets in excel
- Students got online and worked on a variety of math assignments/programs
- When looking at patterns changing over periods of time students had to make inferences of where the patterns would be in the future and explain.
- Students use the document camera and projector to share work and solutions.

- Every day we use the projector and document camera. I just received the Mobile Presenter and am in the process of learning how to use it. Computer lab is another time we use technology to support math and higher order thinking skills
- We used the TI navigator to investigate changes in the graphs of sine and cosine waves and how they can be used to model the action of a respirator
- We were calculating the area of squares and using the mimio to interact with the book.
- In problem-solving -- used doc camera/projector set-up to show work as they explain thinking and strategies
- They bring their daily work and place it under document camera and they explain their work to the class.
- Graphing calculators to explore linear relationships, slope, y intercept "T" table and intersections.

October - 06:

- Sharing solutions with class
- Put student examples under the document camera of data collected and graphs created following an activity. Used these to compare and contrast, look for patterns.
- Share graphs and patterns
- None
- Students continue to share their work with the rest of the class using the document camera and projector to allow them to explain their work and discuss it with the class
- Students share their work and discuss...compare, show other methods
- Discussing why a graph looked the way it does. The distribution of the data
- Students get to work in pairs and then share their work with the class on the document camera.
- Sharing problem-solving strategies, solutions
- Don't have technology at this time. We use the white board
- Explored window sets to view equations they were working with.
- Showed examples of different ways students solved a problem using their work under the document camera.
- Using matrices to solve a three variable system of equations
- An example of an object was projected onto the wall and the students were asked to discuss the similarities and the differences in their groups.
- The math unit we are in, involves a lot of plotting points, which we have done on the computers

December - 06:

- Students graphed rules on graphing calculator, looking for connection between rule and the graph's shape. After making conjectures, groups presented to the class using document camera and LCD.
- Share understanding and strategies
- Students used their TI 83s to complete the investigations they did today.
- Students used document cameras to display work.
- Students took data from our recent fund raiser and made spreadsheets. Then they analyzed the data to help make some decisions about the sixth grade field trip later in the year.

- Students work in groups to solve a problem. Next, they share their work using the document camera and projector
- Students have shown their own work on the document camera to explain and/or question each other.
- Shared problem solving strategies and showed their work/solutions
- Graphing calculators to explore linear relationships and the standard form of a linear equation.
- Analyzing all functions from a graph. Finding x-intercepts and finding points.
- Not much at this time. The use of graphing calculators will begin in our class next week.
- Using the document camera and projector to model or assist students on a CMP lesson
- Use calculators to check the total degree amounts for straight angles and other types of angles
- Students use Projector to show work. Students create spreadsheets.

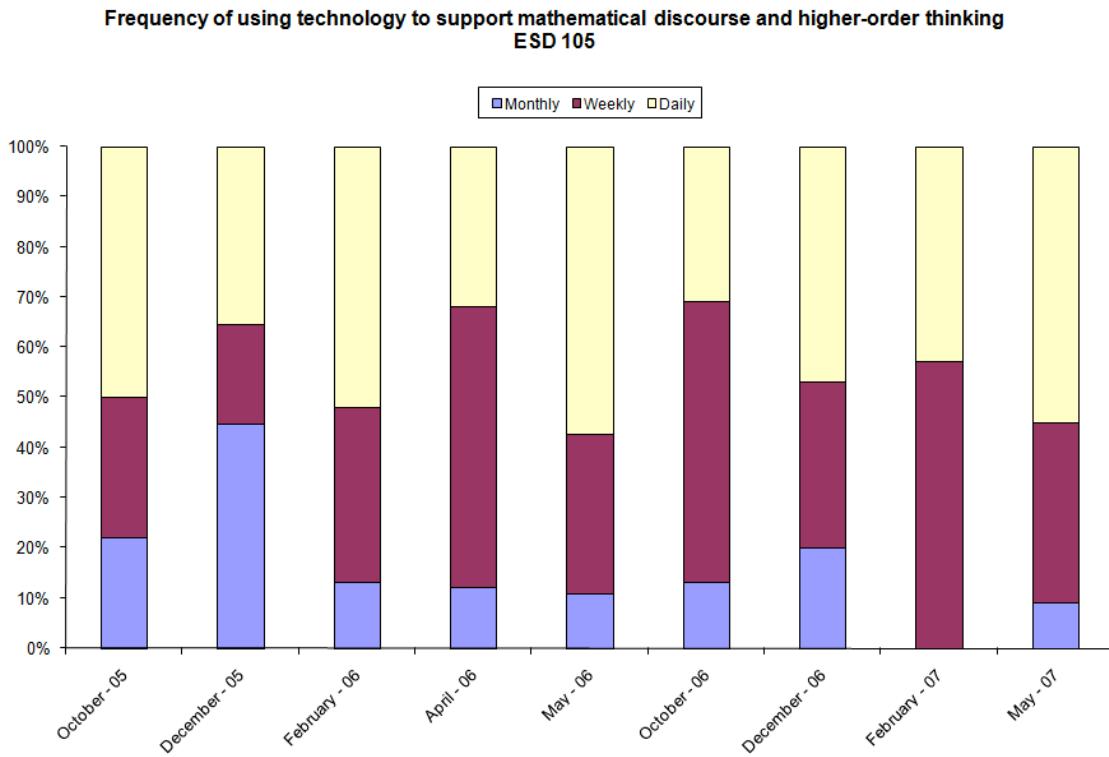
February - 07:

- Putting student work under document camera to compare and contrast ideas
- Using document cam to display and explain work
- Students shared different approaches to solving linear equations
- Students came up to the whiteboard and show students how they came up with answers.
- Made histogram of data from an experiment and discussed variability of the data. Then looked a box and whiskered plot to extend the discourse.
- They discussed their answers to the last unit test while looking at a blank copy of it on the document camera. They took turns explaining at the board.
- I usually put the entry task on the wall so they can discuss in their groups. Then we open up the discussion to the class and together they attempt to bring out the concept

May - 07:

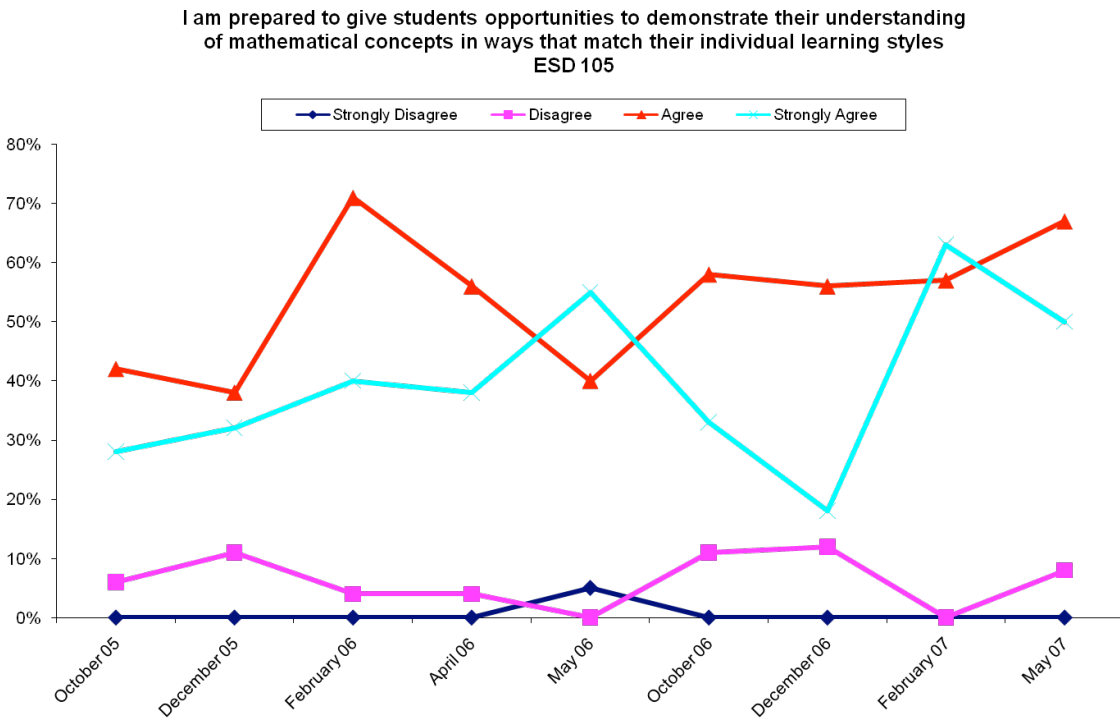
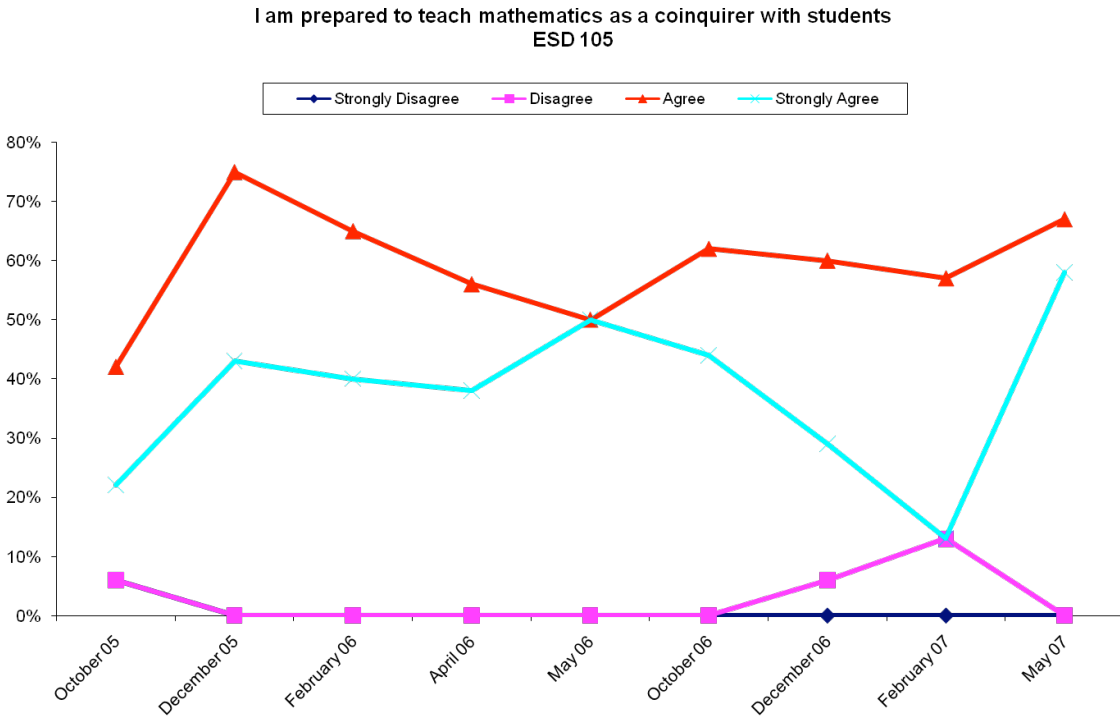
- After working on a long Order of Operations problem, samples of student work were display under the document camera. Students were able to see more clearly what made sense in terms of showing work. They could also see the advantage to working in small steps so they didn't get lost.
- Students used the Segmented Math Course software where the students used the software to discuss i.e. Pythagorean Theorem
- Used document camera and projector to show work.
- I have observe math lessons when students have explained their discourse and higher order thinking skills to other students
- Students show and/or explain work
- Looking at / discussing student work.
- Sharing work, strategies, explaining processes, evaluating work
- Calculators to explore the meaning of square root.
- Using the document camera to explain their work to the class
- While discussing the homework we used the Projector to have different students give their thoughts about why a problem was right or wrong.
- Showing their work under doc camera and explaining

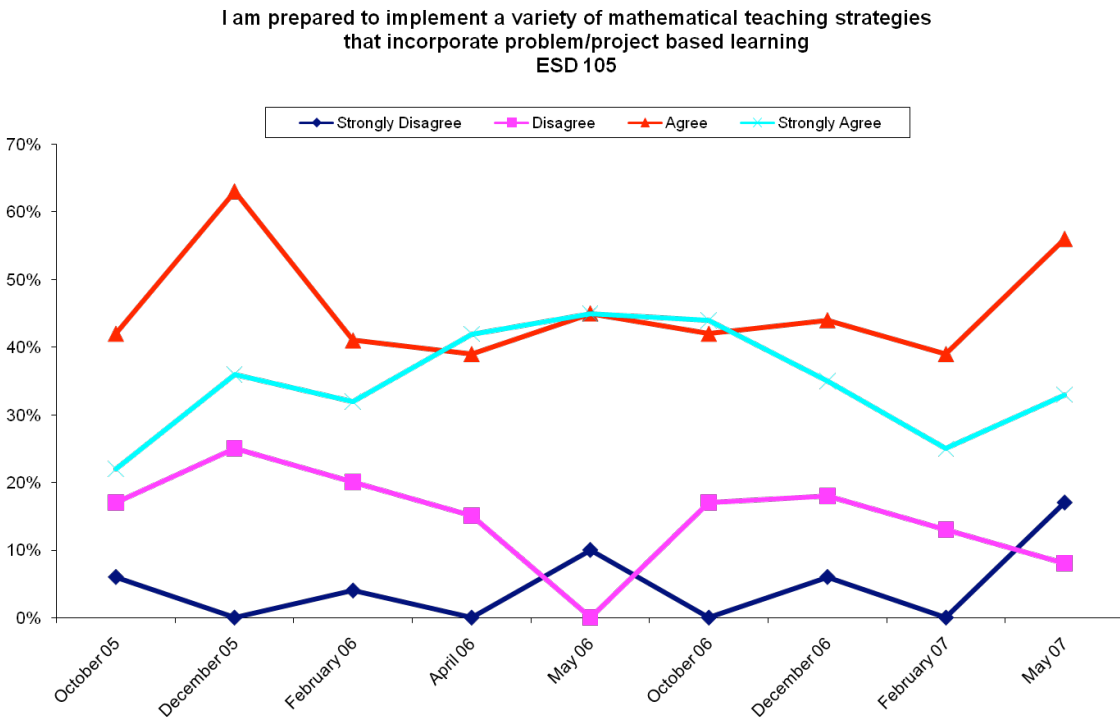
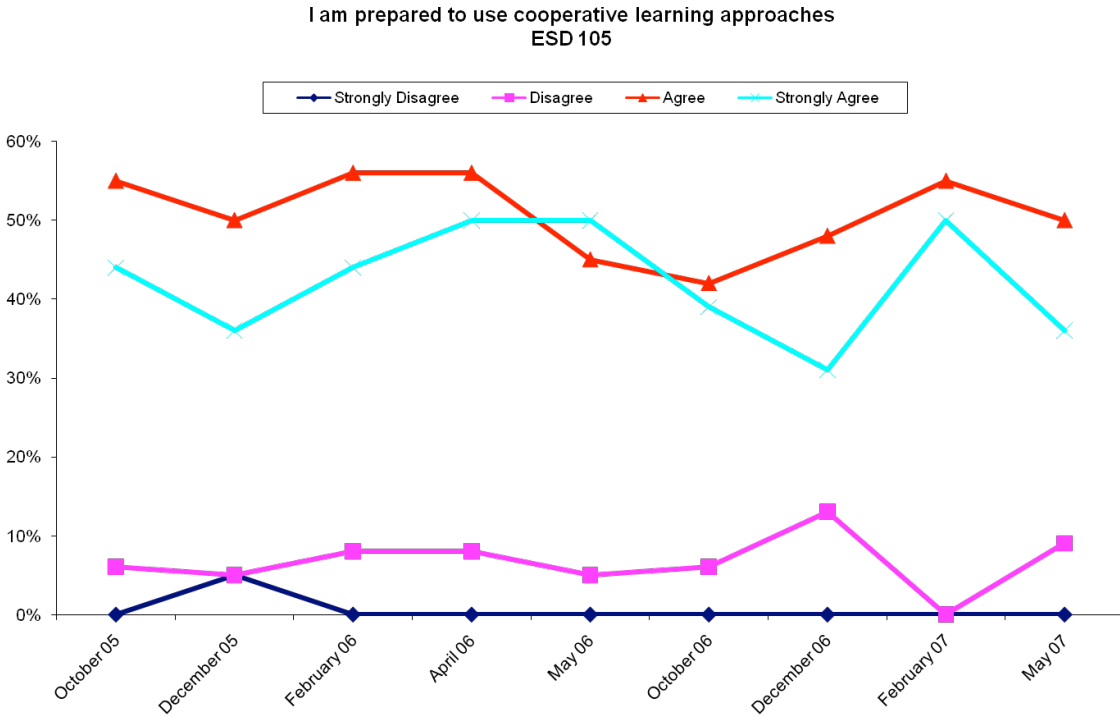
How often does something like this occur in your classroom?



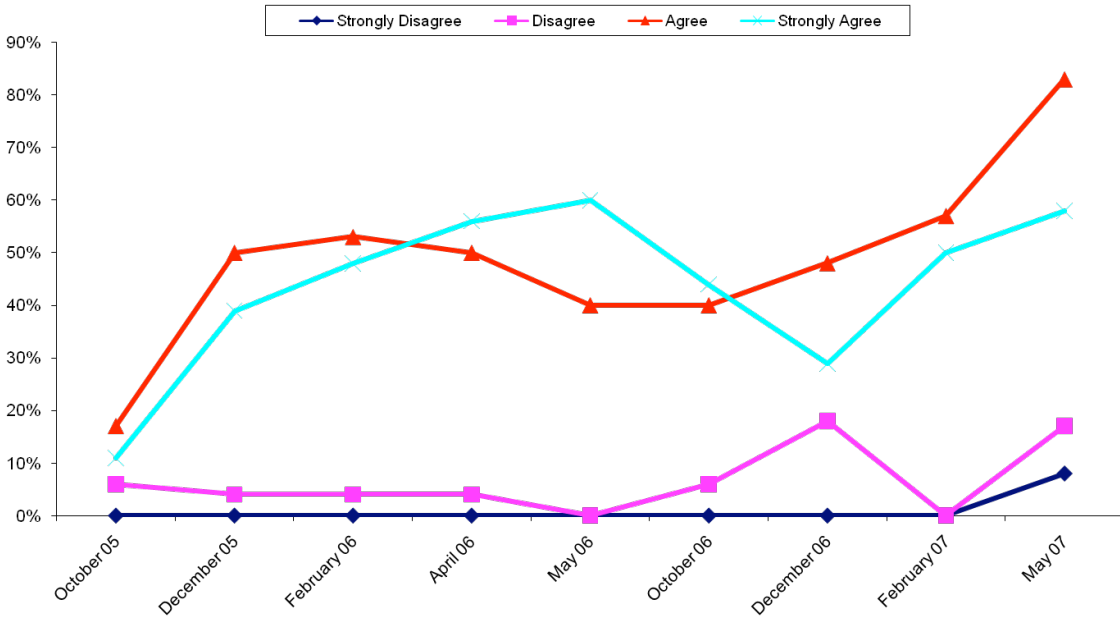
Item 13:

Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.

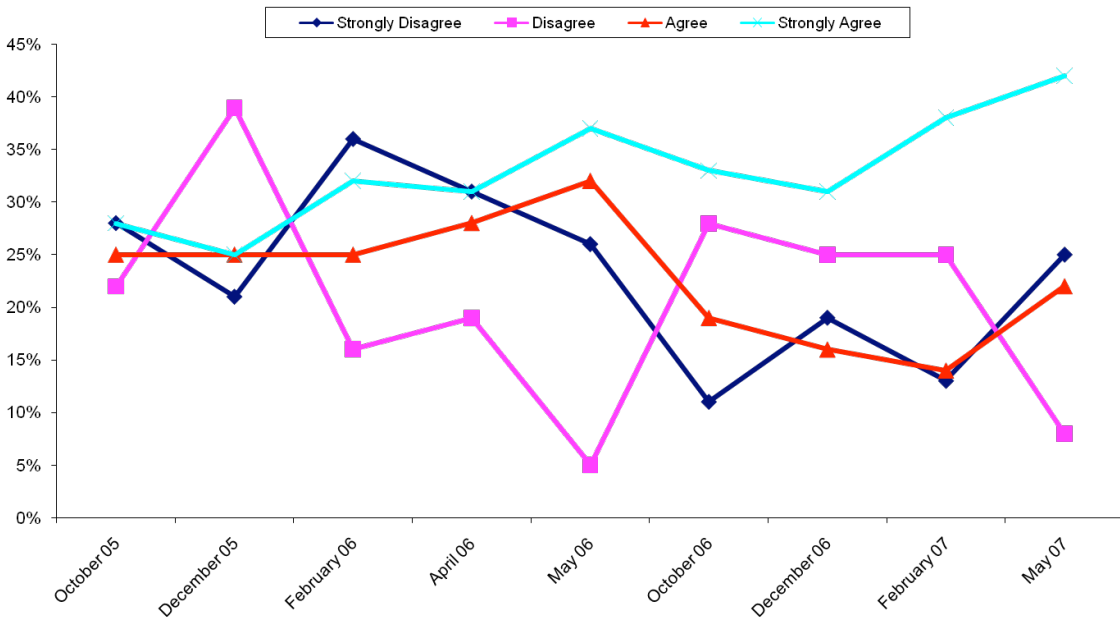




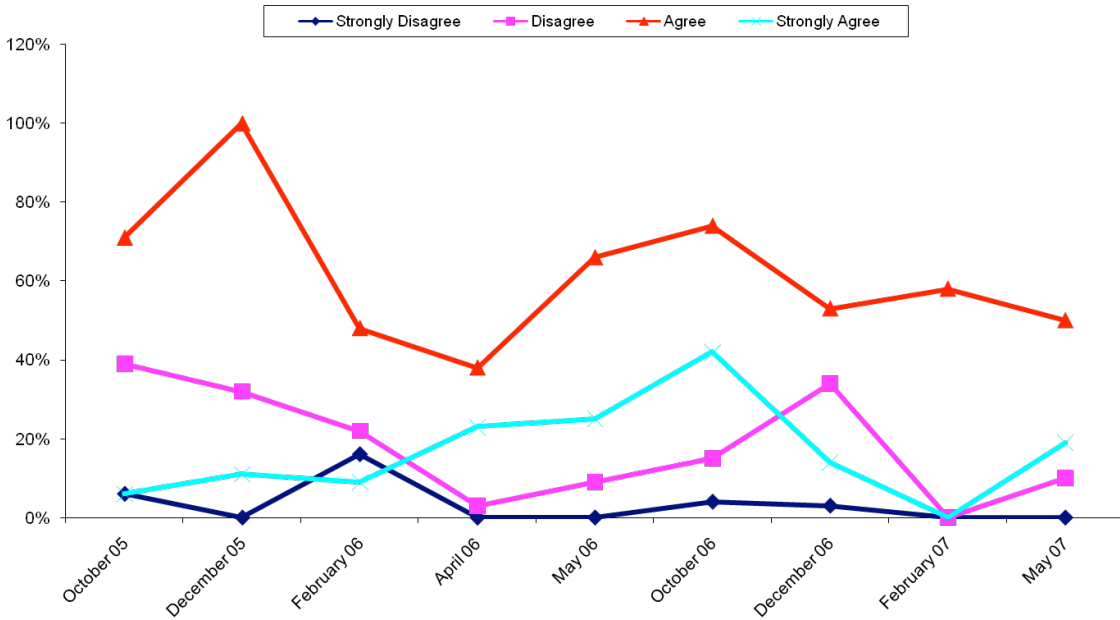
I am prepared to involve students in hands-on, concrete mathematical experiences
ESD 105



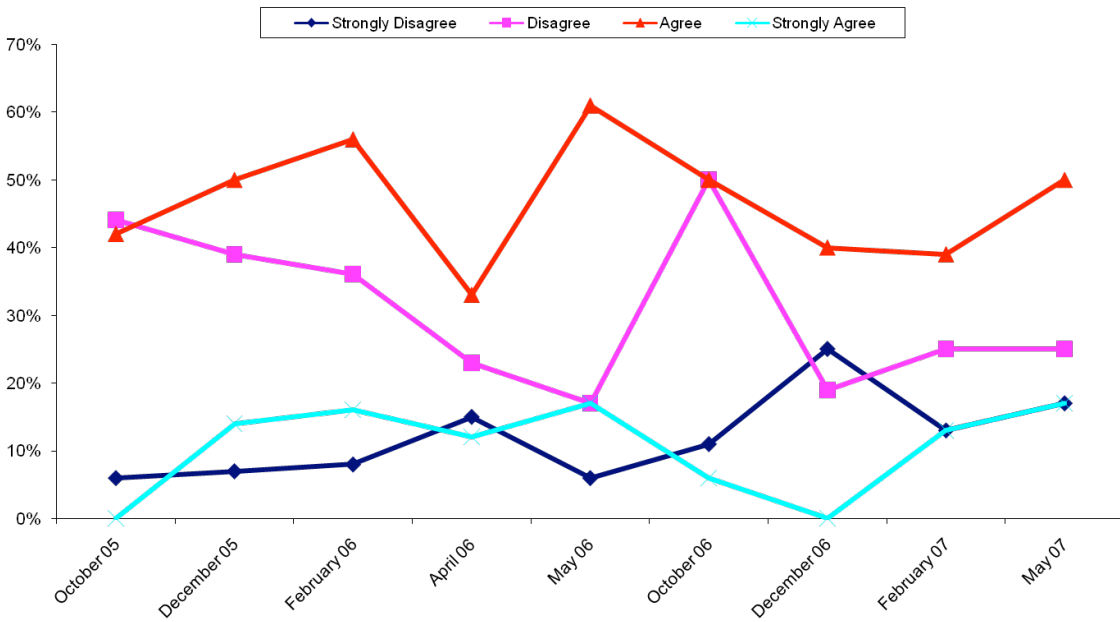
I am prepared to teach mathematics lessons that include the use of graphing calculators
ESD 105



I am prepared to locate online resources in support of mathematics learning
ESD 105



I am prepared to integrate computer-based activities
in support of mathematics learning
ESD 105



Comments:

October - 05:

- My training and experience with computer-based activities is limited.
- The last two items are something that I am striving to incorporate into my lessons.
- I have learned to let students find their own solutions to problems and am often surprised and elated by their diverse methods, but am frustrated with the low level of basic mathematical fact knowledge that seems to hamper their understanding of why different methods can be used to achieve a solution.
- I need to get better at using Excel.
- I would love to use more internet resources and computer based activities and believes that by the end of the year I will be. Currently I have trouble finding time to research them and implement them. I believe that within the next PLC meeting or two we are going to take some time to research some of these resources and use them.
- I am not sure what co-inquirer means. I have one computer at my disposal in the classroom. The lab is available on a limited basis. My graphing calculators are TI-73. All instruction appears to be for TI-83.

December - 05:

- Our curriculum is already full. If we take extra time to do more than problem solving once a week, we won't make it through the curriculum for Everyday Math.
- NEED HANDS ON HELP
- I'm getting better!
- I would like to do these things, but I am unwilling to spend a lot of my own time researching/testing these things.

February - 06:

- Bits and Pieces 1 I had my students go the computer lab and I found a site called Fraction Frenzy on equivalent fractions students had great fun and learning at the same time
- I do not have the time to research lessons that may enhance our regular curriculum. Our curriculum takes most of our math time.
- I would like to have more training and computers in my room for the students to use in math.
- Finding time to locate and use on line resources is major challenge for me. I find myself with no time to look for these items or implement them.
- I am highly qualified and always prepared to implement any type of instruction.
- I do not have the classroom set-up/hardware/connections to have students involved hands-on with internet- or computer-based activities.

April - 06:

- Only one computer that can be used by students in classroom...supposed to be getting a couple soon. CMP2 has good web sites that reinforce concepts with the lessons.
- No graphing calculators nor computers
- Until I become better at using the computer, I probably will not try to use it because it takes me so long to get to the right lesson.
- Some things that I disagree with are because finding time to research or use that is difficult.

- I have really enjoyed teaching the Investigations curriculum this year. Math has become one of my favorite parts of the day.
- No classroom computers for student use.

May - 06:

- CMP2 program has site connections for activities and multiple choice practices for the concepts presented.
- My students do not have daily (or even) weekly access to computers. Scheduling of the lab is tight. The entire class must go to the lab as a unit.
- I feel I still need training when working with the computer and graphing calculators.

October - 06:

- I am prepared to give students hands on concrete mathematical experiences on a limited amount of topics.
- I don't have access to computers to use on line materials regularly.

December - 06:

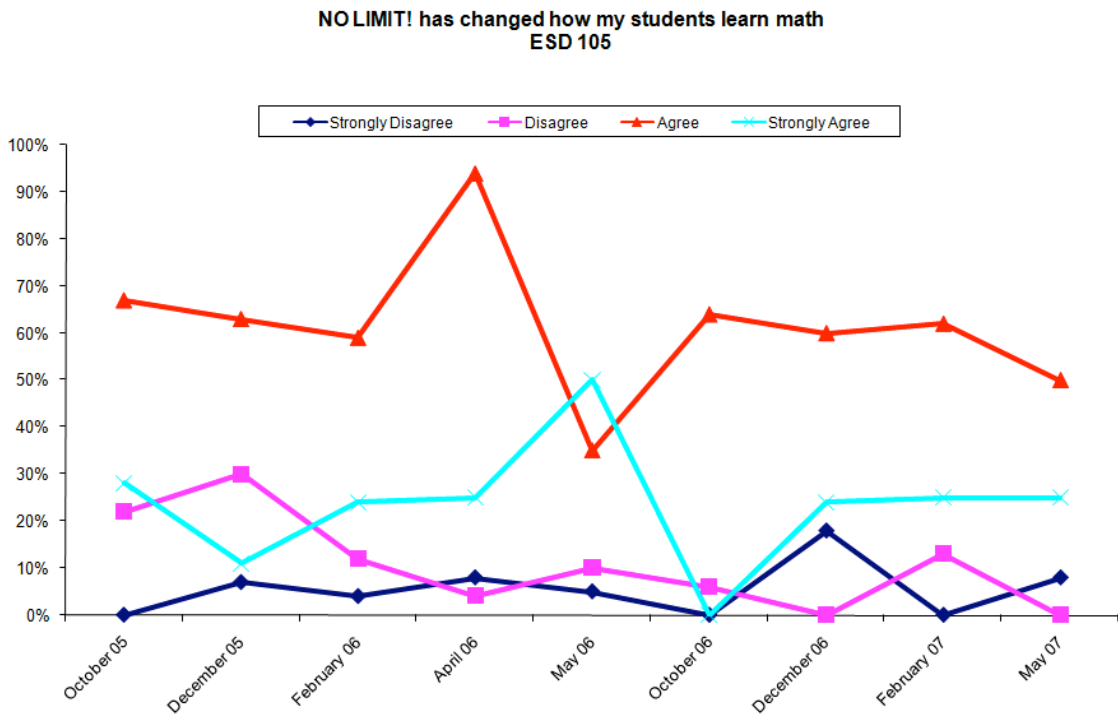
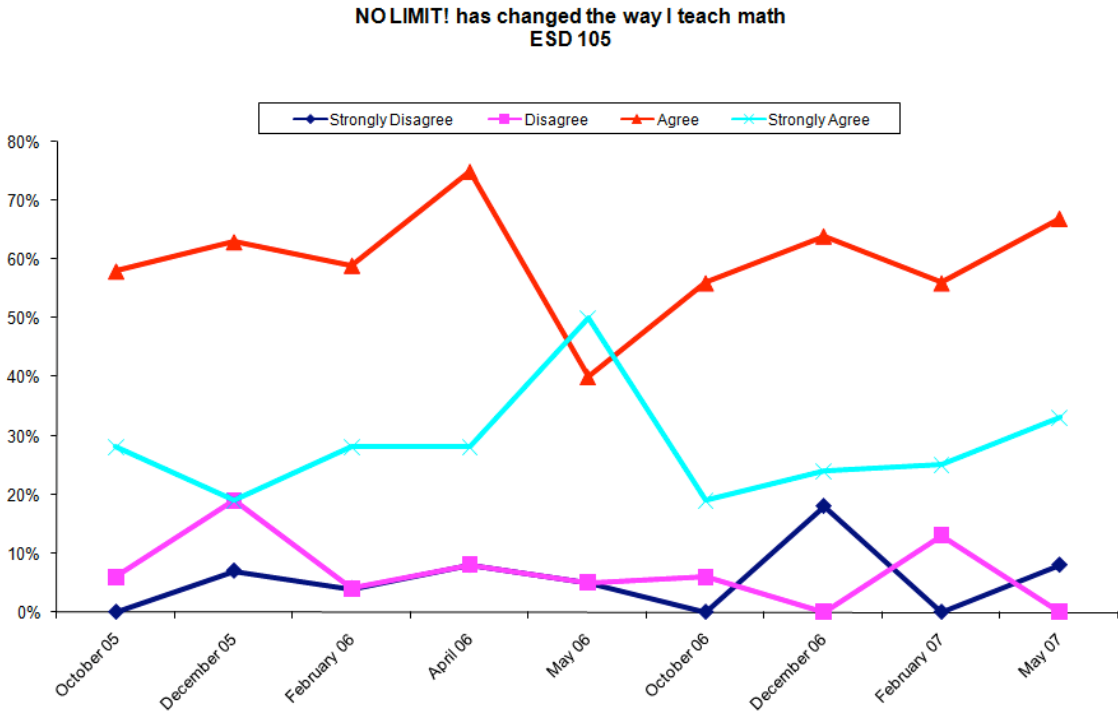
- If you don't have the computers available it doesn't matter what you know you're not prepared to integrate computer-base activities into your classes.
- I would love to integrate computer based activities, but the hardware and software is not available.

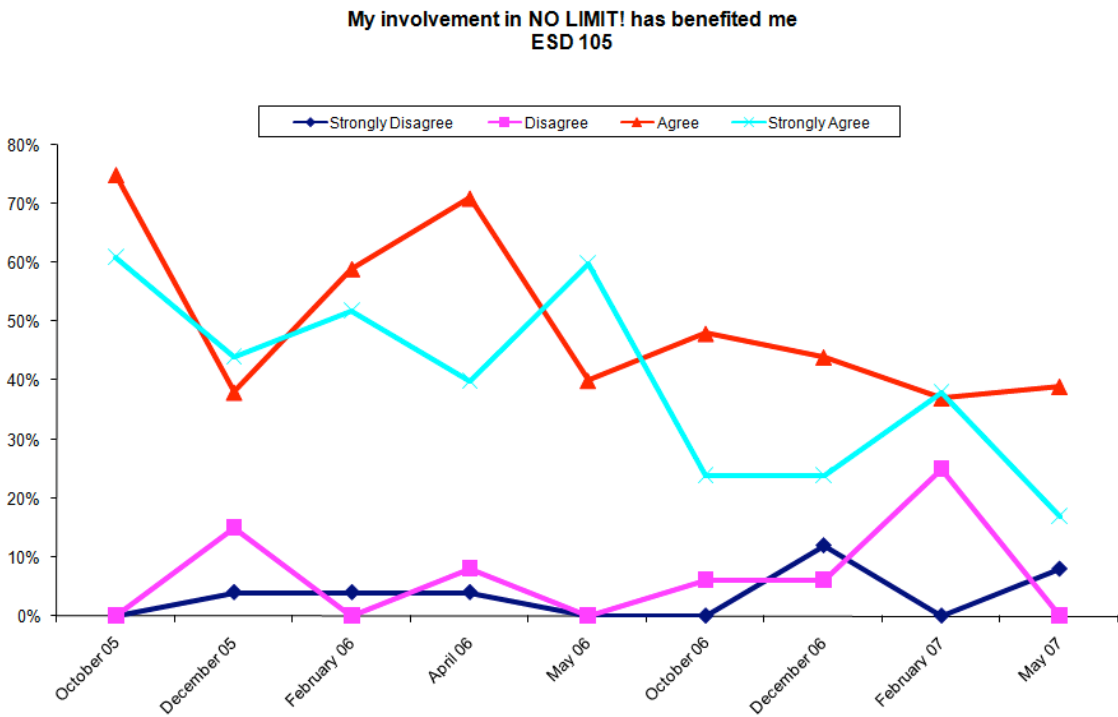
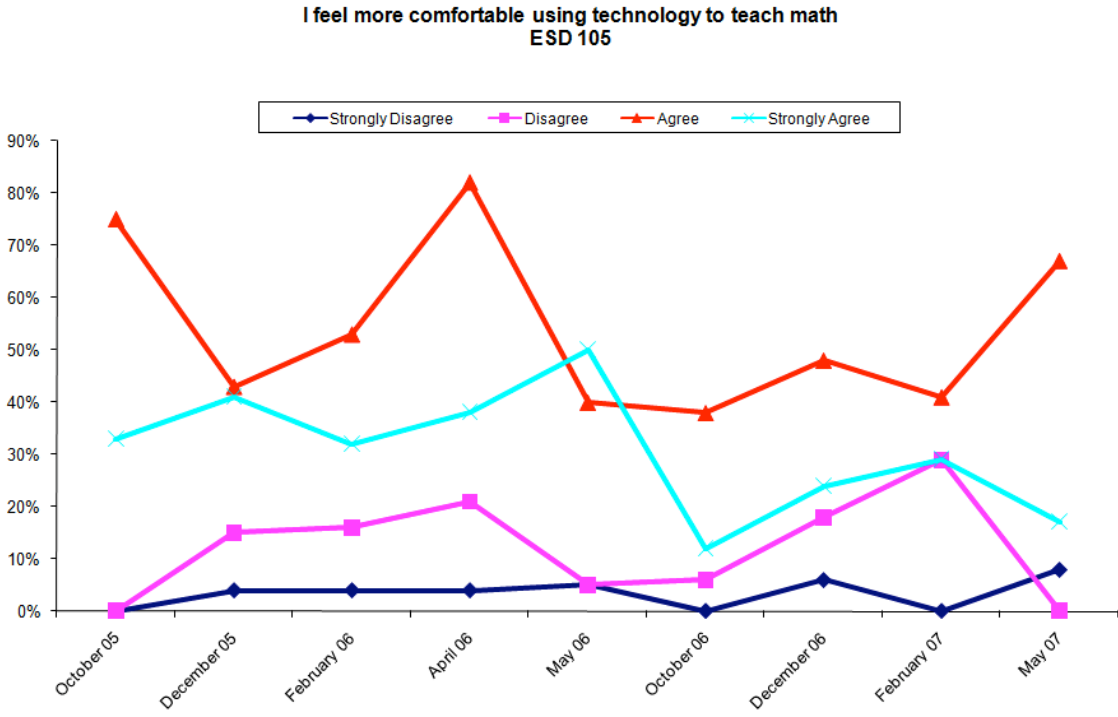
February - 07:

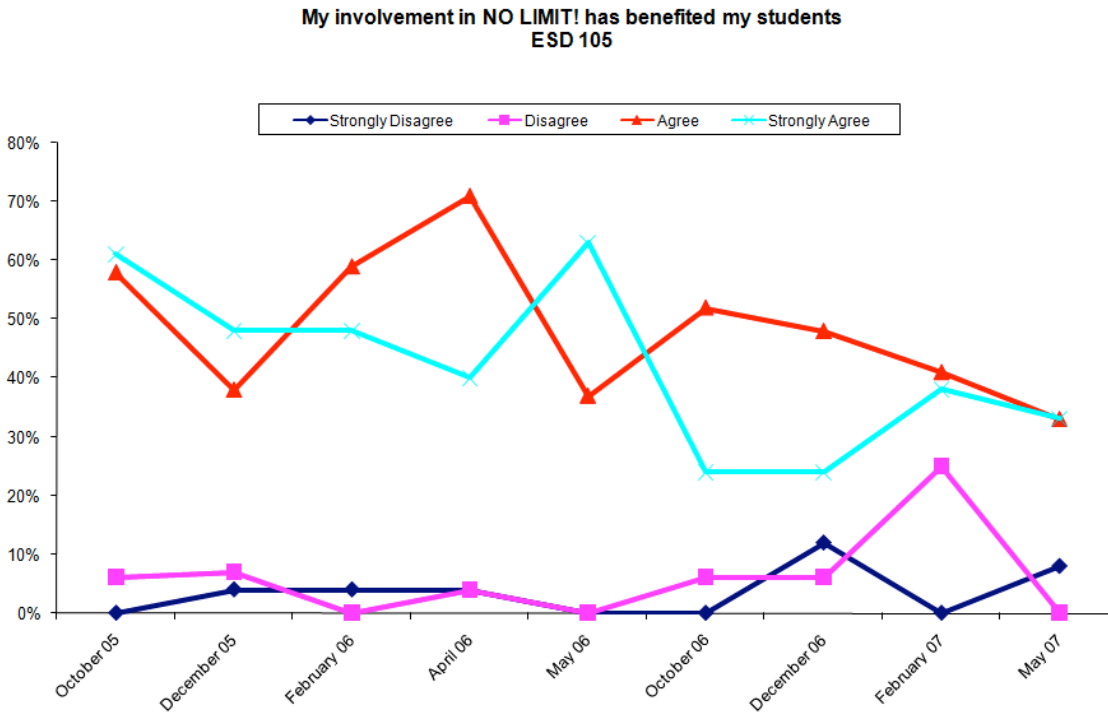
May - 07:

Item 14:

Please tell us how NO LIMIT! Has impacted your classroom. We are interested in your frank responses.





Comments:October - 05:

- I don't feel that the No Limit! Has changed how I teach math but rather helped me and supported the changes that are already occurring in my school and district.
- The document camera was immediately beneficial and has huge potential that is only limited by my imagination and creativity with it.
- I feel that I am more comfortable with using technology but I am not sure if I am successful at passing that on to my students. (They often know even more than me, or have another way of accomplishing the same thing - usually faster.)
- As of right now I would not say that NO LIMIT has changed the way my students learn math. I believe in time it will. I have always felt comfortable using technology to enhance the learning experience. NO LIMIT is giving me the opportunity to use quality instruments and giving me opportunities to change the way that my students learn math.
- I see things which could change. Knowing how to facilitate those changes, and having time to make those changes are my challenges.

December - 05:

- I am frustrated with the lack of focus when we meet for our big meetings away from our school site. I do not appreciate having my time wasted, and I do not enjoy being away for an entire day.
- To be quite honest, the only true benefit that I, or my students, have received from my Involvement in No Limit is the Technology grant that has provided our classroom with a document camera (which is just fantastic!!!).

- At this point I am wondering where the technology training is going to come into play. I was under the impression that this grant was about implementing technology into the classroom.
- At 5th grade we really do not have a need to have a graphing calculator. We need those which convert fractions to decimals.
- TO MUCH TALK AND NOT ENOUGH HANDS ON
- My school is a GATES school and many of the concepts presented to me by NO LIMIT have been our standard for several years.
- I feel more comfortable with trying new things and am excited to show them to my students. It doesn't always go smoothly, but they are often very helpful in figuring out how to make the lesson work better and the technology quicker and smoother.
- I plan on implementing many No Limit ideas into my math classroom after the Christmas break.

February - 06:

- Confident in using the three pieces of technology supplied through NO LIMIT
- Some of our equipment was stolen, and it is taking the district a long time to get it replaced. I really notice how much I miss it, and so do the students. They love to show off their good work, and I have more trouble allowing them to do that without the LCD projector.
- These questions are very subjective.
- The addition of the technology has helped my students and myself. Being able to meet with other teachers in my school has been very beneficial to me and somewhat rewarding for my students. I sometimes feel like our focus gets lost or that we get too involved in using strategies that some of us do not have time to implement. I also find that we are asked to do things that we never get around to discussing.
- No limit has helped reinforce everything that my school has been doing over several years. It has not impacted my teaching and students at all.
- Teacher and students have all benefitted in understanding concepts of math, willingness to share ideas, and a wider application of technology.
- They are getting to the point where they now want to come up to the camera and share their class/group work.

April - 06:

- The availability of a document camera, laptop, and projector has been so instrumental in getting students involved. Being able to see how other students work problems, etc. is very valuable.
- Working closer with the math teachers in our district has reaped the most benefit for our school and our students.
- What has changed my teaching and my student' discussions is the document camera and LCD projector. These tools were a part of the grant. Beyond that my team has gained little from No Limit. It could be the fault of my team

May - 06:

- The Share Fair added to my resources for effective teaching methods.
- The collaboration with my colleagues in the math department has been the most benefit to me as a fifth grade math teacher.

- Students have loved trying new strategies to solve math. It has been meaningful and fun for them.
- Just being able to use technology that makes it easier for students to share their work has benefited both my students and me.

October - 06:

- NO LIMIT has allowed my classroom to be supplied with technology that allows me to implement CMP2 and get kids more involved through showing their own work.
- I haven't decided yet if No Limit has changed the way I teach or the way my students learn. I strongly believe that it has benefited both my students and myself, but I'm still not sure on the change part. I'll hopefully have a better answer next time.
- I wasn't a part of the NO LIMIT grant last year so I can't answer the previous questions.

December - 06:

- This year in No limit, it is not as focus and not benefiting our group. The time together though is very important.
- This year we have had NO interactions with our coordinator. We have had NO PLC meetings regarding No-Limit!!!
- No limit gave me the tools to use technology in my classroom. It has also caused me to be aware of the tasks I give students. I try to give them more they can share with each other. I am not so sure that the visits from the ESD mentor are helpful.
- It's hard to say that my involvement has benefited my students, because at times, I think it has hurt the flow and community of the classroom.
- I am new to the no limit this year. I did not receive the benefit of the technology purchased the previous years. Fortunately I have some of the items thanks to our District.

February - 07:

- The benefit we have received has come from the acquisition of LCD projector and document camera
- These comments are geared at this month's activities. No Limit has not really impacted what I have been doing the past few months. We haven't really met as a no limit group. No limit has had an effect on my teaching from last year but this month it has affected my teaching very little.
- The opportunity to use a document camera has greatly helped the way I teach.

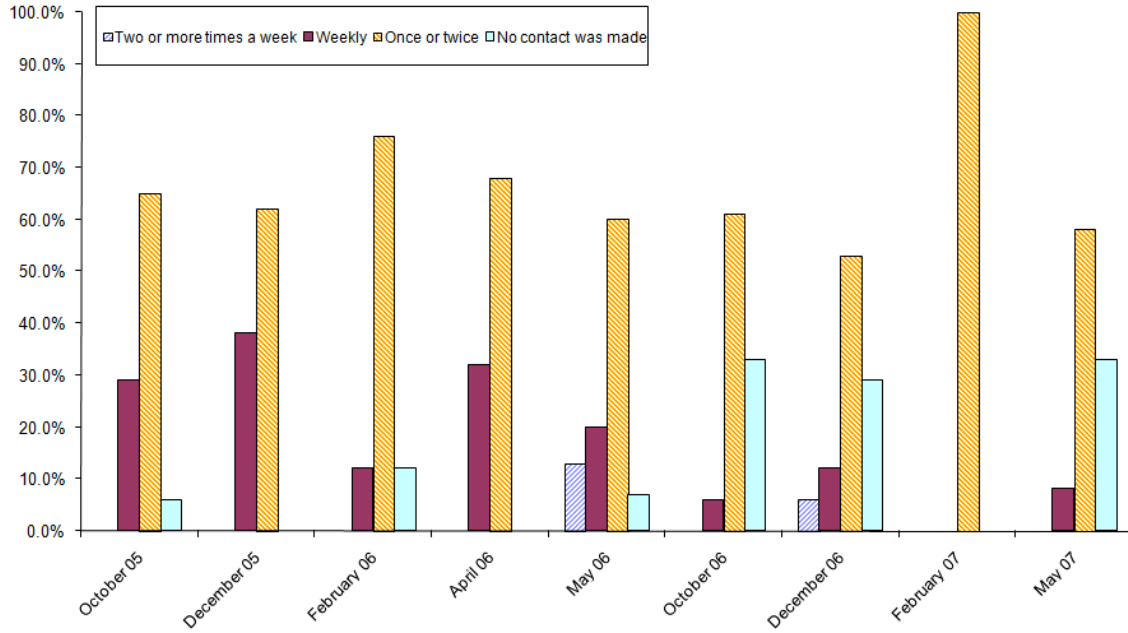
May - 07:

- Getting the Document Camera and the Projector are the best things that have come out of this grant.

Item 16:

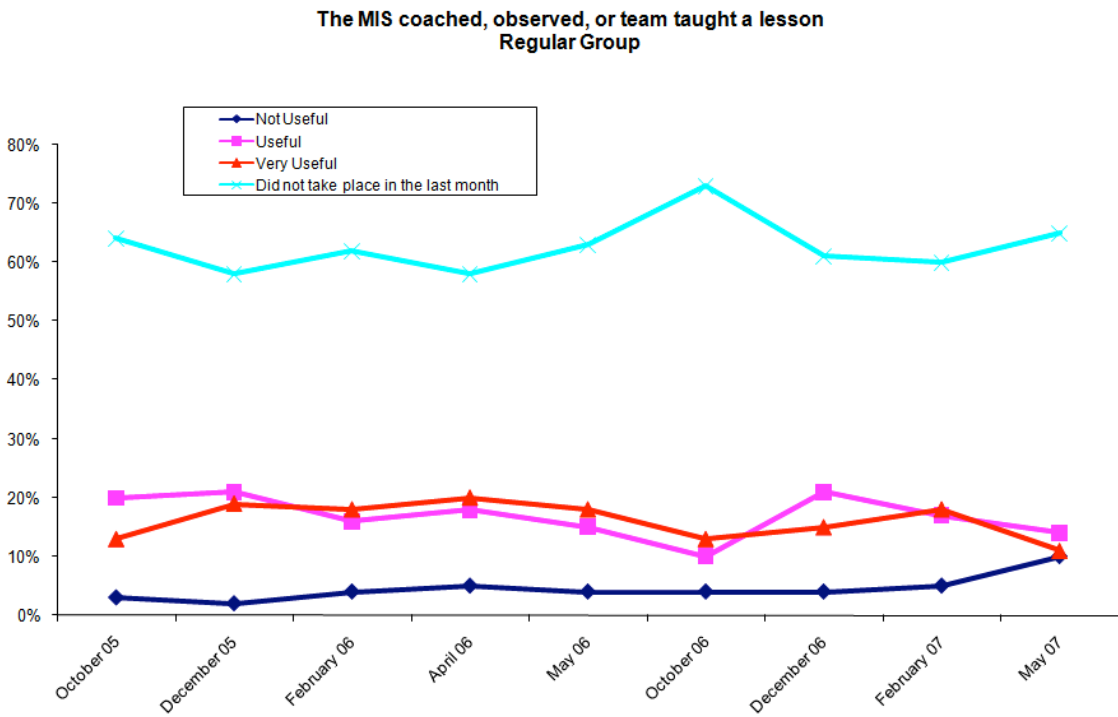
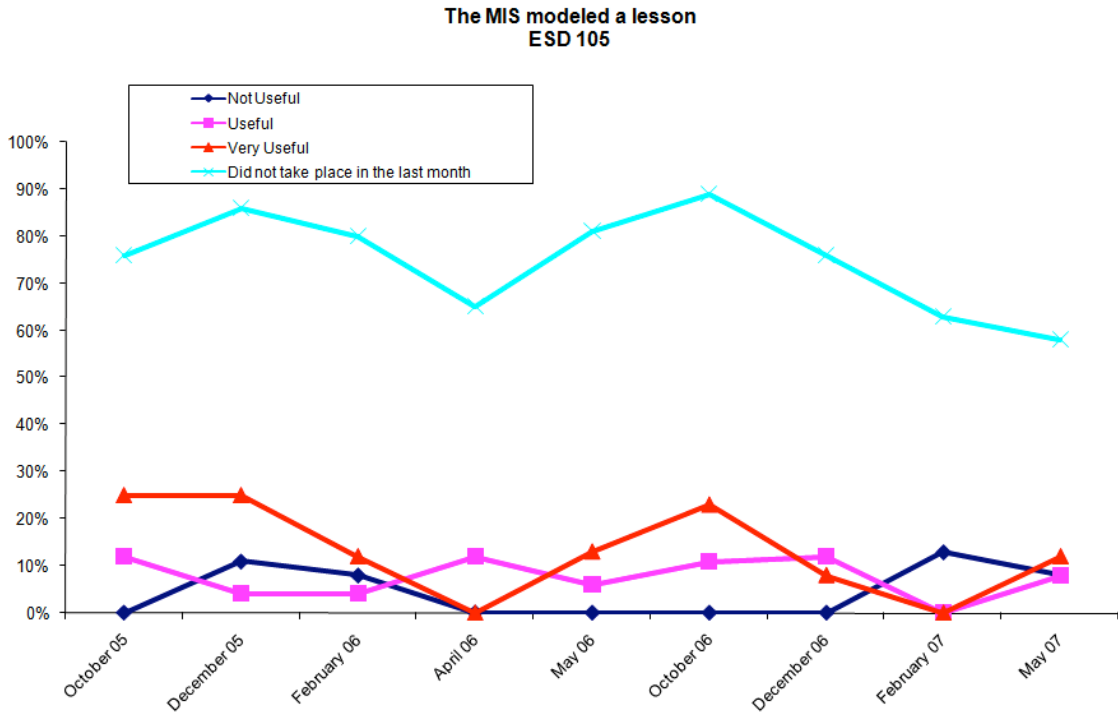
How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?

**How often during the past month were you in contact with the Math Integration Specialist(s) from the ESD during the last month?
ESD 105**

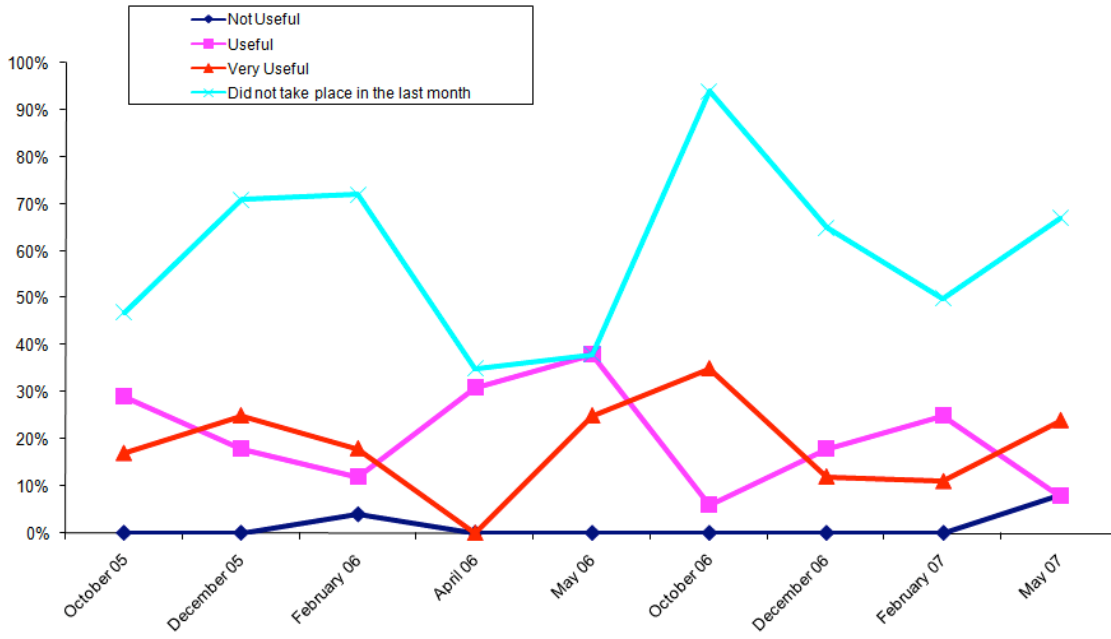


Item 17:

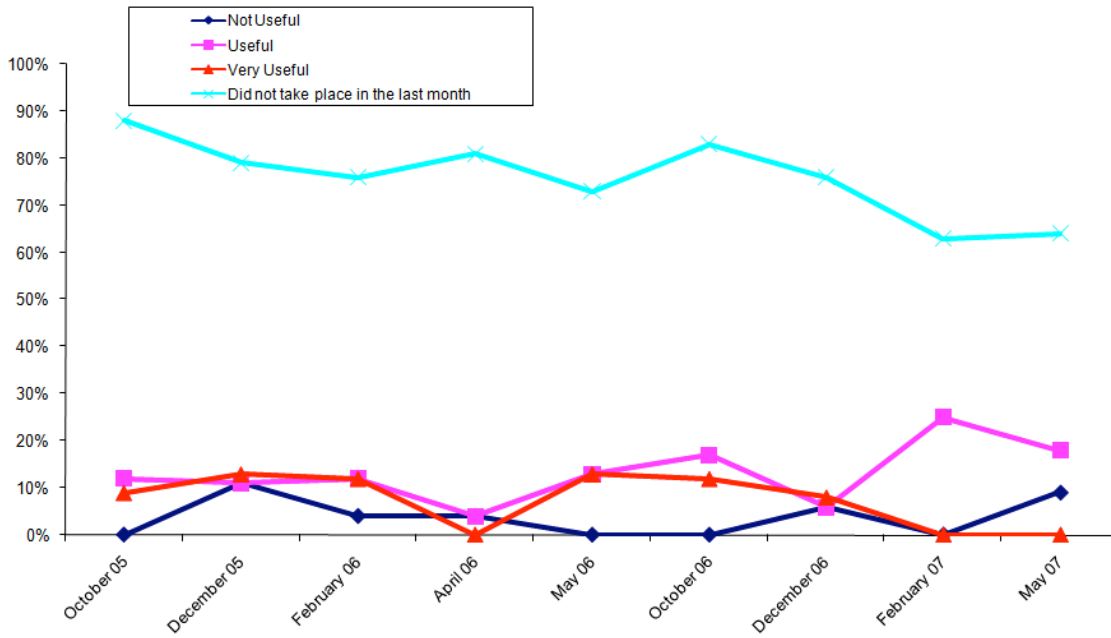
Please evaluate the following MIS activities over the last month.



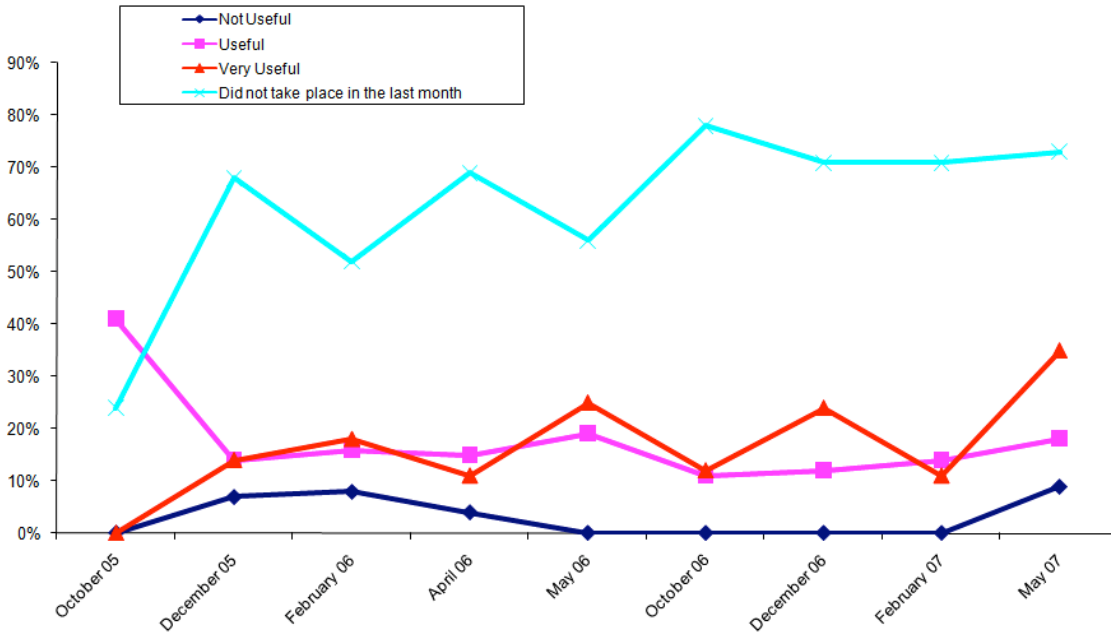
The MIS worked with students
ESD 105



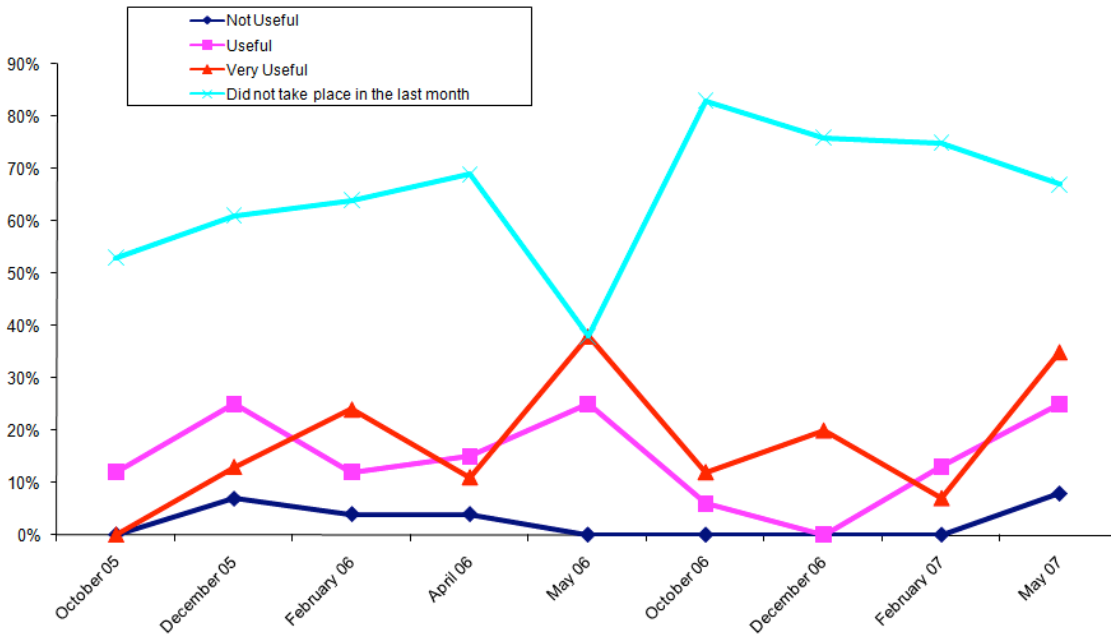
The MIS helped with planning a lesson
ESD 105



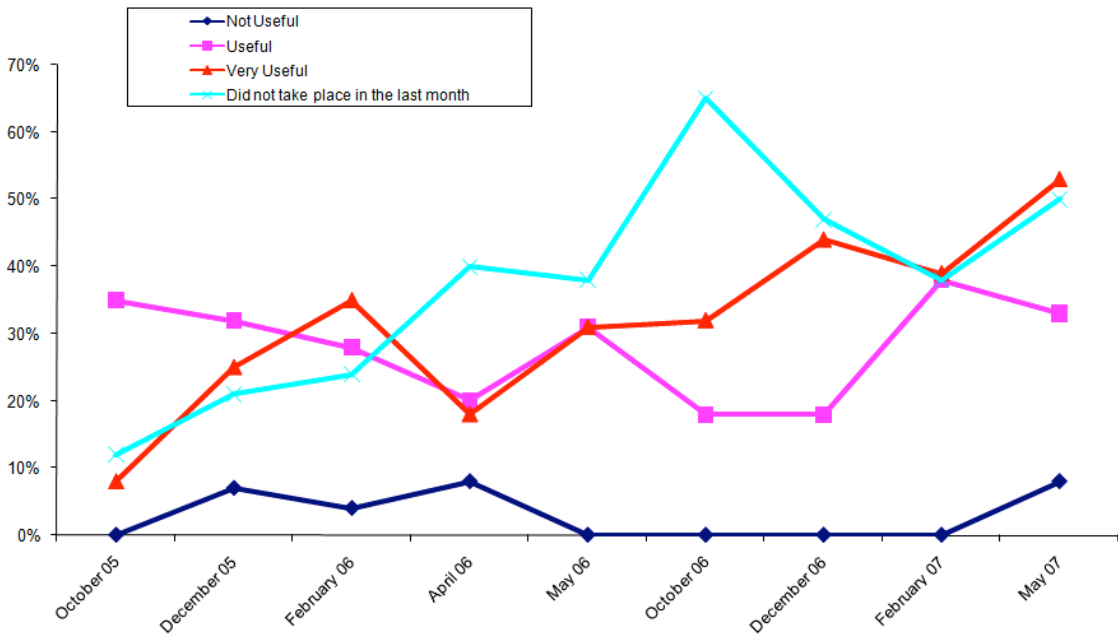
The MIS helped with schedules, logistics, or administrative issues
ESD 105



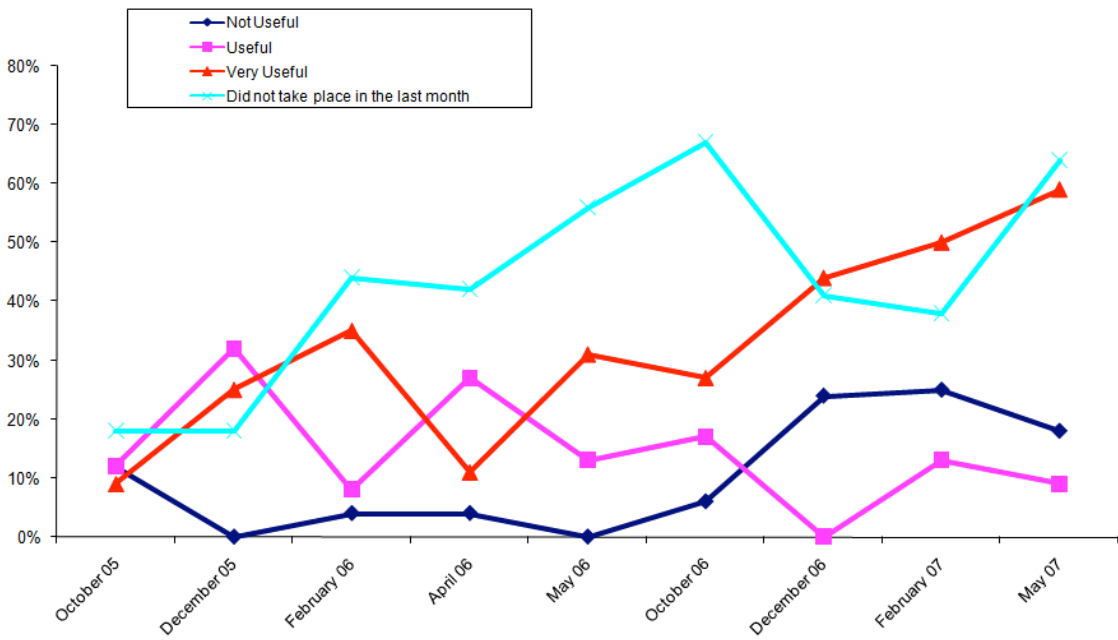
The MIS helped with technology
ESD 105



**The MIS provided instructional resources
ESD 105**



**The MIS facilitated a Professional Learning Community meeting
ESD 105**



Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

Comments:October - 05:

- We are focusing half of our time on a book study of the book "Classroom Discussion". The other half is focused on action research of 1 student in each classroom.
- Setting goals; reading/discussing professional learning communities
- Determined PLC processes including Community Agreements and big ideas to be addressed by the team during the academic school year. Began to complete book study about Classroom Discussions.
- I have not met with my colleagues outside of the No Limit Training.
- Peer observations
- We are focusing on our technology use and curriculum alignment.
- Our first few PLC meetings are focusing on peer coaching and on using the technologies we have in the classrooms. We are also working on our mission and vision statements as well as working on a book study.
- Are focus on these meeting have been students. We've looked at data, ELL students, special education and all the factors pertaining to the lessons. How we are embedding technology in the lessons.
- Having our first one soon.
- To learn how to use the technology in the classroom.
- We discussed how to get our students onto the WRL's we have created, discussed the online comments about a lesson demonstrated this week, spent time discussing personal projects as opposed to group projects.
- The focus is getting everyone comfortable with the process in no limit, but our last one was mainly on debriefing the observations we had done on each other.
- constructing unit test for connected math
- To increase the use of technology in our mathematical classrooms by students and teachers.
- We are currently focused on establishing a uniform problem solving form for 5-12. We are also centering are focus on geometry because we are having some troubles there. The purpose of the problem solving form is to help students analyze and communicate their understanding of math.
- This is my question. What is my focus? I have been told that the focus is integrating technology into math instruction. I need to go beyond, "this is how the camera works".

December - 05:

- Our focus is to increase student conversation in math and to also increase the use of technology.
- Our PLC is focusing on looking at student work and discussing how we can positively impact that student in the future.
- The focus has been on looking at how our students are writing up problem solving activities that we are giving in our classrooms. We are hoping to see some patterns that will help us improve student learning and achievement.
- Reach and analysis of student work; book study

- We are working on becoming better teachers through technology and other resources, to help our students become better learners.
- We are focusing on WASL techniques and item writing as well as ways to give kids plenty of practice with problem solving.
- To improve student learning through cooperative learning, using a constructivist approach that places a high emphasis on effective "math talk."
- We are collaborating to enhance instruction in problem solving to important student achievement.
- We have attempted to integrate our subject matter across grade levels.
- Peer coaching.
- Collaboration on instruction.
- We are focused on improving math instruction as measured by success on the WASL. We are doing a book study on Math talk, we are doing a study of student work over time for 2 individual in each classroom and using that information to tweak our instruction to better able all students to be successful
- Collaborat5ion with the teachers in our district has been invaluable. Our focus has been on teaching and scoring problem solving type problems.
- We are focused on developing problem-solving skills in our students, with emphasis on explaining their solutions.
- The focus recently has been learning to write and score WASL questions so that we could train the whole staff.
- Working together to create a common vision among the math department
- VANDERWALL BOOK
- We have been arranging for a district math specialist to demonstrate a division cluster lesson with a fifth grade classroom. We have also been reading and discussing a teacher resource book that promotes (and came with) Investigations.
- The PLC meeting was focused on what we had observed in each other's classrooms.
- Our focus is to read the math discussions book and other resources to learn how to better facilitate math discussions within our classrooms We also look at student work for two students each teacher and evaluate what they know and do not know and how that can affect our instruction
- We are working on aligning the curriculum-K-12-not just 7-8. We are helping each other to determine ways we can improve our instruction to better meet the needs of our students on WASL.
- Improving WASL scores

February - 06:

- Our PLC is doing a book study on "Classroom Discussions" and on specific chapters in appropriate the Van de Walle book. We are also doing a very deliberate action research on 2 students in each of our classrooms. We analyze how we could get more from in dept understanding from these students.
- Getting Connected Math initiated in our school
- The focus of our PLC meetings has been on classroom/student problem solving in order to impact student learning and achievement.
- We are aiming at becoming better teacher, using technology, so that our students will become better learners.

- We focused on curriculum alignment, technology sharing of ideas and knowledge, and WASL.
- To improve student achievement in problem solving and collaborate 5-12 better.
- Our math PLC focuses on student questioning and how to generate it
- The focus of our PLC is technology in the classroom as well as the effective implementation of using that technology for the benefit of the students.
- The most valuable aspect of our team is meeting with other math teachers in our district.
- We have been working on developing and remediating problems solving skills.
- Learn better uses for the technology in the classroom. Collaborate on ways to facilitate student learning better.
- Our focus has been problem solving across grades 5-12, we spend time at our meetings discussing what is working how to make it better. We have tried to become more driven by our own members rather than by the MIS. We feel that we can better direct ourselves and that our MIS needs to help support and somewhat guide where we think we need to be going.
- Peer observations.
- Meetings have been focused on scheduling lessons to observe, giving feedback, facilitating completion of projects, and planning presentations.
- The focus of our meetings are to better acquaint ourselves with the technology and to plan for the integration and implementation of the curriculum
- Discussing how to improve student discourse reading the Classroom Discussions book. Analyzing student work, identifying what they know, what they do not know, and recommendations for further instruction
- Very useful.

April - 06:

- The focus of our meeting have been to look at student work and do a reflective analysis. We discuss each focus student and recognize what they know, what they don't know and what might be some ways we can improve/change our instruction to deepen their understanding. We are also conducting book studies. We read a chapter the Van de Walle book. Then discuss how/what we plan to do as a result of reading it.
- Learning our new math curriculum with CMP2 and problem-based instruction
- The focus of our PLC meetings have been somewhat MIS driven which has been frustrating. We have collectively shared with her that we would like her to be a guide on the side rather than try to facilitate the meetings.
- Action research, Discuss student work, Facilitate student led discussion techniques
- We are in the process of creating a presentation for our building about the experiences we have had this year. That took the bulk of our time. We are also working on the "share fair" presentation for the next ESD meeting.
- Our PLC has focused on curriculum alignment (6th, 7th, 8th), readiness for the WASL, and sharing of ways to implement technology in the classroom.
- Our focus is to look at student work, analyze their progress, teach how to use the technology, and build student discussions in class.
- These are extremely beneficial. We discuss what is happening in our math classrooms and plan for our up-coming unit of study (create formal assessments, i.e.: quizzes and tests) by aligning them with the GLE's.

- Collaboration between 5 -12 staff and consistent expectations as well as improving instructional strategies
- Better ways to teach our math students. Also preparing for the year end presentation.
- We have had very little time to have PLC meetings because of scheduling conflicts and district directed professional development.
- We are working on looking at student work, looking at what we might do to increase the level of understanding across the entire class. We are also doing a book study of math Talk and Van de Walle
- To improve classroom discourse and student engagement.
- I feel we are without focus
- The currently we are working on a school board presentation to make them aware of our findings and need for an after school program.
- Meetings have focused on finishing projects. We have had Spring Break this month and are now entering the WASL window, so have been very sporadic and brief.
- Our last PLC was focused on preparing for our Share Fair and finalizing plans to update some drop dead dates for the curriculum
- Looking at student work, Book study and lesson study
- Information acquired from our PLC meeting is very useful for the classroom.

May - 06:

- Trying to incorporate our new math program along with technology
- Learning to use technology to make us better teachers so our students will become better learners
- We did some curriculum mapping, we did some peer teaching about technology and state standards, and we did student evaluations as a group.
- Our focus was on helping students in the area of number sense through the use of technology, assessment analysis, and book studies.
- Problem solving and connections within 5-12 mathematics curriculum
- Peer Observations and best practices.
- Depending on what unit we are on. We try to pre-plan the lesson, observe, evidence of engagement and debrief the lesson.
- This was my concern. We had no true focus. Nor did the district have time for us to meet regularly. This made for a lack of focus.
- Our focus has been on problem solving and most recently making our community and school board aware of our work and the needs of our students
- Our focus this month was reviewing purchases, determining the purchases for the remainder of the \$\$, and developing and improving our presentation for the Share Fair.
- Creating presentation for Share Fair
- Because of principal problems, we have only had time for one substantial PLC meeting
- Student discourse.

October - 06:

- Last year it was used to get us started in CMP2; this year we are expanding in to improvement of assessments and sharing student work. This is done through my own grade level PLC not the NO LIMIT PLC.

- We are slow starting this fall. The math department has been meeting regularly as a PLC to discuss curriculum, pacing, etc. We have not brought the other member (Special Ed) into our meeting times yet. Scheduling is a bit of a problem, but we are working on it.
- We are uncertain of our focus; we are feeling some pressure to move to a focus where we feel we may not have time or resources for.
- We have not had any.
- This year we are focusing on extended student responses to problem solving experiences.
- To help our students achieve
- Higher level discourse for students
- Mathematical discourse
- Observation of one another, Evaluation of effective teaching strategies.
- Have not had no limit plc meetings since start of school
- Classroom tech discussion.
- Different weeks bring different problems and issues that we discuss. We have discussed GLE's, upcoming tests and lessons, graded WASL sample problems together, read articles, etc.
- What is and is not working in each of the classrooms. How we can use each other's classrooms as a pool of ideas on assessment and teaching strategies.
- Mathematical discourse

December - 06:

- Our PLC is focused on improving student understanding of math concepts. We are looking at how technology can assist us.
- Not sure.
- At this moment we are focusing mostly on ways to raise WASL scores with resources that are available. I have no interaction with our No-Limit coordinator.
- Our meetings rarely occur because of district planned PD.
- Our focus in math conversations
- Lately our PLC meetings have been consumed with discussion about our upcoming math adoption and implementation. No Limit has been a fantastic resource for this process.
- We are doing great in our PLC meetings.
- There are only two of us. We really do not have PLC meetings
- In our PLC meetings we discuss the ideas of promoting student discourse and how it is not happening in our classrooms. I feel worn out and as though I am not teaching correctly at the end of the day. It is very frustrating and I feel resentful towards being in this grant this year.
- We have no meetings
- Math talk and sip
- We have only had a few and they were not useful at all.
- At this point I feel that they are geared towards getting ideas on how to be better teachers. We share work and ideas on what may or may not work in the classroom. I also feel that they are a useful tool to help open up our curriculum to the other teachers; we are no longer behind closed doors teaching how or what we want.
- Lesson Planning, pacing of lesson plans, discuss students and learning behaviors
- Project to help with mathematical discourse

February - 07:

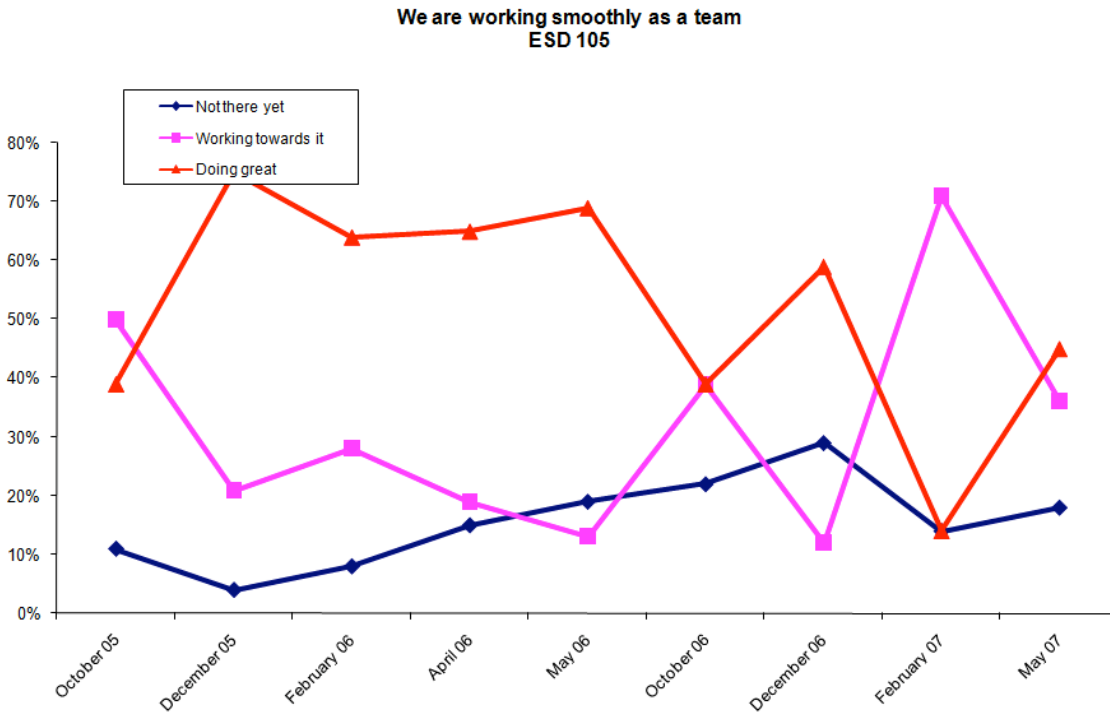
- We are doing peer observations and looking for ways to help each other improve student discourse.
- WASL
- We do not have meetings
- We were focusing on WASL scores
- Each week is a little different. We discuss upcoming lessons, district math concerns, WASL, etc. The time is effectively utilized.

May - 07:

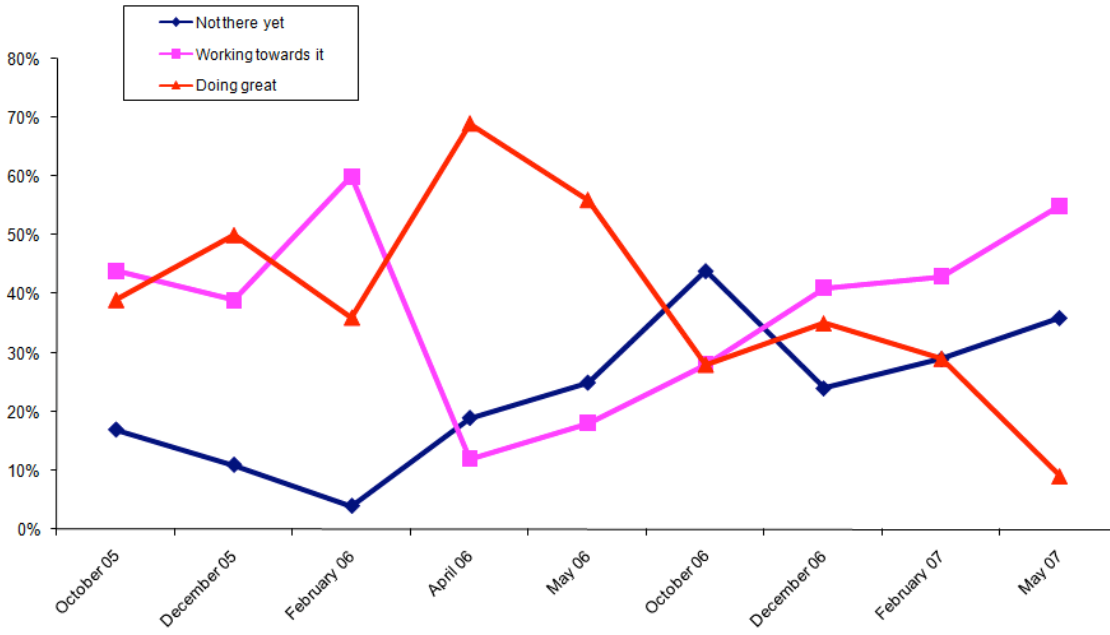
- Beginning to work on common lessons and assessments.
- Our focus was on peer observations and student discourse
- Problem solving
- Our PLC focus was to use technology as a tool bring our math conversations in the classroom
- Did not have one.
- We haven't had any recently.
- Haven't had any since start of year -- no time allowed by principal
- The lessons we were teaching and how we could improve them.
- What was going on in the other teacher's classroom?
- Mathematical discourse

Item 19:

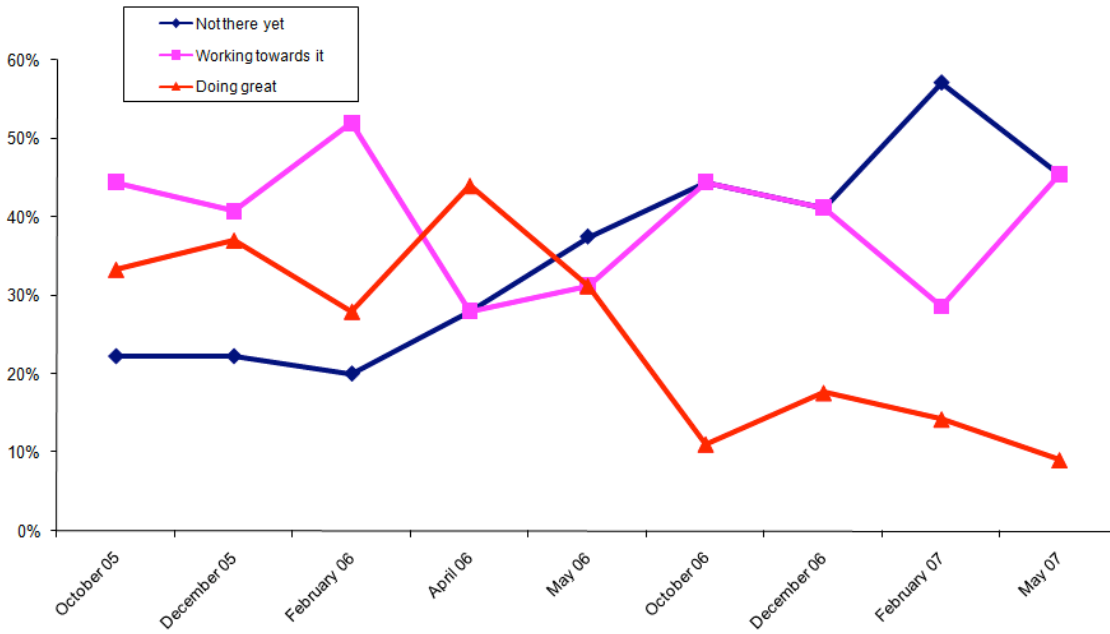
Please evaluate the effectiveness of your PLC meetings.



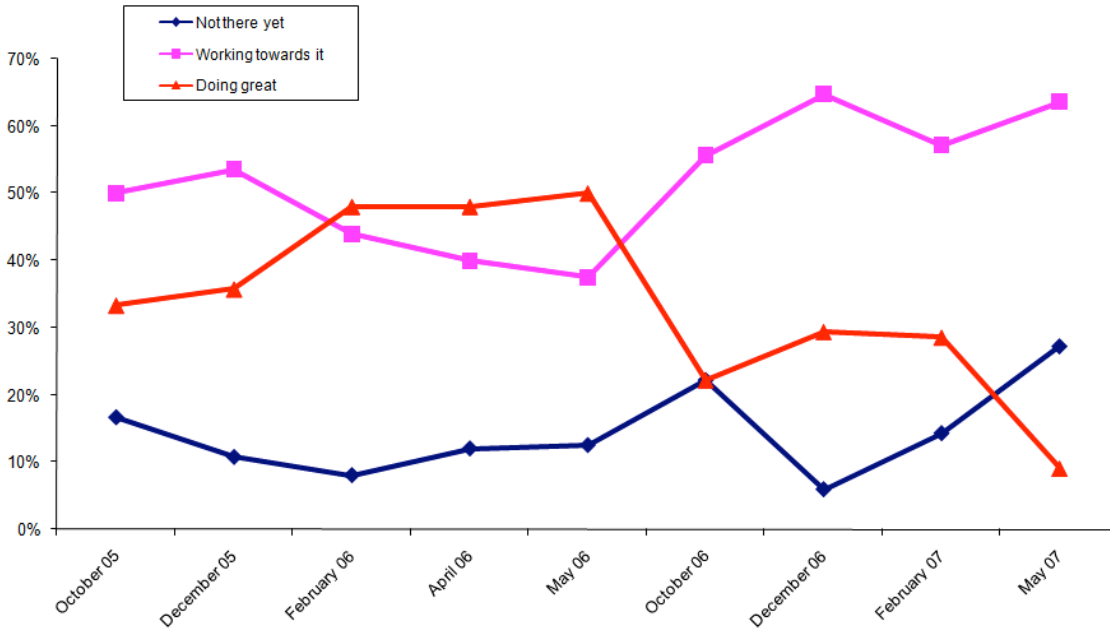
**We are maintaining a regular meeting schedule
ESD 105**



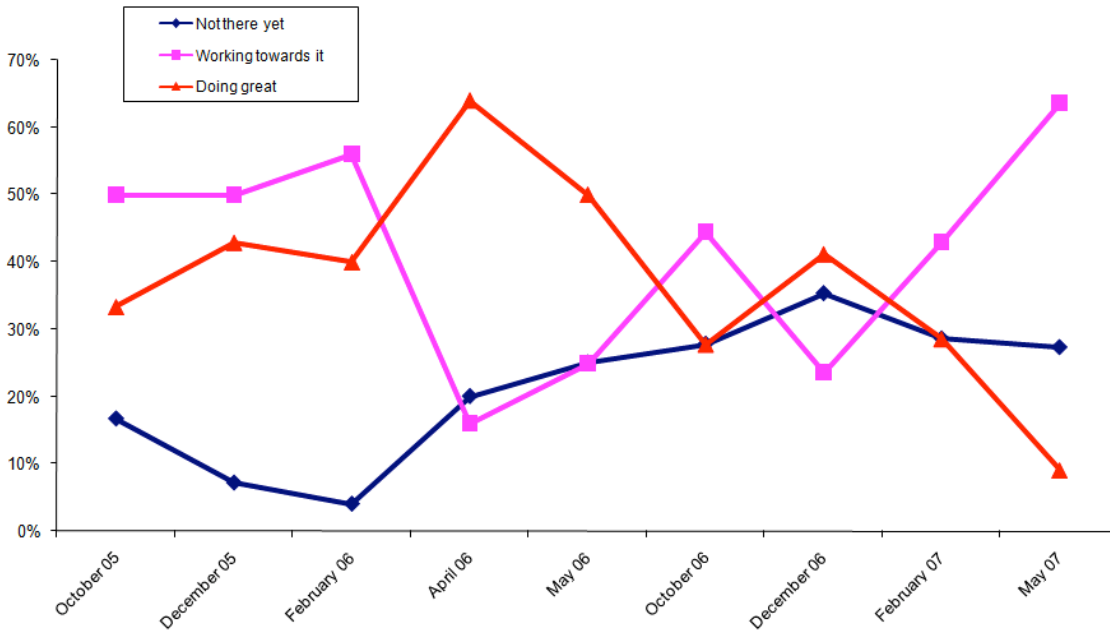
**We are reading and sharing research
ESD 105**



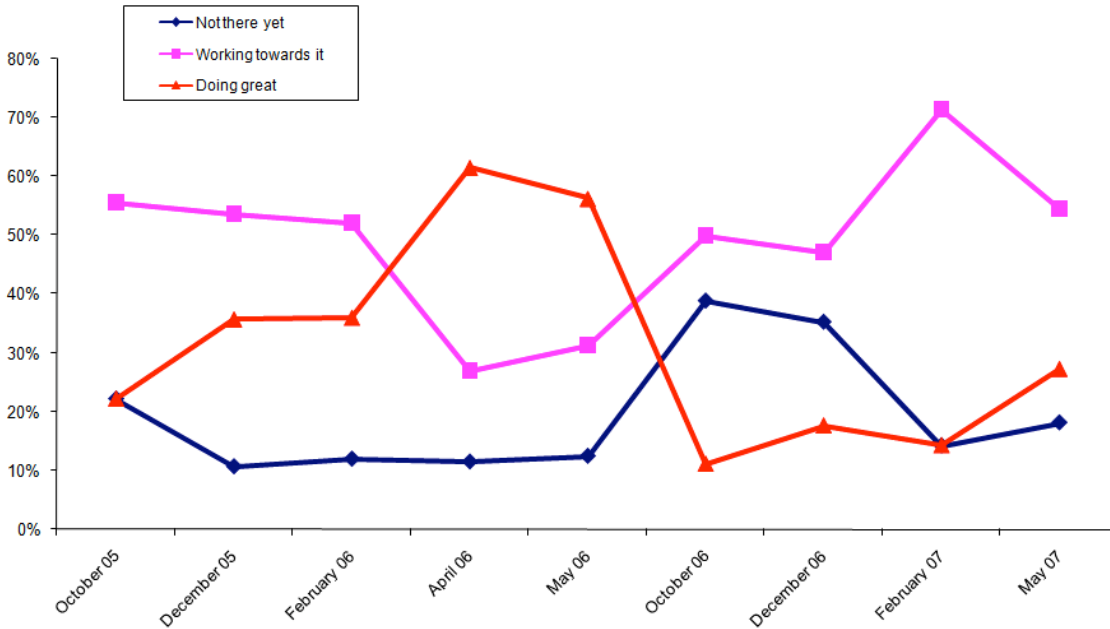
**We are using new teaching strategies in the classroom
ESD 105**



**We are maintaining focus on our goal
ESD 105**



**We are seeing changes in student performance
ESD 105**



Comm

ents:

October - 05:

- Our team is working very closely together with very specific goals.
- My husband died suddenly in September and that has impacted my attendance and participation in out-of-classroom experiences. I have missed quite a few days of school, but I am attending more and more days per week. I should be up to full time by November.
- We are still determining ways to implement instruction and technology to increase student involvement.

December - 05:

- The feedback we get from each other in our Kittitas unit is very helpful.
- TOO MUCH SHOTGUN APPROACH
- We have a new member (replacement) for one of our team members and scheduling has been rough because of other commitments
- November has been very "chopped up" for academics. There has been a lot of lost time due to conferences and holidays.

February - 06:

- Our students are adjusting to problem based math and being more successful with each new unit.
- Our meetings are fruitful and stimulating.
- Observing how a particular lesson is taught, then analyzing it to help the other members create a successful lesson has been very useful.

April - 06:

- The changes in our student's performance have come from the focus on instruction that occur throughout our district nor because of the No-Limit grant.
- Our team is very strong and work well together. Debbie, Our building math coach has been great with resources and information to help us.
- Very effective.

May - 06:

- Not given release time to meet

October - 06:

- Our school is so driven to be focused learning by use of grade level and subject; we have no time to meet as NO LIMIT.
- We have a new mix of teachers and everyone is trying to get to know one another. Trust is still being built.

December - 06:

- As a building team, we are working smoothly.
- Still, as a new participant, I am unsure of the goals.

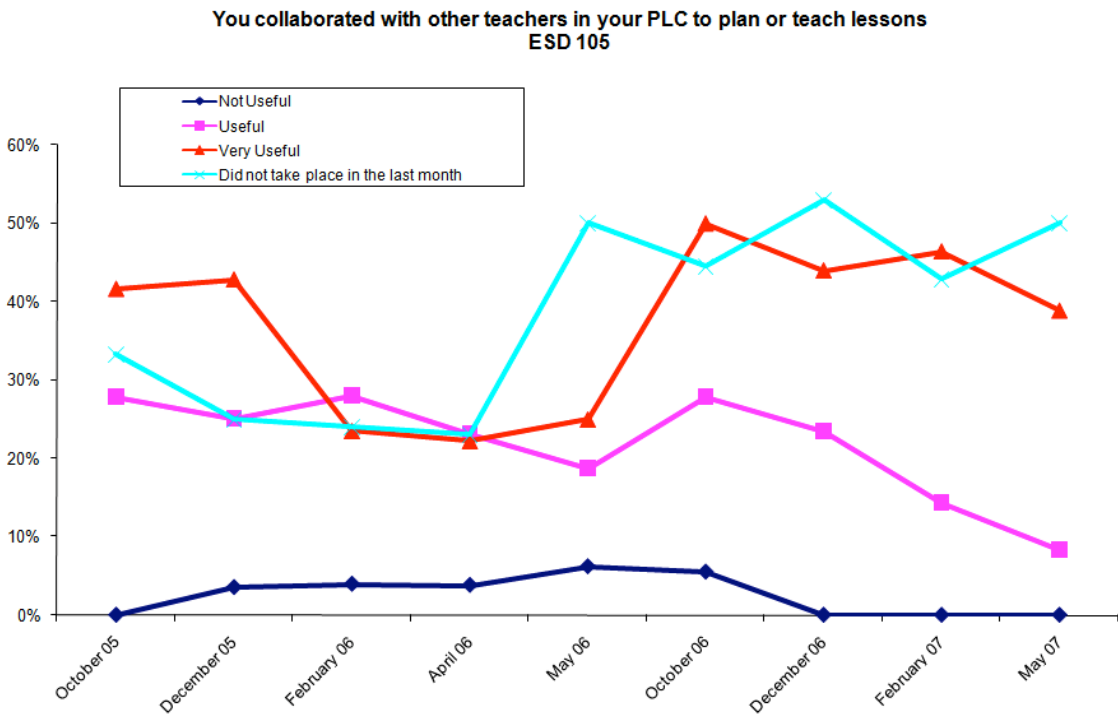
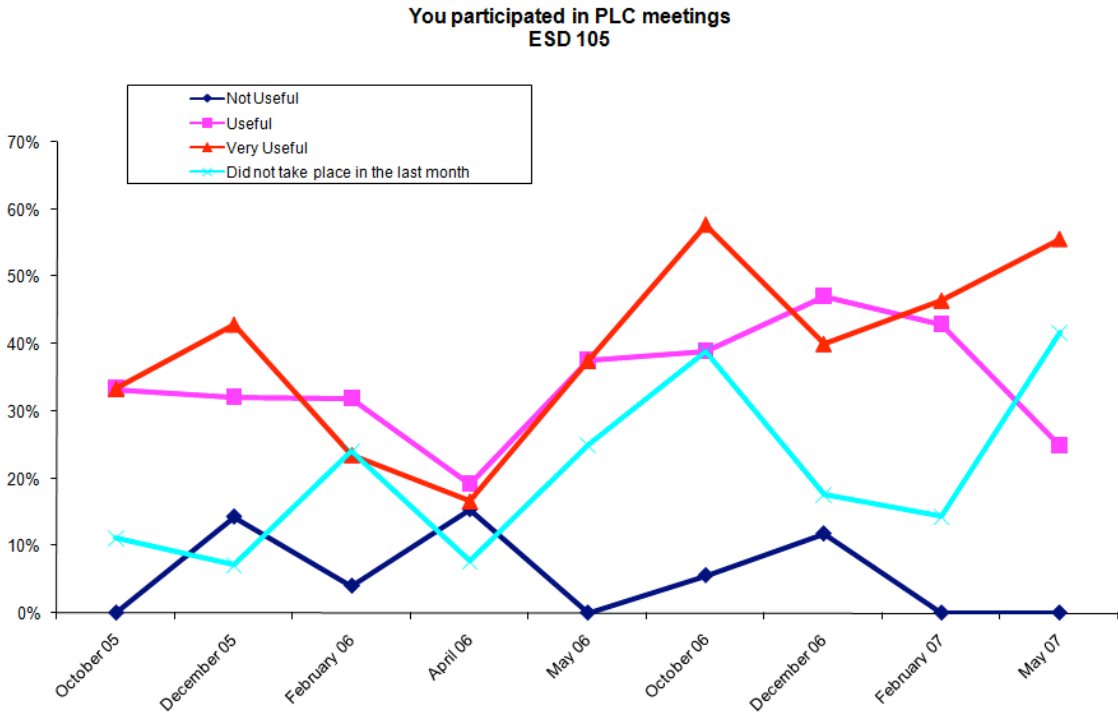
February - 07:

May - 07:

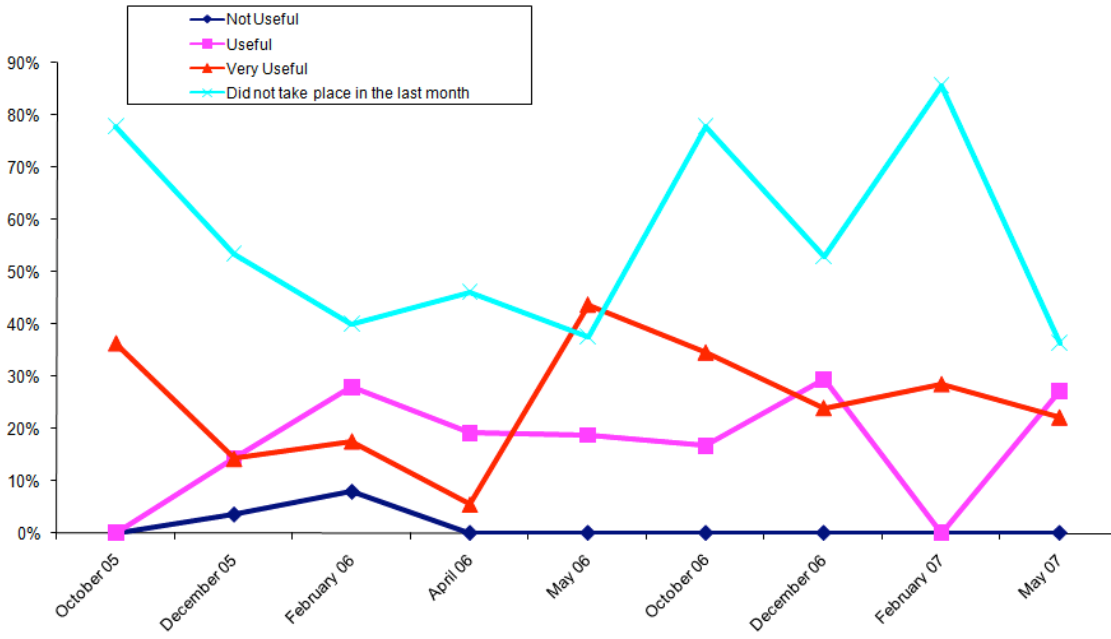
- I can't evaluate something that has not taken place.

Item 20:

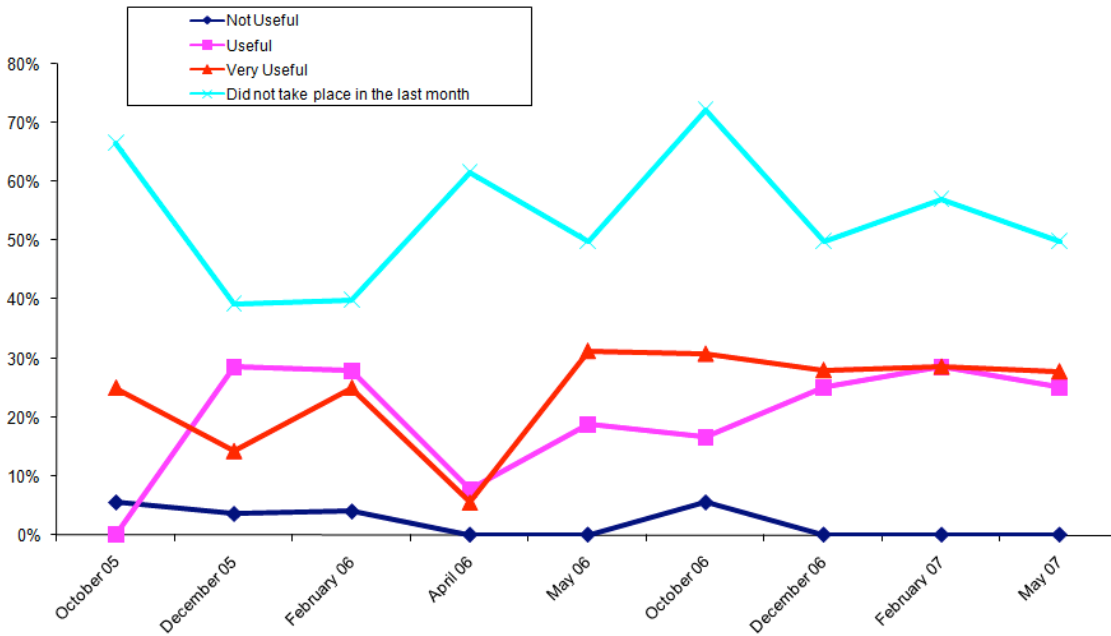
Please evaluate your PLC over the last month.



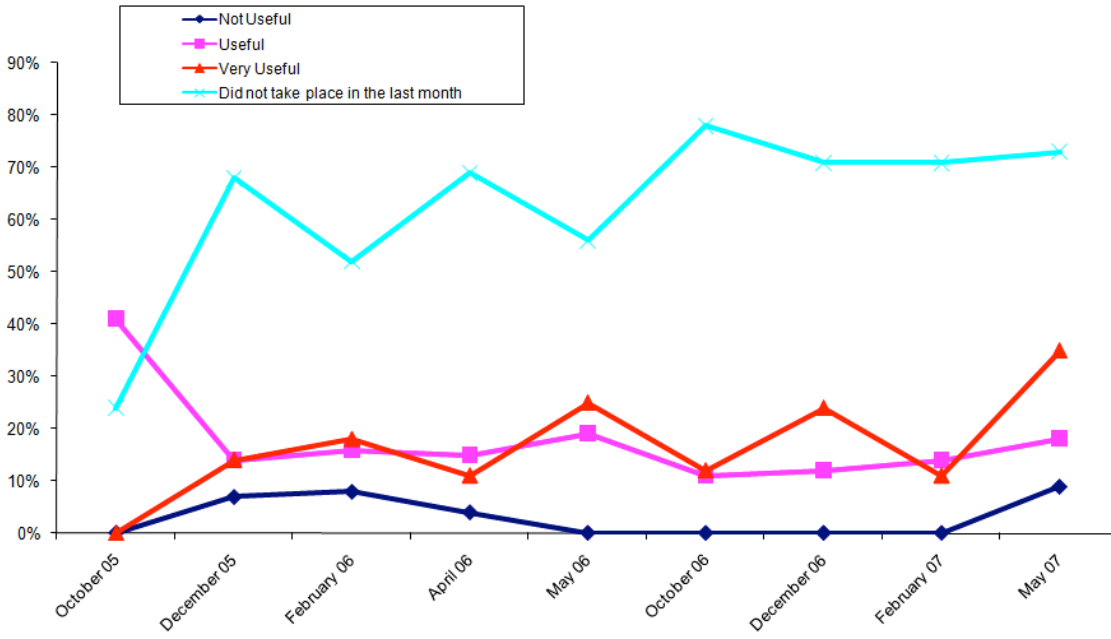
**You worked with teachers in your PLC to align curricula across grade levels
ESD 105**



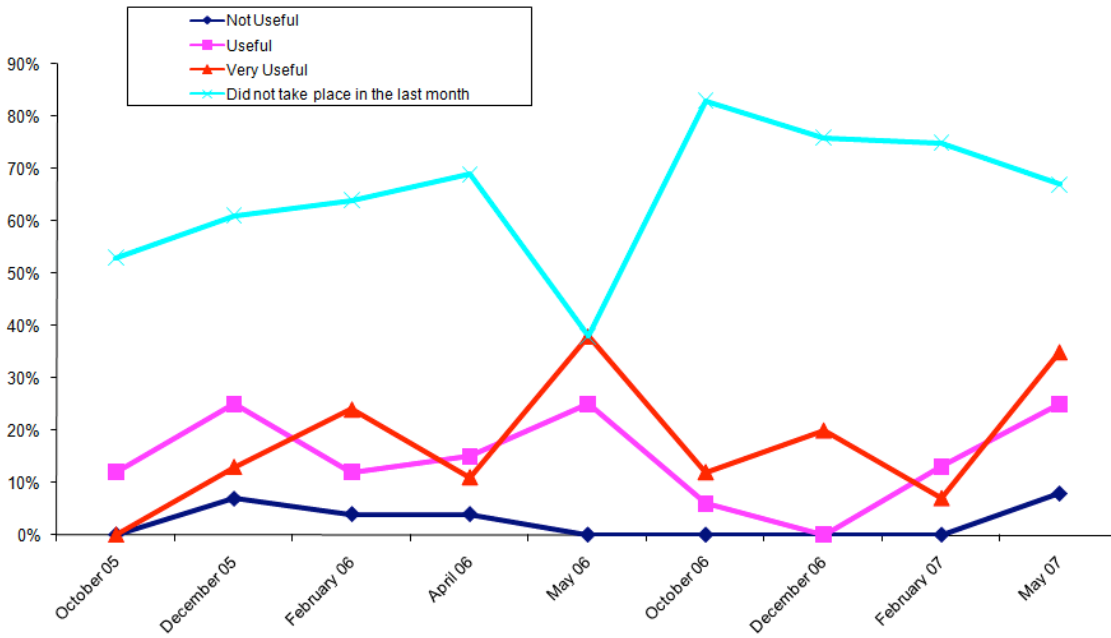
**You worked with teachers in your PLC to align curricula with state and/or national standards
ESD 105**



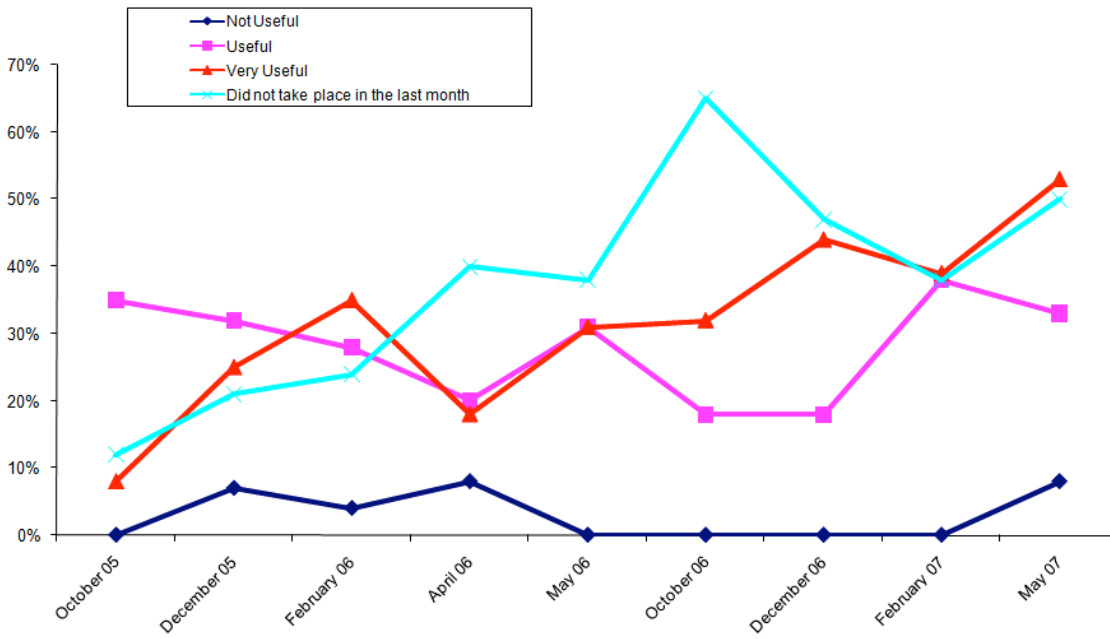
The MIS helped with schedules, logistics, or administrative issues
ESD 105



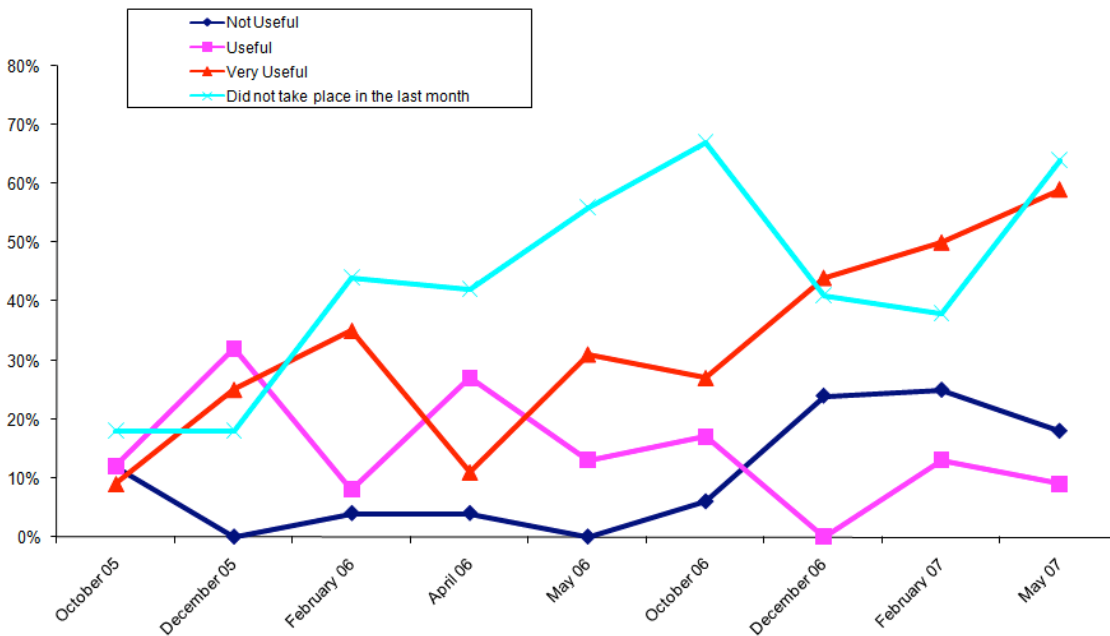
The MIS helped with technology
ESD 105



The MIS provided instructional resources
ESD 105



The MIS facilitated a Professional Learning Community meeting
ESD 105



Comments:
October - 05:

- We have been aligning curricula with all district teachers at this grade level.

- We are still spending a lot of time spinning our wheels. The time for collaboration is not free. I am working with one 1st year teach and the sped teacher. Our goals and practices are quite different. The alignments is taking place as a district directed activity. We work on this once in a while.

December - 05:

- WOULD BE USEFUL IF EVERYTHING WAS NOT DONE IN A BIG HURRY
- The meeting we had about items specs was interesting but what did our Mission statement have to do with it?
- I value the time we do are able to work on curriculum with other colleagues from our grade level. We have shared problems, ideas, and supplemental resources.

February - 06:

- None

April - 06:

- Our Math department has already aligned our curricula with state and national standards before becoming involved in this grant.

May - 06:

- We each worked with own grade level PLC to get new program going
- Share fair was effective as a team.

October - 06:

- All of the above was done within my 6th grade math/science PLC

December - 06:

- These things have been done on an "as needed" basis. We have not set aside time to work on these areas.

February - 07:

- None

May - 07:

- None

ESD 112**Year Five****1. Training and professional development provided for teachers: amount of time, dates, and content**

Training	Time	Dates	Content
NO LIMIT Kick-Off	9:00-4:00 (6 hrs)	8/8/05-8/10/06 (3 days)	<ul style="list-style-type: none"> • Team building exercises • Setting group norms • Pre grant survey • Share examples of PLC in action • Quality math lessons demonstrated • Textbook protocol • Analyzing school data • Quinn's six questions - protocol
Professional Learning Communities – Collecting Data & Using Technology	8:30-4:00 (6.5 hrs)	10/4/05 (1 day)	<ul style="list-style-type: none"> • PLC check-in • Using the document camera • Data Collection and Analysis of Student Work • Graphing calculator lesson
Mining Student Data Using Excel Spreadsheets	8:30-4:00 (6.5 hrs)	11/14/05 (1 day)	<ul style="list-style-type: none"> • PLC check-in • Creating student data sheet using Excel • Mining data w/ PLC group • Exploration of OSPI web site – Math resources • Interpreting and using the data for instruction
Proportional Reasoning & Problem Solving Lessons using Technology	8:30-4:00 (6.5 hrs)	1/10/06 (1 day)	<ul style="list-style-type: none"> • PLC check-in • Exploring proportional reasoning • Overview of final project requirements • Creating PowerPoint lessons for use with math • Explore communication skills
Graphing Calculators & Creating Mathematics Materials Using Special Features in MS Word	8:30-4:00 (6.5 hrs)	2/2/06 (1 day)	<ul style="list-style-type: none"> • PLC check-in • Using graphing calculators • Using MS Word for mathematics – Tables, borders and equation editor • Revisit proportional reasoning
PLC Progress & Proportional Reasoning Revisited	8:30-3:30 (6.5 hrs)	3/28/06 (1 day)	<ul style="list-style-type: none"> • PLC check-in • Think, Pair, Share – Collaboration activity with other PLC groups • Proportional Reasoning-Encouraging Classroom Discourse • Graphing Calculators and Cabri Jr • Teaching effort in mathematics
Professional Showcase and Sustainability	8:30-3:30 (6.5 hrs)	5/16/06 (1 day)	<ul style="list-style-type: none"> • PLC check-in • Share effort rubrics with other PLCs • Building PLC presentations • Intro to My eCoach • Next year's plans and ideas

2. Conferences attended by teachers (please note if any presented at conferences)

Building/School District	Conference/workshops
Mt Solo, Longview SD	Algebraic Sense Alignment of Connected Math Between HS and MS
Lyle, Lyle SD	WASL test prep for Math (OSPI)

3. Conferences attended by you (again, please note if you presented)

MIS	Conference/workshops – presented?
Sue Bluestein & Bill Kring	OSPI January Conference presented for PRISSM
Sue Bluestein	Teacher’s Development Group, Origo computational Fluency
Bill Kring	Northwest Mathematics Conference in Portland
Bill Kring	National Council of Teachers of Mathematics regional meeting in Denver
Bill Kring	Northwest Council for Computers in Education Conference in Portland
Bill Kring	National Council of Supervisors of Mathematics annual meeting in St. Louis/presenter
Bill Kring	National Council of Teachers of Mathematics annual meeting in St. Louis/presenter

4. What PLC structures were in place in Year 5? Why were they structured in that way? Were they different from previous years? Why?

Teachers were in PLC’s by building. They were required to hold one meeting a month in their building as a PLC. Each PLC established group norms, completed agenda’s and meeting notes and developed an Inquiry Question to work on throughout the school year. The MIS attended these monthly meetings to help facilitate and offer resources. When teachers came together for common training we worked on PLC collaboration skills.

Previously we required teachers to have cluster meetings around a shared book- these ended up being very random especially in small schools. The teachers were supposed to run these meetings themselves with occasional assistance from the MIS.

Our requirement and attendance at monthly PLC meetings aided the teachers in sustaining their work this year. The format of a PLC added much more structure to their collaboration.

5. Math curricula in use by NO LIMIT! teachers

Connected Mathematics	Investigations
McDougal Littell	integrated mathematics curriculum

6a. Technology purchased in Year 5.

Equipment	Vendor	Qty
Mac District: I Book 14" notebook w/60 GB, 512 MB RAM, DVD/CD-RW, wireless card	Apple	1
Dell District: Latitude D510 14" notebook, Windows XP Pro, 30 GB, 512 MB RAM, 24x CD-ROM, wireless card	Dell	8
HP District: HP Compaq nc6000 14" notebook, Windows XP Pro, 40 GB, 512 MB RAM, DVD-CD-RW, no wireless	HP/Compaq	11

HP District: wireless card for HP Compaq nc6000	Amazon	6
Avermedia 300i document camera	Troxell	20
Hitachi Performa CP-RS55 Projector, SVGA, 1500 lumens	Troxell	16
MS Office Pro 2003 for PC	Dell	16
MS Office Mac 2004	Dell	1
AC Adapter for iBook 14" notebook	Apple	1
AC Adapter for Dell Latitude 14" notebook (estimated price	Dell	6
AC Adapter for HP/Compaq 14" notebook (estimated price)	HP/Compaq	8
Targus laptop bag (estimate)	CDWG	18
USB Mourse w/wheel	CDWG	12

6b. How were the choices made? Were teachers happy with choices? Were you? Why or why not?

Equipment choices were made from past project experience. Equipment chosen was off the Washington Technology bid. Teachers appeared to be happy with the choices. Overall, we were happy with the equipment choices. The only real problems we ran into were network issues when logging into our wireless Internet at the ESD. This had nothing to do with the equipment, but was district settings that we had no control over.

7. Successes and challenges of Year 5

	Successes/Challenges
Bill Kring	At McLoughlin Middle School the NO LIMIT teachers made great progress in answering their inquiry question “How can we make students become proficient in documenting and defending their work?” They found their students becoming quite capable of using the document camera or calculators to show their classmates how they found an answer or why they knew they were correct. Finding a common time to meet as a Professional Learning Community and days when I could visit their classrooms were challenges throughout the year. The Professional Learning Communities at Monticello Middle School and Mt. Solo Middle School worked consistently during the year. They each made progress in answering their inquiry question. Most of the teachers welcomed my presence in their classrooms, utilizing me mainly to teach model lessons. One of the Monticello teachers who had been in NO LIMIT before did not participate fully in the Professional Learning Community meetings. He did make good use of the technology in his classroom. A Mt. Solo teacher did not embrace the goals and spirit of the grant until I was able to teach a calculator lesson to his seventh graders. When he saw how engaged and involved they were, and how much they embraced the use of the technology, he did a complete about face and participated completely during the rest of the year.

<p>Sue Bluestein</p>	<p>The showcase, as always, showed enthusiastic teachers making good use of the technology and willing to share their successes and challenges relating to their PLC Inquiry Question. They are anxious and poised to get started at the beginning of next year, now that they have established themselves as a teacher community in their district.</p> <p>I think we did a better job of digging deeper into the functions of the equipment teachers purchased. Instead of constantly exploring new resources, this year they were able to spend more time learning about what they had purchased.</p> <p>The biggest challenge is the constant reduction of funds, each year participants being able to purchase less equipment.</p>
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8. Plans for Year 6. How is your ESD adapting to the reduction in funding?

We have cut down the amount of times the teachers will meet face-to-face and have incorporated the use of My eCoach for staff development. A book will be introduced for a year long book study (book TBA). We will also lose one MIS and have less visitations out to the districts.

Anything else you'd like to add

	I'd like to add...
<p>Bill Kring</p>	<p>I have felt all year that there wasn't enough time for me to do the research needed to help the NO LIMIT participants as completely as I should have. My goal for next year is to a more complete job in this area.</p>
<p>Sue Bluestein</p>	<p>I am sorry that schools had to be released from the program in the middle of their two years. Even the reduction in equipment was easier to handle than a school finding out they can't continue to participate.</p>

Year Six

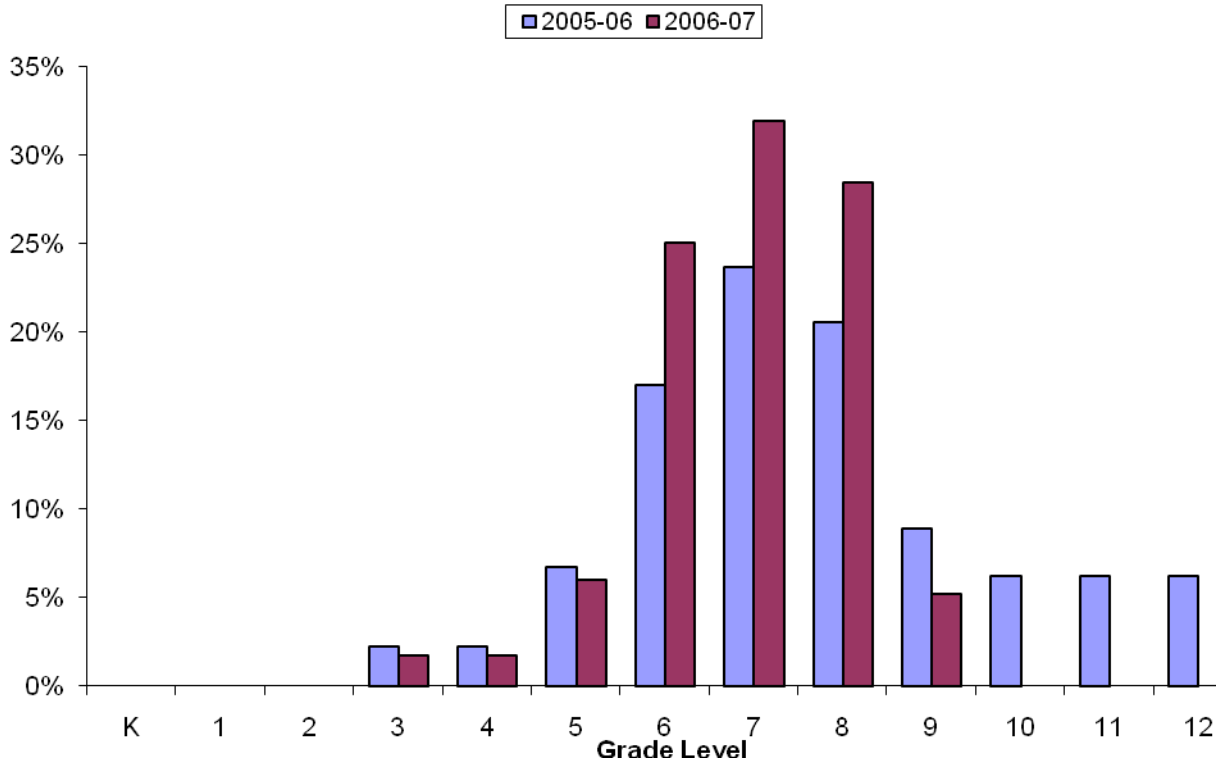
No report received from ESD 112. Teacher Log data for Year Six appears with Year Five below.

**Log Report 2005-2007
ESD 112**

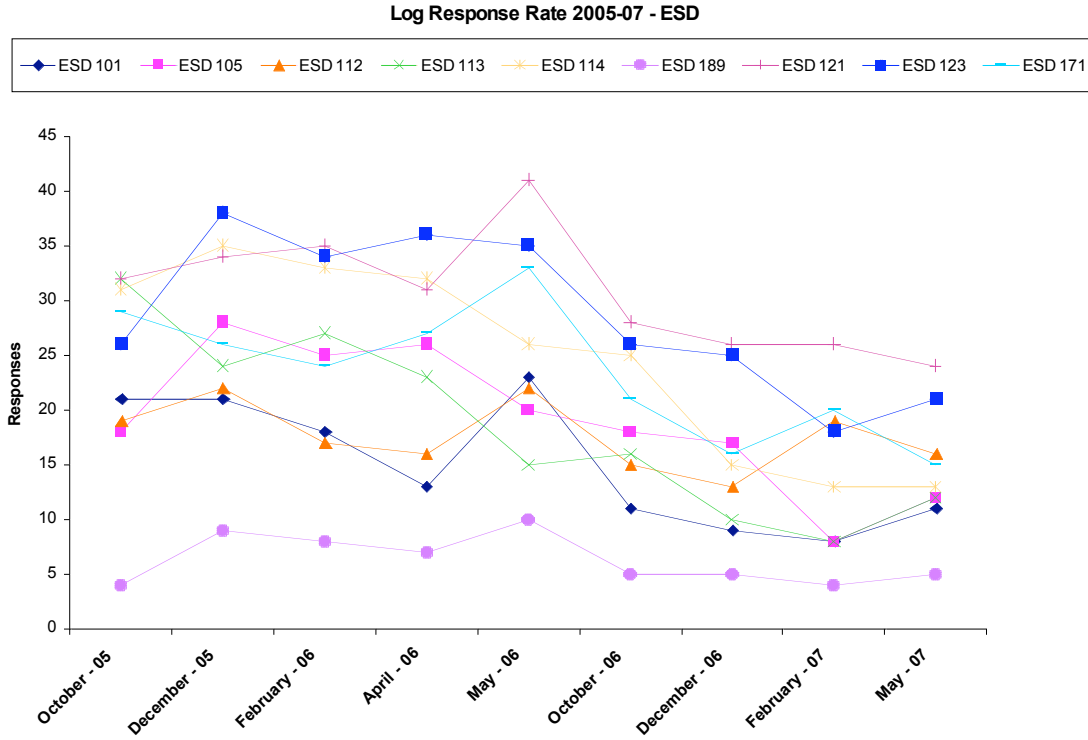
Item 6:

The grade levels you teach:

2005-07 Grade Level Participation - ESD 112

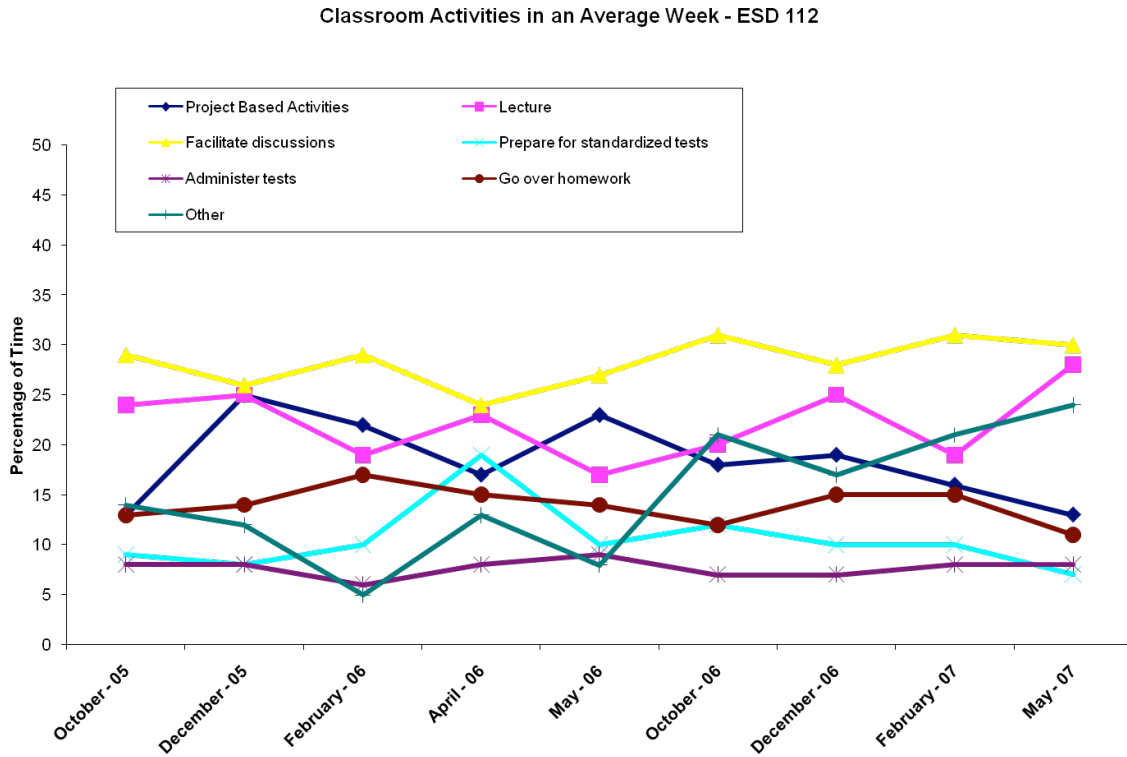


Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?



Other, please specify:

October - 05:

- Some days we spend more days as a group problem solving than others!
- Community building activities
- Defending their work as they present it to the class
- Helping students one on one
- Practicing math concepts in a game format.
- Rocket math skill review

December - 05:

- Individual help
- This varies. Much depends on the topic being covered and how well it is facilitated by projects.
- Due to the fact that we are teaching from the Connected math project, I feel all the work can be considered project based.
- Collecting and passing out papers, review of tests, fire drills :)
- Facilitating student work on real world, text based, multistep problems via the incorporation of a variety of problem solving strategies.

February - 06:

- Right now working on WASL math strategies is at a fever pitch.
- How do you use this stuff
- Remediation on math basics

April - 06:

- As we approach April, the month of income taxes and WASL testing, there is indeed a shift toward test taking strategies and preparation. It's interesting to see how much this takes away from engaging students in projects. Sad, isn't it.
- Math games
- Allowing students to explore mathematical ideas, problem-solve and share findings.
- Warm-ups, Misc. including standardized tests

May - 06:

- Now that WASL is over I spend more time on homework discussions vs. WASL strategies.
- Students thrive when they are conducting a mathematical discussion instead of me doing it....
- Practicing routines and procedures.
- This varies throughout the year depending on the content and class.
- The last month our state administered the WASL. Much of the class period was spent preparing students with strategies and tips. I tried to do as much of this within the curriculum.
- As the year draws to a close I'm spending more time using the camera and projector to go with group responses to the math question on the screen.
- Skill review. Working on basic facts, division, review work

October - 06:

- Math Games

- Student exploration and practice
- Drill and practice of individual needs for specific students.
- Skill review per district requirements

December - 06:

- Students have individualized practice work that is based on skill need.
- Reviewing basics.

February - 07:

- Problem centered mathematics
- Working during class w/ students that have difficulty with the basics
- Review basic concepts, computation, WASL strategies
- Drill and practice using Quizdom. Individual paper pencil based on student need for IEP goal.

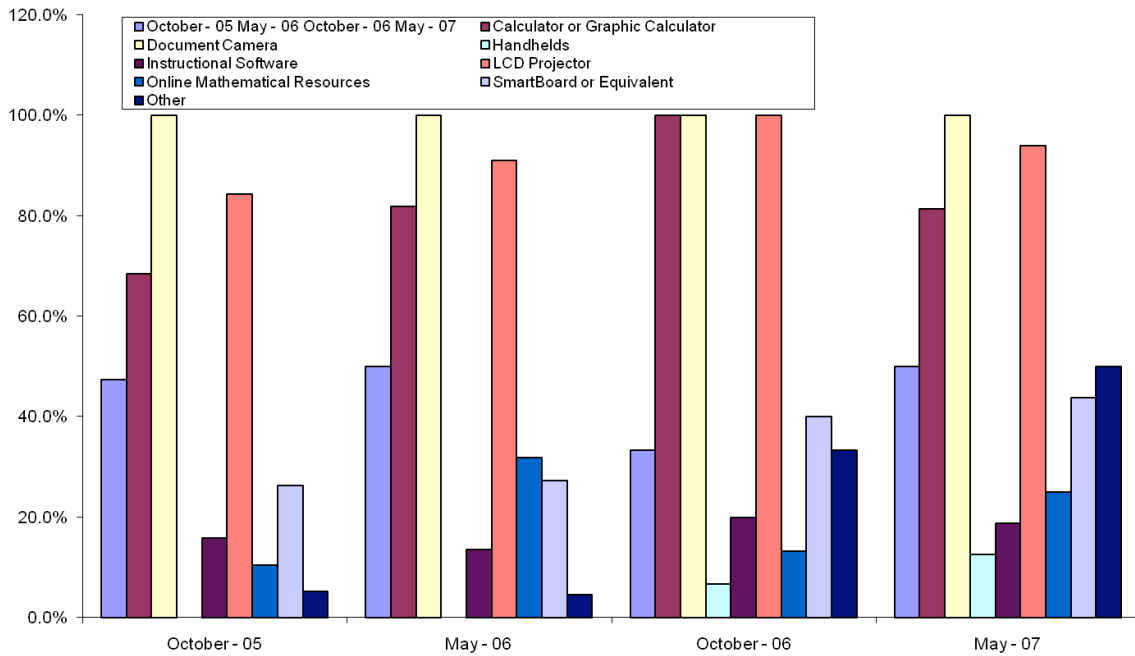
May - 07:

- We have just completed three weeks of WASL testing so the emphasis on test administration is high and we've cut way back on homework. I feel there is a huge disconnect in math learning for the duration of the WASL as well as the weeks preceding it as we "practice" for the WASL.
- Supporting students who are working on individualized material based on student need and IEP.
- Exploring concepts and guided practice
- Working with students so they can better understand their mistakes.
- Class assignments
- We've just begun a geometric project, so most of our time will be project-based.
- Quizdom, math activities/games/computational practice

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.

Type of technology available to participants
ESD 112



Other:

October - 05:

- Laptop

December - 05:

- 7 computers

February - 06:

April - 06:

May - 06:

- 7 computers

October - 06:

- Quizdom Interactive
- Quizdom
- Quizdom
- Quizdom
- Quizdom

December - 06:

- Quizdoms
- Quizdom
- qwizdom
- Quizdom technology

February - 07:

- Quizdom
- Quizdom Interactive
- Qwizdom
- Quizdoms
- Quizdoms
- Qwizdom
- Quizdom
- Quizdom

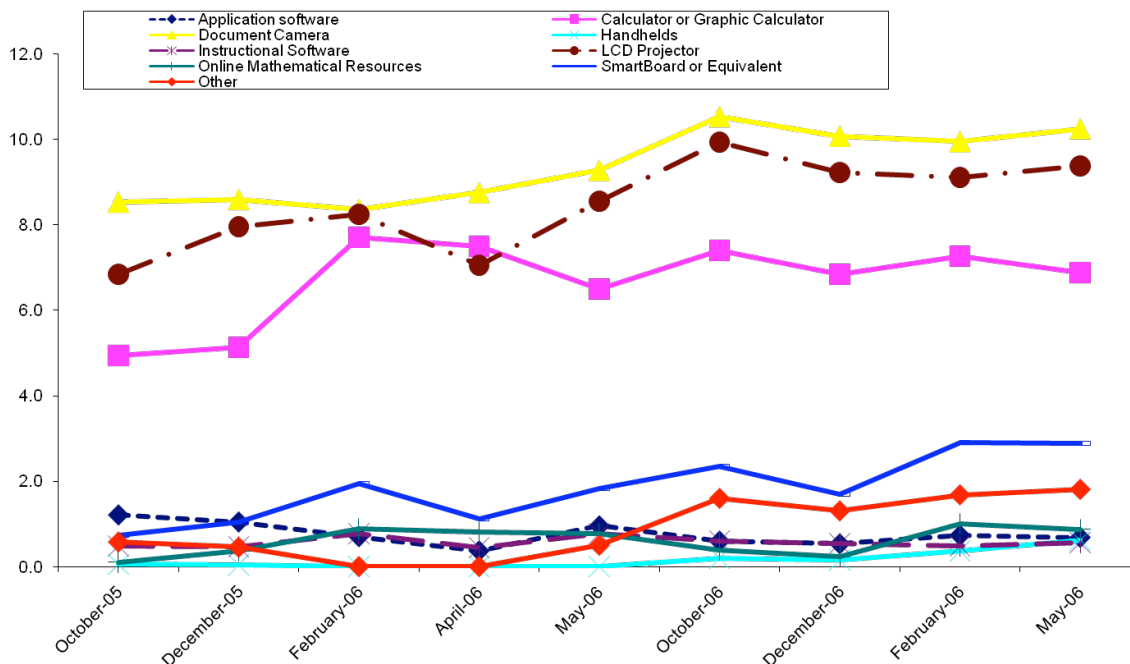
May - 07:

- Quizdom
- Computers
- Quizdom
- Quizdoms (handheld?)
- Quizdom
- Digital camera, TV, lap top, printer,
- Quizdom
- Quizdom

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.

Frequency of use of technology over the last ten lessons
ESD 112



Item 11:

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- My students are showing their work at the beginning of each class. We try to come up with as many ways to "solve" problems and then share them with the rest of the class.
- Let me be honest, I'm not sure exactly what you're looking for but I will try! On almost a daily basis, I have my students come up to the document camera with their work for the day and explain how they came up with the answer, or how they tackled the problem.
- We use the document camera and projector for lectures in class. We also use the computer and power point for some lectures.
- Students share their math journals using a document camera. I try to show different approaches used by students to solve problems. I am focusing my No Limit! Project on improving student writing in mathematics.
- I would have them show their answers to the warm-up problems daily on the document camera, when I get it fixed
- Document cameras to show work they had completed. Graphing calculators to confirm their paper graph.
- I use the document camera and LCD projector when lecturing and going over different types of problems. I will be having students use it to show some of the ways they solve problems in the future.
- Graphing with graphing calculators to understand functions and how the graph relates to its equation and table

- My students use the document camera and projector to report their work and defend their thinking for the class.
- Sharing work under the document camera.
- Students showed examples of work and thought process to class
- The students work in groups to solve problems and defend their work using the document camera.
- Students are asked daily to present their work and answer questions from the class and instructor. We currently have a document camera, projector, and smart board.
- Comparing what adding a constant does to the position of a line.
- My students present their answers to class & or homework questions on a daily basis with aid from the LCD projector and the document camera.
- Today the students took turns creating and solving number patterns with the document camera and projector.
- Students use the document camera at least 2 times per week. I had student extend the area/perimeter concept to figure out area and perimeter of our state by using both a map and the internet. We then made comparisons between answers (in kilometers and miles) and then discussed why it was difficult to get an exact answer.
- Using manipulatives and the document camera

December - 05:

- We used a negative numbers on-line electronic flash card activity. It charted answers correct / incorrect and was leveled.
- Using camera to demo problem solving methods
- Keeping in mind that I have the lowest math group, we use the document camera almost daily. The students use it to show their work and explain how they came up with their answer.
- We did a math WASL and I had the students show their answers over the projector using the document camera. We discussed each of their answers.
- Students use document camera and projector regularly to put their solutions to problems up for comment.
- My students are required to defend their mathematical thinking on the document camera daily.
- Investigation #6 - Shapes & Designs (CMP) utilizes Logo programming language to construct geometric figures.
- Use document camera to show different solutions to problems
- Real world problems in my Algebra II and PreCal classes
- Using a graphing calculator to graph lines and find the slope of the lines
- Sharing student work under the document camera. Preparing PowerPoint presentations and presenting ideas to the class. Demonstrating how something is done under the document camera.
- Students demonstrating use of number lines when +/- positive and neg. integers.
- Student use the smart board to display their algorithm for dividing fractions. Students are able to retrieve past pages from the gallery.
- Working through finding equation given two points
- I teach a special education math class. I try to involve my students in discussions about why they did the problems the way they did. It is very difficult for many of the students to

explain their reasoning and many of them don't know why. We have started application problems of the day to start off class. I give the students 5 minutes to try to answer the problems on their own and then volunteers come up to share how they are working on the problem. The student doesn't necessarily have to be done with the problem; just have an idea of how to complete it. This has encouraged more students to start thinking about their math processes in a new way.

- Kids share their work daily with the document camera. Almost all of the information for the day is on a PowerPoint presentation.
- When studying ratios and percents we used the graphing calculators.
- We use both the document camera/project/notebook computer setup and whiteboard to introduce concepts and to solve problems. Students share their personal notebooks on camera, and then may toggle back and forth to the stated problem on the computer screen.
- Students have taken turns teaching the concept we have been practicing to the rest of the class.
- Students were required to search the connected math program site for homework help.... to answer and explain lcms and gcfs..... They also use the document camera to share their thinking on a regular basis
- Using the document camera and manipulatives

February - 06:

- I have used web sites that illustrate various boxes (various dimensions), so that my students could have practice figures out volume and surface area.
- Students using calculators to prove prime and composite numbers
- To show different ways to solve a problem
- Using graphing calculators to find patterns in absolute value
- Students use the document camera to show how they rearrange blocks to demonstrate the mean of a data set
- Sharing their solutions on the document camera.
- Filling and wrapping...Students sharing examples of box patterns on doc cam.
- Using graphing calculators to define the characteristics of parabolas.
- Using interactive white board to discuss strategies/solutions.
- Daily my students use the LCD projector to show their work to others.
- Buying objects with % off tags
- Explaining or presenting their answers to multi-step math questions.
- To demonstrate and share solution strategies with their class.
- Students demonstrated understanding by being the teacher and providing practice for the other students.
- Students are always using the document camera to compare answers and share their strategies. They also just completed a graph using Excel, to show the rate of their cars (versus the angle) from their science experiment. Then they drew some conclusions about the speed compared to the angle.
- They used the document camera to show homework problems.

April - 06:

- We used a graphing practice web site, so students could learn how to set up graphs, as well as predict trends in graphs.

- Students work in groups to solve problems and bring their work up to defend their thinking and share strategies.
- We use a document camera almost daily to share divergent ways of solving math problems. This has been especially valuable as students have been struggling to visually portray division of fractions by fractions.
- Using doc camera to show different ways to solve problem
- Showing their Geometry solutions
- Algebra students used the graphing calc. to help support their ideas of what a quadratic (if graphed) would look like.
- Students found irregular area on complex shapes (calculators allowed) and then shared their strategies using the document camera.
- Students sharing problem solving techniques used doc. camera and projector.
- Projector and camera to model their solutions to two step equations.
- When going over homework or problems, students support their answers by sharing their work on the document camera.
- Displaying their daily work on the doc camera w/ explanation
- Students explain and teach classmates about a problem they solved using the document camera and LCD.
- Sharing problem solutions via camera and projector
- Daily they use the document camera to share their thinking. We are currently working on a problem solving method and students are encouraged to share their thinking. I have had to put a time limit on this activity, as students are so excited to share their methods. We worked on some online activities with a focus on positive and negative integers. The students had to answer questions and take the timed quizzes.
- A student used the document camera to show their work.

May - 06:

- We go over our warm ups on an individual basis. Students are randomly picked to come up to the document reader and show their work every day. About 7-9 students a class have to do this, not to mention during our regular work as well.
- It would depend on what you consider 'higher-level thinking'. I have a very low math group. They used their calculators when making multiples of various numbers, such as 1105,391 etc. Does this count?
- We place problems under the document camera to be shown and explained to the class.
- Comparing different parallelograms and how their differences may affect the area or perimeters.
- Students bring their work up to the document camera to defend and explain their work.
- Students share divergent solutions to problems using the document camera to show their work while explaining the process they used to complete the problem.
- Daily we use the document camera and LCD projector to facilitate math discussions.
- Use doc camera to show their work to other students
- Kids showing class work
- In working with radicals, their graphs and solutions - students defended their thoughts on the correlation between equations/graphs/solutions and used the technology (smart board, doc. camera, and graph calc.) to demonstrate their ideas.
- Students used the document camera to explain how they find the area of a parallelogram.

- We use the projector to share different strategies for solving a problem. My algebra students are presenting reviews for the final, using the technology, possibly PowerPoint, smart board, or document camera.
- Students sharing solutions to problems using projector and camera.
- Students were exploring different shapes. The students were manipulating triangles to see if a triangle could be made with any size of sides. Students made examples and non-examples to explain their reasoning.
- Using the Activision board to compare box plots. Student groups plot their data and we collectively go over results.
- Using calculators to generate random numbers.
- Comparing box and whisker plots with a graphing calculator.
- Having students share their problem solving techniques.
- Students use document camera on a daily basis to present their findings of new concepts or answers to their problems.
- On a daily basis my students share problem solutions via the document camera/projector. On occasion, we will explore the Web for math related background information in science, culture, etc.
- Students share their answers and thinking strategies in front of the classroom several times during the week
- The students were given a graphing calculator lesson.

October - 06:

- They show and discuss their work by use of the document camera.
- Sharing graphic representation of multiplying fractions
- Reasoning with QWIZDOM
- Students often present their work and discuss their thinking of a problem by showing the class their work on the document camera
- Students use the document camera to explain their thinking and go over problems each day.
- We share daily our solutions and our explanations. Students like to have their work highlighted on the document camera. We use the camera for comparing ideas as well.
- Students displaying and explaining problem solving strategies on math problems using doc camera and projector.
- Sharing thinking about how to solve a word problem.
- My students continue to use the camera and projector to share solutions and to discuss options.
- Currently, my 7/8 resource class is creating coordinate graphs from data tables that they've created. They are sharing and improving their product--in a whole-group context--via the document camera and project.
- Students were presented with graphs that they had to answer questions on. Students used the camera to prove their point to the class.
- During quizdom, we check the graph and discuss thinking. Share on the over head
- Students were given a problem-based activity in which they had to work in teams to solve. After working together to solve the problem, they could enter portions of answers into quizdom to check their work. If they were incorrect on portions, they had to come back together as a team to dissect the problem and what they need to do different to solve the problem.

- Almost daily the students come up to the document camera to talk about (and show) how they solved a problem.

December - 06:

- Students show and explain their work with the document camera.
- Students share their strategies and problem solving skills for every lesson
- Used calculators and doc cam to show work, and Quizdom
- Graphing different equations to see whether or not an equation was a linear function and making inferences based on their finding. - leading them up to the requirements in an equation which would make it a linear function.
- Students bring their calculators up to the document camera and show how they used it to find their solution.
- Students compare answers and analyze write-ups, sharing their work on the document camera.
- Students showing different ways to model equations (graph, table etc) on document camera.
- Students navigated aerial photographs via a spatial orientation activity on the ACTIV board.
- The students took turns presenting puzzles using the movement of toothpicks with the document camera and projector.
- During quizdom, we see all responses and students discuss the correct answer and why other answers may have been chosen. Students also share their thinking about a problem under the document camera
- Almost daily the kids show their answers from questions raised previously and share how they came up with the solution.

February - 07:

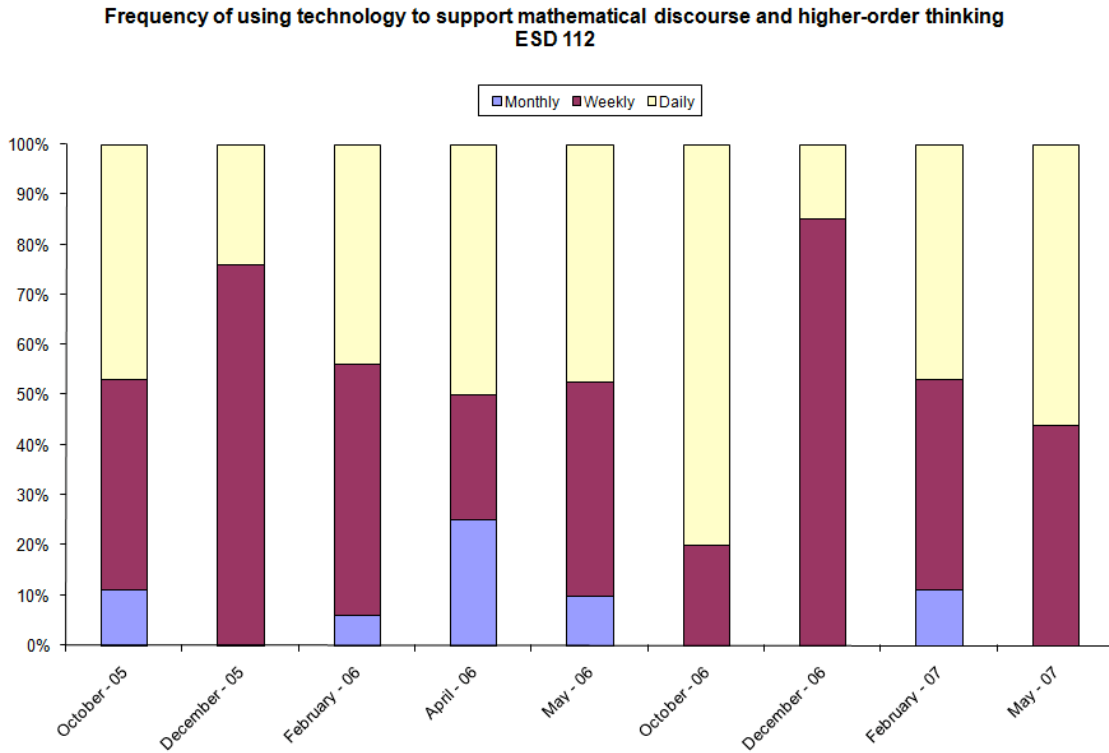
- Sharing of homework and strategies.
- Students use the document camera to discuss and support their work.
- Student samples are shared almost daily using a document camera and projector. This enhances students' explanations of mathematical reasoning and shows divergent strategies used by different students to solve problems.
- Use doc. camera to show answer
- Showing linear equations from a scatter plot on the graphing calculator
- My math focus class used some of the NCTM illumination lessons to work on their fraction skills.
- Every time we do an application activity, students have an opportunity to share their thinking. We also like to look at and discuss alternative ways of solving problems. The most commonly expressed question in my class is "Why?"
- Used doc camera and projector to show area and volume using blocks.
- Sharing and discussing class work
- Using a calculator to estimate square roots without using the square root key.
- Interactive response system
- Presenting problems and working out the mistakes and/or showing a different way they solved a problem.
- Students created a spreadsheet to create a graph that showed the last 10 years sales by vehicle manufacturers. They had to assess the information and predict what manufacturers would be sales would be the following year.

- Shared solutions via the document camera.
- Discuss how someone may have gotten an answer. We put up prompts with an incorrect answer. Or share our thinking by going up to the document camera
- My students used the interactive whiteboard to explain how only one triangle could meet the constraints of side lengths of 3 cm, 4 cm, and 5 cm. Several students felt that there could be more than one, while others argued that there was only one. The smart board was effective in helping students engage in the discussion as well as help them prove their thinking.
- Students completed a pencil/paper exercise then inputted the answer into their interactive handheld Quizdoms. The immediate feedback of right/wrong answers is wonderful.
- Students used calculators, Document Camera, and projector to figure out the cost of multiple items and the change they would receive from a \$20 bill.

May - 07:

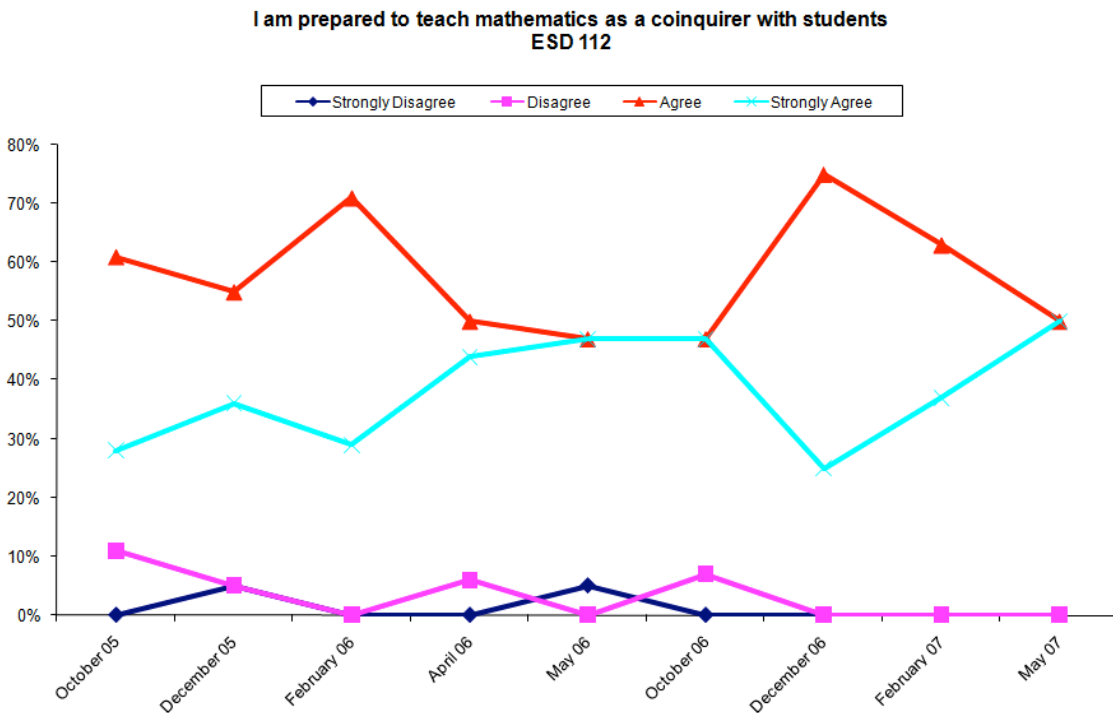
- Using the document camera to explore many students' thinking for specific problems
- Students show their steps in solving a problem. Other students ask questions or comment with their opinions, or offer an alternate method.
- Students use the document camera/ smart board to explain/ defend their work. This also facilitates a classroom discussion of mathematical concepts.
- Problem of the Day - students show diverse solution for finding an answer; share different ways of recording data
- Today the students were using the document camera solve and create missing addend problems.
- Use doc. cam to show multi. Solutions to problem
- Students commonly come up to the front of the classroom to show their work and defend their thinking on a problem.
- Students used the document camera to report on a shape sorting project.
- Students shared solutions to a problem-solving activity on the document camera.
- Students solve problems and explain their process using either the smart board or document cameras
- Using graphing calculators to create and evaluate Box and Whisker plots.
- Explaining their work
- Document camera and LCD projector used on a daily basis communicate different strategies around solving mathematical problems
- Camera and projector. We've also used the internet to support our current project on Egyptian architecture/geometry. These are projected from the computer onto a screen for whole-class viewing.
- Quizdom we discuss all answers and why someone chose an answer.... share their method for solving (even name it)
- Students used document camera to show how they solved a problem.

How often does something like this occur in your classroom?

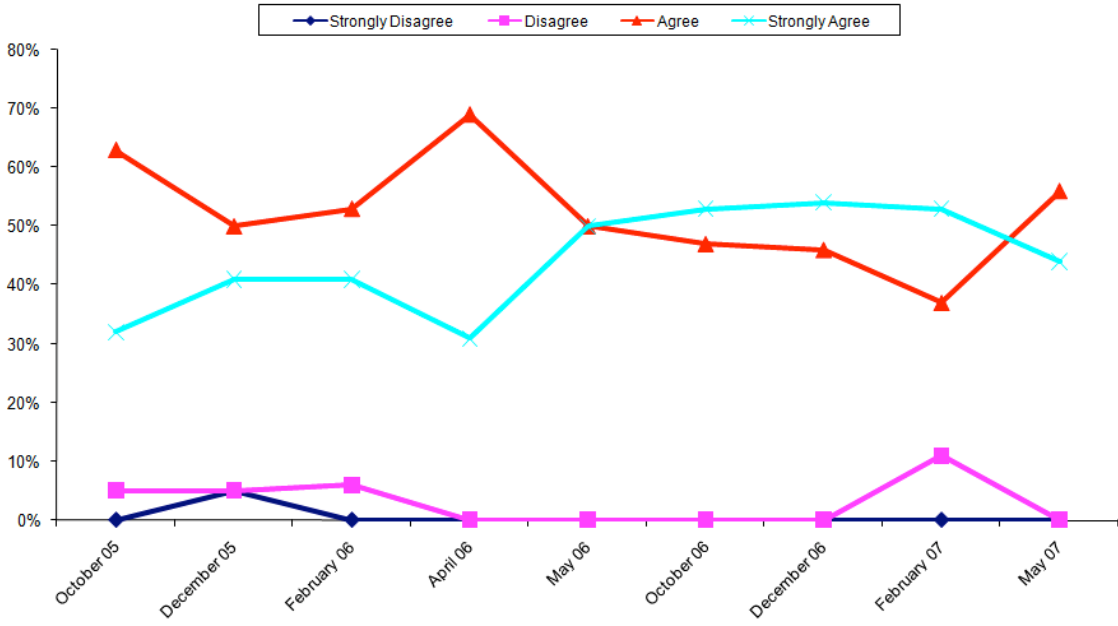


Item 13:

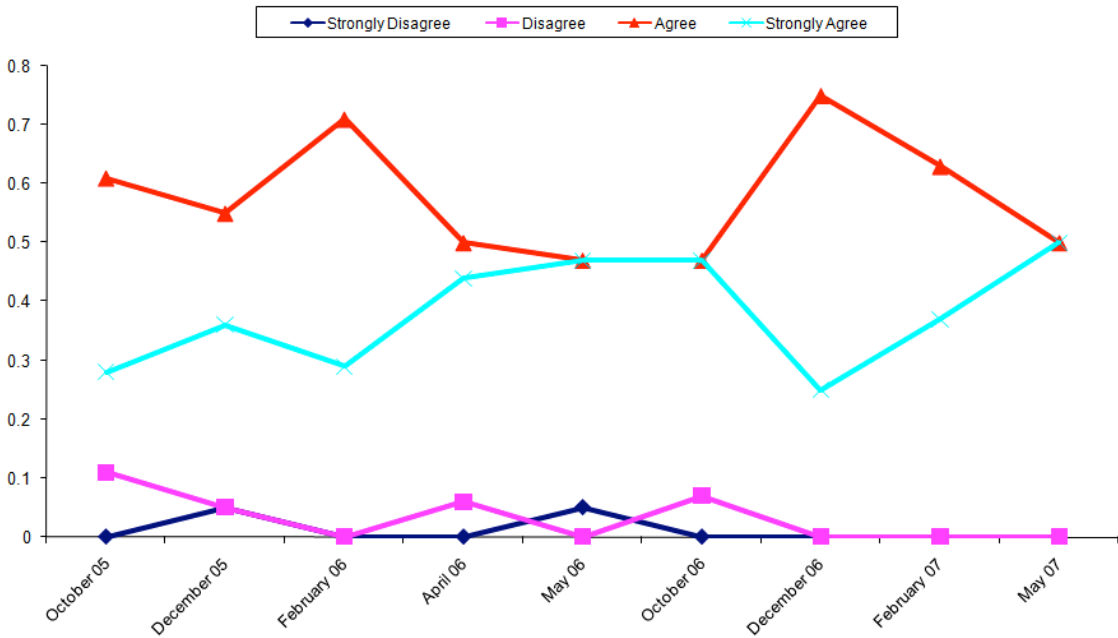
Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.



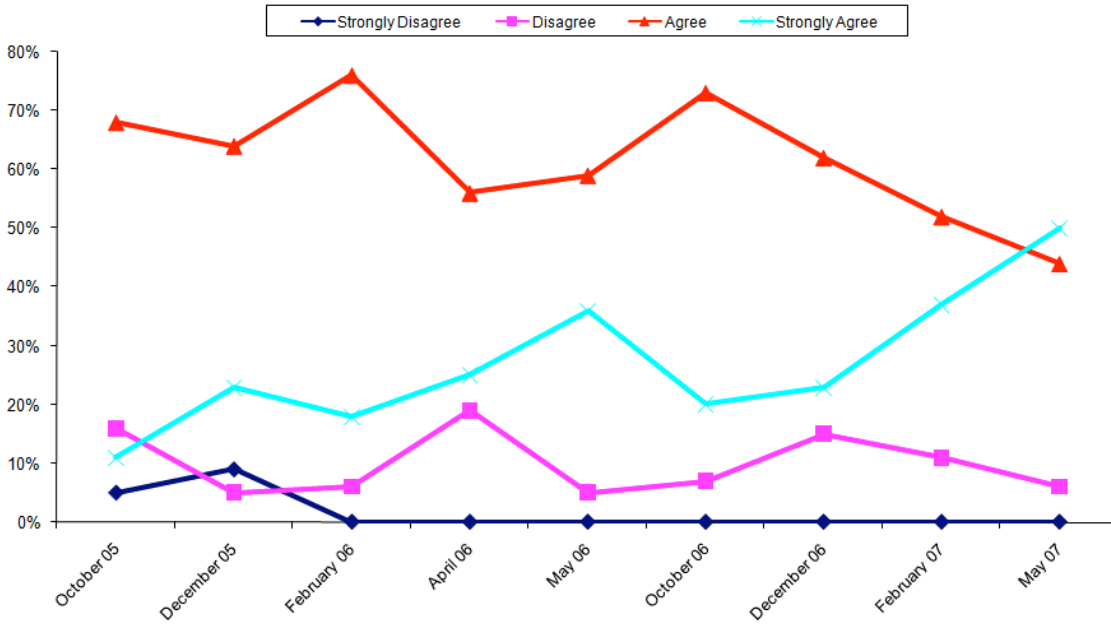
I am prepared to give students opportunities to demonstrate their understanding of mathematical concepts in ways that match their individual learning styles
ESD 112



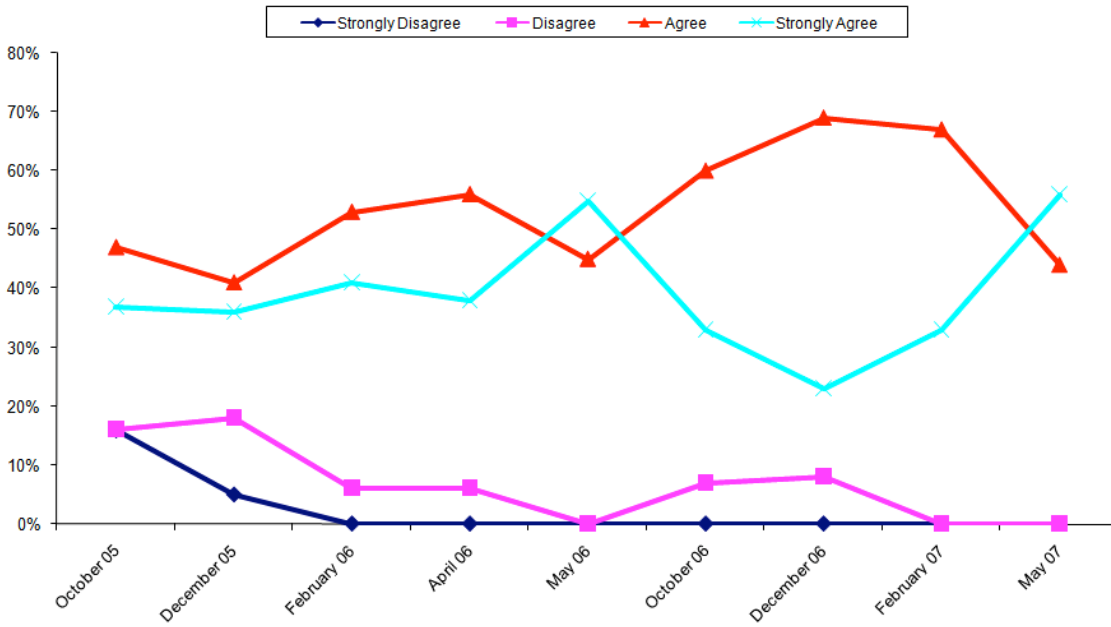
I am prepared to use cooperative learning approaches
ESD 112

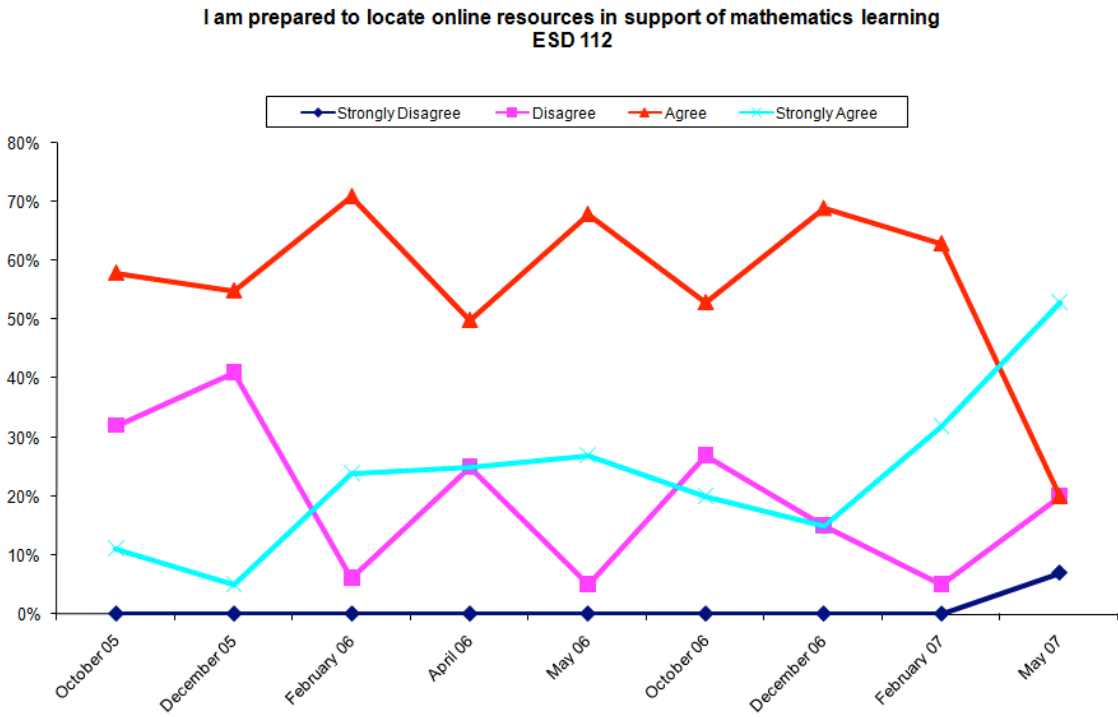
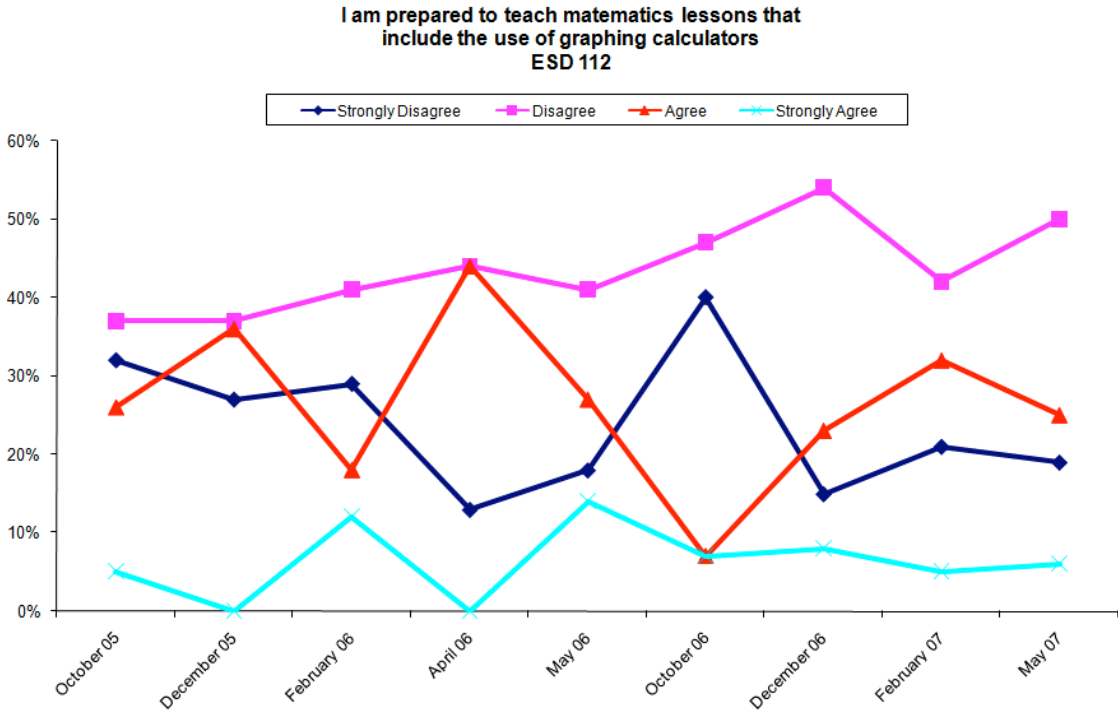


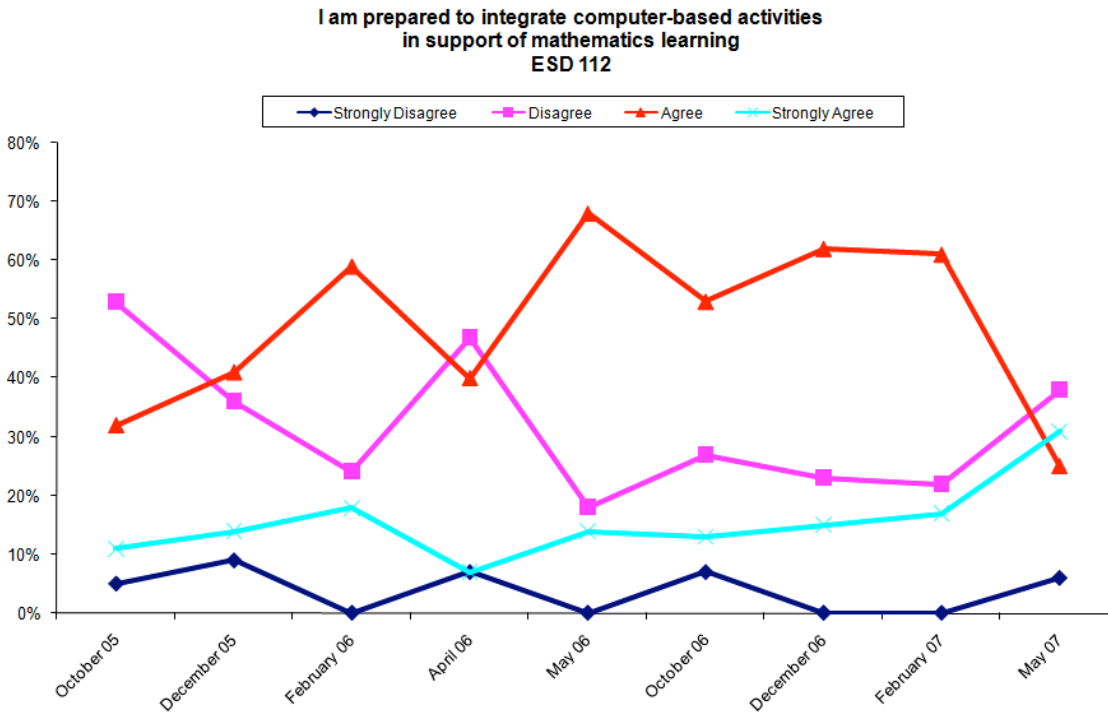
I am prepared to implement a variety of mathematical teaching strategies that incorporate problem/project based learning
ESD 112



I am prepared to involve students in hands-on, concrete mathematical experiences
ESD 112







Comments:

October - 05:

- I need more on-line resources that will coordinate with my lessons. I'd like to do more of this. We do not have lots of computer time in our school, so we would need to use my laptop for this activity. (We only have one computer lab for the entire school and it is usually in use.)
- I may want to do many of these things, but I do not have the ability yet to incorporate much of the technology into what I do.
- I am knowledgeable about how to use the computer; however I have little experience using them with Math assignments. So when I am trying to implement something new I often run out of time and am unable to prepare for a computer based lesson. I am specifically talking about using software like EXCEL. I feel very comfortable using the projector and the document camera as a part of my daily lessons.
- I need help doing more one computer in the classroom activities/learning. We have very limited access to the computer lab.....

December - 05:

- We have only one computer lab for the entire school, so it is almost impossible for my students to get computer related lesson activities. My remedial math class is more likely to get that opportunity because it is later in the day.
- I could still use help on the statements that I agreed with...
- While not well prepared in these areas, the no limit training is helping and I want to be able to do these things. I don't like the answers I have to choose from.

- I am stronger in certain Math concepts than others and that would determine how much technology I use when teaching it. The stronger I am in a Math concept the more comfortable I am using technology and other resources.

February - 06:

- Having a lack of computers for student use really limits how much Web based, or interactive software I can use effectively. If I had enough student computer time then I would do more of this!
- I am a bit freaked out about teaching graphing calculator activities. I am planning to ask my NO LIMIT Math Coordinator to demonstrate. Part of the problem is the lack of the calculators. I have been introduced to some great activities, just never been able to try them.

April - 06:

- We don't have graphing calculators in our classroom. Though I have had a little training with them through No Limit, I need a lot more to be competent in teaching with them. I have asked for further training and expect they will help me with this.
- I have had a couple of training sessions in the use of graphing calculators as part of the No Limit! Training. I don't own any for my own classroom. I could borrow some from either the ESD or one of the 7th.8th grade teachers, but to be honest, I have so many other new things I'm doing with my math curriculum this year, that I've barely begun to think about implementing graphing calculators.
- I still need practice and time before I feel competent with a graphing calculator. I also need more time to find effective ways to use the computer as an instructional tool.

May - 06:

- I need a lot more help with graphing calculators. We did have a couple sessions on this, but it went too fast for a beginner like me.
- I still need to do more exploring with the integration of technology into my teaching. I want it to be a tool that supports learning, not a gadget that can get in the way of learning.
- I have yet to have access to graphing calculators--nor really demonstrate a critical, curriculum-based (CMP) need for them at this time. Perhaps next year.

October - 06:

- I am still really shaky on the use of graphing calculators even though I have them in my room. We have had two trainings, but it wasn't enough for me.
- I still need more in-service in using and trouble-shooting the graphing calculator. My classroom lacks manipulatives. I would like more for many of my lower level learners. However, we're very creative and are able to make sense of most concepts.
- I have a low 5th grade math class. They can barely use a regular calculator, let alone a graphing calc.

December - 06:

- We do not have enough student computers to have my class use them.

February - 07:

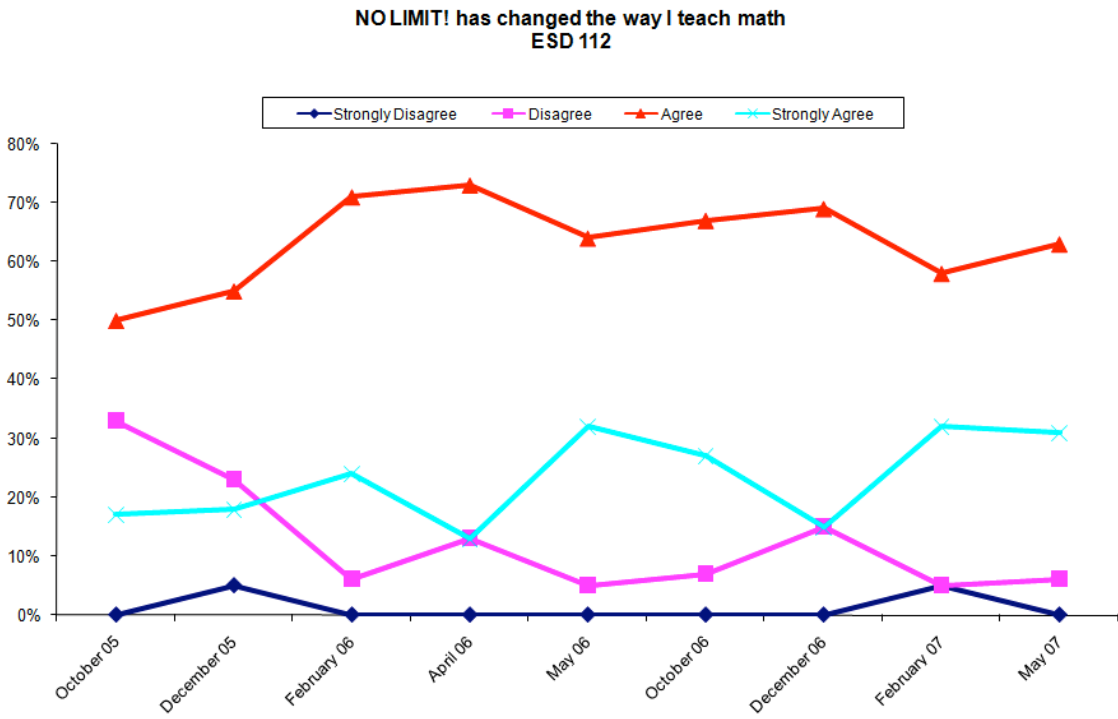
- We do not have access for students for regular computer access. At best it would be once a month, so this is not a viable option.
- I don't have graphing calculators in my classroom.
- I love when kids find different ways to do a math problem.... even if it doesn't work, we try it out, but when it works, it is fun to name it after the student and share the 'knowledge.' I have learned a lot from kids when they have shared how they solve problems....

May - 07:

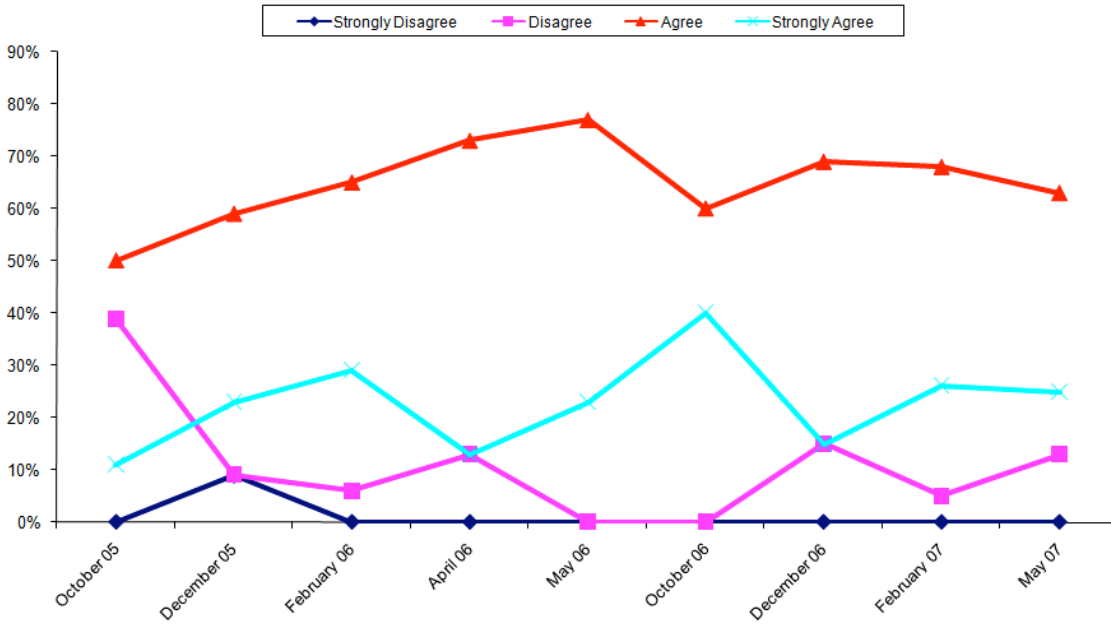
- We have little access for students in terms of computers in our school. I am not very competent in the use of a graphing calculator. I know some skills well, but mostly I don't even have a grasp of the functions and how they work.
- Students use computer based applications including Excel fairly regularly; and Logo programming as part of a geometry project.
- Graphing calculators aren't used at 6th grade, so I learn that materials, but haven't had a place to put them into action... if I had to I would/could

Item 14:

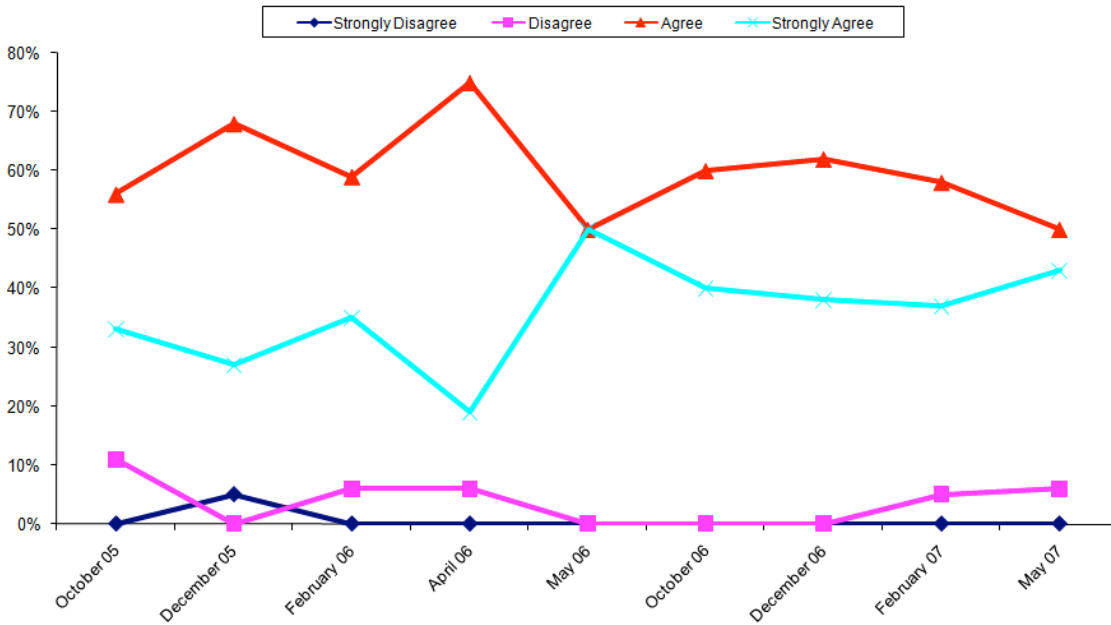
Please tell us how NO LIMIT! Has impacted your classroom. We are interested in your frank responses.

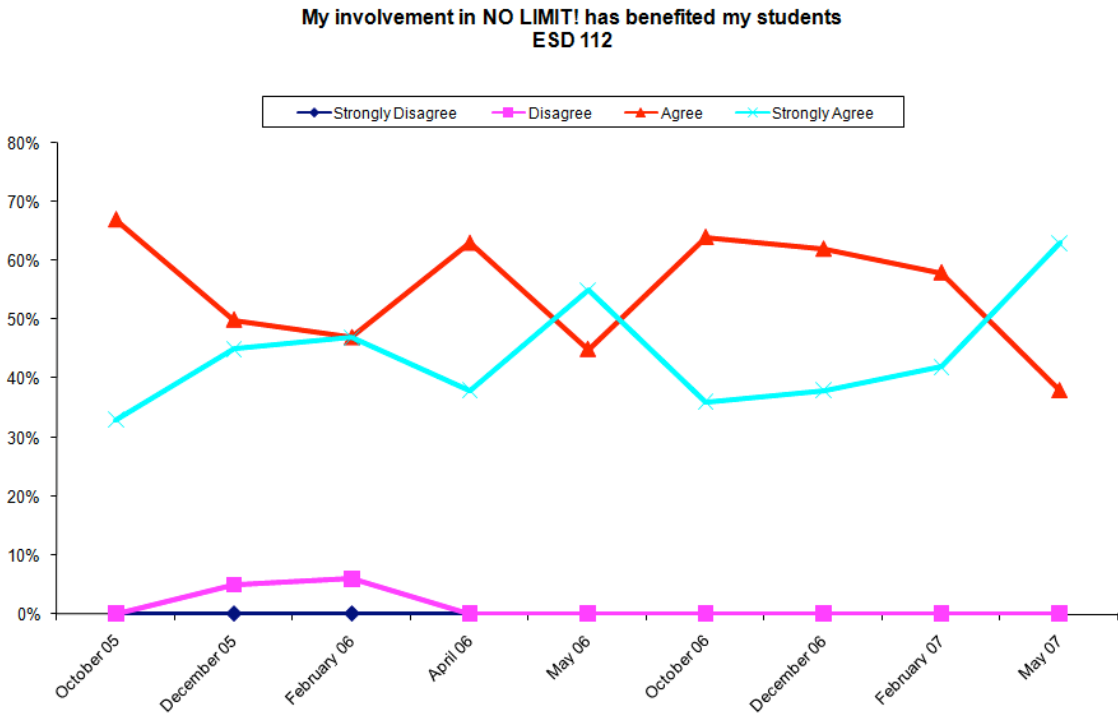
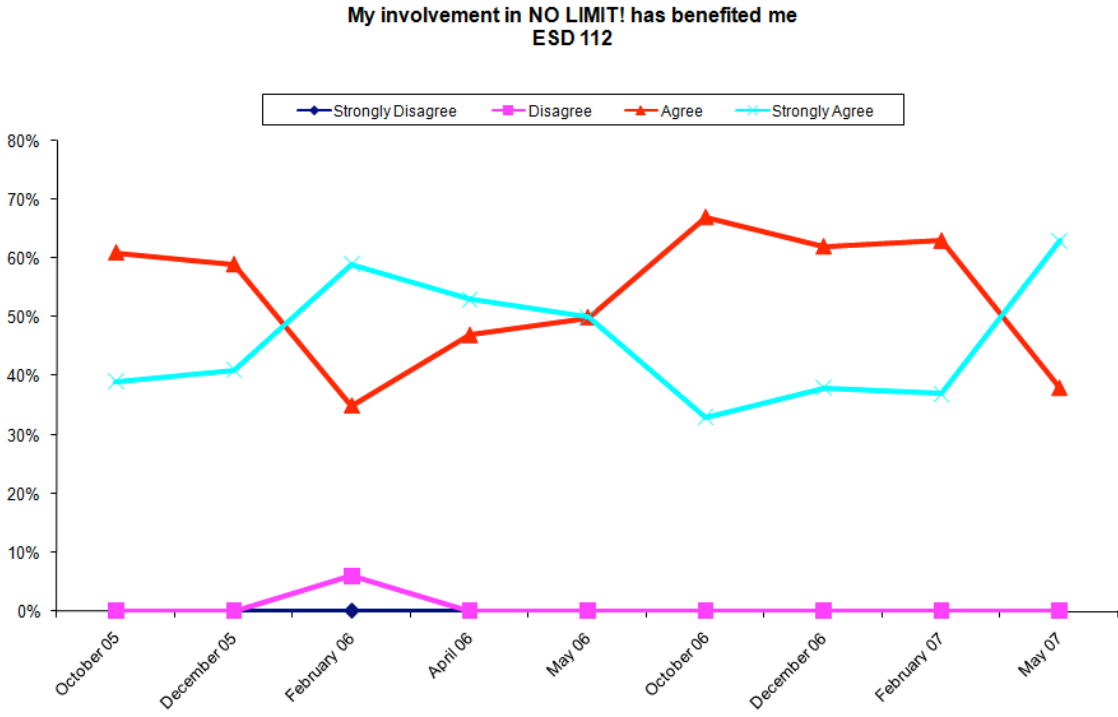


**NOLIMIT! has changed how my students learn math
ESD 112**



**I feel more comfortable using technology to teach math
ESD 112**





Comments:October - 05:

- Being able to use student work to teach math and also to give students the opportunity to showcase their work has been a total blessing. I can't wait to integrate more on-line instruction as well.
- What has changed the way I teach math is being trained for a week in Investigations. The NO LIMITS! Workshop was not centered on technology use; it was focused on Learning Communities. I barely got any training on the use of the document camera and projector.
- It still feels early in the year to say that No Limit! Has revolutionized the way in which I teach math. I can see potential for more change as my students and I learn together.
- As I learn more I think my students will be able to use the technology more - in a way that changes the way they do math but we are not there yet...
- The technology is nice, but I have not learned how to use it to change the way I teach. It definitely has made the discussions easier or more fluid.

December - 05:

- I have always had a cooperative learning environment. Having an Elmo though has changed how my students can show and explain their thinking. Having a laptop means that I can show concepts to the entire class via the Internet. This addition of technology is a powerful tool.
- So far the no limit! Grant has basically helped in giving the class more technology to work with but it is still up to the teacher to teach in a new way or old way - the grant hasn't taught me much in the way of instructional strategies that I don't already use
- Having the math technology in my classroom is wonderful for my students and myself.
- My involvement in the grant has yet to produce any new technology (I have technology from another grant program.) for my students. Given space restrictions, I have yet to be able to purchase the one item, an interactive screen, for my kids. If I had a suitable classroom, I would. In the interim, I will wait to see what happens and what other purchases would help. Otherwise, I am not too impressed with the content taught via NO LIMIT versus T2CI. I learned much more relevant material and strategies in the latter.
- I was able to participate in the first round of No Limit and it has changed the way I teach. I am enjoying learning even more!

February - 06:

- The last training we had was the best of them all. I learned how to use WORD Equator. Now I can write my own tests / worksheets instead of using canned tests. Thank the LORD!
- Our last meeting was very beneficial for my students and I.
- In particular being on the PLC has led me to get very close with a top notch math teacher that I really didn't know before. This has really helped me a ton. She is a great resource and dependable.
- A busy month.
- Worked with other PLC members to align curriculum, and GLE's
- Like I said, it's terrible. We are so far from meeting any goals other than not yelling at each other... Oops, we haven't even met THAT goal yet.

April - 06:

- I am much more confident using technology due to No Limit. I also now know how to create my own texts because we learned how to use the symbols in WORD, which was SO helpful.
- I think the goal set by my PLC, to improve students' written communication in math, has been an excellent focus. It took a while to figure out where we were going and how we planned to get there. I look forward to next year when we can start at the beginning of the year. I want to get earlier baseline data collected, and then watch student progress over the course of the year. I also look forward to involving the students more directly in tracking their own growth.
- I have used a document camera/notebook/projector technology set-up for three years. The NO LIMIT! Grant has yet to afford me new technology. However, we have recently decided to procure an Activiboard to help my learners. Then, things may change for us.

May - 06:

- Using technology to enhance student learning and participation has exceeded my wildest expectations. I also love that I can bring the Internet and math activities from outside of my classroom to my students and use it as an effective teaching tool.

October - 06:

- I recently remembered how to use my document camera to take pictures of student work in order to use some for examples. The lesson turned out GREAT.

December - 06:

February - 07:

- Quizdom is not a workable technology. I am very frustrated with all of its associated issues. The idea is great and the students love it (so do I), but it hardly works. Software and hardware problems. I have informed the ESD about all of this with no action on their part.
- I have been very frustrated with the Quizdom Interactive materials. The initial training last August and September was not good. When our ESD took over the training, there was a marked improvement, but there are still numerous "glitches" in the hardware and ease of using the software. I am on the high end of technology users in my building, serving as the tech specialist for the building, and I am not using the Quizdom materials on a regular basis. I tried one day last week only to have my computer continually freeze despite repeated restarts.
- In the 2006-7 school year, NO LIMIT! Has not benefitted my student or me as much as in the previous year. Reliance on a poorly researched/selected student response system has resulted in a wash for the year in regards to the implementation of new technology.
- I love my technology and have a few colleagues who are really jealous!!!! They are still using overheads.

May - 07:

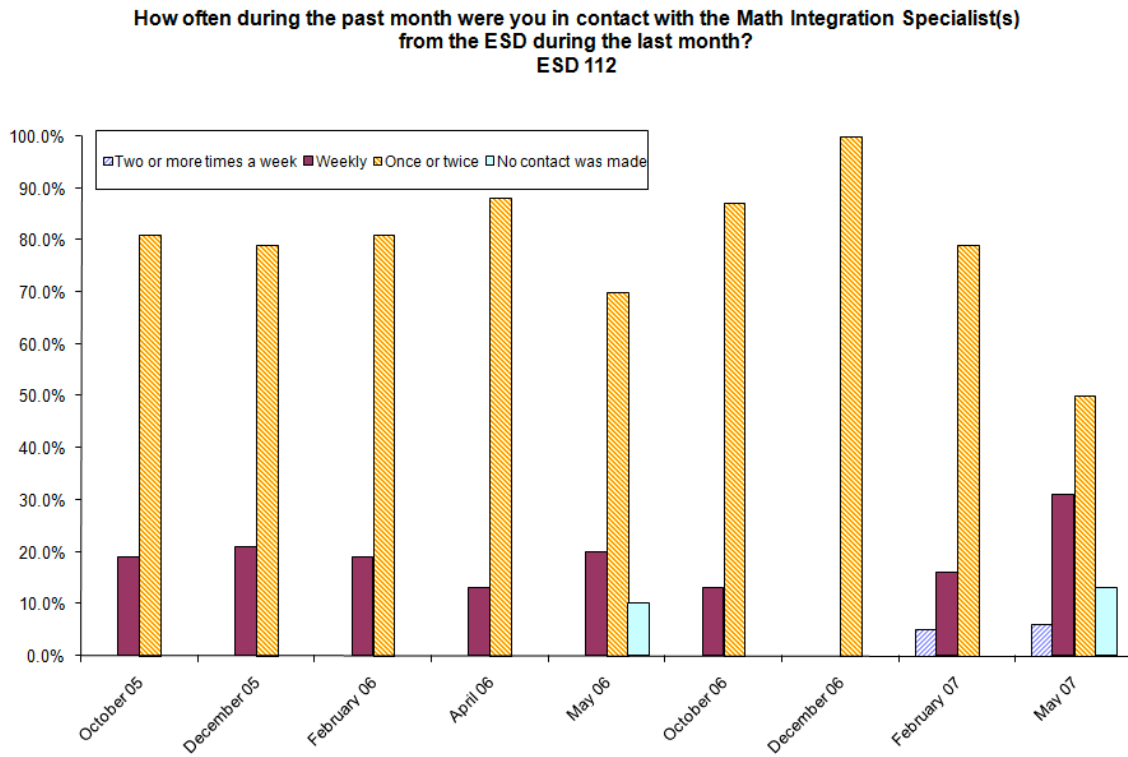
- Before I had technology in the room, the sharing of ideas was really limited. Also, students had a hard time reading my writing!
- I have used a great deal of technology in my class for a number of years. The document camera made a decided improvement in my classroom to encourage student discourse and share multiple approaches to solving problems. We were very disappointed with the

Quizdom system, partly because the training was not well done and partly because the upgrades to the software have actually sent us back a step. Now, at the very end of No Limit! Money is available that will allow several of us to purchase active white boards. I wish these could have been purchased at the beginning of the 2006-07 school years and all of us could have received training and support during this year.

- Anytime you add technology to a classroom, you make learning more accessible for students.

Item 16:

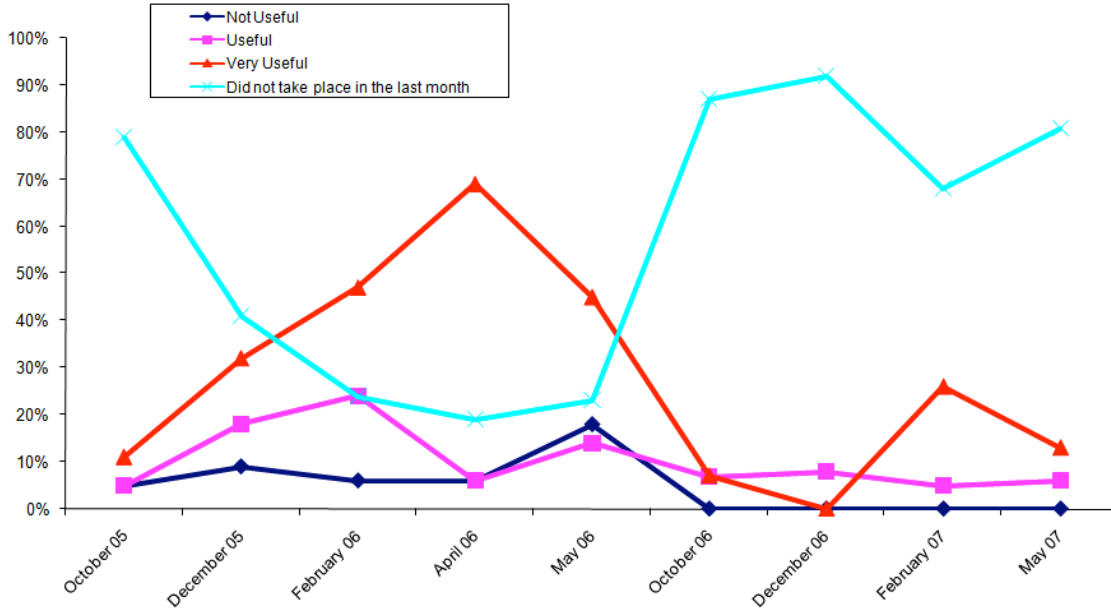
How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?



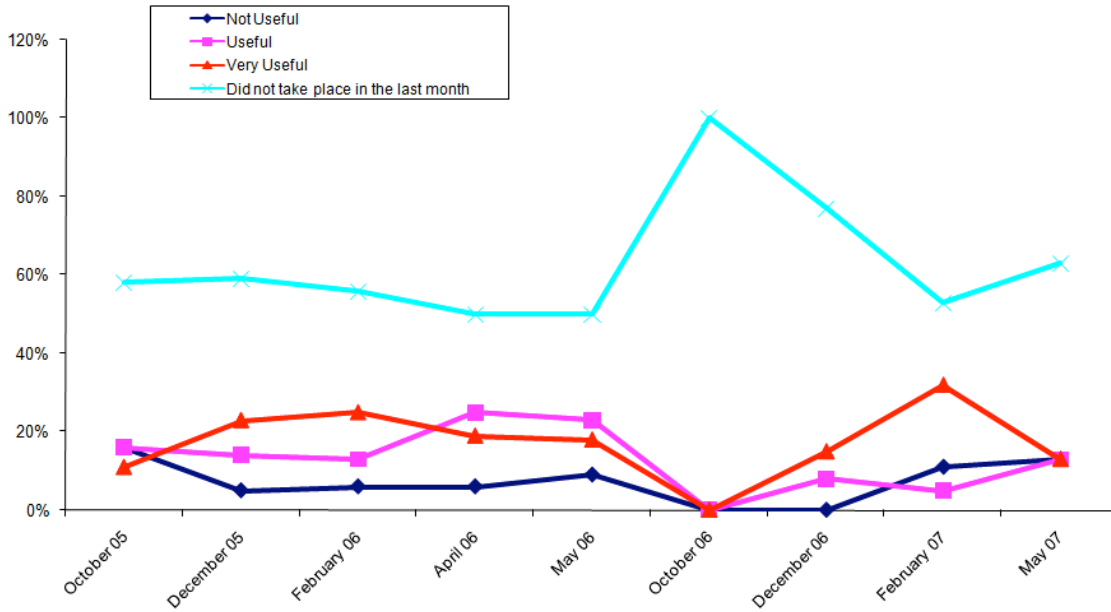
Item 17:

Please evaluate the following MIS activities over the last month.

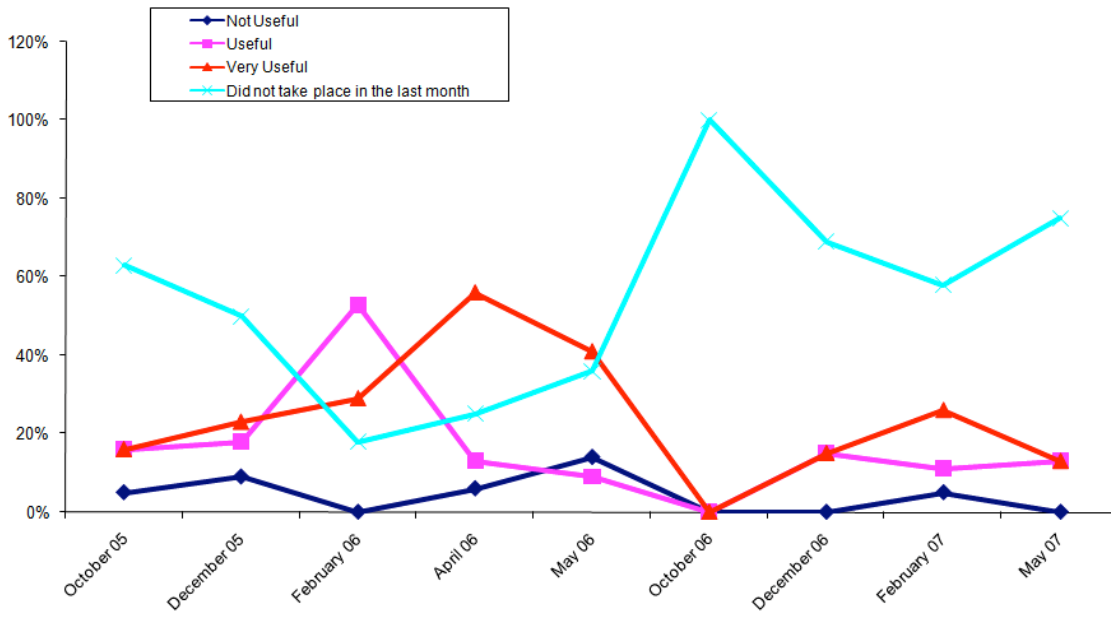
**The MIS modeled a lesson
ESD 112**



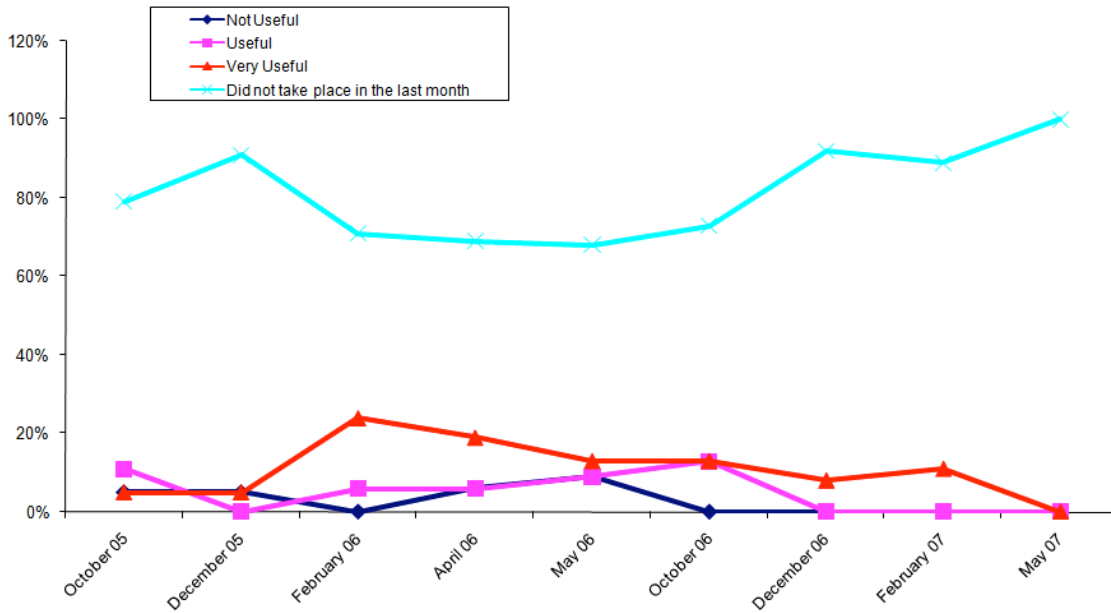
**The MIS coached, observed, or team taught a lesson
ESD 112**



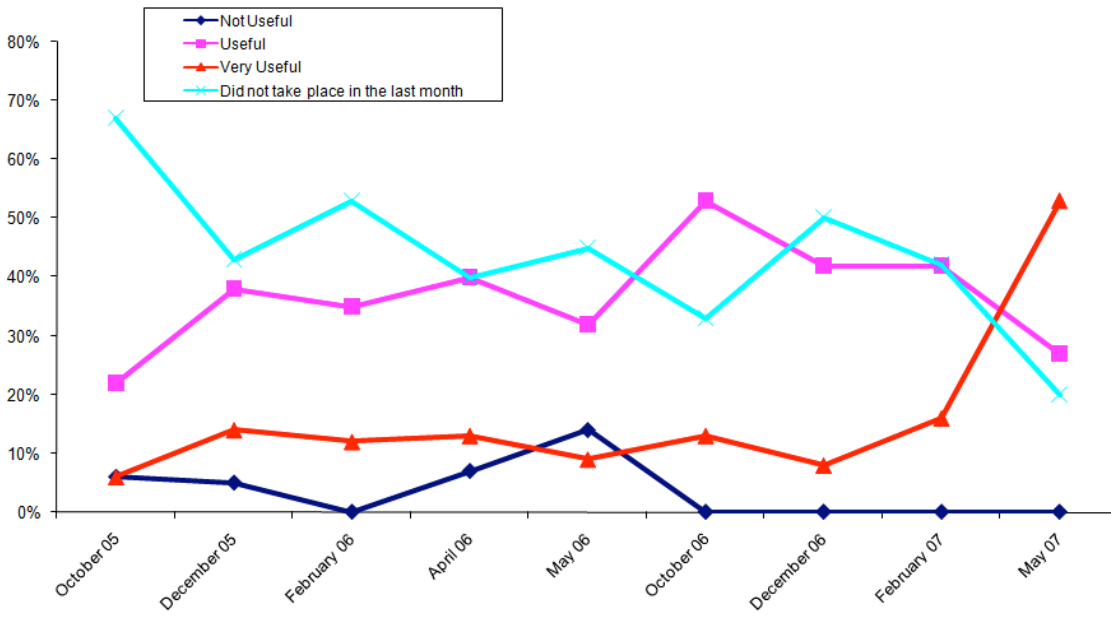
The MIS worked with students
ESD 112



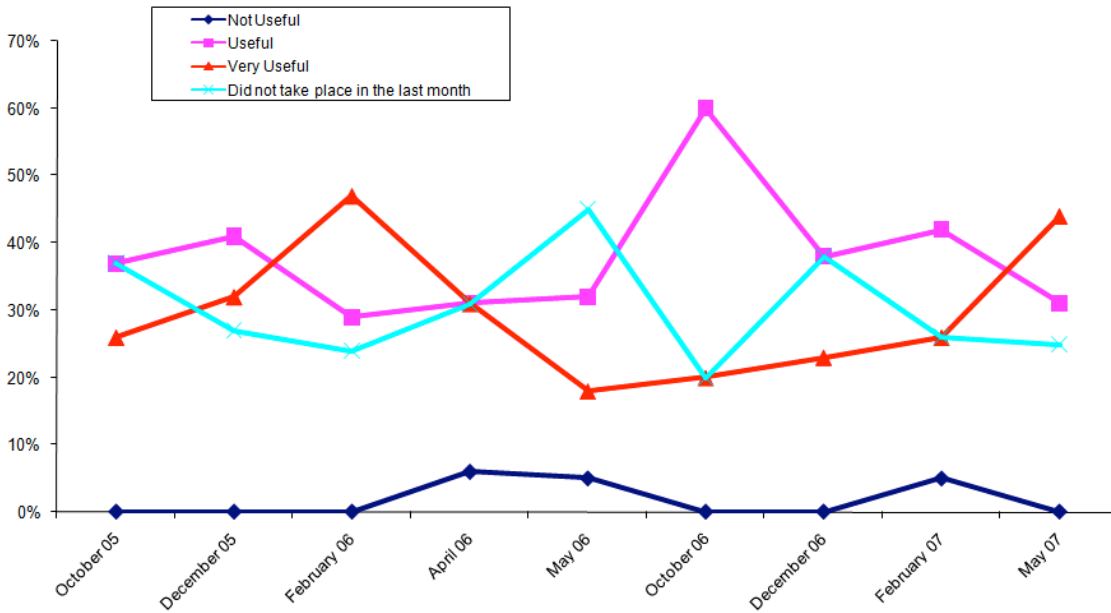
The MIS helped with planning a lesson
ESD 112



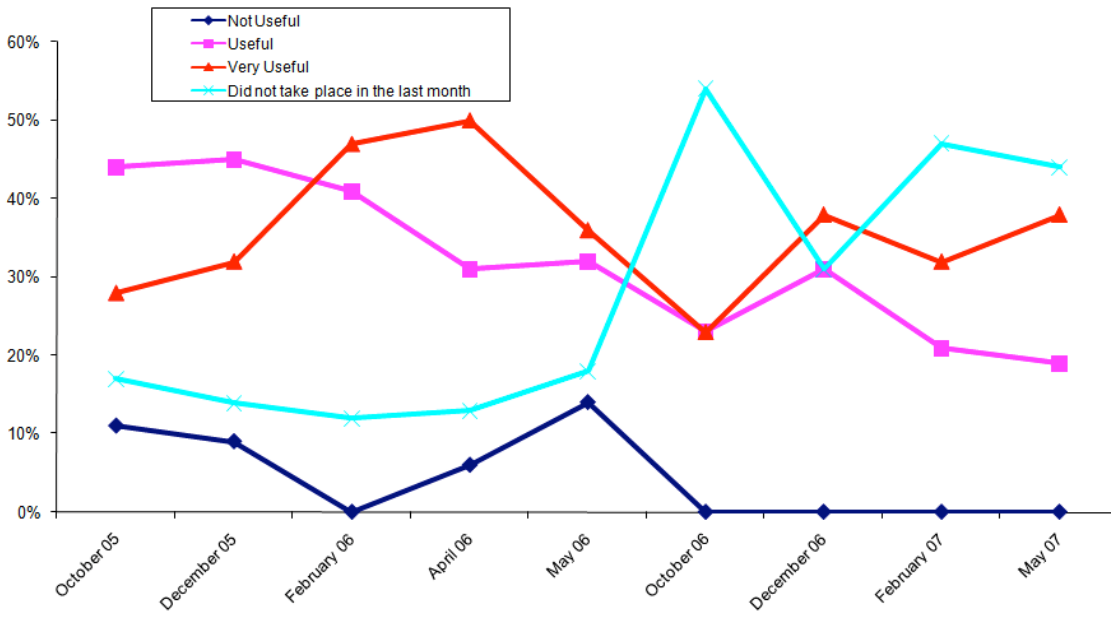
The MIS helped with schedules, logistics, or administrative issues
ESD 112



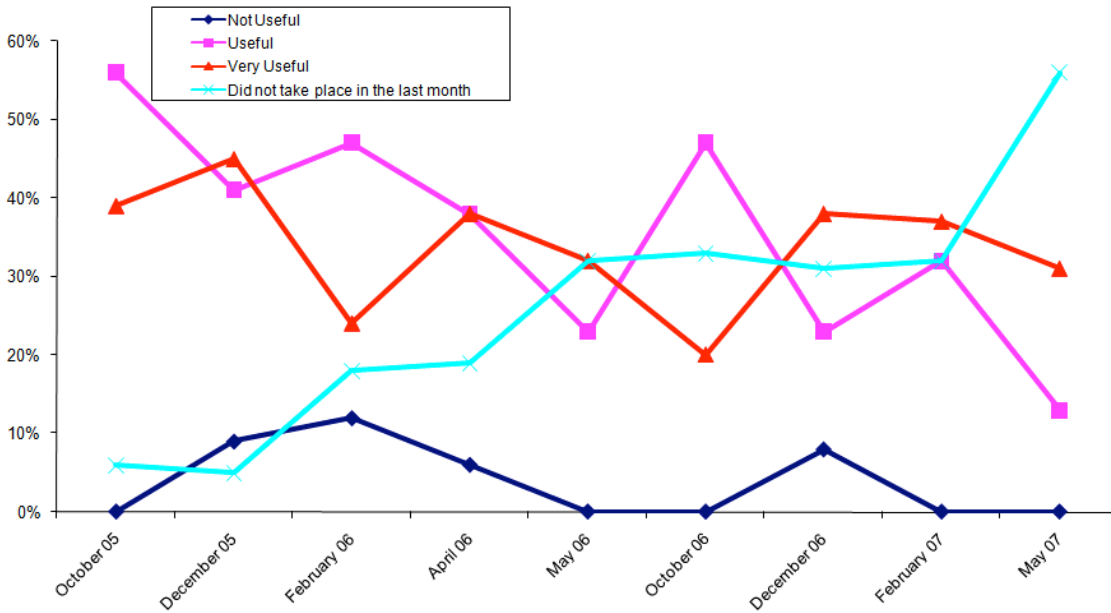
The MIS helped with technology
ESD 112



**The MIS provided instructional resources
ESD 112**



**The MIS facilitated a Professional Learning Community meeting
ESD 112**



Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

Comments:October - 05:

- We have just begun to bring ourselves together as a math dept. This is the first year of our school opening. As math teachers we are just learning about each other. We have decided to work on how students write answers as our focus.
- Right now we are trying to come up with our goal for the year. We also discuss issues that come up in our classrooms that impact the other teachers. We have shared some student work in math.
- The focus of our PLC is to come up with ways to help the students to do better on Math WASL testing.
- Collaboration as a 5/6 team. Curriculum alignment with GLE's. Implementing Investigations and CMP - 2 of us are using new curriculum
- How to use the tech we got to improve our teaching
- Getting kids to use words in math and WASL preparation.
- The focus of our PLC is to find a way to improve our Math WASL Test Scores. We have discussed ways to go about it. Right now we are all doing a WASL question and are going to be bringing samples of the work to our next PLC Meeting.
- to plan and then implement our vision (through the use of technology students will be able to defend and document their mathematical work/thought etc.)
- We are working toward developing our project in which we will be presenting a video that shows how technology has helped our students report and defend their work in our classes.
- We discuss how to better coordinate our curriculum and troubleshooting strategies with the technology.
- Goal setting
- Familiarizing staff with new technology and ideas to make it work in the classroom.
- During our first PLC meeting my MIS helped us set our PLC's goals for the year. During the next PLC meeting, (MIS was not scheduled to be at this meeting.), I lead our school certificated staff through a periodical article that addressed Math test scores and different schools solutions to increase those scores. Math is our schools focus this year. We also formed a team that will be going over our curriculums carefully and seeing if they meet our needs or if we are in need to adopt new curriculums.
- How to implement positive math instruction at Monticello.
- We are working on our focus/plan. Planning to work on building unity.
- Our focus is to facilitate the use of technology in our math classrooms.

December - 05:

- We are a new school. We are trying to get to know each other and pull together as a department. Right now we are trying to figure out how we will get our research project together.
- demonstrating how students are making improvements in their learning of math.
- Setting goals for our group, planning on how to implement those goals.
- The focus of our PLC Meetings is to better prepare our students for the Math WASL. We discuss how we can help our students feel more comfortable taking the test. We discuss how students performed on the WASL released items that we give them.

- We are developing detailed rubrics to be used by students for self, as well as peer evaluation of problem solving.
- Identifying goals: 1) Improve student writing. 2) Develop a rubric for assessment of student writing about mathematics. 3) Assess students 3 times this year on WASL type questions using the above mentioned rubric to assess progress.
- How to better use the technology we have
- WASL Scores and improvement
- our focus is on the question that we have asked ourselves - namely how technology has impacted our students learning
- staying focused on the topic covered and trying to learn how it is applied to my class
- We focus on refining our goal and strategies for gathering data and making change.
- Fairly well focused
- we are tasked oriented and looking for ways to positively impact our students.
- Focus mostly motivational, some discussion of test results and community make-up.
- Our focus has been to get all of our technology to work. We still have not been able to integrate our laptops into our lessons.
- We're just starting a new school and have yet to get our bearings. I have found that using a problem solving method shared at a NO LIMIT session has been helpful and is being used regularly in my classroom. Whether or not our PLC will implement it school wide is TBD.
- To create a learning environment so exciting that students want to come to class.
- trying to integrate a problem solving approach into the CMP materials ... as a school wide focus.
- Integrating technology into the math curriculum

February - 06:

- Right now we are focused on our PLC project. We just got it kicked off and are taking data now. Our next meeting will focus on sampling and scoring issues.
- setting up for our final project. we made a rubric for our math class and have revised it and are now in the process of scoring our first and second sets of papers from the kids.
- working on the presentation for may by continuing to evaluate the main question for this year- how student defense of work is increase by technology
- We have been working on our project for this May.
- We collaborate on ideas of how to use technology in the classroom. We help each other with troubleshooting issues and support the use of new technology. We examine student work and use our in-class research to help us develop new and better approaches to teach math concepts.
- well focused
- Data driven based on last WASL scores and area needing improvement.
- We are focusing on integrating technology into the classroom and being more comfortable with that technology.
- improvement in writing on WASL math questions
- Locating a focus for our new school.
- To make math so exciting that students want to come to school.
- Our team is researching the value of a Problem Solving format (trying to make it uniform throughout the school.) We have been focusing on the format, the problems to present to the students and the schedule. Soon we should be able to evaluate the problem solving method.

- We trying to improve our math instruction.

April - 06:

- We have been focusing on our research project results and how to score student work. We will next be working on our presentation materials for the project.
- we are working on our goal for the grant--making rubrics to use to score student work and looking at their work to give us guidance as to where we go next.
- We share different strategies we have implemented with students. Last week we spent about 1 1/2 hours exploring the OSPI site for math resources, WASL prep ideas, GLE examples, Glossary and searching other on-line resources.
- Using our technology better
- Improving WASL scores.
- working towards the presentation showing how students in our school have learned to use technology more and more to defend their mathematical thinking
- We have been looking at our student work, doing evaluations, and sharing strategies for improving writing.
- We are focused on developing and teaching strategies students may use to assist them with WASL style problems. We are also keeping data on the effectiveness of one particular strategy.
- Preparation of Year End Project Presentation.
- We are currently trying to help our students utilize technology to explain, defend and understand their own thinking.
- develop something that will enhance the students' ability to verbalize their understanding of math.
- Our team project, data collection and presentation.
- Focus is on a problem solving strategy. We have taught and taken a pre/post example. Will be sharing our results. Hoping to modify this strategy to make is a school wide strategy. (maybe even district)
- Improving students' involvement in math.

May - 06:

- Lately, we have been focusing on our research project and planning for it. Now we have accomplished it and will present it tomorrow.
- our goal was the main focus
- Our focus was to find ways to help your students better their WASL scoring.
- The focus has been steps toward reaching our team goal, improved student math communication and organization.
- Align curriculum with EALR's and GLE's. Improve students' mathematical written explanations.
- Getting our project done
- Document how students, through technology, are defending their work.
- Student reporting and defending their work.
- Use research to improve the reading of problems and the communication about problem-solving strategies. Use meeting time to better coordinate our scope and sequence with state standards.

- Our focus has been on teaching and evaluating the effectiveness of a strategy for organizing and solving story problems.
- To encourage the use of technology to defend and explain student work.
- 4-square problem solving.
- 4 square problem solving
- Alignment with state standards and school strategic plan.
- very focused on the task at hand
- what is our plan and goals for next year?
- To select and work toward the completion of our PLC project.
- We taught a problem solving method to all grade levels.
- Improving the learning environment.

October - 06:

- Right now it is all about problems with the Quizdom systems. How to operate them, how to get enough to use them with our classes and how to get software so they are actually usable (teacher friendly).
- We are refining a scoring rubric that we developed last year. We have used this rubric to score one WASL released item that students completed in September. Our second focus is to become more familiar and comfortable with using the Quizdom interact materials.
- work on the best ways we as teachers can facilitate mathematical discourse and use technology as a way to do this
- We are working to help explain their thinking and connect what they are learning to real-life situations.
- We are collaborating about how to make our students more effective as problem-solvers and how to foster independence in problem-solving. We also have collaborated on our alignment to improve our WASL test scores.
- Average
- Introducing the necessity of math later on in life...REAL LIFE CONNECTIONS!
- We're considering a focus for our group study project. We're attempting to implement the Quizdom SRS technology...but we're struggling.
- Currently, we're coming up with a classroom inquiry project. We're debating a focus on problem-solving method intervention and/or a student discourse study.
- To increase student engagement.
- We met to discuss our yearly goals and how we were going to collect evidence to show student improvement.
- We completed working on a rubric to determine how well our students are learning to write responses and explain how they solved a problem. We used it, revised it and are ready for our next 'test' in January.

December - 06:

- We have been dealing with the problems with Quizdom. So far, nothing has changed. We don't have enough remotes, or software to use it for drill / practice. No decision or movement has been made by the ESD despite our requests.
- We are trying to put together a career day in which students will be exposed to how math is used in everyday life in various careers.
- Using Quizdom effectively

- We are looking at how technology can help further student discourse and understanding
- We are continuing our work with helping students make real world connections with what they are learning in math class.
- Analyzing student work and discussion on how to improve instruction. Learning and practicing uses with the new technology.
- Real life application of math.
- 4-square WASL prompts to increase student discourse.
- We're determining the type of classroom inquiry projects we will implement this year. We may involve metacognitive processes in conjunction with problem-solving strategy instruction.
- To increase student enthusiasm for math or higher percentage of participation.
- Student discourse and problem solving methods.... preparation for WASL ... strategies
- goals for the year

February - 07:

- We are continuing to discuss our problems with Quizdom. We are trying to come up with a project.
- Rubric for assessing WASL type questions, Quizdom, Curriculum alignment
- working towards exposing students to math in the real world
- We are working to help kids make real world connections with the math they are learning.
- How to troubleshoot Quizdoms. We want to be discussing student work and planning how to adjust our teaching based on assessment.
- A power point presentation illustrating examples of tech use in our classrooms.
- student engagement and understanding of functional (real life) application of math.
- We are in somewhat of a flux. Currently we are thinking about ways to use our knowledge of technology to influence and help other teachers in the school.
- Planning for our end of year project.
- progress toward our data gathering project on how students are progressing toward the WASL format type problems
- Survival. We're beat. We've lost our focus given the demands beyond NO LIMIT! I, for one, cannot both case manage IEPs and plan for my classes effectively.
- Our Plc has been trying to focus on a project to present that is meaningful. We have also spent a lot of time trying to work out the 'bugs' in quizdom. and share what we are doing in our classrooms.
- The focus of our PLC meetings have been two parts. We usually discuss how technology is being used in our classrooms. Then we discuss our action plan to show how technology is affecting our students.
- To increase enthusiasm and participation in math.

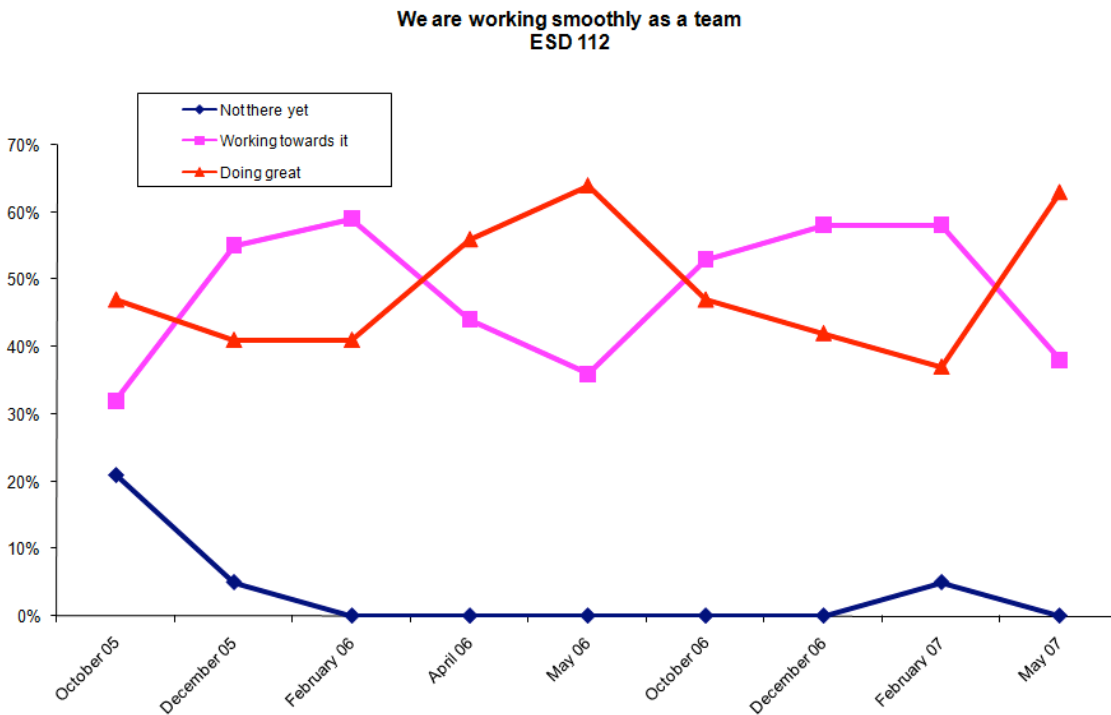
May - 07:

- Our focus has been on our final project and technology issues.
- We focused on our goals and how best to get students involved in a way to show growth.
- Varies from meeting to meeting - analyzing student work, collaborating on technology use, planning our end of year project.
- To increase on task behavior during math class.
- Using our tech. most effectively

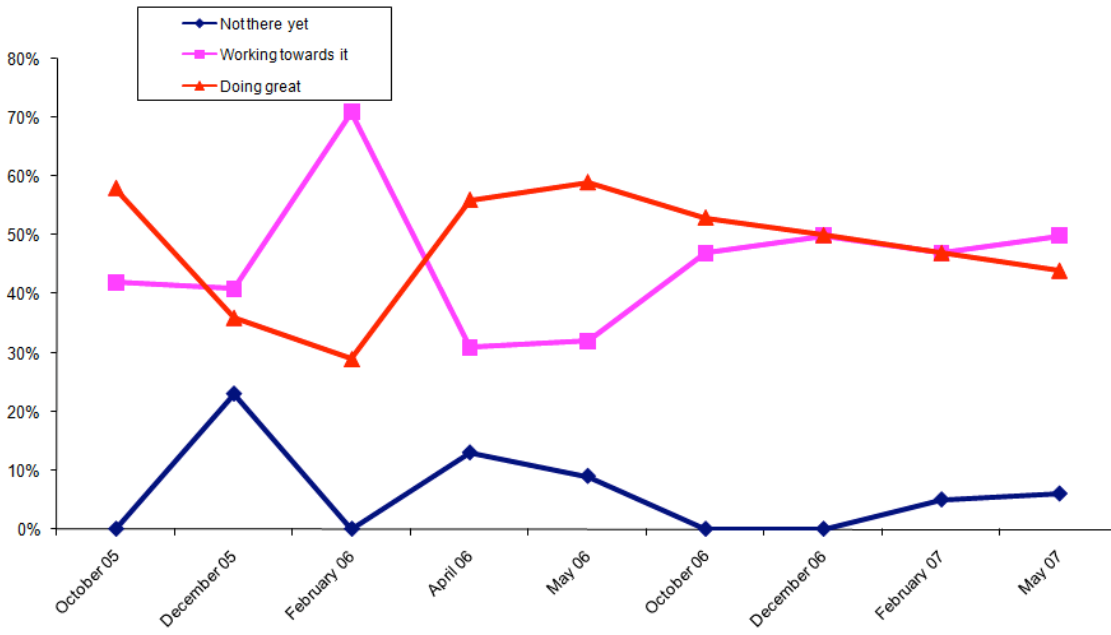
- Bring the Real World of Math into the classroom and using technology to help further mathematical discourse in the classroom.
- Bringing the real world into the math classroom.
- Improving student discourse on mathematics.
- Becoming competent with technology and implementing it throughout the curriculum.
- increasing dialog between students
- looking for a new curriculum, find a new High School math teacher, and focusing on Math vocabulary for the year
- Deciding what we might do with additional resources and preparing our final presentation.
- Streamlining some of the curriculum. Working on questioning strategies and putting together our project
- Providing evidence that technology increases student participation.

Item 19:

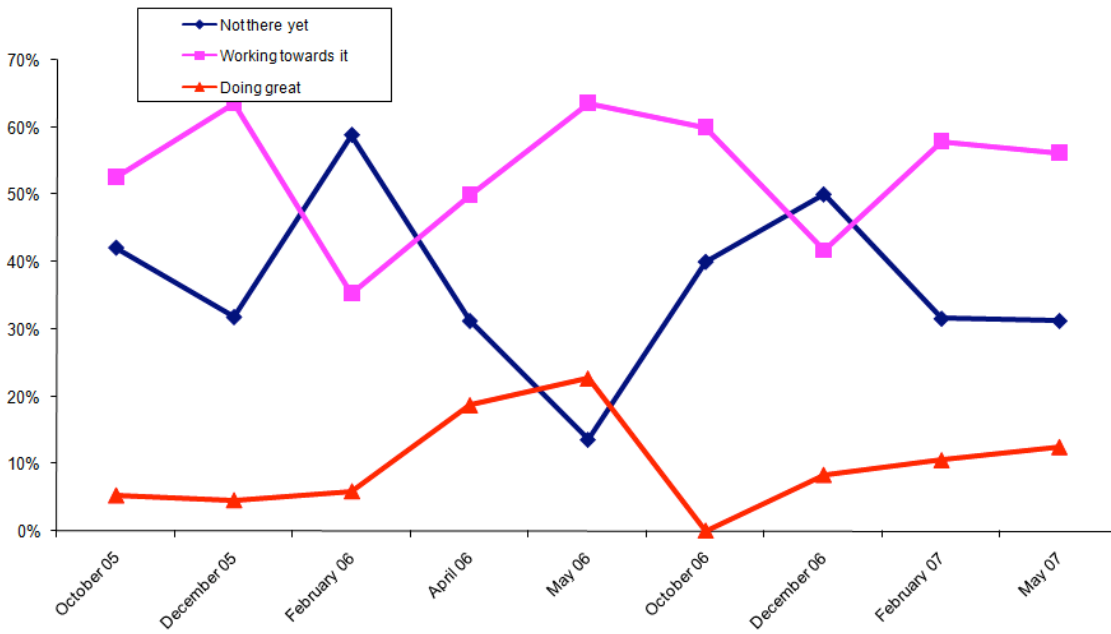
Please evaluate the effectiveness of your PLC meetings.



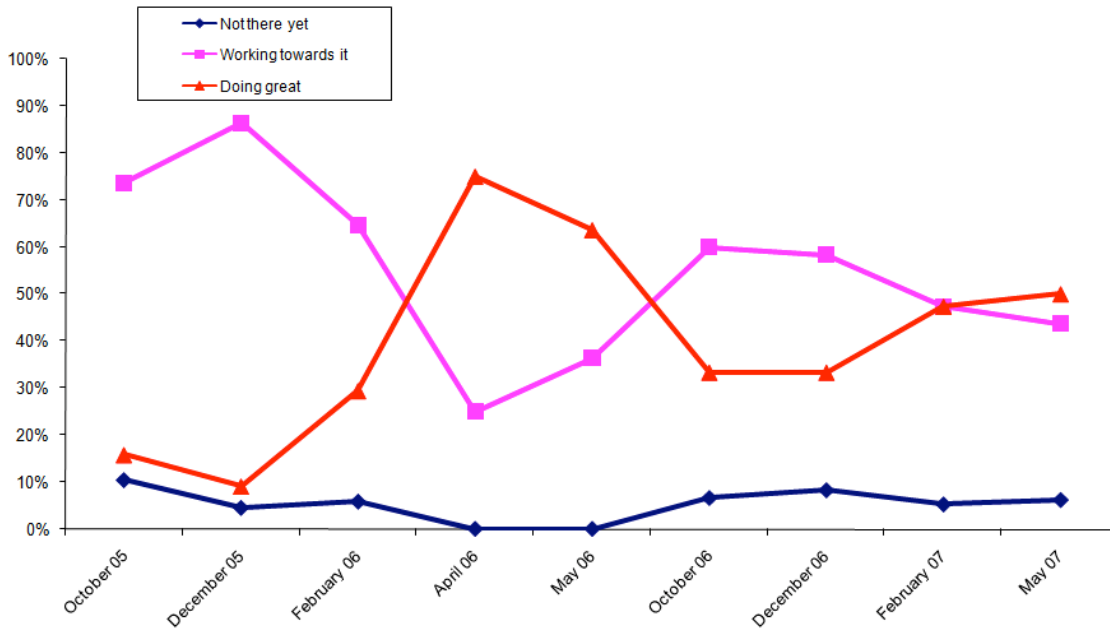
**We are maintaining a regular meeting schedule
ESD 112**



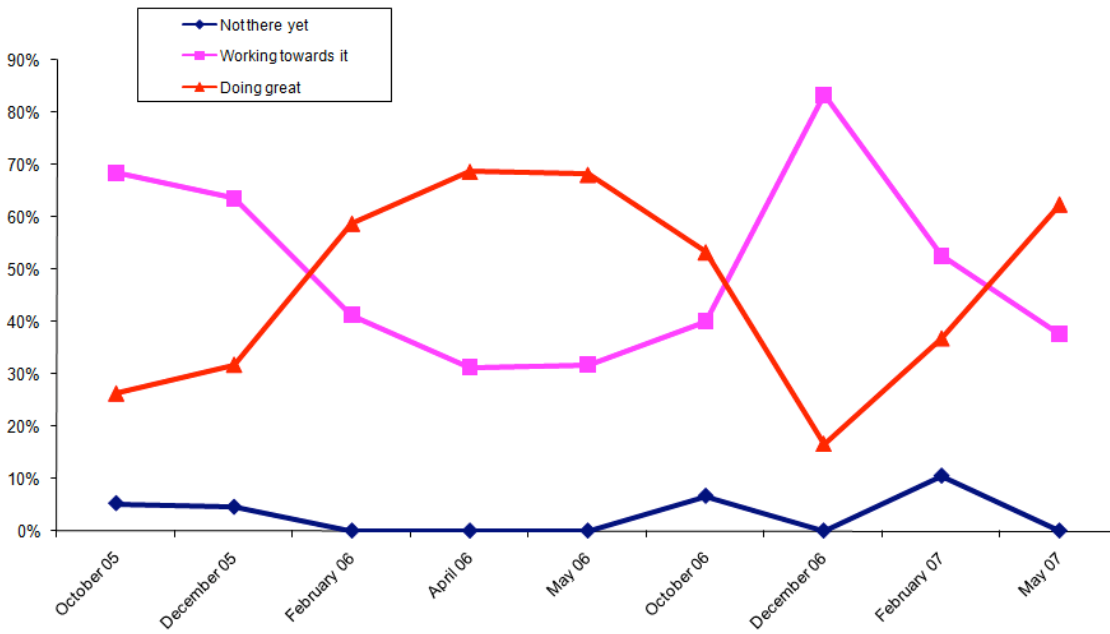
**We are reading and sharing research
ESD 112**

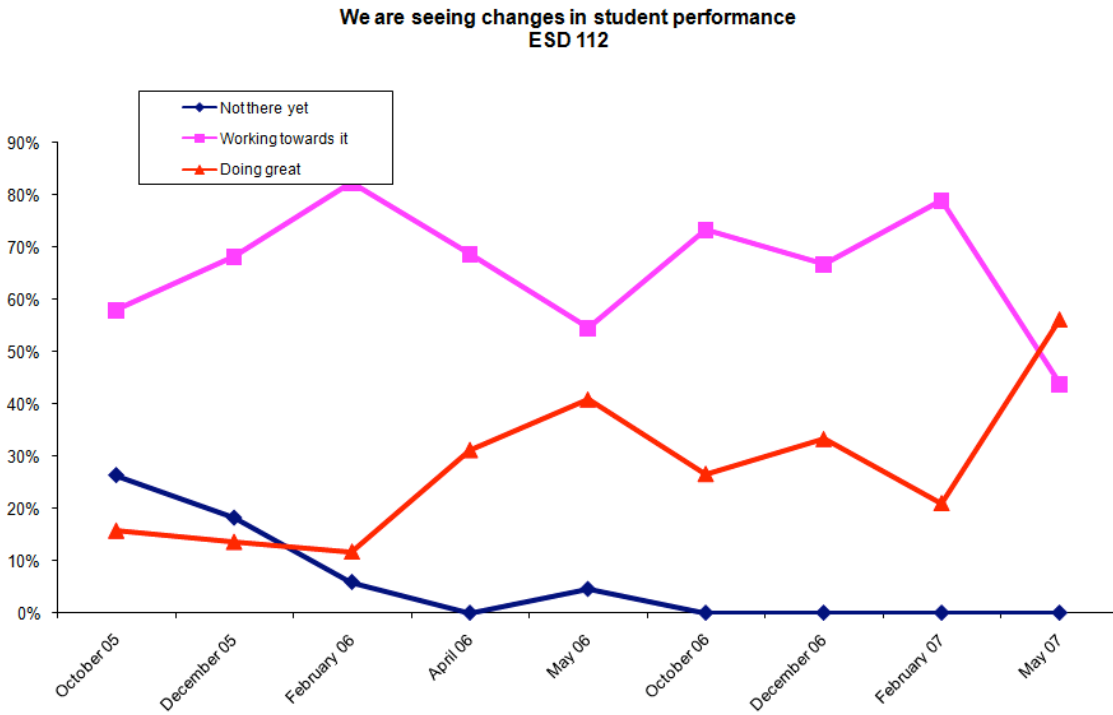


**We are using new teaching strategies in the classroom
ESD 112**



**We are maintaining focus on our goal
ESD 112**





Comments:

October - 05:

- Now that we have some technology in the school, I expect that student math performance has already improved.
- 4 of the 5 of us are already working together as a 5/6 team and meet every Tuesday during a common prep period. Our discussions are not always about Math/No Limit! but we do discuss math regularly. In terms of the entire group of 5 meeting specifically as a No Limit! PLC, we've got a ways to go.
- It's pretty early in the process and we've been swamped with parent conferences and mid-terms.

December - 05:

- Our goals were somewhat vague until recently. Pinpointing our goals has been helpful in giving direction to instructional strategies we hope to incorporate; assessment tools we plan to use; and results we open to observe.
- Our question is hard to quantify but we are having a meeting next Monday and I am looking forward to sharing with my colleagues on what we have found so far
- I appreciate the collaboration opportunities.
- At this point, we are working towards our goal. It has only been three months, and we are a new school. I imagine we will see greater results as we approach the end of the year.

February - 06:

- Several of our members do not share the same enthusiasm for meeting. This isn't of course the most fun.
- Some more than others

April - 06:

- We are a new school and staff doesn't know each other that well. Taking that all into account our PLCs are making gains, but maybe at a slower pace than other established schools.

May - 06:

- Our research project was a good one and everyone in the PLC participated in it. Our students' math performance also improved.
- Time is always an issue. I work in a separate wing than the others. We do not have common preps and we are often committed to other things after and before school.

October - 06:

- We're HOPING to see changes in student performance, but we won't know for sure until we test them in January. Not that we can't see growth all along, but we want an ironclad way of measuring their growth.

December - 06:

February - 07:

- we are comparing 3 papers at different times during the year to see if students are getting the process down.
- This is a group that is in its' second year, things are not going as smoothly as they did last year, as we are where research says 'past the nice stage'. We are all busy professionals, and some off the people are not 'playing' as nice as they could.

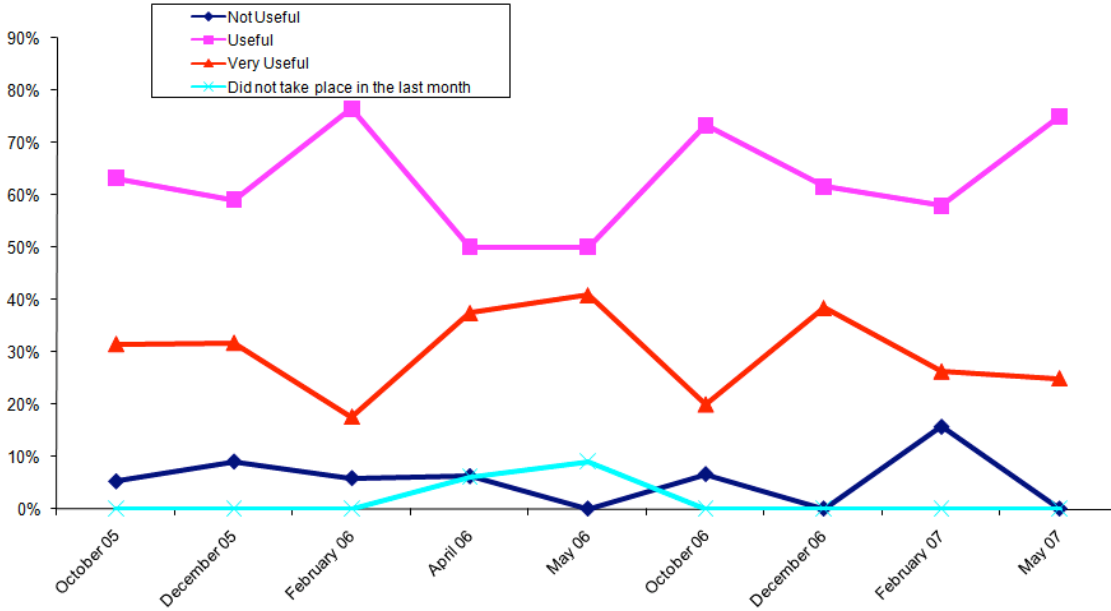
May - 07:

- Our second year was much more difficult to stay focused compared to our first year.

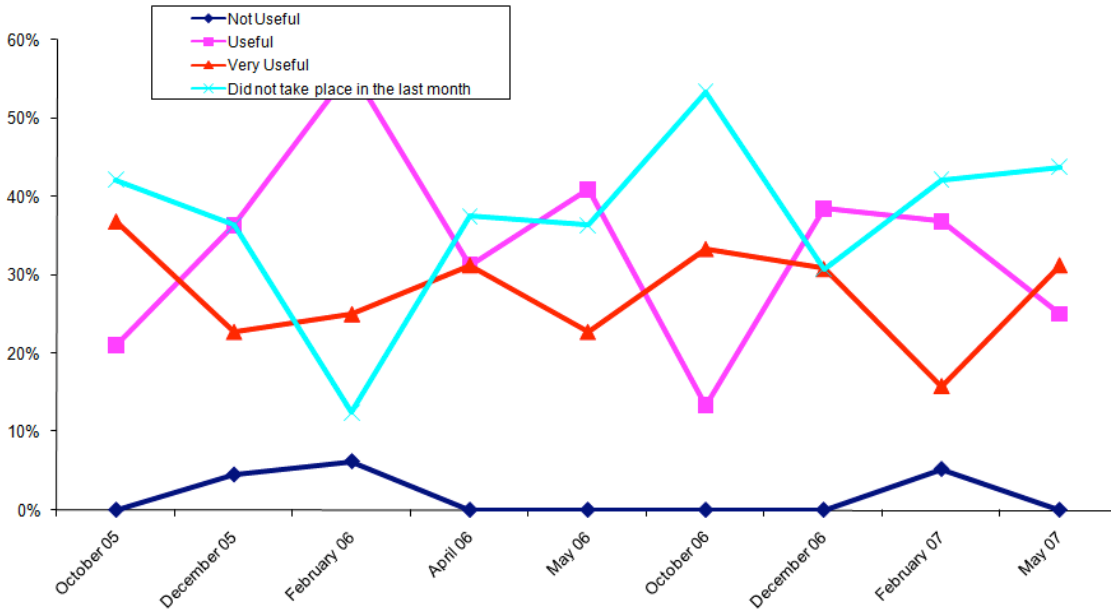
Item 20:

Please evaluate your PLC over the last month.

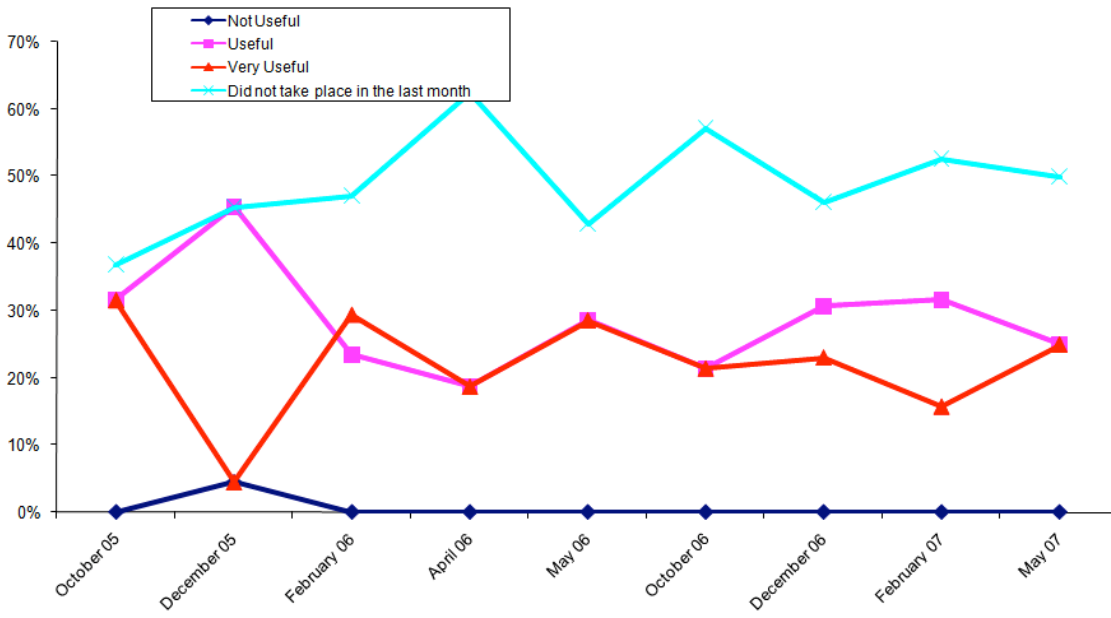
**You participated in PLC meetings
ESD 112**



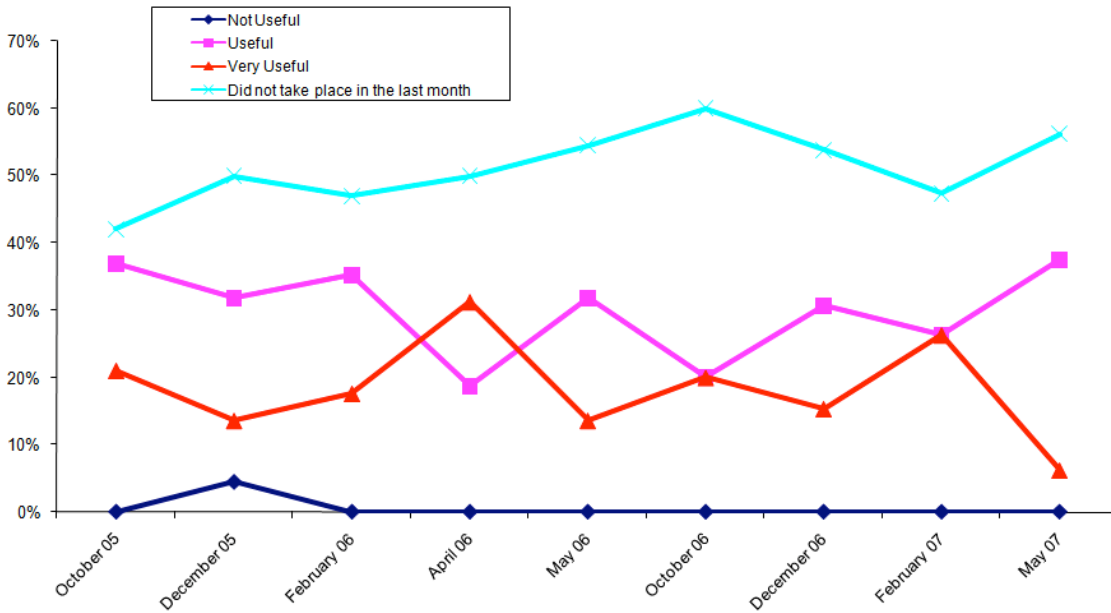
**You collaborated with other teachers in your PLC to plan or teach lessons
ESD 112**



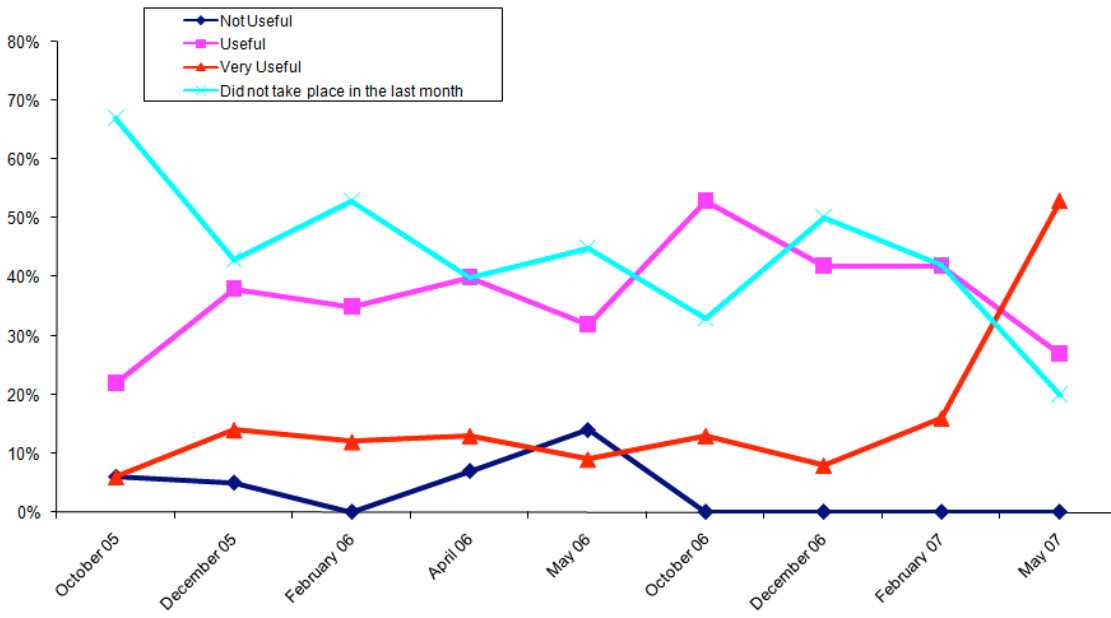
**You worked with teachers in your PLC to align curricula across grade levels
ESD 112**



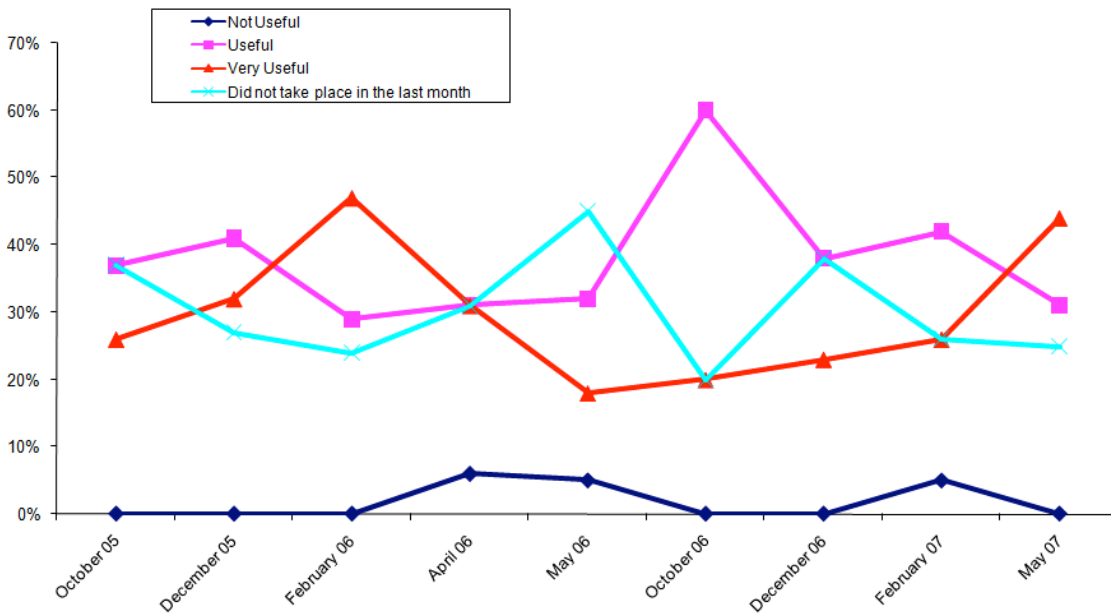
**You worked with teachers in your PLC to align curricula with state and/or national standards
ESD 112**



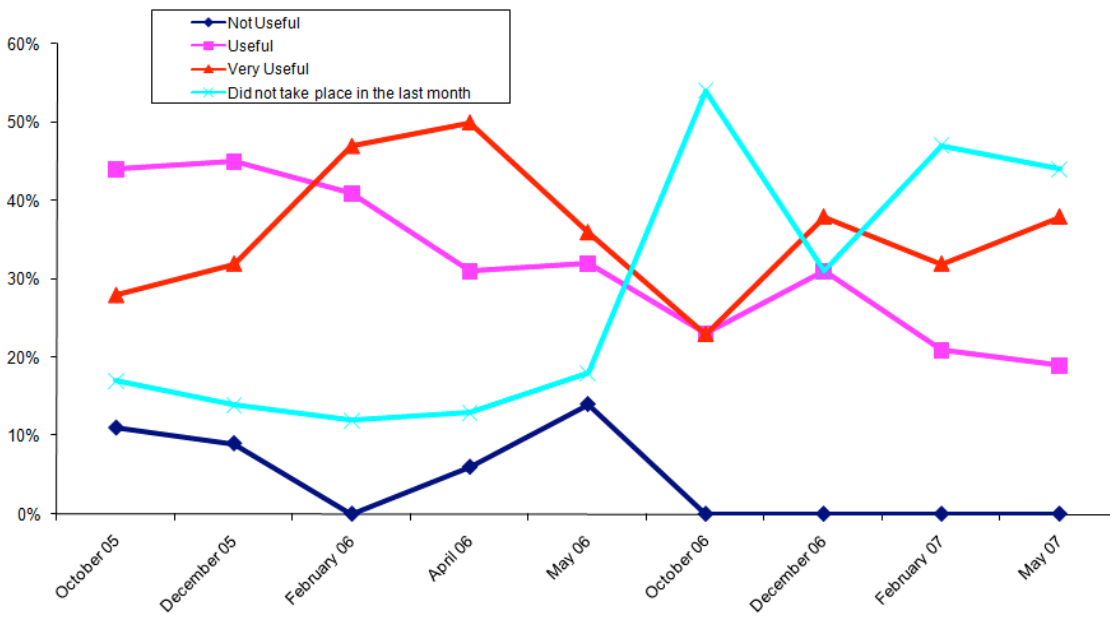
The MIS helped with schedules, logistics, or administrative issues
ESD 112



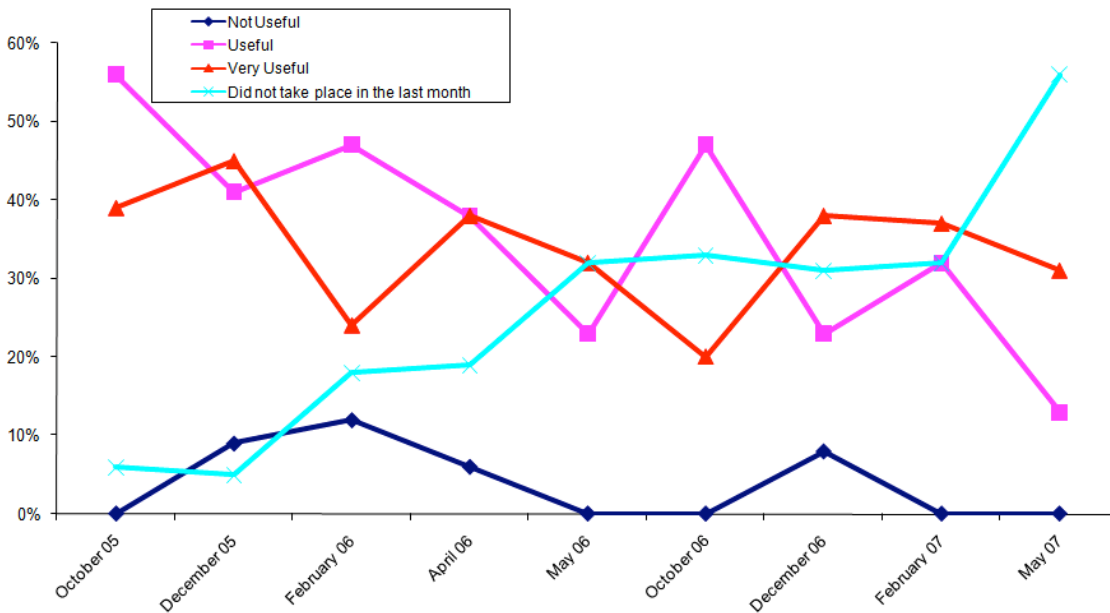
The MIS helped with technology
ESD 112



**The MIS provided instructional resources
ESD 112**



**The MIS facilitated a Professional Learning Community meeting
ESD 112**



▪ **Comments:**

October - 05:

- We are now working on the format for teaching math problem solving (documentation) as a PLC.

- We are just beginning to work on aligning curricula across grades; we did this many years ago however different curricula is being used now. Our new Math Committee is going to make sure that our curricula is meeting state and national standards and above all meeting the needs of our individual standards. We have a 30% American Indian population that is continually not meeting standards in Math, we are looking into speakers, books and any information we can find about how culture impacts the learning of Math, and what is the best way to teach it, so that all the students, "get it".

December - 05:

- Within our district, alignment of curriculum with the EALR's has been an ongoing process for 5-7 years. I really feel this year that we are not only fine tuning this process, but the practical application of curriculum is becoming much more evident. In the past, the application was still too "lofty" without specific, attainable goals.
- We need more time to work together. The collaboration is really appreciated.
- I am not actually sure if aligning curricula took place last month or the month before. It seems like it has been part of the discussion actually every month at least a little.
- This really is a focus of ours. We have a TOSA who is awesome to work with, who helps us align our curriculum and goals.

February - 06:

- None

April - 06:

- We have recently had a tragedy in my school. My student teacher died in my classroom. I have not been as involved in PLC matters since that time because I'm a bit overwhelmed.
- As is the case in all areas of teaching, we could always use more time. This past week was a treat as we were able to use building early release time to work as a PLC.

May - 06:

- We worked together to bring the 4-square strategy into every math classroom in the school.
- The last statement took place at the beginning of the year.

October - 06:

- None

December - 06:

- We also have teachers who are not on no limit, who are working with to do these activities. We have a math TOSA who does a lot of this work!!! So not just a PLC focus.

February - 07:

- We also do a lot of work with our district math tosa. It seems to run a lot smoother, as she is a leader. And our No Limit group is struggling with a 'leader' position.

May - 07:

- None

ESD 113**Year Five****Training and professional development provided for teachers: amount of time, dates, and content**

- August Institute, intro to NO LIMIT, effective lessons, teaching standards, My e-coach, August 9-11
- WASL Scoring Training, teachers learned how to score WASL items and use them in their classrooms with their students, November 18 and January 6
- Problem Based Lesson Planning, teachers learned how to transform traditional lessons to problem based lesson, December 2
- Spring Institute, teachers learned how to use effective questioning techniques and how to enhance classroom discussions, looked at student work, read research regarding specific math content areas, and experienced worthwhile mathematical tasks in those content areas, March 23-24

Conferences attended by teachers (please note if any presented at conferences)

- I have seen our teachers at these conferences: NWMC, OSPI winter conference

Conferences attended by you (again, please note if you presented)

- NWMC, OSPI winter conference, PDG conference, NECC (did not present)

What PLC structures were in place in Year 5? Why were they structured in that way? Were they different from previous years? Why?

- Our PLCs used My-eCoach to track their progress and develop a project around their identified content area. The beginning of the year focused on assessing where the school was at using data and then using that information to inform the mathematical content focus for the year. Our teachers then used a survey to look at their teaching practice and used that information to identify a professional goal as a group for the year. We capitalized on our strengths by attending different PLCs and modeling lessons at different schools. No one MIS had their own school, we had a shared responsibility in all of them.

Math curricula in use by NO LIMIT! Teachers

- Centralia: EDM and CMP
- Aberdeen: EDM
- Oakland Bay: McDougal Little Integrated
- Mt. View: Growing with Math
- Raymond: Trailblazers
- Pioneer: CMP
- Elma: EDM, MS Scott Foresman, HS Glencoe
- McCleary: Scott Foresman

Technology purchased in Year 5. How were the choices made? Were teachers happy with choices? Were you? Why or why not?

- Choices were made by the PLCs, with recommendations from the MISs. Since money was limited, most were able to purchase just a document camera, laptop and projector. Those who already had some of this equipment used their money to buy peripherals such as printers.
- Raymond purchased extra iBooks for their laptop cart, digital cameras, and graphing calculators.

Successes and challenges of Year 5

- Success: Using My-ecoach for communication and their project. PLC meetings were generally productive.
- Challenge: Not having one specific school that we were responsible for. Communication and the sense of buy-in suffered because of that. Attending all of their PLC meetings cut into the time and travel budget for classroom visits.

Plans for Year 6. How is your ESD adapting to the reduction in funding?

We will have almost half as many schools, but we are planning on assigning a lead MIS to each school so that we can increase continuity for the PLC.

Year Six

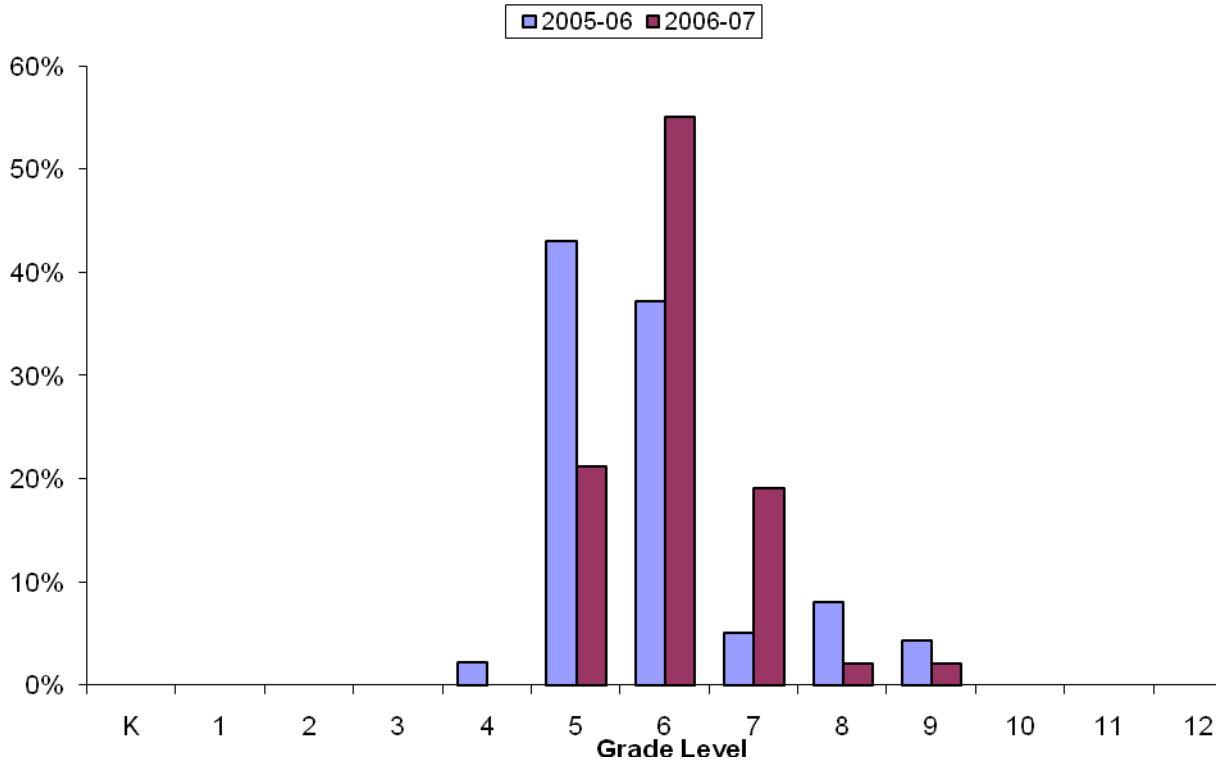
No report received from ESD 113. Teacher Log data for Year Six appears with Year Five below.

**Log Report 2005-2007
ESD 113**

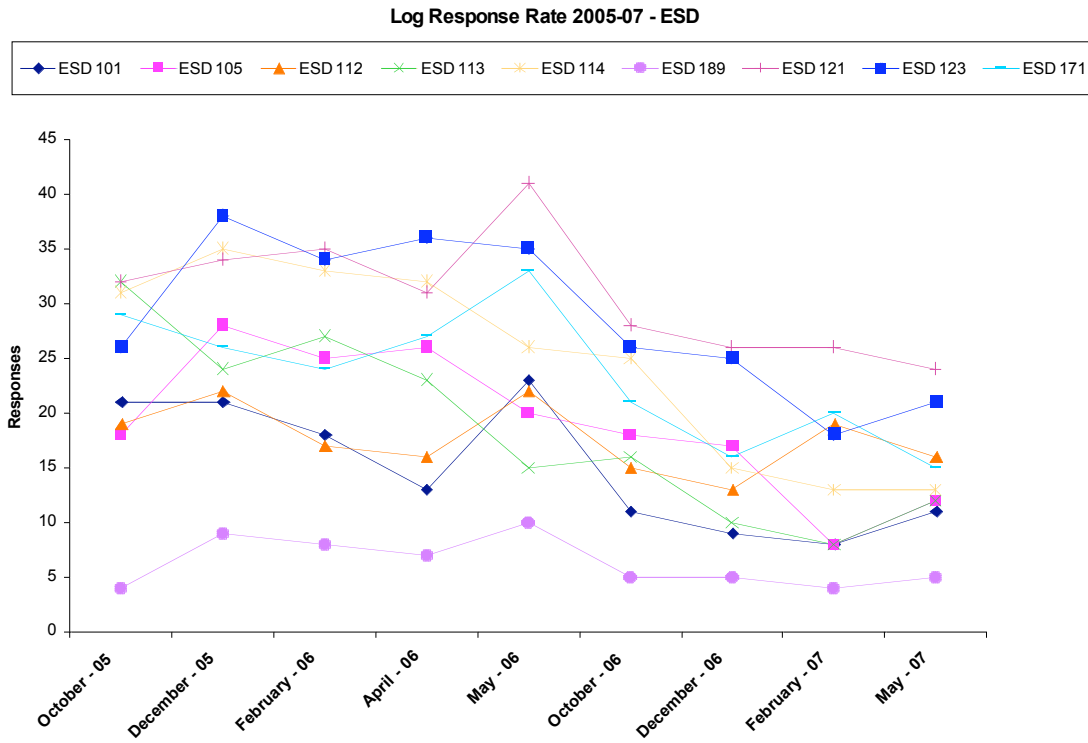
Item 6:

The grade levels you teach:

2005-07 Grade Level Participation - ESD 113



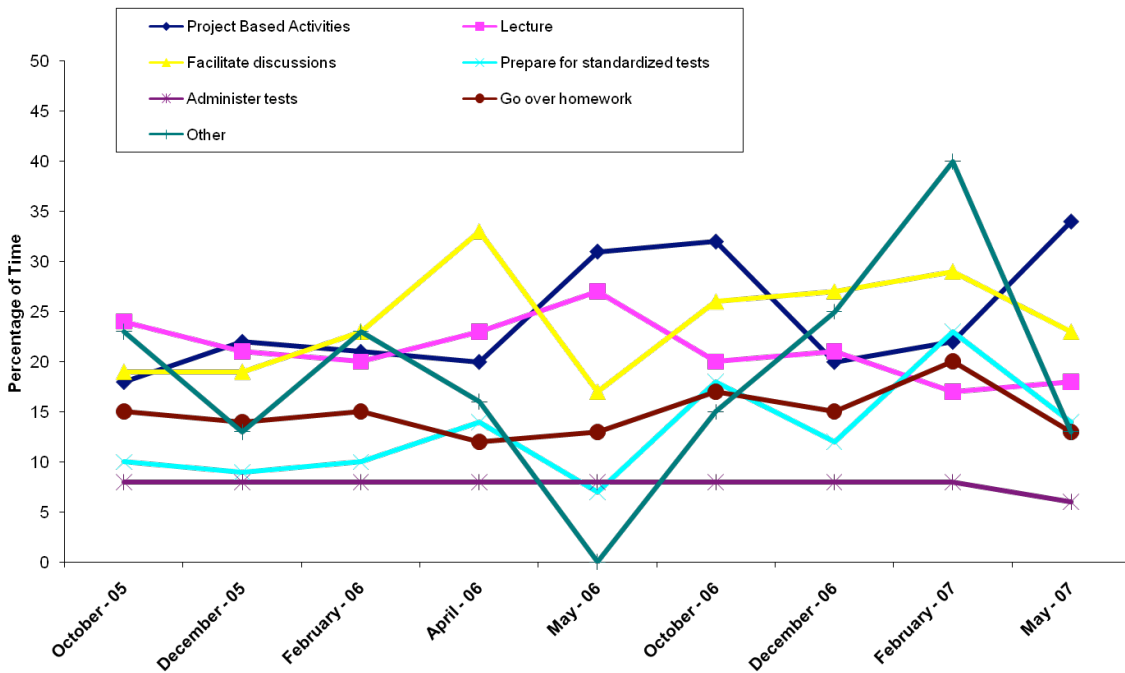
Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?

Classroom Activities in an Average Week - ESD 113



Other, please specify:

October - 05:

- Other: time in class to work on assignments; computer time doing projects or working on practicing keyboarding skills; reading in class (either silent reading or me reading aloud); I am not clear if the above is referring to math or includes other subjects. I answered for all subjects considered together.
- Hands on activities and manipulatives
- Things not having to do with math (assembly behavior, pictures, blah blah blah)
- Student work time
- Allowing work time/students to teach one another/monitor student activity
- Other practice of math concepts
- Wasn't sure if this was to be over math or all subjects - - Also didn't know if it was suppose to add up to 100% or not. Hope it makes sense.
- Our program is Everyday Math which dictates a set number of journal pages every day. Also included is a Math Box with review exercises, practice computations and preview items of future lessons. We go over these pages together depending on difficulty and I monitor their progress everyday.

December - 05:

- Behavioral issues; classroom management; this is a big issue this year with my group; hard to keep them from blurting out, disrupting, interrupting, generally being off task
- Working on Basic arithmetic facts.
- Allowing time to work in class when I can assist them - or they can work with their peers.
- Student practice of concepts
- Math games and review
- Facilitating literature discussions
- Not sure if this is needing to add up to 100%
- Student work time on assignments.
- Technology based activities

February - 06:

- I spend too much time re-teaching the previous assignments.
- Every lesson is preparation for the WASL . The students also do Math Activities on the computer that are on line and published by our Every Day Math Curriculum.
- Work time, assisting students, ...
- Student work
- Discussion
- Provide class work time for students to work on the assignment.
- Student work time on their assignments
- Math games/activities
- Videos, reading aloud, other activities too numerous to mention. We have been doing much testing since the last survey.
- I spend at least 10% of my time preparing for and setting up lessons.
- Helping students engaged in assignments, such as fielding their questions (10%).
Administrative tasks, such as taking roll, entering grades, giving out progress reports, etc (10%).

- Problem solving strategies, writing about math, and how it all fits together.
- puzzle problem solving fun activities

May - 06:

- We have been doing a major project this past month, in which students have had to research and write about.

October - 06:

- I'm trying harder this year to have more student discourse and less teacher lecture.
- Basic Facts work
- These all tend to bleed into each other.
- Homework time
- Everyday math has games to use to reinforce skills

December - 06:

- Variety of activities; hard to give an exact % amount for the above categories; it changes from week to week as well.
- I struggle with how to do project based activities and still cover the GLEs , item specs, test specs, Sample WASL test items and the Every Day Math curriculum we use in 5th grade. I would like to do more project based activities that are connected to GLEs instead of just projects for the sake of doing a project.
- Everyday is a prep for tests. If we just taught how to take a test, students would not learn the philosophy behind math!
- Still wondering if this is needing to add up to 100%

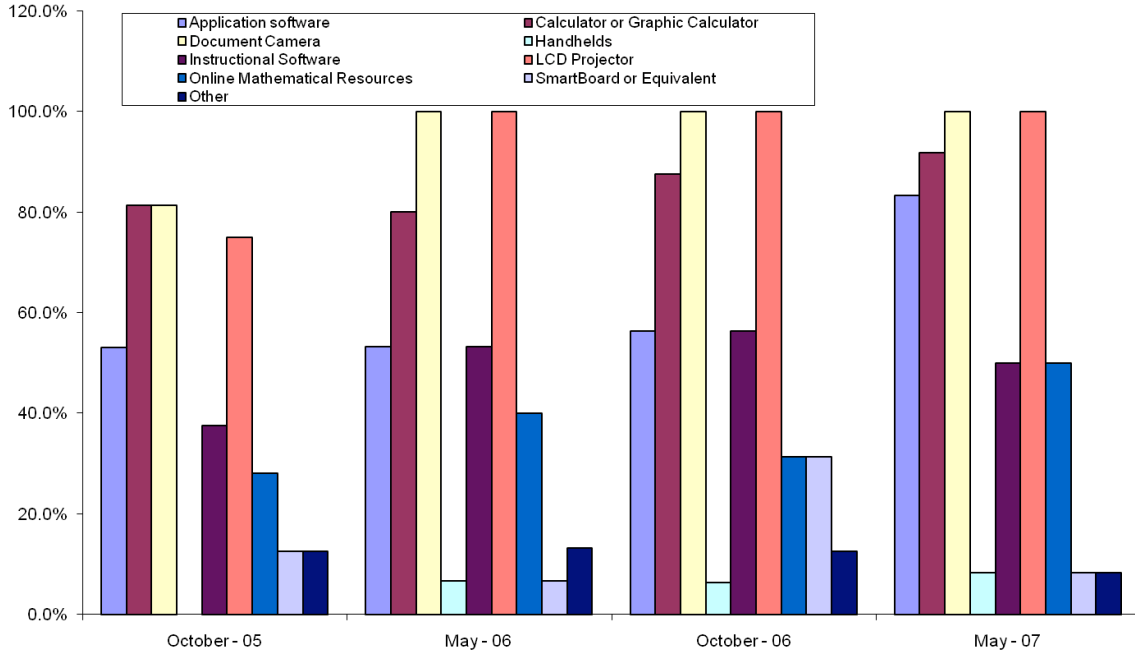
May - 07:

- Where in WASL prep/ online research

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.

Type of technology available to participants
ESD 113



Other:

October - 05:

- Digital camera, 14 students computer stations
- Overhead projector, 1 teacher comp.
- Aver media
- Einstruction

December - 05:

- 14 student computers
- Aver media
- Math Safari
- Lap top

February - 06:

- Aver media

April - 06:

- Digital camera and video camera, wireless microphone, 13 desk top computers , printer, 30 Alpha Smarts,
- Alpha smart

May - 06:

- Digital cameras video cameras, alpha smart
- Alpha smart

October - 06:

- GPS Units w/ mapping software
- Instructional CD's

December - 06:

- Aver media
- Camera, desk top computers

February - 07:

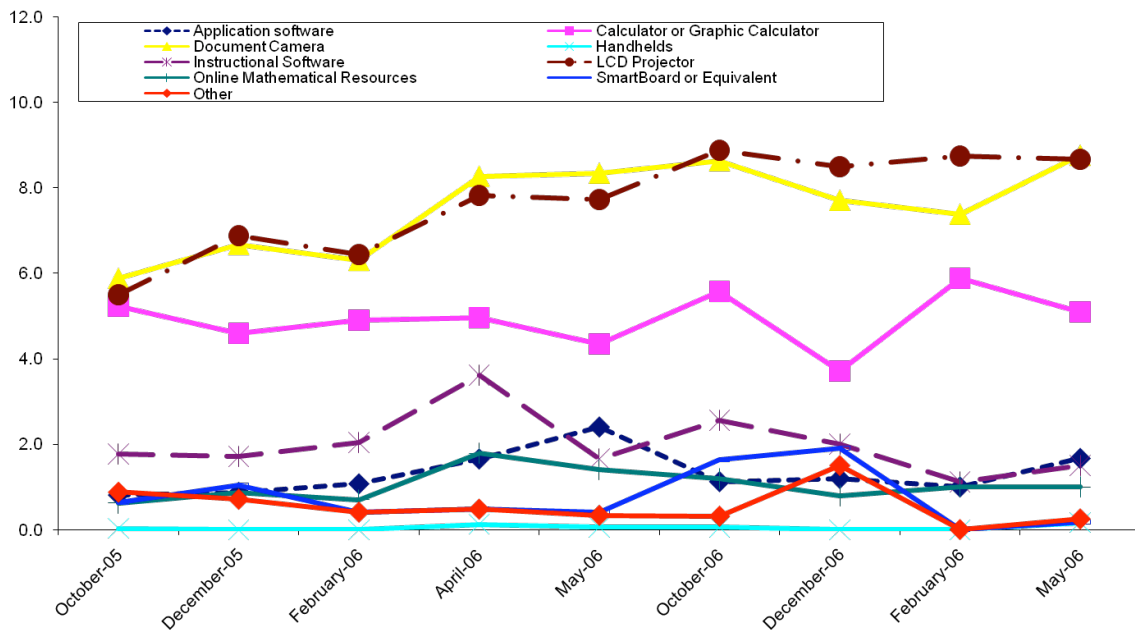
May - 07:

- Einstruction

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.

Frequency of use of technology over the last ten lessons
ESD 113



Item 11:

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- Sharing of their work using the document camera/projector. This stimulated discussion/changes/corrections among other students as work was shared in class.
- Comparing steps of how to multiply decimals. The students used paper, compared on doc camera, and used calculators to check
- They use computers to do Orchard Math.
- Document camera to explain and demonstrate problem solving strategies
- Calculators to work with exponents, computers to find roman numerals and their equivalent numbers
- We used calculators to for algebra. We use the document camera and projector daily for lessons and student examples. We use computers daily for math games and lessons.
- During the last two months and on a daily basis I present my math lessons using the doc cam and a projector. Most times the students are asked to use this technology to present their thoughts, questions, and learning to the rest of the class. Additionally, the doc cam has been used to further student's knowledge through various math websites.
- The technology in my classroom is often used in the "Problem of the Day" group work activity.
- The base curriculum requires the use of calculators.
- Students share their methods of solving problems in writing and with manipulative under the document camera
- I don't have all the technology items installed in my room yet...
- They have used calculator during their math lessons during the past week. They have to use calculator about twice weeks.
- We use the document camera everyday to share different methods for solving problems
- The document camera is used to have students help share their solutions. Also this is great to discuss strategies being used to solve problems.
- When discussing problem -solving strategies, they projected their mathematical processes onto the screen, and we discussed different ways to solve a problem.
- Class discussions of graphs using the document camera and projector
- They use Orchard math on a weekly basis
- Explaining how to select a strategy for solving a WASL type problem and showing how to use that strategy.
- Students used the document camera and projector to share graphs that they completed while doing a project. The class was able to discuss the graphs and any differences that arose.
- Students display their individual work that illustrates their solution to problem solving questions.
- We have done some open-ended problem solving questions that students explain their reasoning and share them with the class via doc. cam
- We went on NCTM website and played the factor game (we also played the paper version)
- My students have used the ELMO and projector to show the steps they took to solve a problem.
- They use calculators on a daily basis to check their thinking.

- Explaining answers to the class and explaining how they arrived at their answers
- We used calculators to discuss and figure square numbers and square roots. We have used them for positive negative numbers and finding value of numbers with exponents. Also to get them more adept and using their calculators they trade papers and correct with them.

December - 05:

- A fraction activity that utilized shapes to consider a different way of looking at fractions, especially the relationship of part to whole
- Graphed using excel, the results of survey
- We review story problem solving (review for WASL) once per week and discuss various strategies which can be used to solve mathematical problems. Students share their knowledge through the use of the document camera. Sometimes this involves use of the calculators as well.
- Document camera and projector to share, explain, and support their solution to a problem.
- Working through WASL problems, scoring them, working in groups to decide whether answers were good or bad and how many points they were worth. We used an LCD projector and document camera.
- We used the document camera to share students' problem solving techniques for order of operations.
- Using calculators to determine mathematical division patterns.
- Figuring formulas for spreadsheet
- Students used calculators to develop an understanding of multiplying and dividing by powers of 10
- WASL prompt with table discussion . . . students used calculators and discussion to find solution. Then presented their solution to the class using the document camera.
- We are using the document camera and LCD projector to share student work which also stimulates student led discussions.
- CONVERTING FRACTIONS TO DECIMALS AND PERCENTS SQUARING NUMBERS FINDING THE SQUARE ROOT OF NUMBERS
- Sharing their work with each other to discuss problem - solving strategies
- Students share solutions with document camera
- Using the Orchard Math program and the document camera to present work
- Students have been using the document camera to display their work to the class while sharing how they came up with their solutions.
- Students display their step-by-step algebraic solutions to various problems.
- Work with fraction with pattern blocks on document projector
- My students haven't had access to a document camera and projector because they haven't arrived yet or aren't installed yet. The Math Safari is used as an activity when class work is done and is sometimes used often and other times not much.
- We project our work to talk about the steps, what worked, what didn't, etc. We played a math factor game online.
- The main type of technology that my students use is calculators and graphing calculators. They use these on a daily basis.
- Problem solving web quests. Where in Washington Video conference

February - 06:

- Students came up in groups to show and explain their problem-solving /steps using the ELMO and projector. (My document camera and the educational games I have ordered are in the process of being shipped. There was no place on this form to give that information.)
- They played math hangman with the projector and guessed each other's problems
- We created line graphs using data from our science investigations in growing various seeds. Students had to figure out labels, and input data from earlier recorded information. Students presented their findings at our District Technology Fair and were available to explain to the community members who came to our classroom booth.
- Displaying work under the document camera and explaining what they did.
- Students used their calculators to multiply decimals and place them from least to greatest. Students used the document camera to explain their work to the class.
- To prepare for a chapter test my class recently used illuminations website to practice using fractions.
- They used calculators to determine mathematical sequences.
- Presentation of work with projector. Calculators to allow for more difficult work.
- Students showed various solutions to a perimeter question under the document camera and explained their thinking to the class.
- We discussed how to find a perimeter of a non-rectangular object, like a hand, and students discussed in teams, found a method, and presented to the whole class utilizing the document camera.
- When students are trying to find the perimeter of an L shaped surface that doesn't have all the sides labeled they show each other how they solved the problem using the document camera.
- Looking up information via computers using math web-sites
- Students share their work with each other using the document camera and LCD projector
- Use of document camera/projector to share and discuss work
- Recently, we were working through a chapter review, and I had students use the document camera and LCD projector to show how they solved problems.
- Use of calculators to determine effects of multiplying and dividing by powers of ten.
- Use of calculators almost daily to justify answers / occasional use of doc. camera to share results with others.
- The students use to projector to display their assignment solutions.
- My students used lessons from my e-coach locker in science.
- They used the document camera and projector to show and explain their work to the class.
- We have been working on fractions, decimals and percents. Student have been using their calculators and sharing their strategies with the class using the doc. cam and projector.
- Students display answers to today's number and discuss whether the equations work or not.
- They use calculators to assist them in their math assignments/tests
- Reviewing WASL sample questions they answered and scored and then explaining to the class

April - 06:

- Calculating and analyzing data from larger and larger samples; predicting what results would be as larger samples were collected.
- Computer games as partners

- Recently we have been learning how to calculate % using cross multiply and divide method, or other regular methods. I had students use the doc. camera to show their work and prove their answers. I reward any student by giving bonus bucks that we use with our checkbooks.
- Showing examples with the Document Camera to the rest of the class.
- They have been using calculators to multiply percents and decimals. They have used the document camera to share their answers on WASL prompts.
- Peer teaching
- Students used the document camera to share their solutions
- The students logged onto the OSPI site that had examples of lessons in the 5 strands and a Super Math Game. The students have also been using calculators to find the mean (average) of collected data. The students explain their process for solving math problems daily using the projector and ELMO. The students have also been using the Software that goes with the Everyday Math program that has games for each unit of instruction.
- Internet as a resource
- We just got our LCD projector so we have used it a lot to show each other how we got our answers.
- Students share their work on the document camera. They discuss processes and share how they did their work.
- Writing thoughts about a math problem on the alpha smart
- My students have used the projector and document camera to display work and discuss problem solving strategies.
- My students often use the document camera and projector during class discussions to demonstrate how they solved a problem.
- Pattern blocks on document projector to demonstrate rotational symmetry
- Used computers in the lab to access web sites which illustrated polygon transformations (slides, flips, and turns).
- The show their work using the projector and document camera on a daily basis. We have also been using our calculators to calculate decimal and percentages.
- We use the document camera and projector to display student work as it is discussed.
- Students share their work by using the document camera and projector. This aids in discussions about how they solved particular problems.
- Teaching others the methods used for solving mathematical problems

May - 06:

- We have been using tangrams to discuss tessellations. Students have used the document camera to share their patterns
- Document camera to display their explanation of a strategy.
- Giving examples on the document camera. Sharing work with other students under the camera.
- Before every math test I try to involve math games from the internet that relates to the subject that we have been studding. Also, over the past two months I have implemented our NO LIMIT projects. The class has really enjoyed the use of the computer.
- Presentation of work with projector.
- Students' used the document camera to display answers to questions
- Students used the document camera and projector to demonstrate various ways of finding perimeters and areas of polygons

- Students share work with document camera.
- Document camera/projector to share solutions
- The students present their work and problem solving skills to model or explain their work and how they solved a problem. They also have modeled solutions using manipulative.
- They used the document camera to show their solutions to geometry based problems such as area and circumference of circles. Displayed their polyhedron drawings.
- They worked with probability through internet games.

October - 06:

- Discussion of WASL practice tests; different strategies; evaluating other answers
- I used state released WASL practice problems, and had students discuss the answers and explained their reasoning and strategies to the class. They used the LCD and document camera to show their work.
- Before the document camera broke down, having teams discuss and explain their problem solving method really makes them organize and evaluate what they have done.
- Students show their work under the document camera and explain their rationale for coming to their answer.
- When discussing our problem of the day, they do this.
- On a WASL style question, students took turns showing how they got their answers and questioned each other.
- Students share their work during warm-ups and discuss processes.
- Used graphing calculators to make a graph in order to find the approximate point where two equations are equal.
- Students use the LCD Projector and Doc. Cam. To share their work with other students, this gives students opportunity to think out loud and other students a chance to see a problem solved in a different way.
- They used LCD and doc. camera to show how they solved geometric problems
- We are studying scientific notation and they are using calculators and small group learning to help each other learn and understand converting decimals from standard notation to scientific notation.
- We used it to find patterns in the 100 chart.
- My students have used the document camera to present and teach their answers and findings to the class.
- Students use a document camera and LCD projector to show their thinking on how they solved a problem

December - 06:

- Used Smart Board to make equivalent fractions; joining parts to make wholes, using available shapes, etc. They showed different ways of joining parts.
- Students often come to the document camera and projector to explain how they solved fraction problems. We also had our math specialist come in and teach math casting and students were excited to show their parents their work at home over the internet.
- Document camera is being repaired so, we have only used calculators lately to support our answers and ideas.
- Students showed examples of their work on the document camera.

- Discussion of the Problem of the Day is facilitated by the use of the LCD projector and the Aver Media 3001.
- Classroom of teachers
- Students place their answers under the document camera and describe how they came up with their answer and why they know they are correct. Other students ask questions or show a different way to find the answer.
- Students used the document camera and the LCD projector to show how they could measure an angle using the protractor on their Geometry Template. They have also used the wooden blocks to demonstrate how to level off several stacks in order to find the mean number of blocks in each stack.
- We use student work to talk about mathematical concepts and we use the document camera to support this learning.
- During problem solving activities, students shared how they solved their problems using a document camera and an LCD projector

February - 07:

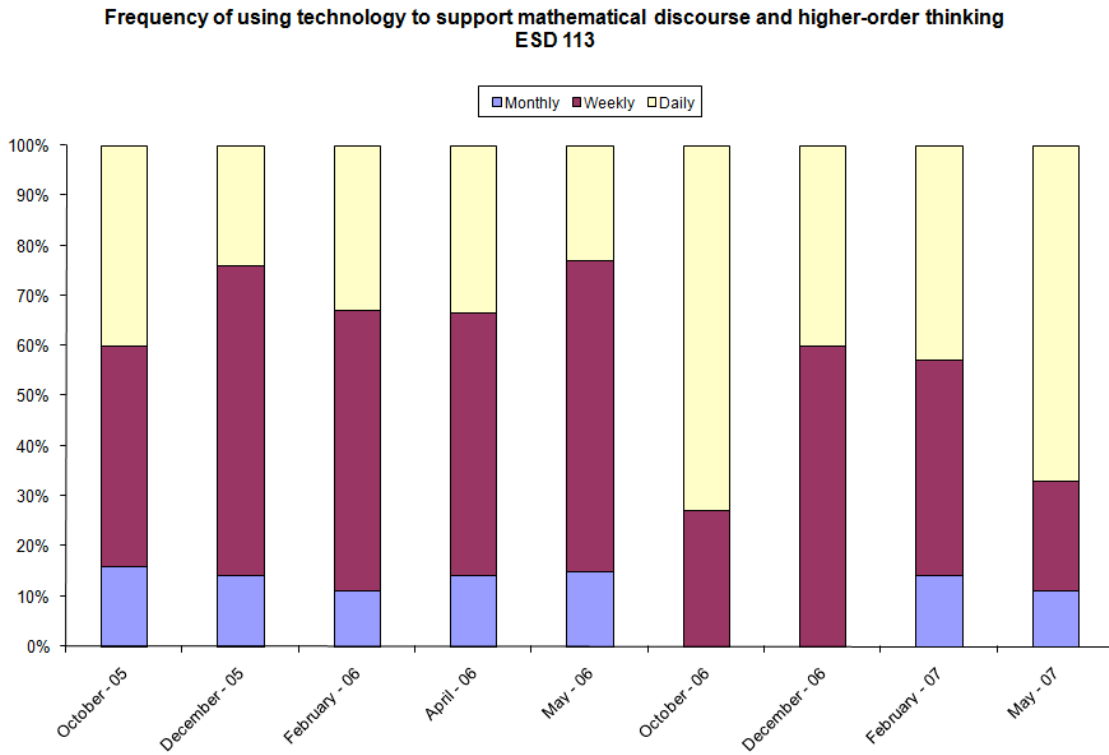
- Every Friday, we discuss WASL type problems. I do not give the answer; however, various students share their papers and their logic in the steps they took to solve multistep problems. Also, we have clickers where the students have been taking the 6th gr. Texas state test. We discuss results and I get printouts to review with the students.
- Students explaining how to do math problems from 1790, 1860, 1900, and 1990 to the class on the document camera.
- Students place work under the document camera to help aid in explaining ideas and to encourage questioning from other students. Also, we have placed tiles under the document camera to help explain surface area and perimeter.
- Demonstrating work under the document camera
- Exploring new concepts and discussing problems
- Use of document camera and projector to share reasoning for ordering fractions smallest to largest
- We use our document camera just about every day. This allows students to show their work without having to recreate it on the whiteboard.

May - 07:

- Students used the document camera (along with projector) to show how they arrived at a WASL practice problem
- Demonstrating their understanding with document camera and projector.
- Demonstrating their understanding with document camera and projector.
- To show their WASL examples to the rest of the students
- WASL practice... Calculator, LCD, document camera demonstrating various strategies
- I don't know where else to "fit" this information, but...during the last two weeks we did WASLs. So that was 8 of 10 of the last days.
- Students display their work and discuss their outcomes
- We use the document camera all the time to share how we got to our answer, show our thinking, and how we organized our work.
- Completing group activity on finding perimeter, area, and volume, group problem solving with fractions using the SIOP model

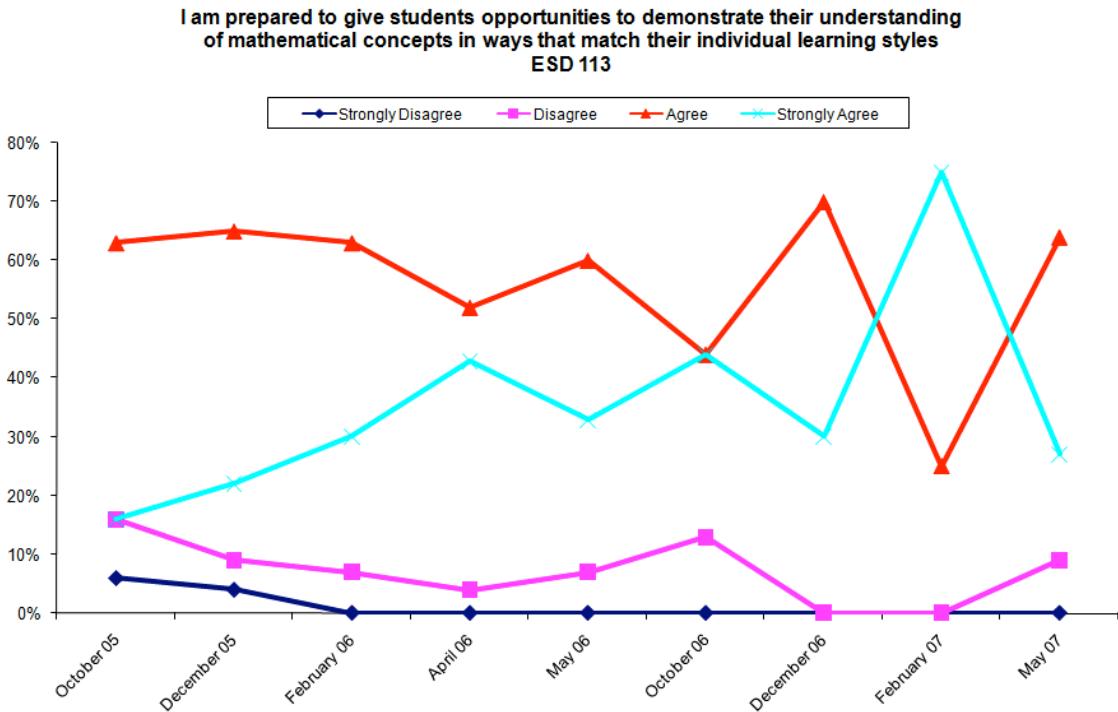
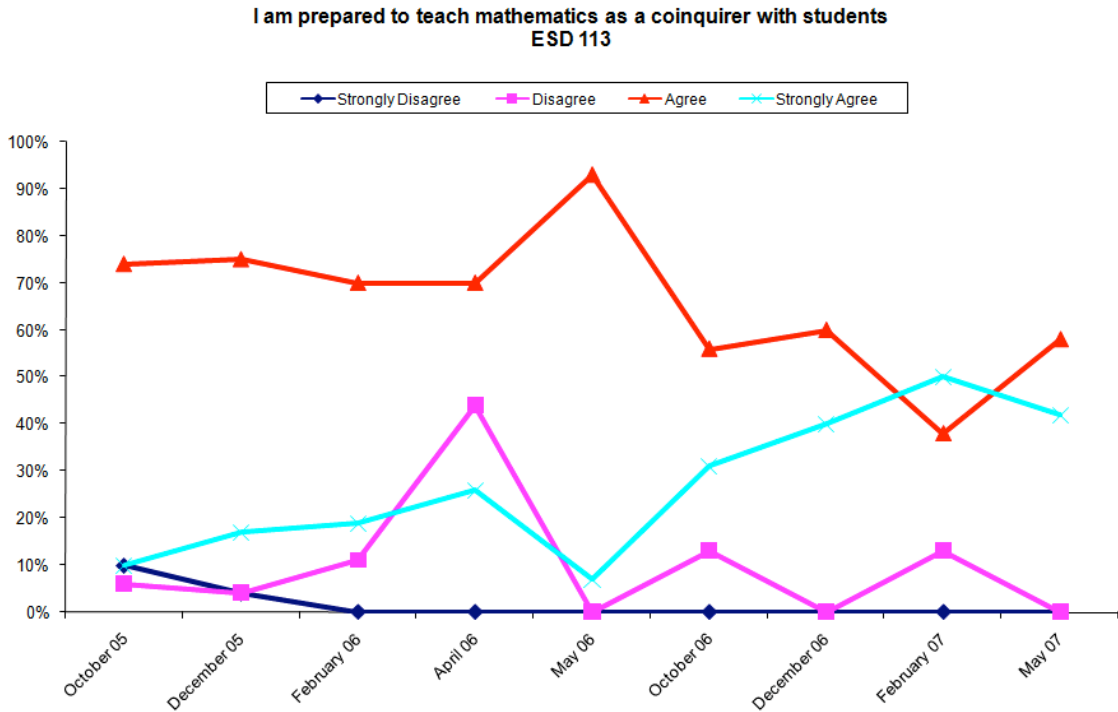
- Students used a document camera to illustrate a summary of a lesson they completed.

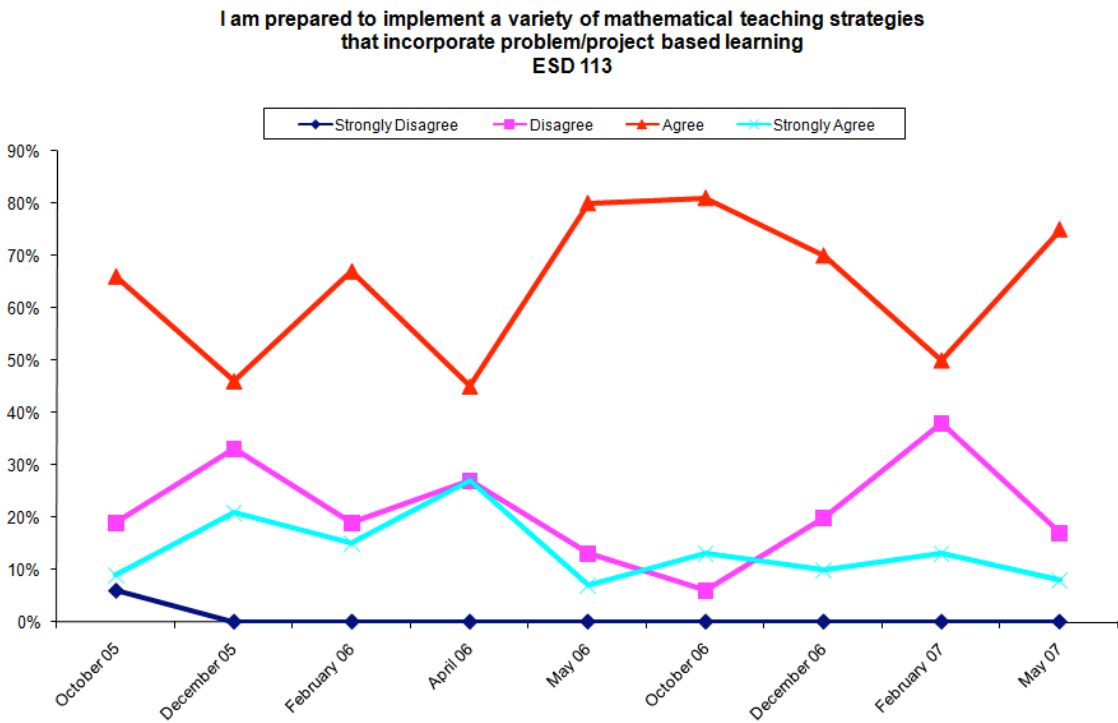
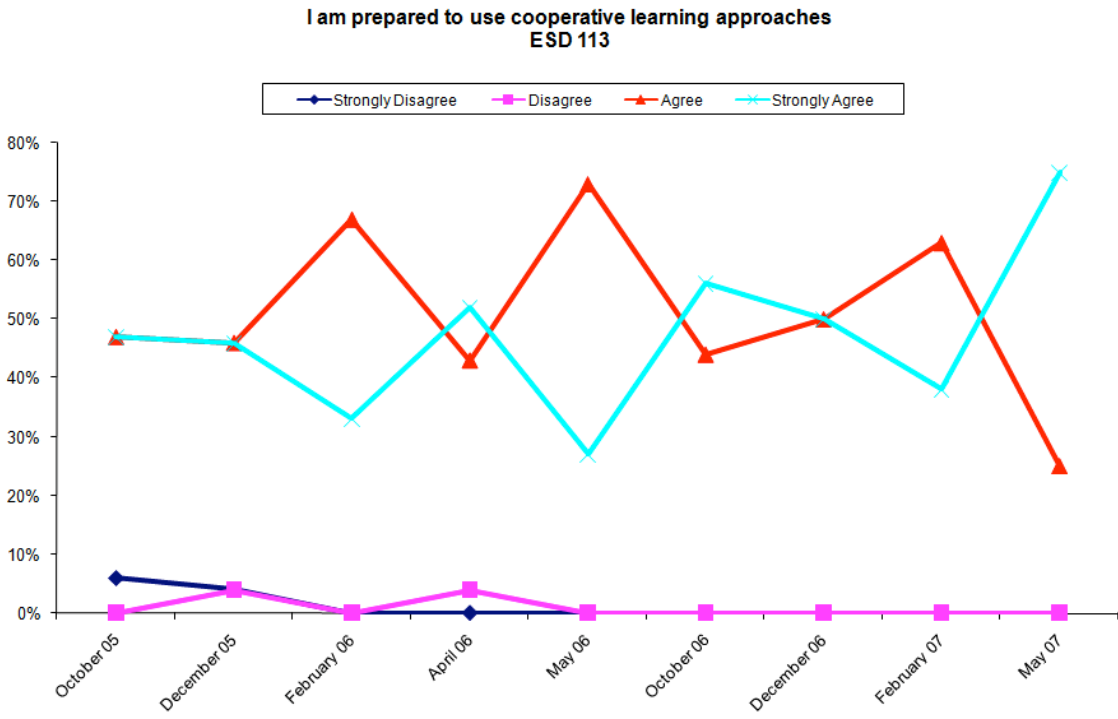
How often does something like this occur in your classroom?



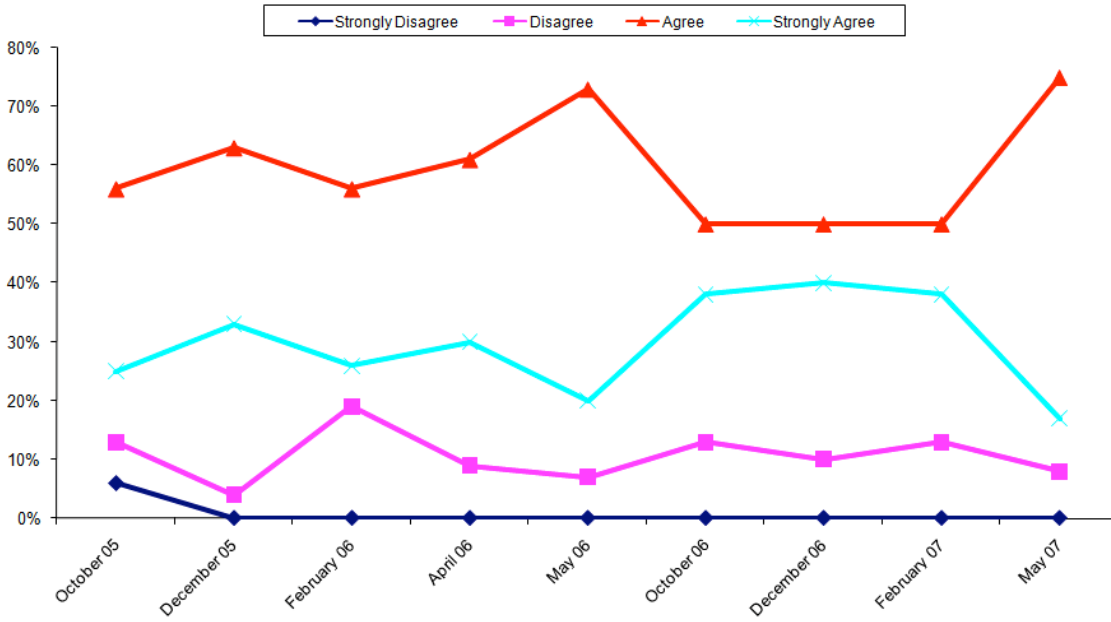
Item 13:

Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.

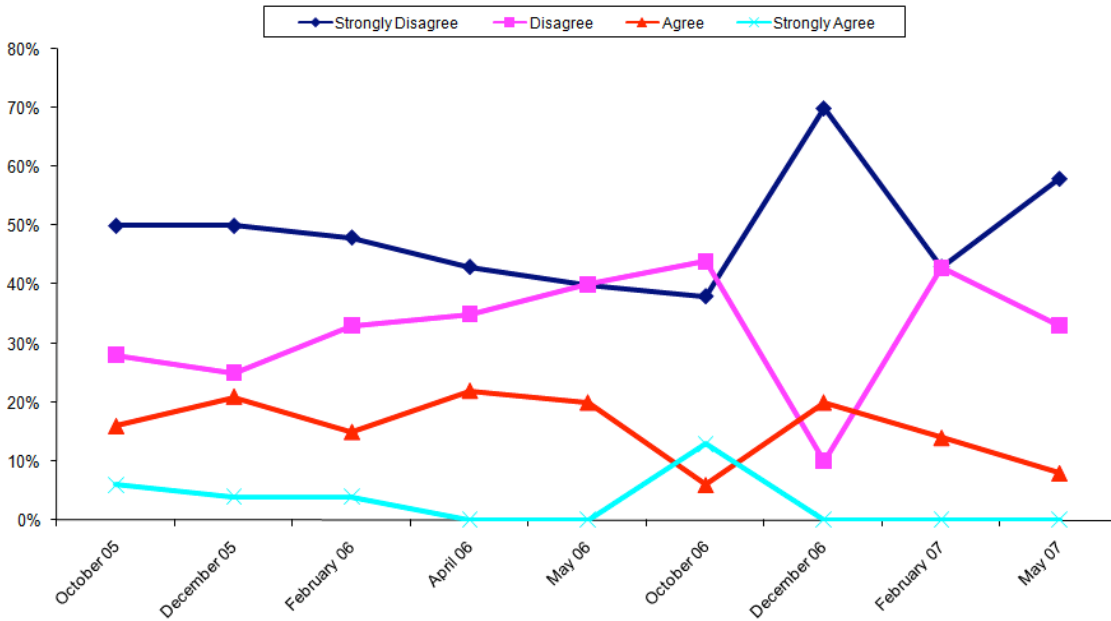




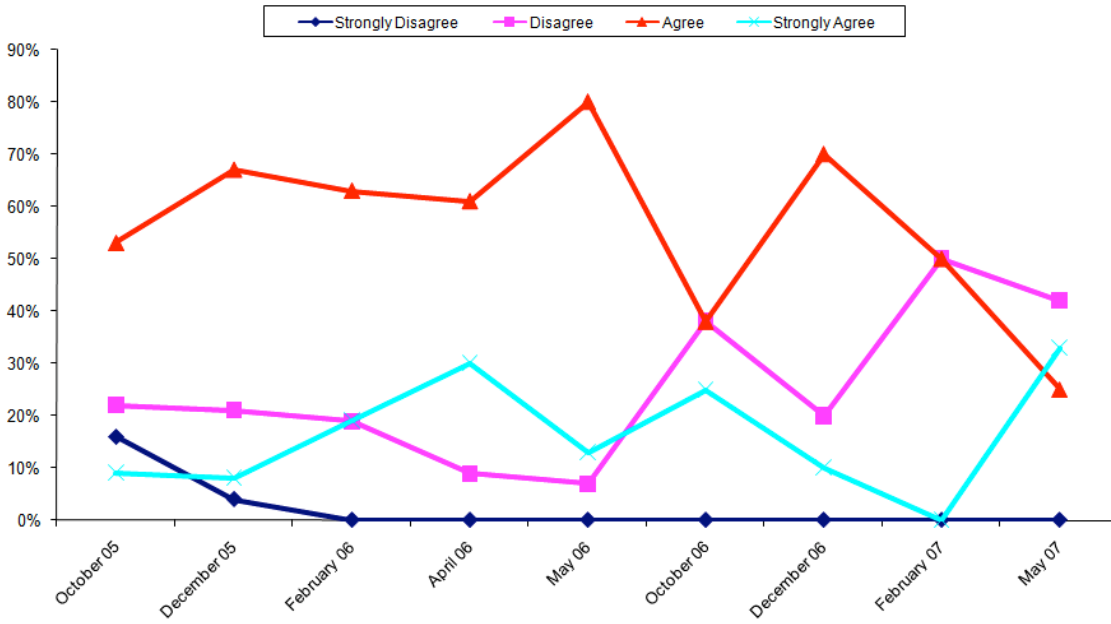
**I am prepared to involve students in hands-on, concrete mathematical experiences
ESD 113**



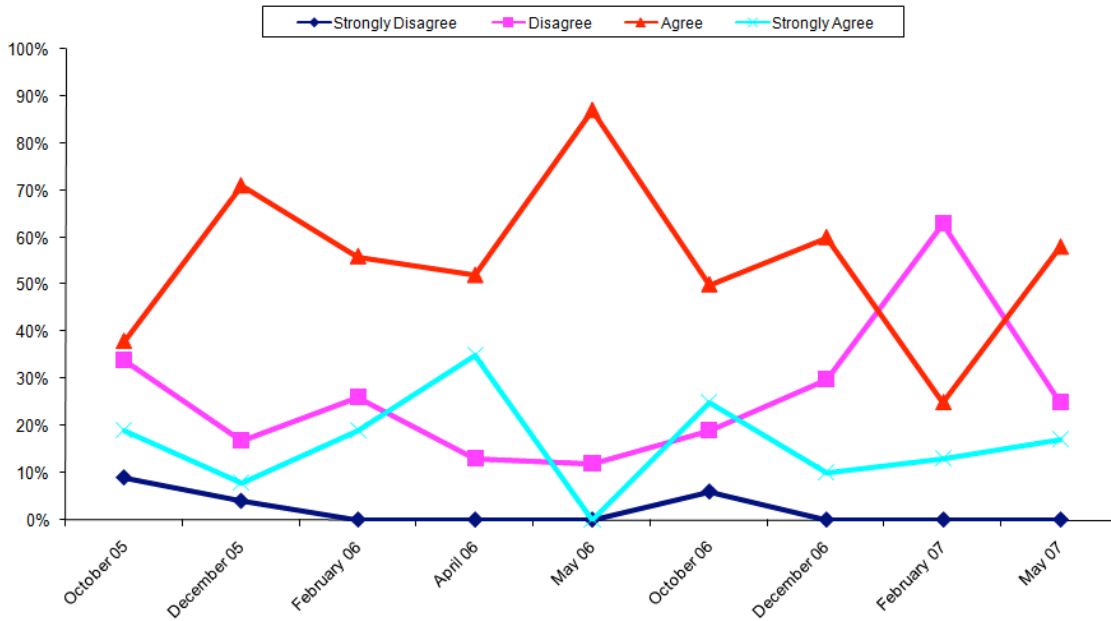
**I am prepared to teach mathematics lessons that include the use of graphing calculators
ESD 113**



**I am prepared to locate online resources in support of mathematics learning
ESD 113**



**I am prepared to integrate computer-based activities
in support of mathematics learning
ESD 113**



Comments:

October - 05:

- I am hoping to increase my skills in the above areas through my involvement with this grant opportunity. I would definitely like some ideas for how to incorporate technology and the tools I have available into math instruction.
- I wish I could be more agreeable to these statements. I truly want to use these strategies, but I'm not there yet. I need more time to learn about them and to see how to use them.
- I am sorry, but I don't know what the graphics calculator is??????

December - 05:

- I would like to get more assistance and ideas in/for using the rich amount of computers that I have in my class to facilitate success and growth in math. They are not used to the fullest potential.
- To be honest, I do not have enough time to research and investigate the internet during the school year to come up with technology based projects. I have created such projects during my summer break in other subjects, but once our math program starts, it takes anywhere from 60 minutes up towards 90 minutes of class time per day. We break it up with mental math, use of student white boards, teaching new concepts, homework review, and then the daily lessons. When I do schedule activities, it's usually on a Friday, where we break away from the routines.
- Time to prepare is always the problem. If I had the time to get materials together, I would be better able and more likely to teach hands-on lessons.

February - 06:

- I have no graphing calculators. I've never been trained to use them and don't understand their application in 5th grade.
- With 25 plus students in each class and only 7 computers - doing class wide project/activities on the computers is challenging.

April - 06:

- In our 5th grade program we have never had a situation where students were expected to use graphing calculators. I wish I had more problem/project based math situations to offer the students.

May - 06:October - 06:

- I am prepared, but time seems to be an issue. Such a time crunch; more this year than ever. More expected during the day, no more time.
- I am teaching 6th grade this year (a new math level) having taught 5th for the past 4 years using Everyday Math. I'm finding some difficulty in teaching some of the newer skills and concepts which are strange to me this year but I find it challenging and actually like the 6th grade math more than 5th.

December - 06:

- There is always room for improvement.
- Lost all websites when our school burned down.
- I let students use the Everyday Math games on the computer, but I'm reluctant to let them use the web because of all the messages that pop up. I am aware of NCTM's Illuminations, but have not taken the time to connect them to classroom instruction.
- I would like to spend time searching for mathematical games and resources on the internet. I also need time to play with these as well as downloading them to each computer in my room.

February - 07:

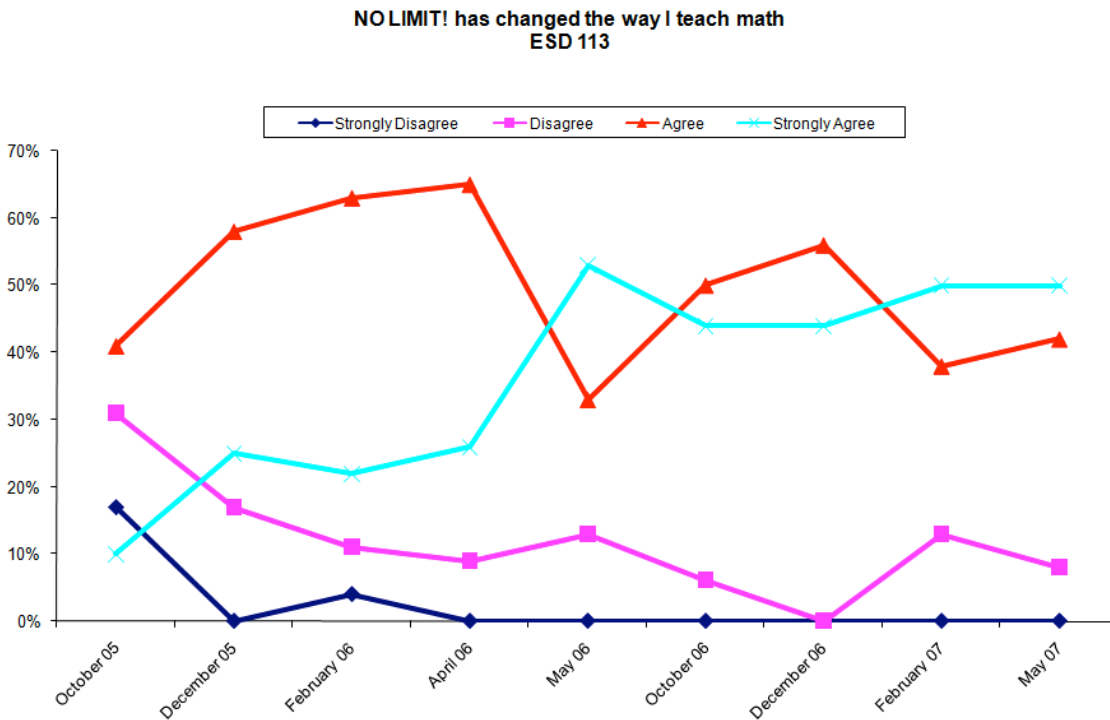
- Since we have Everyday Math curriculum, it is very vigorous and we spend so much time doing the program, it's hard to get computer time/
- Using online websites is not something I am comfortable with due to the amount of cookies, tracking devices, and other computer destroying, and system crashing items. We had math websites up for kids to use until one of them caused our whole district to shut down while it was being located and contained. It would be nice to have a list of SAFE internet sites!

May - 07:

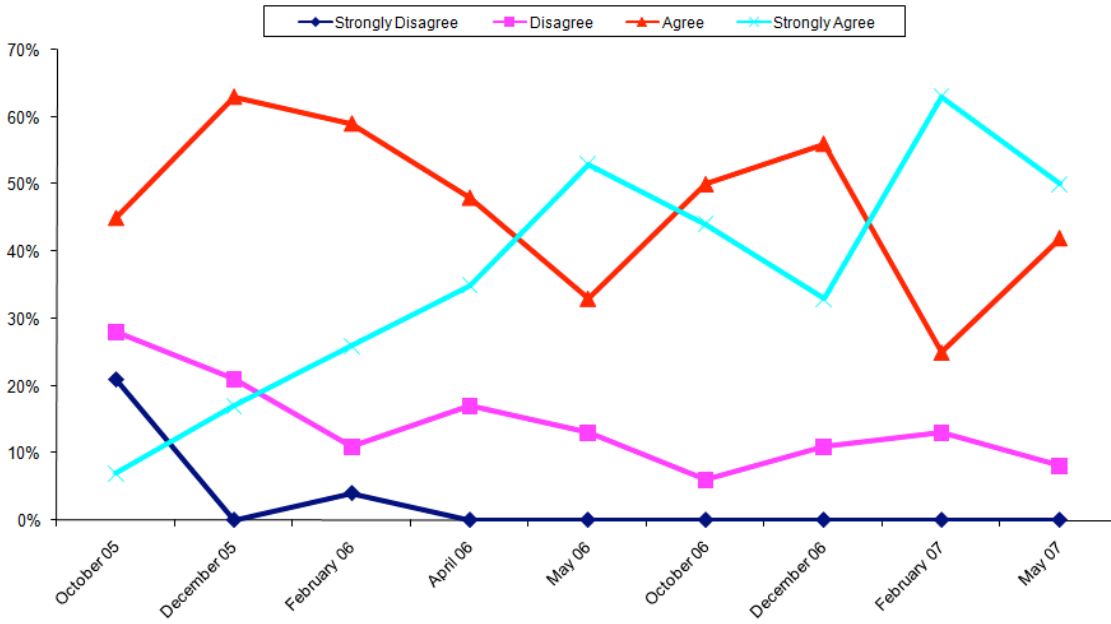
- I have most difficulty finding enough computers to have students work on projects together.

Item 14:

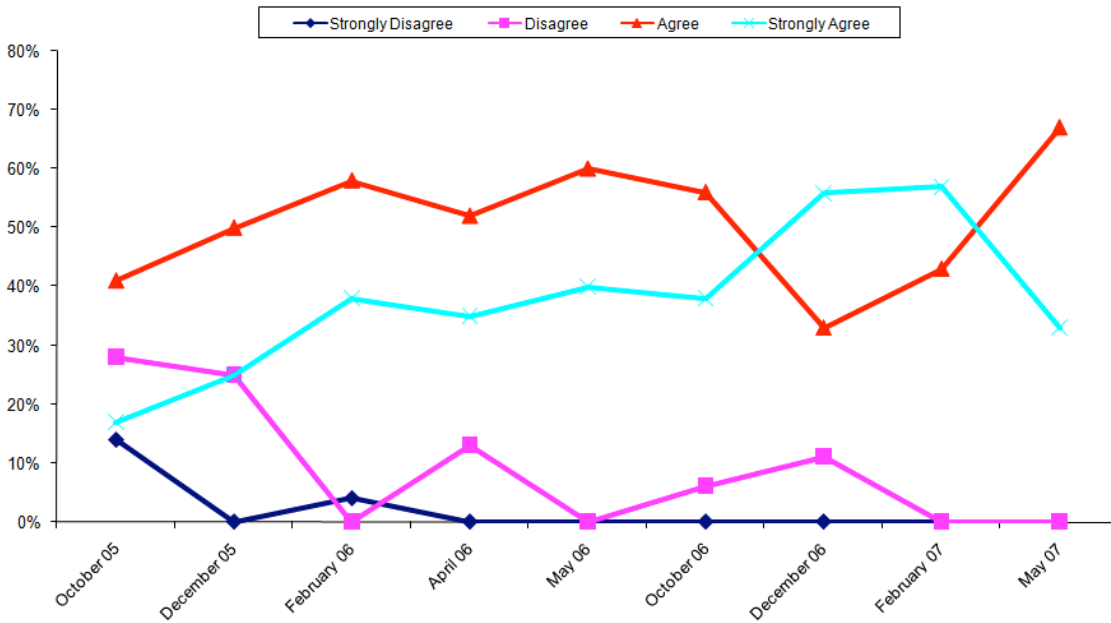
Please tell us how NO LIMIT! Has impacted your classroom. We are interested in your frank responses.



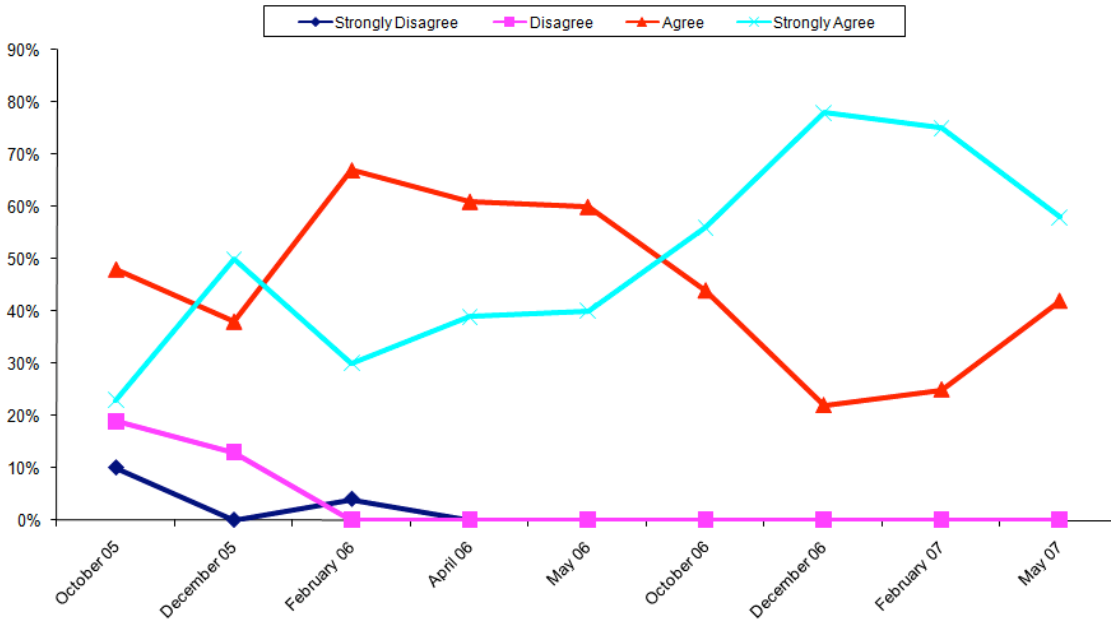
**NO LIMIT! has changed how my students learn math
ESD 113**



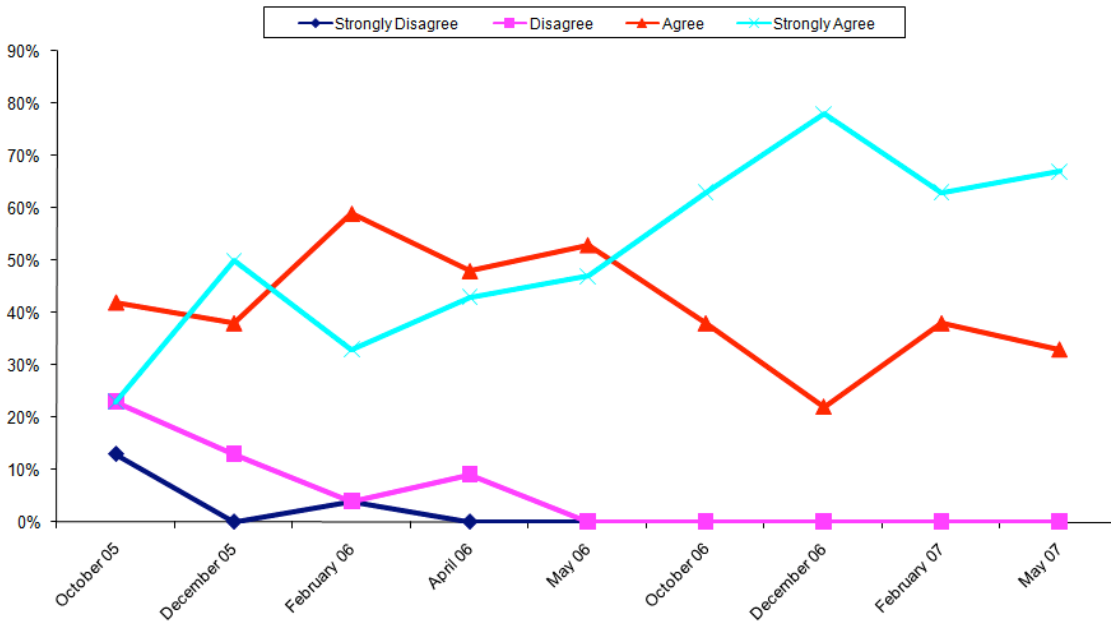
**I feel more comfortable using technology to teach math
ESD 113**



**My involvement in NO LIMIT! has benefited me
ESD 113**



**My involvement in NO LIMIT! has benefited my students
ESD 113**



Comments:October - 05:

- I can't say that much change has occurred yet as we have not had meetings with the coaches or each other. The beginning of the school year has been filled with beginning of the year meetings, activities, building requirements. I am looking forward to the sharing among participants in the grant so that my involvement in No Limit will ultimately benefit my students.
- This year I feel we haven't received the support from our district for the no limit hardware installation. We haven't had much support from our ESD because of our district's lack of help.
- We do not yet have our equipment installed. I look forward to getting it to begin to benefit from the NO LIMIT experience.
- Haven't used anything yet-no equipment, not sure what it is, etc.
- We have not gotten our grant off the ground as we just started on it last month. We feel the potential to improve but have not had time to experience it at this point.
- I have just started the NO LIMIT grant in September and feel that I don't have enough experience to answer these questions at this time.
- I have just started the NO LIMIT grant in September and feel that I don't have enough experience to answer these questions at this time.
- Since I don't have all the technology yet and due to not knowing what I'm really supposed to be doing...
- Having a new document camera and using it daily has made a big difference in the way I teach math.
- At this stage my math team is still trying to figure out our direction in NO Limit.
- As of yet I haven't really changed the way I teach math much, other than an increased focus on giving students chances to work with concrete models.
- We are just starting NO LIMITS this year so I cannot really answer these questions.

December - 05:

- So far, I have not received training in incorporating technology into math. The only piece I have received was two websites for support for student use. I am hoping that they will offer some hands-on training incorporating technology above and beyond document cameras.
- I believe my/our MIS have helped both my students and I understand, and then believe, there is almost always more than ONE WAY to do math!! As long as we all come up with the correct final product, how we get there is just as important!! I feel this has helped boost confidence in a number of my students.
- At this time, I don't feel the time I have been away from my students for NO LIMITS activities has been worth it. I still don't have the document camera and projector ready to use. There have been many times since the beginning of school that I have wanted to use it, but it has not arrived and/or is not installed.
- I think that NO LIMIT! will be more beneficial to our/my students once the content strands that were chosen for use to work on as a department start to impact the students.

February - 06:

- I think there needs to be blanks between "Disagree" and "Agree", because that's where I am. I'm making some changes, using some ideas, but want to have the time to learn more. I'm beginning to think I've bit off more than I can chew trying to do NO LIMIT and Masters Classes. I need more time to explore the uses of the technology I have and maybe more chances to see it modeled during mathematics instruction.
- We tried to start deep aligning our connected math Monday. No one remembers how, and the male member on our team refuses to admit this or ask for help from our MIS. It was a joke.
- We have been working with Tom Boyce and recently met with him to plan our next lesson which directly relates to this but was not a PLC meeting.
- With the projector and the document camera the students become engaged and the lesson becomes theirs. They get a chance to demonstrate what they were thinking. Sometimes the responses look the same, but the explanations are different.
- I am the only teacher from our PLC at my school so it is difficult to do any planning.
- My document camera was just installed last week and I haven't had any training with it yet. I'm still trying to figure it out and how to best use it to help my kids.

April - 06:

- If I didn't have the ELMO, projector, and wireless microphone, the students would take a longer amount of time trying to explain their solutions. When the children explain their thinking I can find common misunderstandings and help students that are struggling with using mathematical vocabulary.
- I have benefitted greatly from NO LIMIT participation. My laptop helps me do my teacher work more efficiently, the document camera and projector make instruction, demonstration and sharing work easier and the clock hours that are available for training have been personally beneficial. I am not convinced that the work I have to do for a guest teacher and being away from my students during the day has been offset by sufficient improvement in student learning.

May - 06:October - 06:

- Thank you.
- I am trying to change how I teach the math.
- Having been in No Limit two years ago, then out of it last year, I feel a bit rusty in addition to teaching a new grade and concepts this year. But I do feel that I learned a lot, use many of the skills I learned and need some help to go further.

December - 06:

- I find myself constantly trying to figure out new strategies with various students. I also try to come up with new strategies that help my lower math students, and also challenge my high learners.
- I am more confident with Inquiry style teaching/learning.
- Being a part of No Limit has inspired me to join NCTM, and attend OSPI conferences. I felt driven to score 5th grade released math last summer and feel more aware of materials my

classroom needs to fill in the gaps that the Everyday Math curriculum has in order for my students to learn the GLEs . I still don't have any graphing calculators and really don't know how they would be used in the 5th grade. Just having a copier in my classroom has helped when a student needs one more copy of an assignment or I want to keep a copy of their work.

- Having a document camera and projector has greatly benefited my class. As far as the style of teaching, I don't think I've changed that. I am working toward becoming a better facilitator, but this is not a new concept for me.

February - 07:

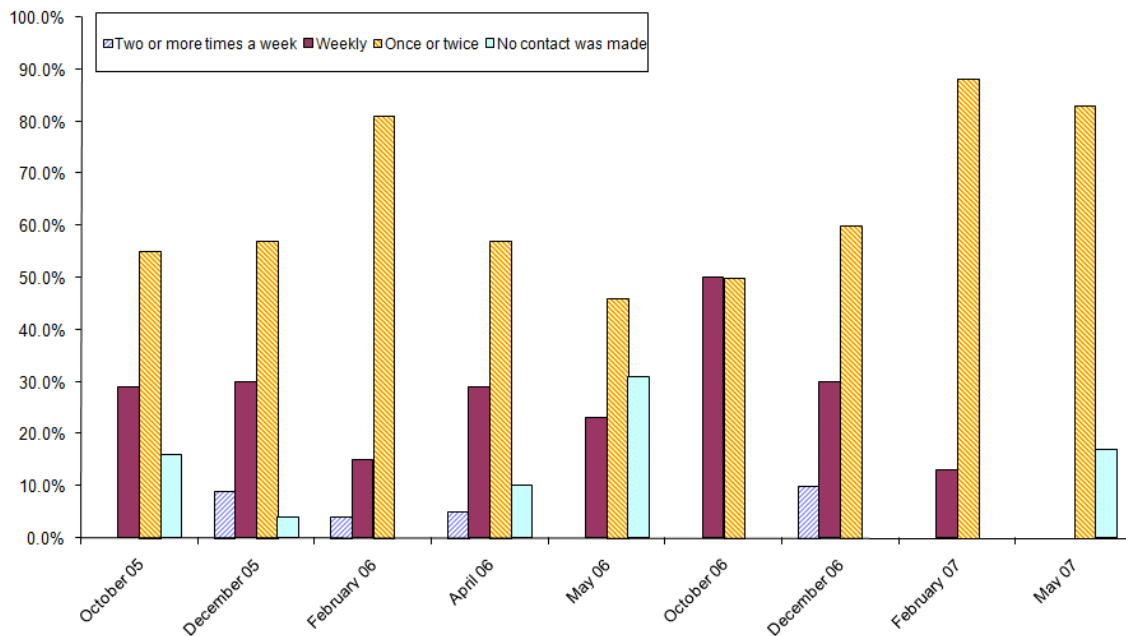
- I have become increasingly more confident in letting students find more than one way to solve an answer and leading discourse about that in my classroom. It has allowed the students to feel more comfortable in trying new ways.
- A lot of what we do in NO LIMIT! Is what my teaching program taught me so NO LIMIT hasn't really altered what I believe but just reinforced it.

May - 07:

Item 16:

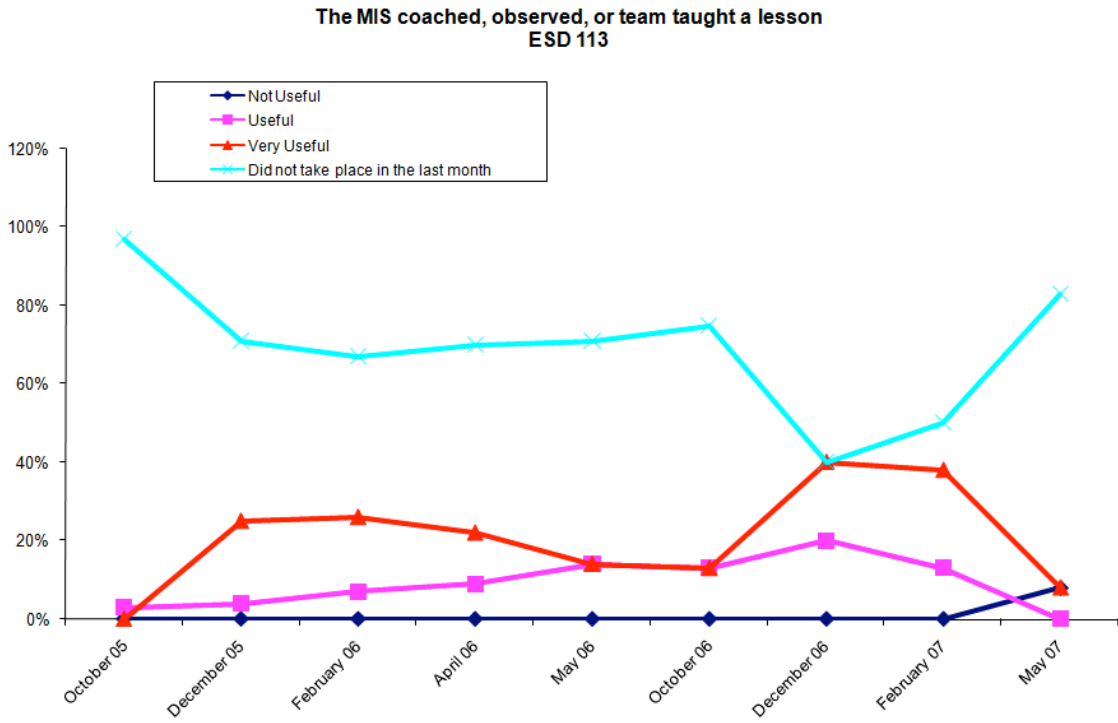
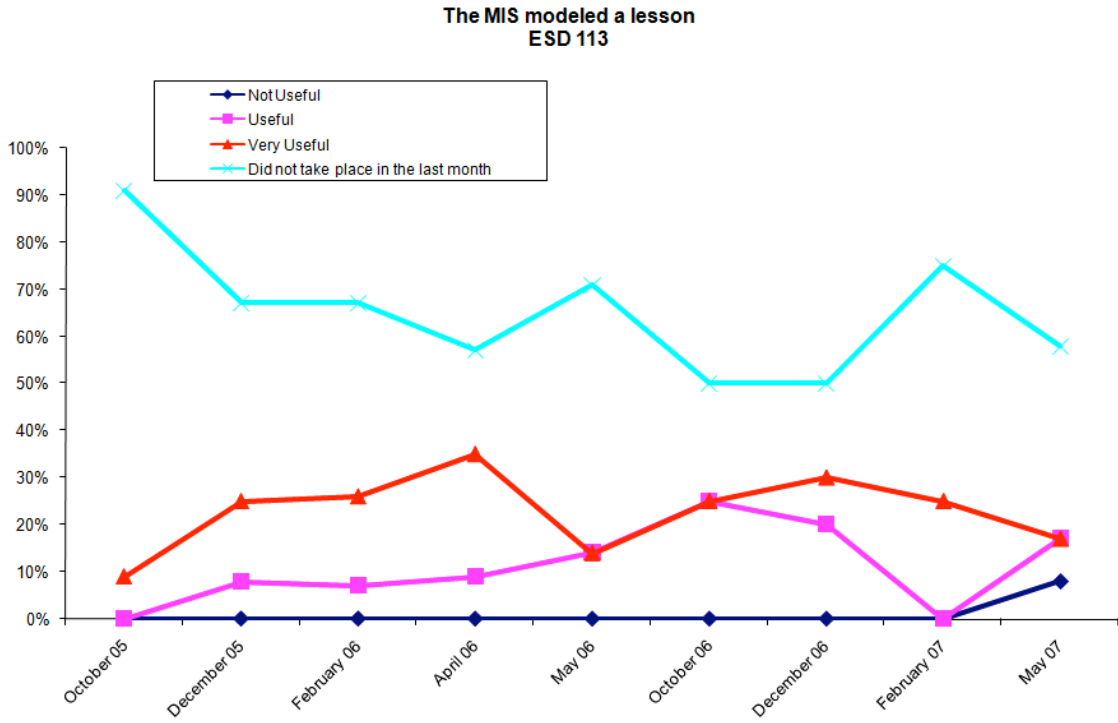
How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?

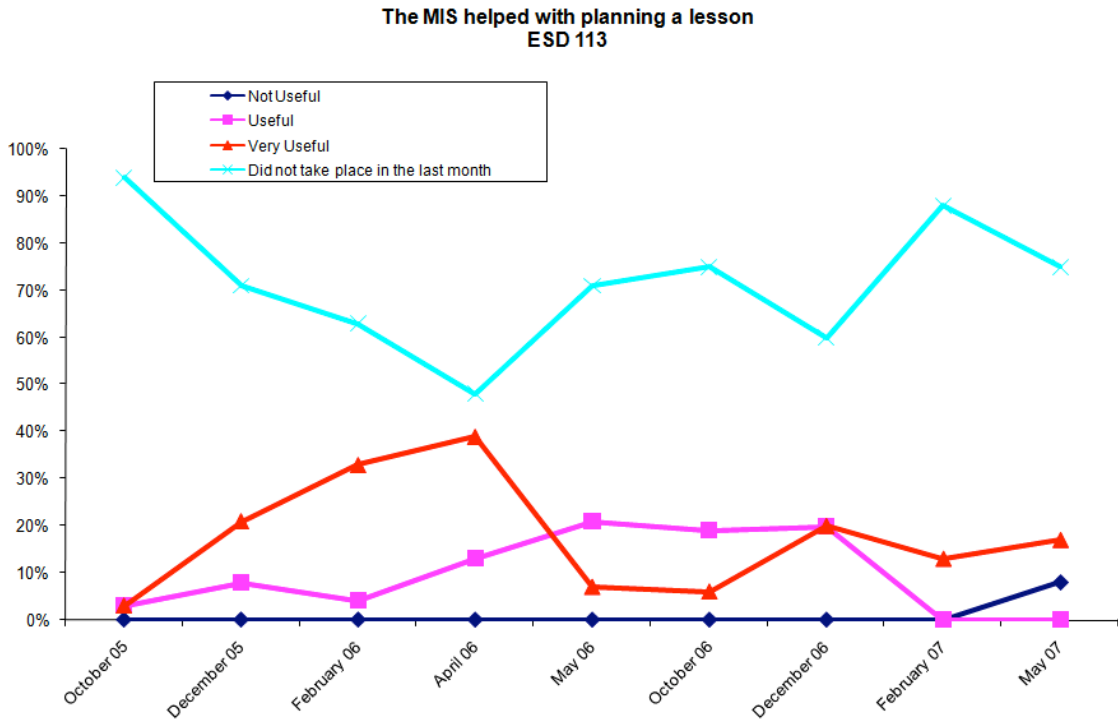
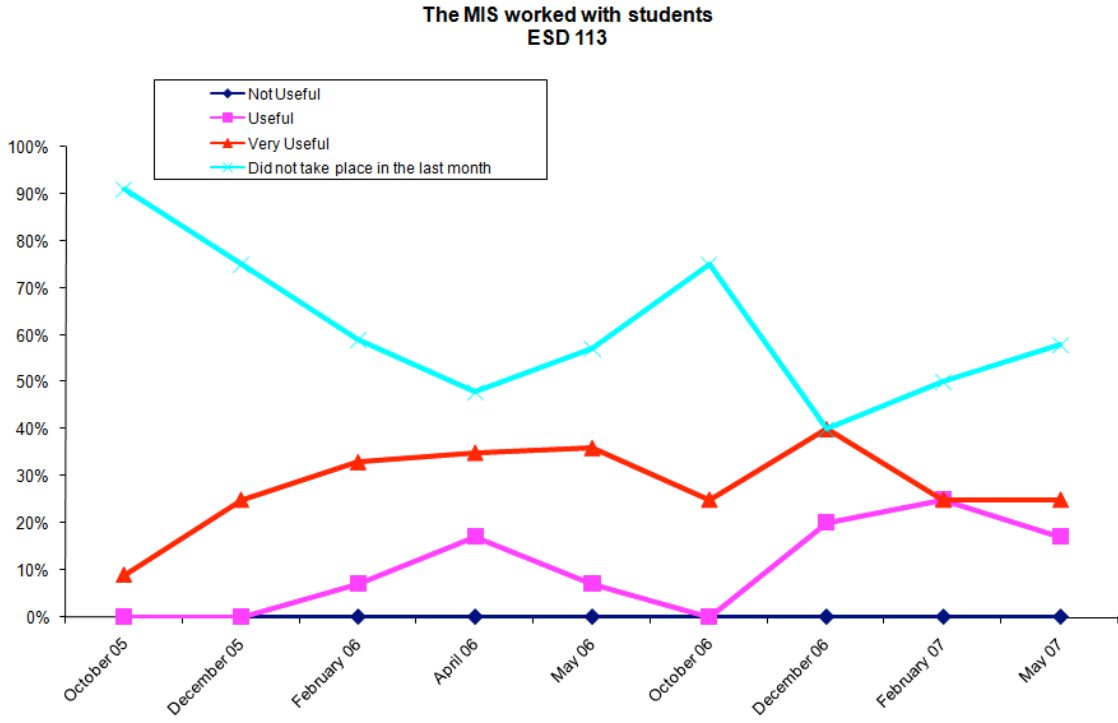
**How often during the past month were you in contact with the Math Integration Specialist(s) from the ESD during the last month?
ESD 113**



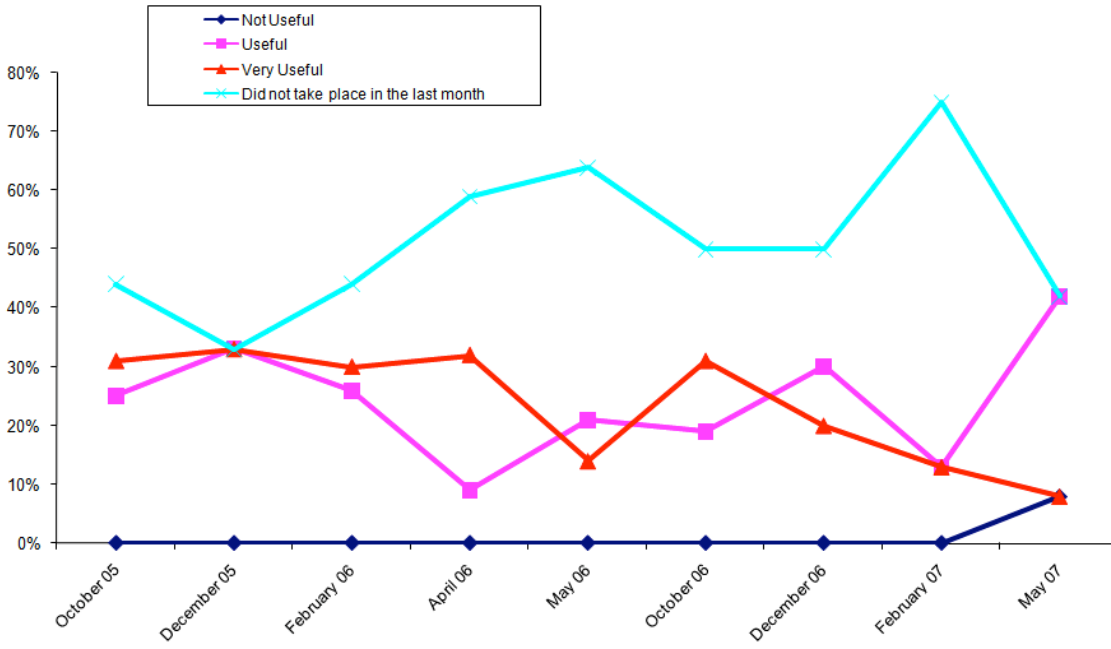
Item 17:

Please evaluate the following MIS activities over the last month.

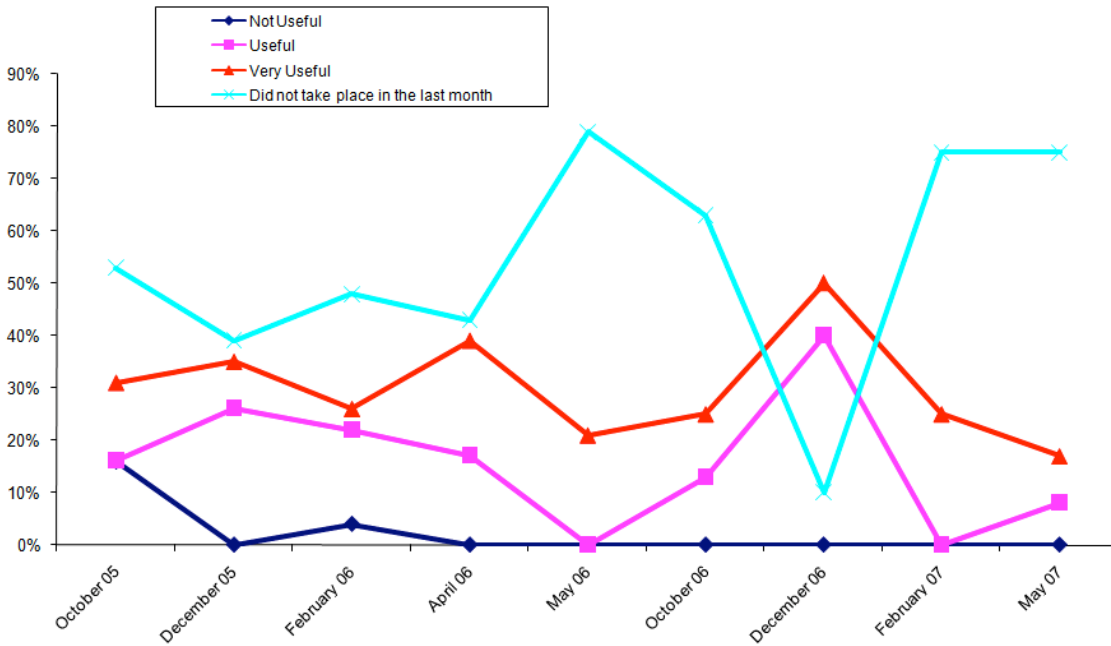


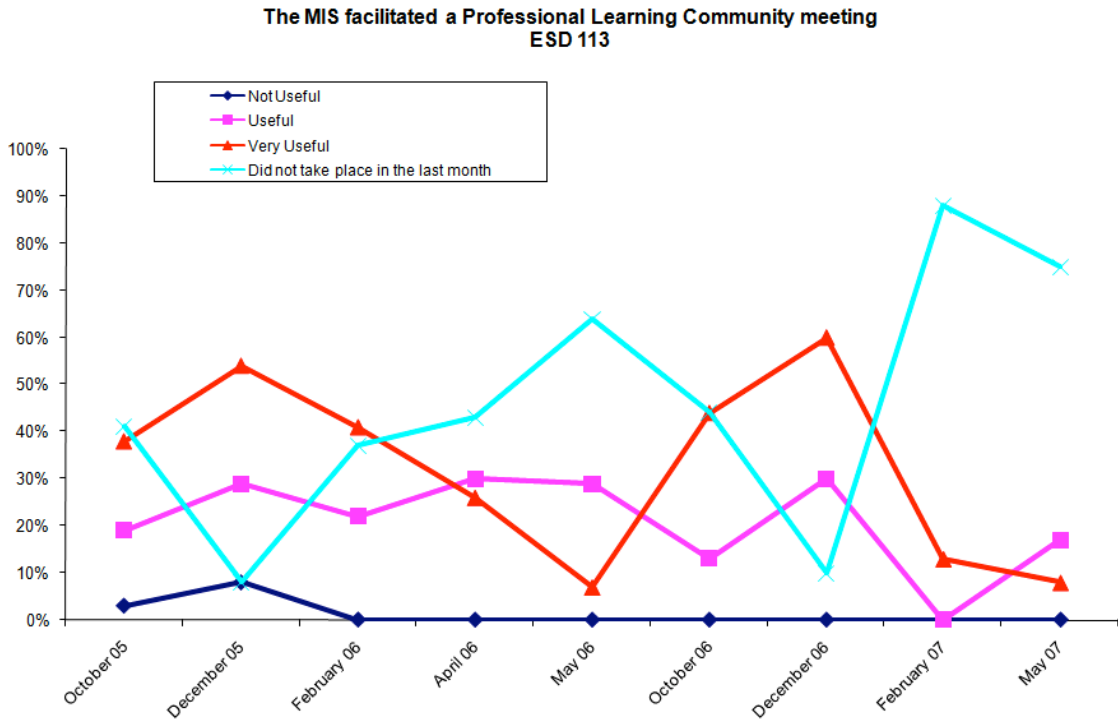
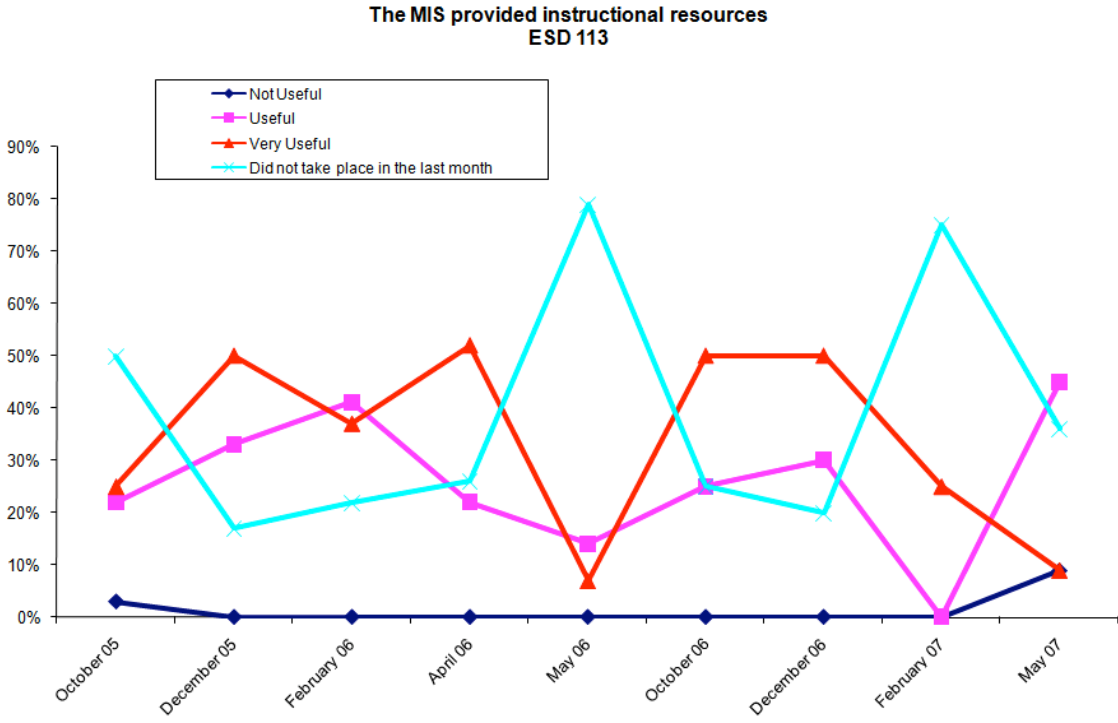


**The MIS helped with schedules, logistics, or administrative issues
ESD 113**



**The MIS helped with technology
ESD 113**





Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

Comments:October - 05:

- Our intent is to gain knowledge and expertise from our MIS coaches and also to share from each other (participants in the project as well as our team).
- We attended the NW math conference. This was wonderful
- We have not yet had a meeting.
- Planning the year, learning the technology, discussing possible project topics, with team members in conjunction with another grant we have designed and aligned curricula
- Haven't met yet
- MAPS testing and WASL testing, how we can work on particular strands to increase student learning.
- We are focused on discovering the weak areas for seventh grade WASL and we plan to emphasize those areas in teaching.
- The focus of my PLC group is to help our students to improve their math skills through the use of technology, and other means.
- WE discussed what might be implemented to better reach those students whose test scores indicated that there were deficits in their understanding.
- Test scores
- Our Focus was to discuss what was working in our classrooms and resources on the internet to help with planning
- We have not had one yet.
- To ask questions, plan units, and understand the technology
- Have not had a meeting yet.
- Analyzing of WASL test results, determined areas of concern/focus, begin planning ways to deal with the areas of concern
- Aligning our work in the classroom with GLE's
- Learning how to use My eCoach
- To organize and schedule the year. Clarify tasks.
- Talking about WASL scores and how to help students meet the standards. Working on our projects.
- Right now we are just getting going and getting comfortable with the technology. We have discussed the role of our math grant in helping us with our NO LIMIT expectations. We are really just in the very beginning steps of this.
- So far, the No Limit group has met to organize a schedule for meetings, determine what should be ordered, and share ideas for integration of technology and math instruction.
- We have not met yet.
- How to better use our technology and incorporate new and better methods and materials to teach Math.

December - 05:

- Pool resources, collaborate, share, help each other, support, get ideas, and learn from our MIS leader. Many valuable activities.
- awareness of our district's help in technology.

- We are focusing on measurement and number sense.
- low achieving areas are measurement and geometric sense
- Setting up our project on measurement on the e-coach site.
- We were focusing on where our students need the most help. We chose number sense,
- Creating our project.
- Our PLC was focused on strategies to improve writing in math
- Our PLC meetings have been centered on organizing purchases and setting up our plan for our project.
- What to work on in our building. We chose two strands that were low for our kids. We need to develop an idea of where to go with this.
- WORKING ON IMPROVING POOR TEST SCORES BY BUILDING LESSONS BASED AROUND THOSE AREAS
- Discussion of our project
- Project discussion
- Identification of areas where students need to improve
- Discussing our project for No Limit
- Our last PLC meeting focused on the WASL, for mathematics. I attended a training session at our ESD. One of the MIS who attended was a co-presenter at the session. So our whole group discussed, shared, and brainstormed how we can help our students improve their lower scores, weaker skills.
- Last meeting dealt with getting more teachers involved in having PLC mentors in their classrooms and ideas of what could be done or looked into as well as discussions on WASL relationships, etc.
- Concentrating on developing units to strengthen our weak WASL score areas.
- We discussed what our project should be.
- We are working on our project.
- We had some questions answered about the technology. We also got our test results back (the test from summer about our strengths and weaknesses) and we talked about this.
- We are taking a look at WASL data and have determined as a department the strands that we need to work on the most with our students.

February - 06:

- We are trying to work on our project.
- Our WASL project on eCoach
- Looking at MAPS scores, working on group project on measurement
- We are focusing on the needs of our students and trying to decide which way to go in our curriculum.
- At our last meeting we focused on getting our yearly project completed and setting dates and times for the rest of the year!
- Completing our projects.
- Student achievement
- Our focus is to create lessons focused on probability
- Project work.
- The instructor for No Limit set up a blog site for my students and showed them how to use it.
- Finding a focus for our project.
- Planning our unit for our group project and discussing our math program

- resources and group project
- WASL preparation
- Have been focusing on WASL weaknesses of students throughout our district. Have decided to make a combined project that could be used within our district at all three levels dealing with probability.
- Teacher/student attitudes. Project discussion.
- The focus of our PLC meetings are centered on planning a unit in Geometric sense.
- We have focused on our group web project and on our WASL results (what they are, what they mean, trends, etc.). We will be looking at new curricula at our next meeting.
- We have been looking over WASL results and trying to see what strategies will help our students succeed. We also have been working on our e-coach project.
- We are still working on our project.
- We are working on our project
- We have been working on WASL questioning and our project

April - 06:

- Working on our e-coach projects
- project for No Limit
- We have had our team meetings, however, this year; the MIS schedules always seem to conflict with the dates our team gave in August. We had our project day cancelled on us in Feb., with no help given from the MIS team. I feel our school was neglected this past year. Even at our Spring Institute, we felt no offer of help for our project. We noticed that the team seem to have favorites (old districts where they use to be employed).
- Looking at WASL scores and using Document Cameras
- We focused on the released items from OSPI for math in grades 3-7.
- The focus of our PLC is to complete our project
- We are working on a lesson on my-ecoach. We have tried to complete every part of the lesson. We have also been scoring released items that have been used in the classroom.
- Trying to figure out what our "project" would be and then getting it taken care of.
- We worked on our project.
- projects
- We discussed and worked on our NO LIMIT project. We also looked at our school's math programs and technology, for both this school year and next school year.
- Working on My e-coach project.
- algebraic sense
- Completing our web based project; issues pertaining to new curricula (CMP and Investigations); WASL testing
- To collaborate and compile a list of activities for our web site on e-coach.
- Since we finished our project in March, we have not had a PLC meeting.
- I marked the "did not take place in the last month" because we never had a PLC meeting with an MIS at our school but our team did go to a workshop for two days that did help with technology, teaching suggestions, and our NO LIMIT project.
- Putting together the group project.

May - 06:

- Our team continued to focus on developing measurement and number sense strands.

- to create an effective geometry unit integrating technology
- Since our project was complete the focus on our PLC meeting was strictly direct on our students and preparing them for the next school year.
- allow for a smooth transition from 5th to 6th. make sure we are teaching the same things, using the same language
- Geometry unit development and plans for next year.
- Finishing project.
- We concentrated on developing a geometry unit to strengthen the 6th grade geometry sense scores on the WASL.
- the teaching of algebraic thinking

October - 06:

- Share ideas and concerns; discuss problems; time is an issue here as well; not enough time to meet as much as we would like to meet.
- We discussed the importance of increased student discourse and what it looks like and how it sounds. Less teacher lecture time.
- Organize, Plan, and Increase Student Discourse
- Student discourse in the classroom
- We planned this year's agenda.
- Have not started PLC this year due to restructuring after our school fire.
- Sharing ideas and strategies to engage students
- Ways to get students to be responsible for their own learning.
- Math Casts and our needs.
- We focused on student discourse.
- Focusing on how to incorporate technology into the classroom.

December - 06:

- Sharing, time for collaboration, information from our MIS.
- We focus on our school's main challenges as set by our school wide plan. Also, as our frustrations in teaching certain concepts, that we feel is difficult to teach and is poorly addressed in our teaching curriculum.
- tracking and improving student discourse
- Math casts and how students did on them.
- We are working on a project where students share their work online.
- WASL results and our school.
- Our PLC has focused on Problem Solving and Reasoning Logically. We have researched schools similar to ours with higher WASL scores. Much of our time has been used making list and ordering things that were lost in our school fire last May that the insurance will replace.
- The last meeting we focus on scheduling our math casts and when our MIS would come in to observe us using ecoach.
- WASL outlooks and WASL misconceptions

February - 07:

- We are focusing on student discourse and strategies needed for sixth gr. WASL
- WASL, MAPS scores, amount of talk time

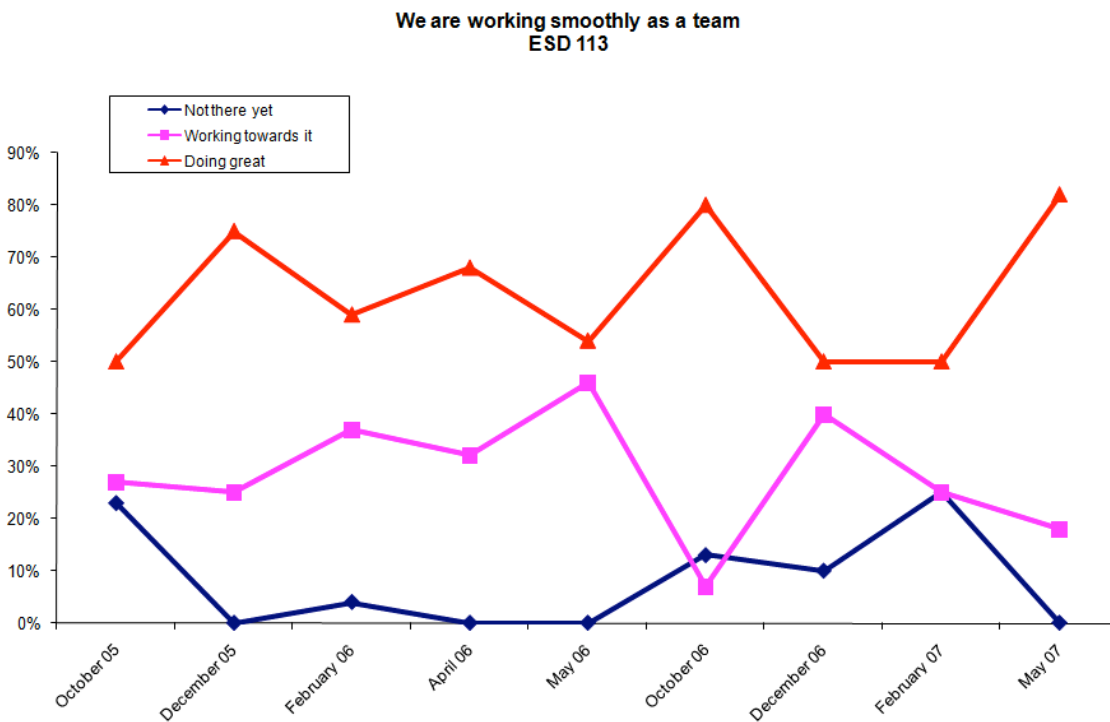
- We check in to see how things are going in each classroom. We have one coming up next week where we will present where we are at and what our future goals should be.
- Did not take place in the last month
- Our MIS had time here scheduled. But the severe ice prevented her from driving all the way to Raymond!! It was not safe.
- We have not had one for awhile but the last one was about modeling and math casts.

May - 07:

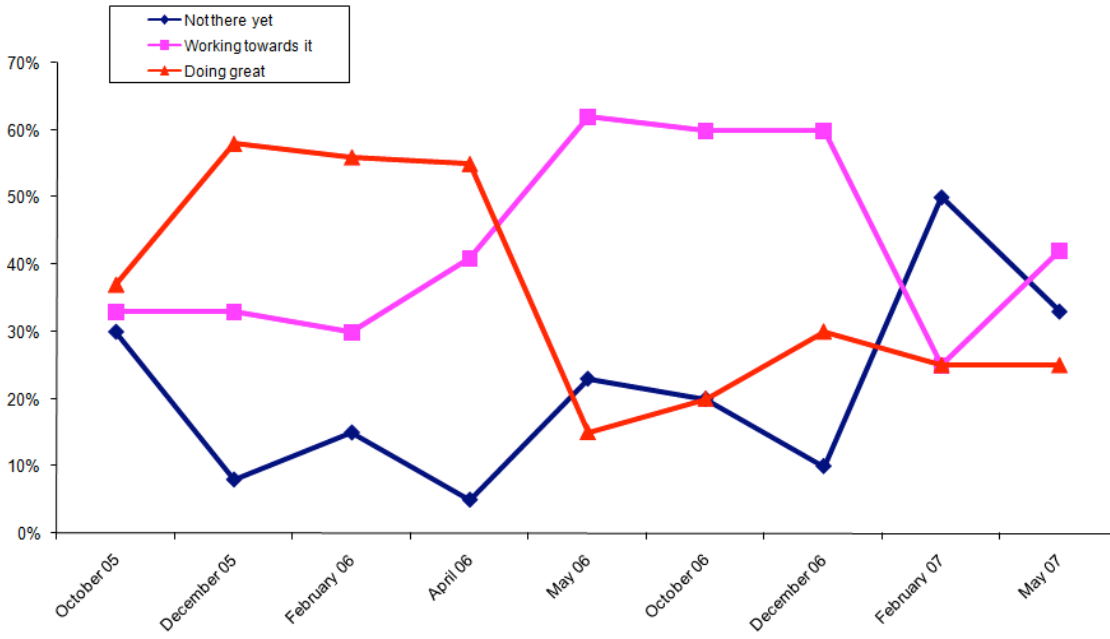
- increasing student discourse
- increasing student discourse
- Looking over WASL/MAPS tests scores.
- I could not attend our school's last meeting, for a variety of reasons.
- student discourse
- student discourse
- How to get the students more interested in math and knowing the basic math facts
- We had lots of discussion on important new math concepts. Technology was used and demonstrated for our benefit in the classroom. We were able to problem solve, troubleshoot math and technology issues.
- Integrating technology into the classroom.

Item 19:

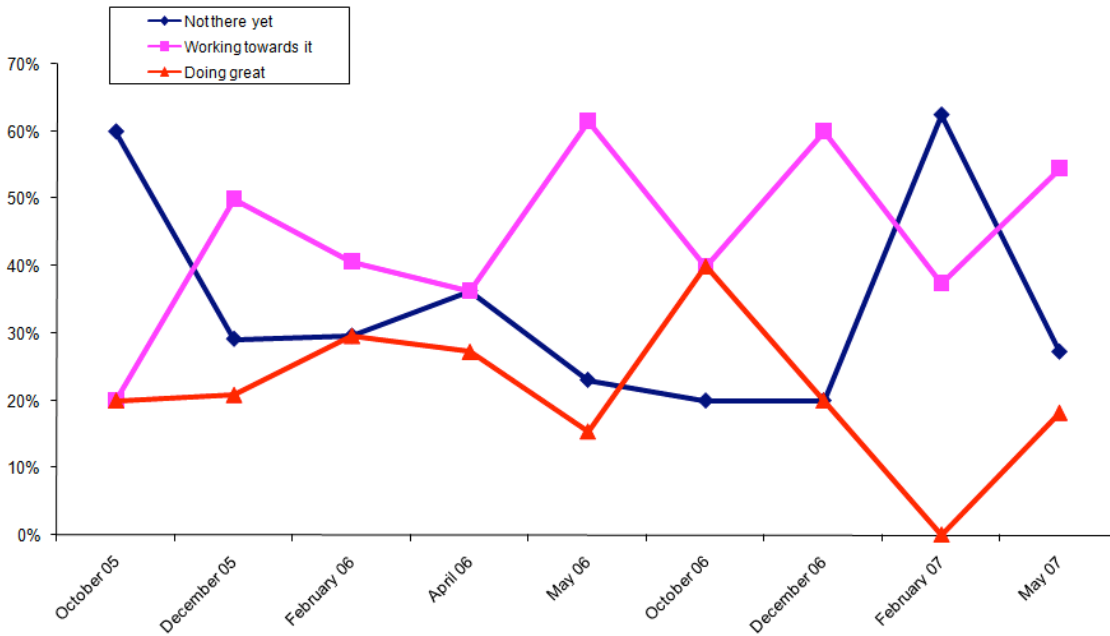
Please evaluate the effectiveness of your PLC meetings.



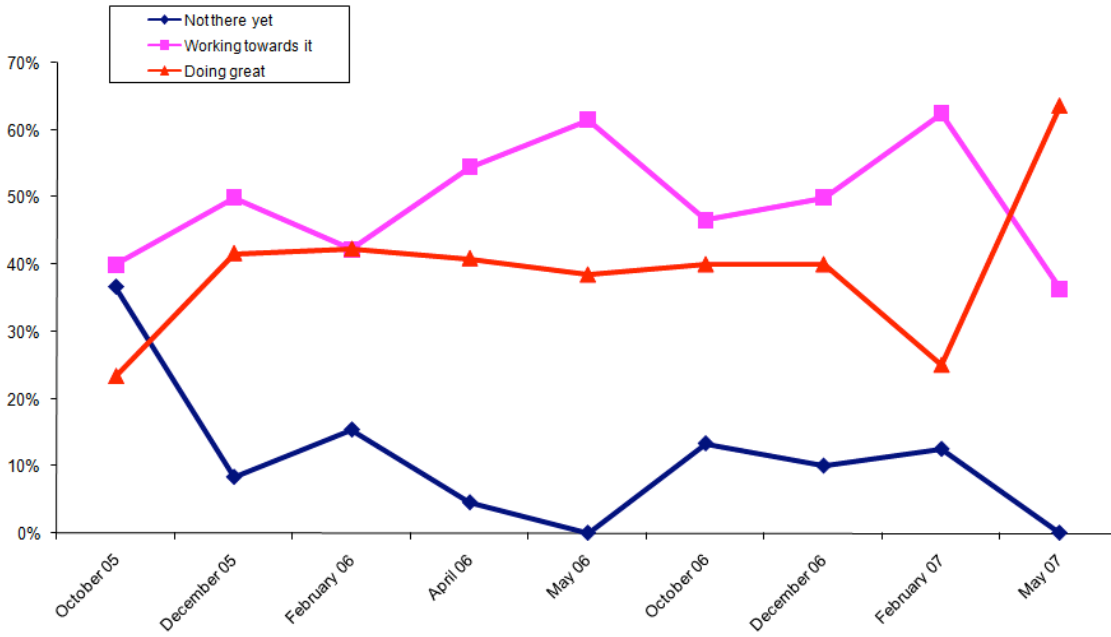
**We are maintaining a regular meeting schedule
ESD 113**



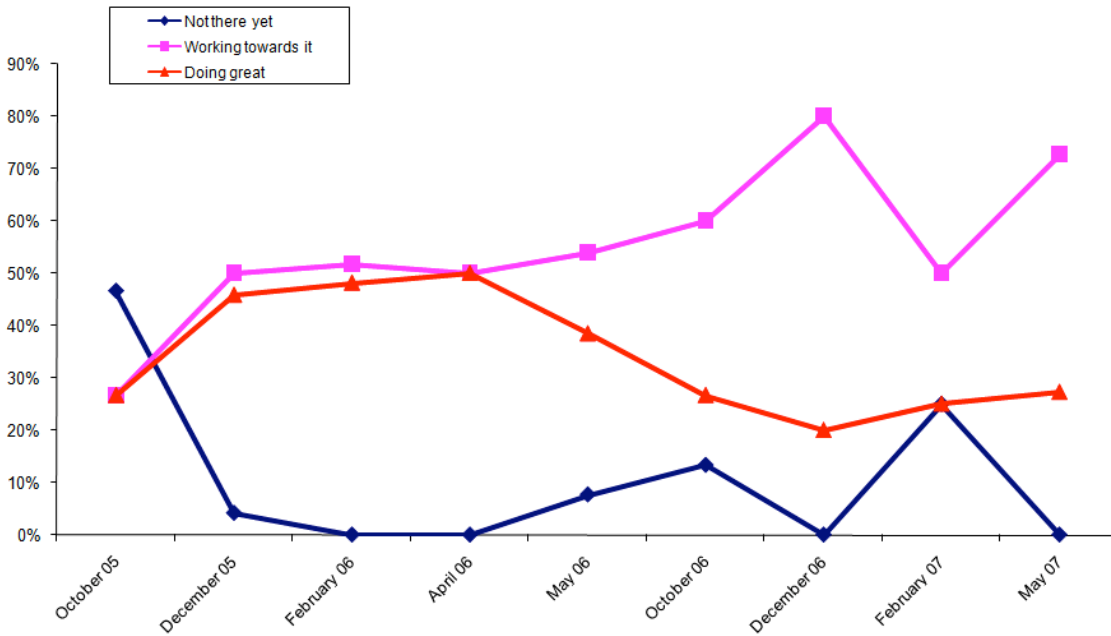
**We are reading and sharing research
ESD 113**

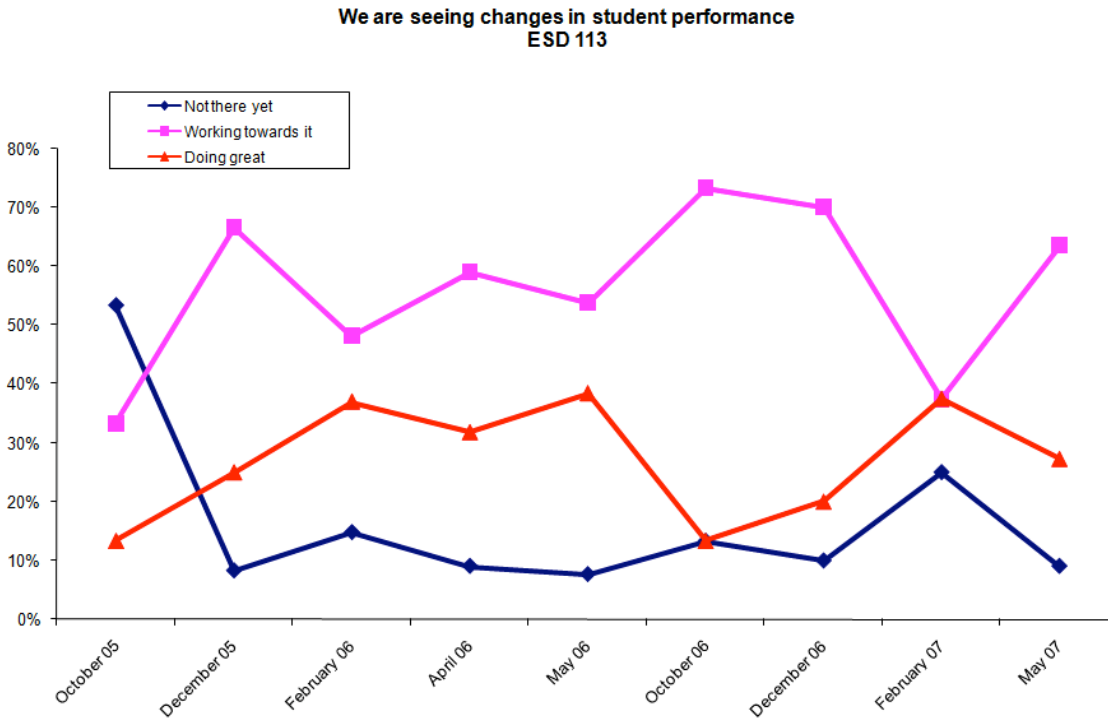


**We are using new teaching strategies in the classroom
ESD 113**



**We are maintaining focus on our goal
ESD 113**





Comments:

October - 05:

- Looking forward to all of the above
- I do not think this is necessarily the fault of our PLF team but we just haven't had the technology.
- Need more time to get started.
- No PLC meetings have taken place yet.

December - 05:

February - 06:

- We have been working on creating a lesson, but have not had a NO Limit Math lesson demonstrated in the classroom.

April - 06:

- We all have been working closely with our own school TOSA specialist, and she has been of great help in working with our students!
- The 5 NoLimit teachers at our building have worked had together to create lessons and find on line resources to support them. We have not had time to observe each other or even video each other. Preparing for the WASL with released items and trying to cover enough material before the test sucks the creativity out of instruction, and the individualize learning "aha" out of some lessons.
- We did not have a PLC meeting in the past month.

May - 06:

October - 06:

- Look forward to starting.
- We have not had a PLC meeting yet

December - 06:

- Collaboration time is almost non-existent.
- The day we met as a team for the whole day we got a lot accomplished. We felt like a team and enjoyed the discussions about articles, and classroom practices. The longer we go between whole group meetings the more I lose track of our focus. If we had a MIS in the building I would feel more driven to communicate on a daily basis.

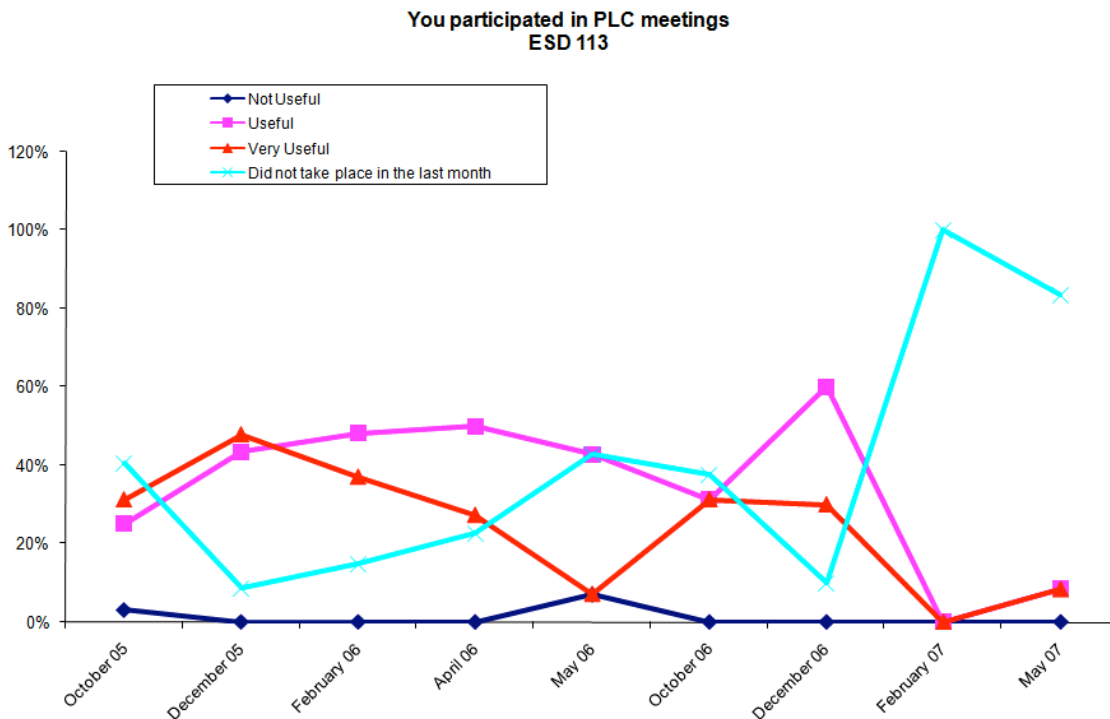
February - 07:

- We have scheduling issues with our PLC person. She is stretched thin and our schedule is almost absurd to allow more meetings.

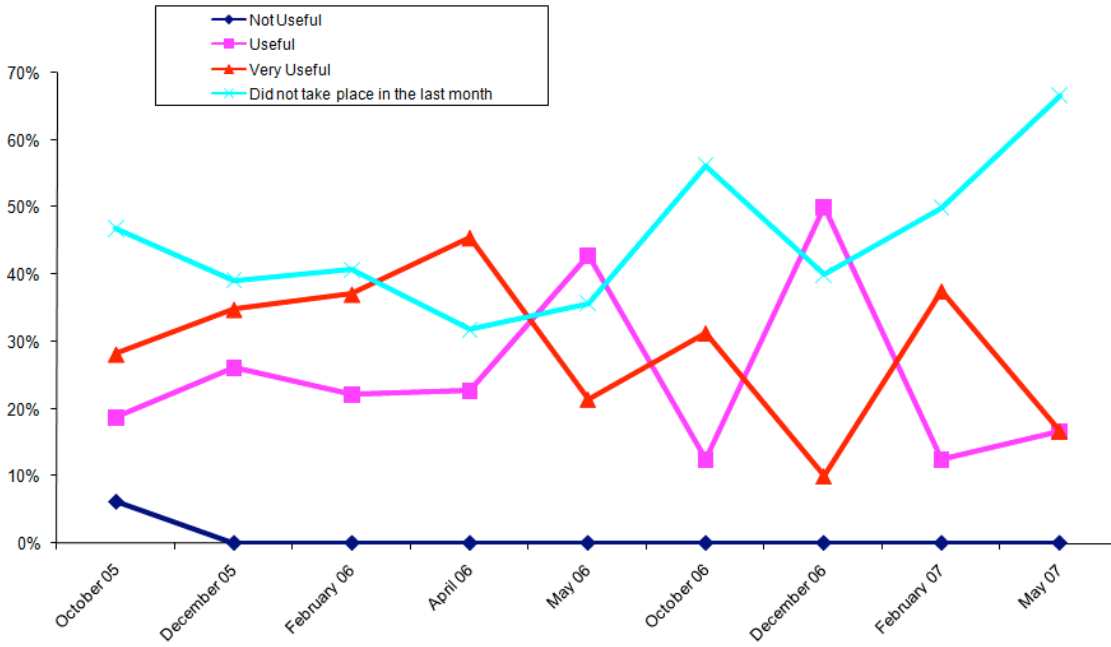
May - 07:

Item 20:

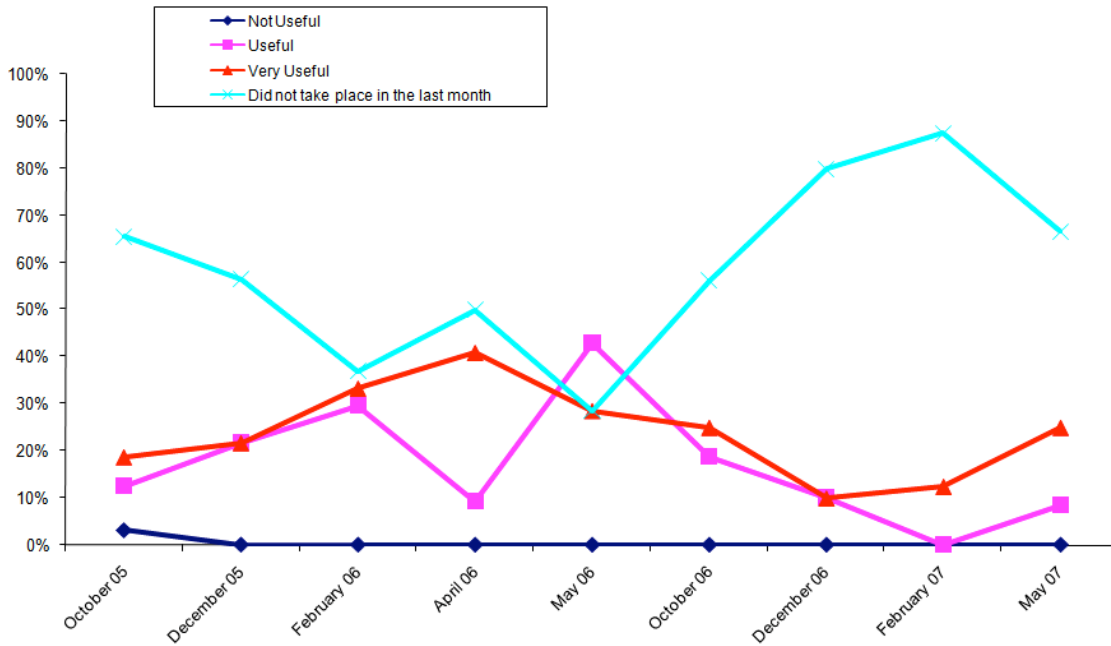
Please evaluate your PLC over the last month.



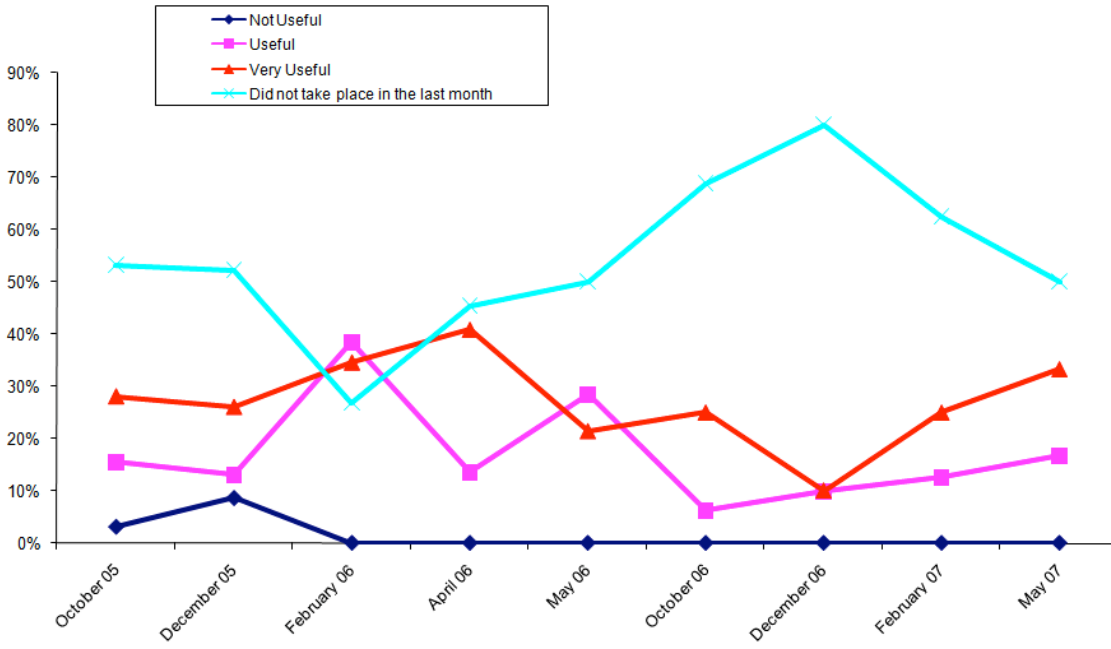
**You collaborated with other teachers in your PLC to plan or teach lessons
ESD 113**



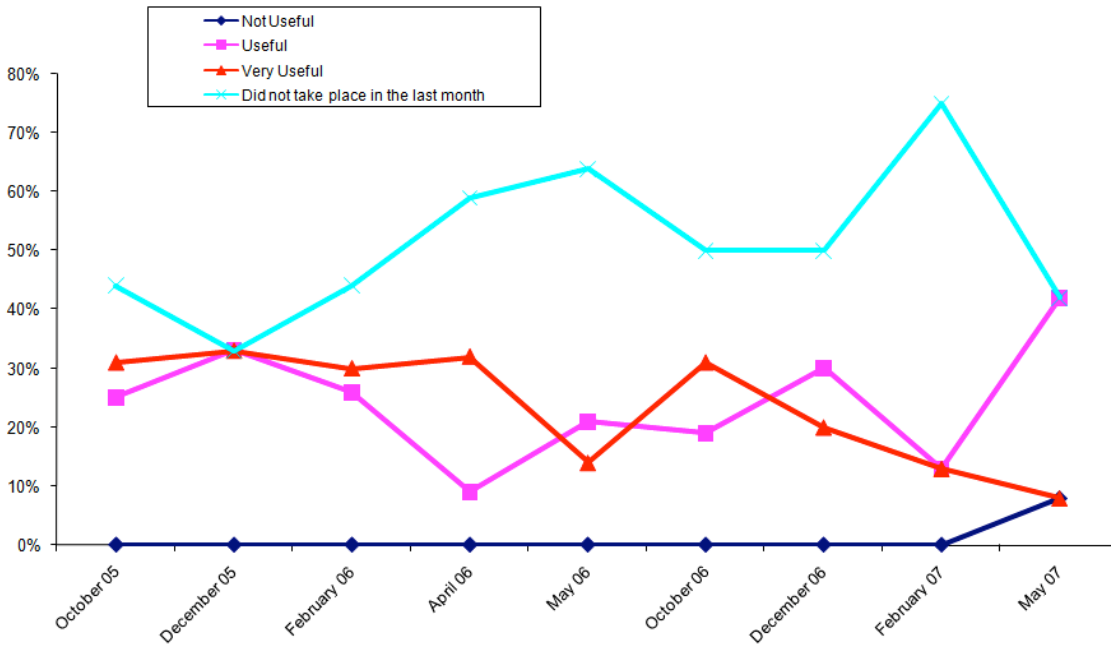
**You worked with teachers in your PLC to align curricula across grade levels
ESD 113**

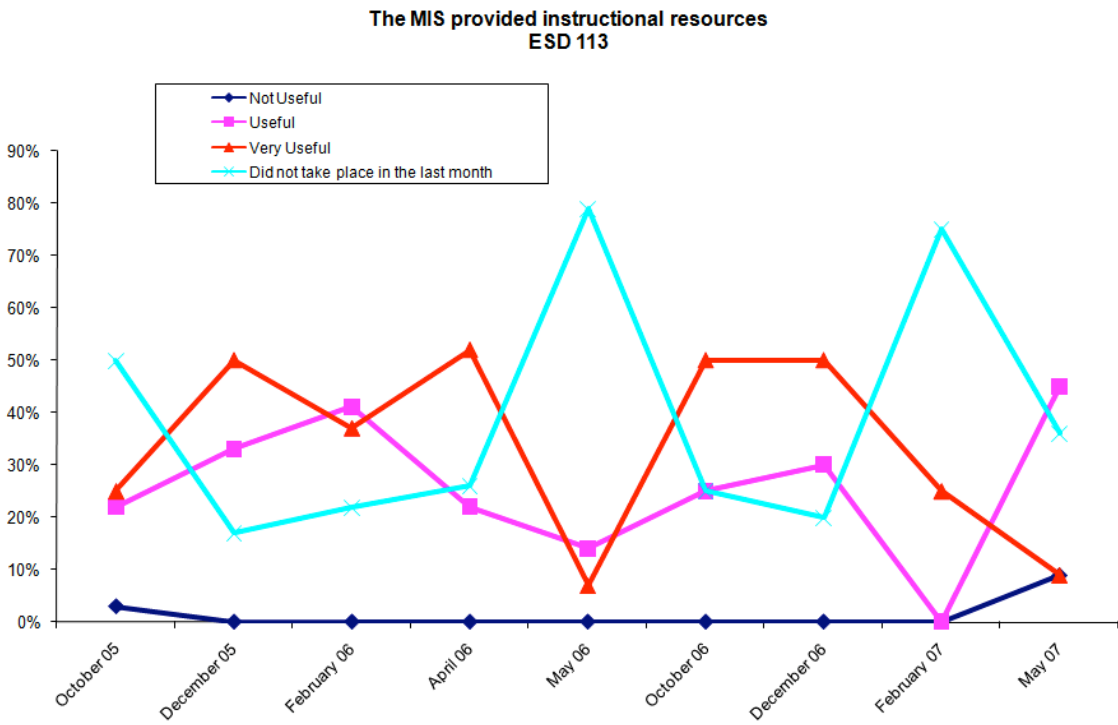
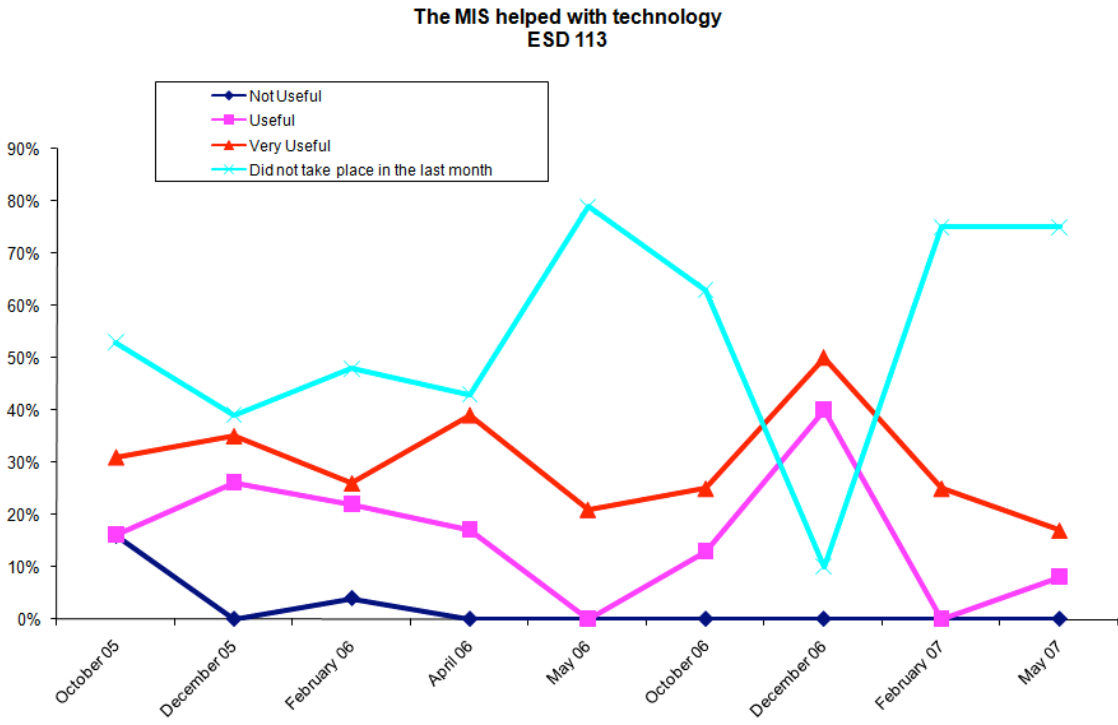


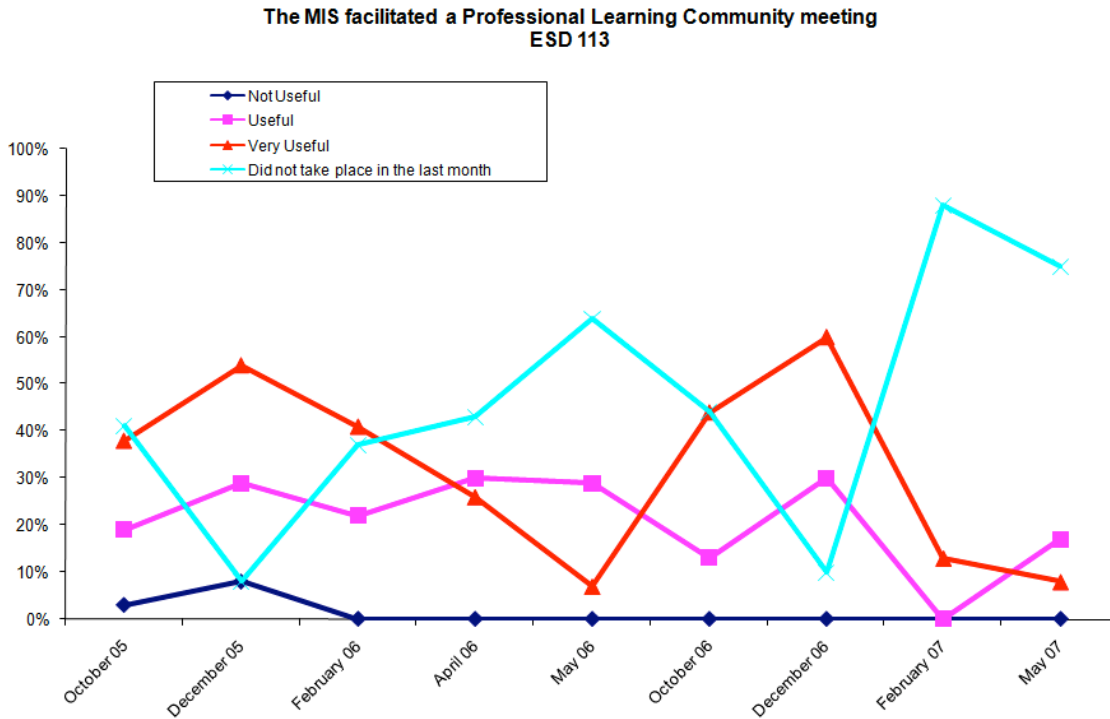
**You worked with teachers in your PLC to align curricula with state and/or national standards
ESD 113**



**The MIS helped with schedules, logistics, or administrative issues
ESD 113**







Comments:

October - 05:

- It would be nice to have an ESD representative talk with us as a team and take us through the different tasks we should be working on.
- We seem to be getting a slow start and need a PLC from the ESD to take us through all the websites and directions again.
- As for our PLC meetings a lot of this has not happened but the same teachers that involved in NO LIMIT are also working with Tom Boyce for our math grant and we have done all of the above with him.

December - 05:

- We had already aligned our math program to state standards in each grade level last year with our math coach.
- I was at a class on our last PLC meeting date and did not attend.

February - 06:

- None

April - 06:

- The meetings in our building have been great, but the meeting at the ESD #113 with other participants in the NoLimit project was very effective
- We did not have a PLC meeting during the last month.

May - 06:

- It has been too difficult to meet with teachers from other schools.

October - 06:

- Worked with some, but not all; many other building requirements for meetings this month; too little time for meeting
- Our next PLC meeting is tomorrow to reorder the equipment lost and to organize what lessons were lost.

December - 06:

- As a building each grade level (4th, 5th, and 6th) did a WASL released item and scored it together as a grade level team. With the data that was gathered teachers are adjusting instruction to improve student learning. Weekly suggestions from our MIS on projects, tech tips, articles, or even just a checking in would help me stay focused on the NO LIMIT project. I tend to get caught up in correcting papers, going to other meetings, and making lesson plans instead of taking time to visualize how to improve my math instruction tomorrow.

February - 07:

- We meet every month as a grade level to discuss one subject or another. Since we started No Limit, all of our sixth grade staff now have the same technology and we have been sharing our ideas with them.

May - 07:

- Even though I was unable to attend our last PLC meeting, I've been told by my colleagues it was helpful and beneficial.

ESD 114**Year Five****OESD 114 Year 5 Summary****Training and Professional development provided for teachers**

Date(s)	Amount of Time	Content
8/10-12, 2005	21 hours	<ul style="list-style-type: none"> • Math Content: Immersion in Measurement and Geometry • Task Analysis- understanding the cognitive demand of a task. • Three part lesson plan – Van deWalle • Introduction to PLC work – GLE alignment, Looking at Student Work (LASW) • Role of technology in instruction including using applets and using technology to increase discourse
October 6, 2005	7 hours	<ul style="list-style-type: none"> • Math Content Probability & Statistics • LASW • Sharing applet lessons • PLC updates—share inquiry question and used data analysis to move to action and evidence • Video case (talk moves and talk formats)
January 12, 2006	7 hours	<ul style="list-style-type: none"> • Math Content: immersion in Algebraic Sense • Task analysis • Video case (Discourse strategies) • Video case (PLC work – sharing actions and evidence)
March 9, 2006	7 hours	<ul style="list-style-type: none"> • Math Content: immersion in rational numbers • Lesson planning: introduced 5 Practices model (Peg Smith) • Practiced selecting and sequencing student work • Case Study - Cognitive Demand implementation, practice selecting and sequencing • PLCs shared successes and challenges, introduced the Student Discourse Observation Tool
May 18, 2006	7 hours	<ul style="list-style-type: none"> • Share Fair—PLCs had 20 minutes each to present their PLC work in their own way. Each PLC described what they focused on, what processes they used in their meetings, what actions and evidence were employed, and what they learned. • Collaborative reflection with two other ESDs on e-Coach • PLC and personal reflection

Conferences attended by teachers (also presented):

We did not collect data on this. Offhand, we know that

- 1 teacher attended a workshop to improve mathematics through journal writing
- 1 team attended OSPI summer conference
- 3 teachers attended an OSPI Math Coaches workshop.

We regularly shared conference opportunities with our teachers, but many were reluctant to attend due to traveling distances & time away from their students.

Conferences attended by us (also presented)

Conference Attended	Session Presented
OSPI Summer Institute	
PRISSM Summer Academies (6-05)	Several...video case, peer observation, LASW, introduction to PLC
Transition Math Project Summer Institute	
PRISSM Summer Training - North Thurston	Katy & Tom facilitated
My e-Coach Training	
OSPI Math Coach Training	
OSPI High School Summit	
OSPI Winter Conference	
TDG Math Leadership Institute	
NCCE	
NO LIMIT Steering Committee	Multiple sessions
PCMI Summer Institute	
OSPI Mentor Academy	

Cluster (PLC) structures in place. Why? How different than Year 3 phase?

- **PLC Meetings:** All PLCs met about 3 hours a month, divided in various ways.
 - PLCs held fairly regular meetings, some of which the MIS(s) would attend. They determined their own focus, classroom strategies to try, and evidence to collect that would inform their progress. This is very similar to Year 4 structure
- **Collaborative Classroom Meetings:**
 - Where convenient and/or strategic, we encouraged and facilitated classroom meetings of 2-3 teachers who taught the same grade level. The focus of these meetings was on collaborative lesson planning to identify and increase opportunities for student discourse.

Math curricula in use by NO LIMIT! teachers

- Queets
 - Elementary School—*Investigations*,
- Forks
 - Middle School—*Connected Mathematics*
- Roosevelt (Port Angeles)
 - Middle School—Glencoe (It's their "adopted" resource, but they supplement with other materials that fit the mathematical strand)
- Sequim

- Elementary School—*Investigations*
- Chimacum
 - Middle School—*Connected Mathematics*
 - Elementary School—*Investigations*,

Technology purchased. How choices made. Were teachers happy? Were we? Why/why not.

We worked with districts early in the year to advise on the purchase of the “basic trio” (laptop, projector, document camera) for all teachers before August 2005. We incorporated the examination of effective practices with technology to educate teachers about making careful technology purchases. Generally, we have been pleased with purchases that have been made. HOWEVER, districts had control of the technology money, and were not required to consult the ESD before purchasing, nor were they required to inform the ESD regarding these purchases. Therefore, we can’t account for all of the technology dollars, nor can we assure that the money was spent appropriately. Many districts are taking advantage of the carry-over option.

Successes/challenges of year 5.

Successes:

- Teachers recognized the benefits of collaborative planning
- Trust building- new PLCs and new MIS
- PLCs identified the importance of curriculum alignment
- Teachers embraced discourse strategies
- PLCs took charge of their own learning and inquiry.
- A few teachers courageously used video to examine their own instruction and student activity/learning.
- PLCs took shared actions
- Establishing and maintaining a focus on instruction/learning, supported by technology (document camera, applets...).
- Coherence in our program: Everything we do is focused on our vision of PLCs.
- PLCs enthusiastic about continuing their involvement in the program

Challenges:

- MIS personnel change.
- Achieving greater administrator involvement.
- PLC accurate, informative and timely record keeping
- Using student data to inform PLC decisions

Anything else to add:

- We are applying our PD learning to other programs with districts and MSPs. Our leadership capabilities are increasing.
- We are voracious consumers of books and research. Our practice is centered on putting research about teaching, learning, effective professional development and technology into play.

Year Six

NO LIMIT! Year 6 Summary 2005-2006

Training and Professional development provided for teachers

Date(s)	Amount of Time	Content
8/17-18, 2006	14 hours	<ul style="list-style-type: none"> • Reflection on Discourse, tie to Teaching Standards • Math content: Area & Volume • Model the 5 Practices: Anticipating, Monitoring, selecting, sequencing, connections • Video Case (Volume – using discourse) • Video Case (Missed opportunities) • PLC work – reflect & evaluate using rubric • PLC Research article - using Text Protocol • Norms, Protocols, Meeting Records
Local PD Sept 21, 2006 Sept. 28, 2006 Sept. 29, 2006 Oct. 13, 2006 Oct. 23, 2006 Oct. 25, 2006	7 hours at each site	<ul style="list-style-type: none"> • Examine WASL data • Moodle set-up & norms • ID data sources for PLC focus and review evidence plan • Define role of MIS for the year & schedule visits. • Review LASW protocol • Research: A Decade of Reform • Tools for Schools
November 2, 2006	7 hours	<ul style="list-style-type: none"> • PLC presentation: Data based Action Plan - • Math content : Stats and probability • Zoom communication activity • GLE math task sorting activity • Revised GLE draft
February 8, 2007	7 hours	<ul style="list-style-type: none"> • Math Content: Linear functions • Curriculum Focal Points/GLE comparison • PLC presentation: Action and Evidence • LASW fishbowl: Quillayute Valley demo of protocol
May 10, 2007	7 hours	<ul style="list-style-type: none"> • Share Fair—PLC presented their PLC work in their own way. Each PLC described what they focused on, what processes they used in their meetings, what actions and evidence were employed, and what they learned. • Each PLC demonstrated an interactive lesson of their choice – reflected their acquired knowledge thru NO LIMIT! • PLC and personal reflection
Local PD Jan 24, 2007 Feb. 26, 2007	7 hours at each site	<ul style="list-style-type: none"> • Personalized PD for each PLC focus • Forks – LASW cycle • Chim.Elem – LASW cycle

Mar. 9, 2007 May 17, 2007 May 31, 2007	<ul style="list-style-type: none"> • HHE – curriculum focal points • RMS – inclusion strategies • CMS – curriculum alignment
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Conferences attended by teachers:

We did not collect data on this. Offhand, we know that

- 2 teachers requested to use NO LIMIT money to attend the NCTM conference but were told that this money could only be used for technology conferences and so these teachers were unable to attend NCTM.
- 1 teacher will take part in WASL scoring summer ‘07

We regularly shared conference opportunities with our teachers, but many were reluctant to attend due to traveling distances & time away from their students.

Conferences attended by us:

Conference Attended	Session Presented
WASL Item Writing	
Teacher – 2 – Teacher Conference	
Transition Math Project Summer Institute	
OSPI Mentor Academy	
OSPI High School Module Training	
OSPI Segmented Course training	
OSPI High School Summit	
OSPI Winter Conference	
TDG Math Leadership Institute	
NCSM Annual Conference	
NO LIMIT Steering Committee	Multiple sessions
SEDL Prof. Teaching Model Training	
WASL Scoring	

Cluster (PLC) structures in place. Why?

- **PLC Meetings:** All PLCs met about 3 hours a month, divided in various ways.
 - PLCs held fairly regular meetings, some of which the MIS(s) would attend. They determined their own focus, classroom strategies to try, and evidence to collect that would inform their progress. This is very similar to Year 5 structure with the exception of collaborative classroom meetings. It became too much of a logistics problem to engineer multiple teachers observing a lesson. We discussed the opportunity for video taped lessons but no group felt confident enough to initiate this practice.

Math curricula in use by NO LIMIT! teachers

- Queets-Clearwater Elementary School—*Investigations*,
- Forks Middle School—*Connected Mathematics*
- Roosevelt Middle School (Port Angeles)—will adopt McDougal Littell.(but they will supplement with other materials that fit the mathematical strand)
- Hellen Haller Elementary School (Sequim)—*Investigations*

- Chimacum
 - Middle School—*Connected Mathematics*
 - Elementary School—*Investigations*,

Technology purchased. How choices made. Were teachers happy? Were we? Why/why not.

As this is the second year, most teachers were already equipped with the required laptop-projector-document camera. One school chose to use this year's money to supply the basic equipment to new teachers in the grant, letting teachers who were leaving the grant, take their equipment to their new classrooms. One school pooled this year's money with last year's carryover and bought classroom equipment as chosen by the individual teacher. Items chosen included classroom printer, calculators with experimental probes, digital cameras and licenses for ALEKS software for students. Some schools chose to carryover funds to next year or didn't have control over their money.

Teachers were happy for the most part. They recognized that there wasn't as much money this year as in years past and were happy with the professional development opportunities. The teachers who were unable to use their money to go to NCTM were disappointed.

Successes/challenges of year 6.

Successes:

- Teachers recognized the benefits of collaborative planning
- PLCs took on greater role at regional meetings
- We saw more examples of shared leadership within the PLC
- PLCs identified the importance of curriculum alignment
- Teachers embraced discourse strategies
- PLCs took charge of their own learning and inquiry.
- PLCs took shared actions
- Establishing and maintaining a focus on instruction/learning, supported by technology (document camera, applets...).
- Coherence in our program: Everything we do is focused on our vision of PLCs.
- Using student data to inform PLC decisions

Challenges:

- Constraints of teacher schedules.
- Personnel changes in PLCs.
- The unknowns associated with a school closing at the end of this year caused turmoil for one PLC
- Achieving greater administrator involvement
- PLC accurate, informative and timely record keeping

Anything else to add:

- Lessons learned through NO LIMIT! (and similar efforts) influenced the design of both our Transition Mathematics Project and Mathematics-Science Partnership grant proposals. In each project, we have increased administrative involvement while

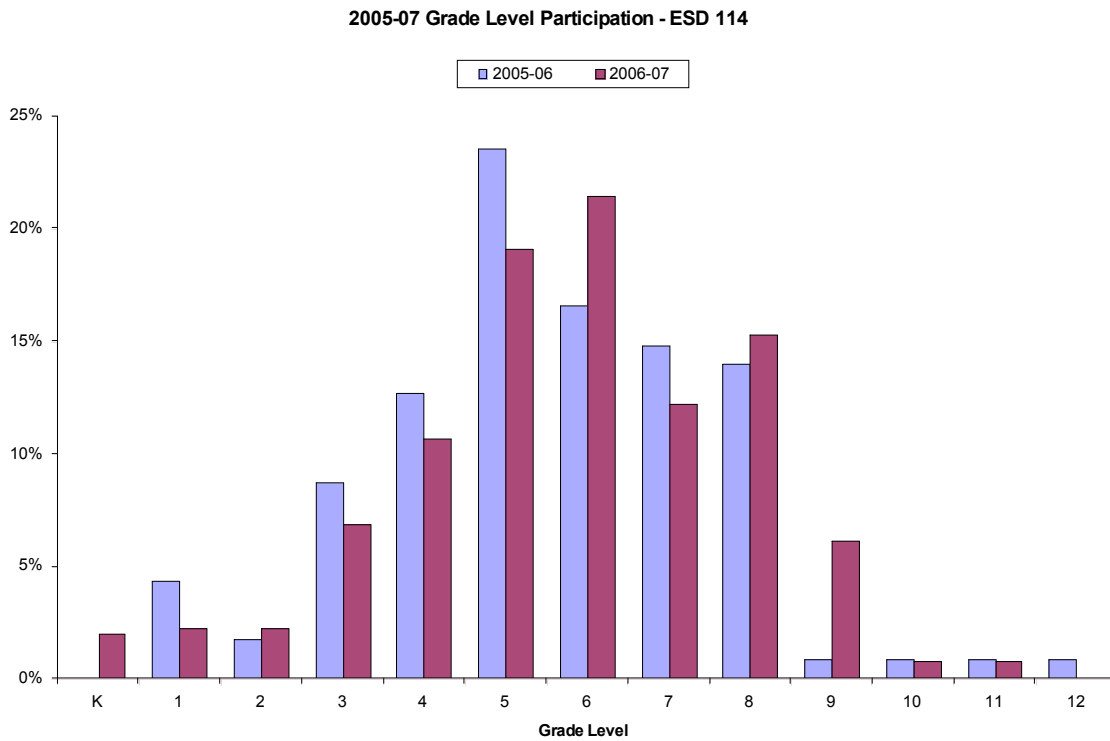
maintaining our focus on improvement through collaboration and standards based instruction.

- The relationships fostered through NO LIMIT! are a vital step to achieving our goal of creating a coherent regional approach for professional development and building leadership capacity within our region.
- We continue to be voracious consumers of books and research. Our practice is centered on putting research about teaching, learning, effective professional development and technology into play.

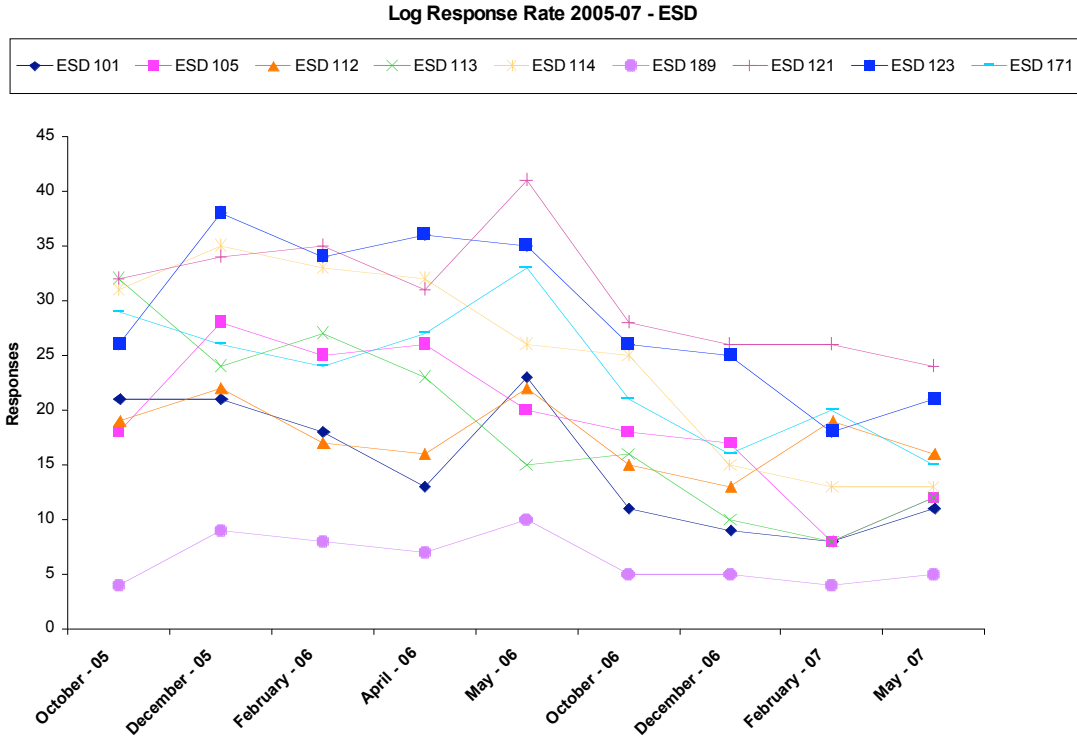
Log Report 2005-2007 ESD 114

Item 6:

The grade levels you teach:

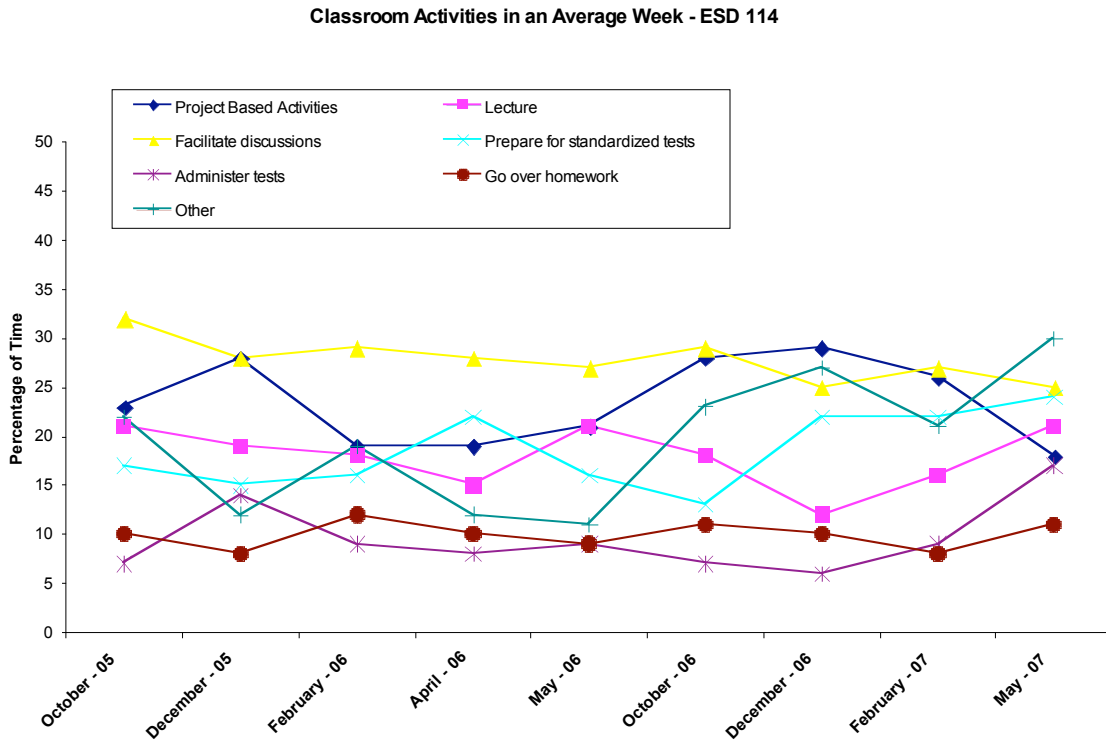


Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?



Other, please specify:

October - 05:

- I only teach math a couple of times a week. I am team teaching with another teacher who is the "Math Teacher"
- These number vary with the concept difficulties.
- Resource Room requires LOTS of repetition, hence the 20%
- Estimate... it is hard as each week is different. This is for math only - other subjects are different.
- Problem Solving
- It depends on the time frame of the unit. I may not test at all one week but 2-4 days any other given week.
- I forgot one thing and it made me do the who thing over!!!
- Observing and talking with students as they work
- Other - facilitating individuals, pairs, and teams in exploration of mathematical concepts through various activities.
- 8th grade math focuses on our curriculum calendar of skills as well as WASL prep.
- Using the text book and dealing with discipline problems
- I do all of these during the week, but it's hard to divide it up into percentages. What do you mean by "standardized tests"? Do you consider the WASL a standardized test? I answered this question with the WASL in mind.
- Practice with calculation skills.
- Varies
- My feeling is that 90% of the subject matter we cover is somehow "preparing" students for upcoming WASL test (standardized)

December - 05:

- 70% if project based activities is considered assignment and practice skills. 4% is conferencing with students individually about work progress
- Reviewing multiplication/division facts and graphing results
- As we are learning by observing each other, this percentage thing is much more difficult than we originally thought. I really depends on what part of the day or book we are on as to how we are teaching. We really use a combination of everything.
- Trying to build a bridge between classroom math and real world
- Lots of public sharing of mathematical discoveries
- Working with students and student groups as they complete assignments
- If games count as projects, increase project based activities to 60%
- 5% administrative - attendance, checking in with absent students, handing back papers/tests, 20% checking in with and guiding individuals and teams as they work on investigations/assignments
- Work time in textbook.
- Is the total supposed to add up to 100%. I feel they are not independent from each other. I can do parts of each category at the same time.
- Work on homework or other guided practice.

February - 06:

- Two days this week was used up to administer the COGAT / ITBS tests for the HiCap Program in Middle School 2006-2007 school year. They wanted to have early identification, so gave it to fifth grade students. This is the first year that has happened and I am unsure if it will be given every year here out.
- Other: basic skills and calculation. Review and spiral approach w/ extended response.
- Peer Assessment
- Teaching mathematical writing skills as part of No Limit project
- Working with students on questions and problems
- Working with teams exploring Math concepts & problems
- Students work on their assignments
- I know my percents don't add up!
- Skill review as an entry task. Use the textbook.

April - 06:

- The percentages are a little skewed right now as we are preparing for WASL.
- This is based on a self-contained classroom, not on just math.
- Working with student teacher, preparing her for curriculum and Math WASL
- It's all about WASL right now.
- We have been WASL training for the last two weeks so haven't been doing our standard teaching routines
- Working with students as they work on assignments
- Other: monitoring group work 10%, clerical/managing behavior 5%
- My job classification has changed significantly. I now do not teach in the regular classroom. I did have contact with kids in the above areas several times but it really wasn't regular.
- Other is multi facts study and review; working in the textbook
- We are currently giving the WASL. On our days off we are discussing WASL sample tests.
- We've been getting ready for the WASL, so I have been giving WASL like assignments and we have been scoring them as a group.

May - 06:

- WASL took approximately 16 hours for total of 3 weeks of testing. Math was not done as much as daily lessons, due to stress level upon kids during testing. Afternoons consisted of math games and art projects.
- WASL testing prep was the big issue this last quarter.
- Self-Grading of extended response items and projects
- April was a busy WASL month. After WASL we get involved in a lot of activities to wrap up the end of the year. Science and Social studies top the charts for me. I am also doing a lot of DRA's (reading assessments) while the students are working on independent reading projects
- Working with students individually as they work on assignments
- Classroom management and behavior issues abound this time of year!
- I just realized that I have added these percentages wrong on all the other surveys!

October - 06:

- Independent help or small groups based on math content needs

- Most of work has been start-up procedures and pre-testing
- Accelerated Math - class work discussions, conferencing with students
- Other involves a daily review paper; fact strategy study, fact practice and timings. I do not feel that all of my content work is project based, so part of the other is worksheets for reinforcement or assessment of concepts
- Students work from individualized math packets from Accelerated Math
- Basic math facts practice and drill

December - 06:

- Following directions to know EXACTLY what is being asked in the problem
- Talking with students as they work in groups and individually
- I use Accelerated Math in my remedial math teaching. Students work independently and make progress individually.
- This year, I am not directly teaching math, but supporting the math classes as the specialist. I am supporting the special needs students who are experiencing project-based activities in those classes. However, I am using some of the talk moves and student led learning within language arts.

February - 07:

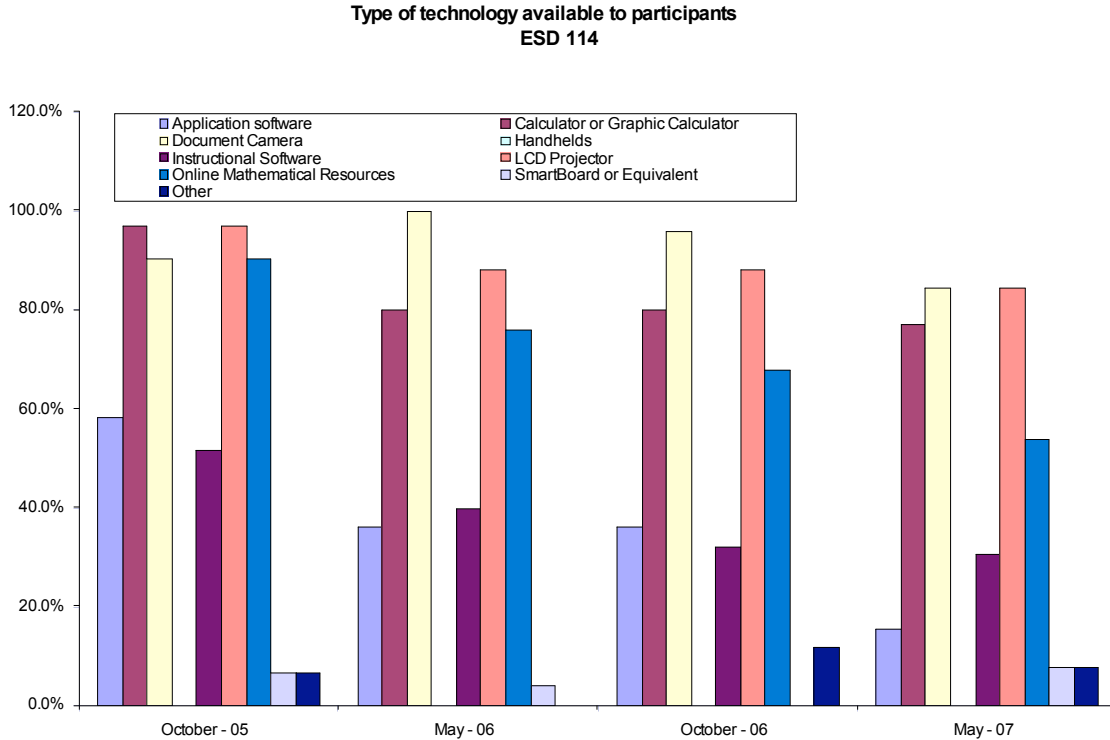
- Actually even our test prep is geared more towards our project-based activities.
- students explore problems and investigate concepts
- I honestly don't know if I'm supposed to only address math instruction with regards to my percentages. can you please clarify this in the question.
- Working with individual students or partners
- Study multiplication/div facts; review; worksheet practice
- I use Accelerated Math, which is individualized instruction.
- I don't currently teach a math class, but enter the classroom and support the students served through LAP or Special Education.

May - 07:

- Working with individual students
- We have great discussions in Math regarding our openers
- Most of time is spent working on assignments out of CMP book
- I use Accelerated Math so the majority of my time is spent in individualized instruction. I also spend time drawing concepts in cartoon form.

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.



Other:

October - 05:

- Digital still & video cameras
- Digital video camera, scanner, overhead projector

December - 05:

- Digital still & video cameras
- Digital camera, scanner

February - 06:

- Digital still & video cameras

April - 06:

- Digital still & video cameras

May - 06:

October - 06:

- Hand held keyboard
- GPS, laptops
- Accelerated Math program

December - 06:

February - 07:

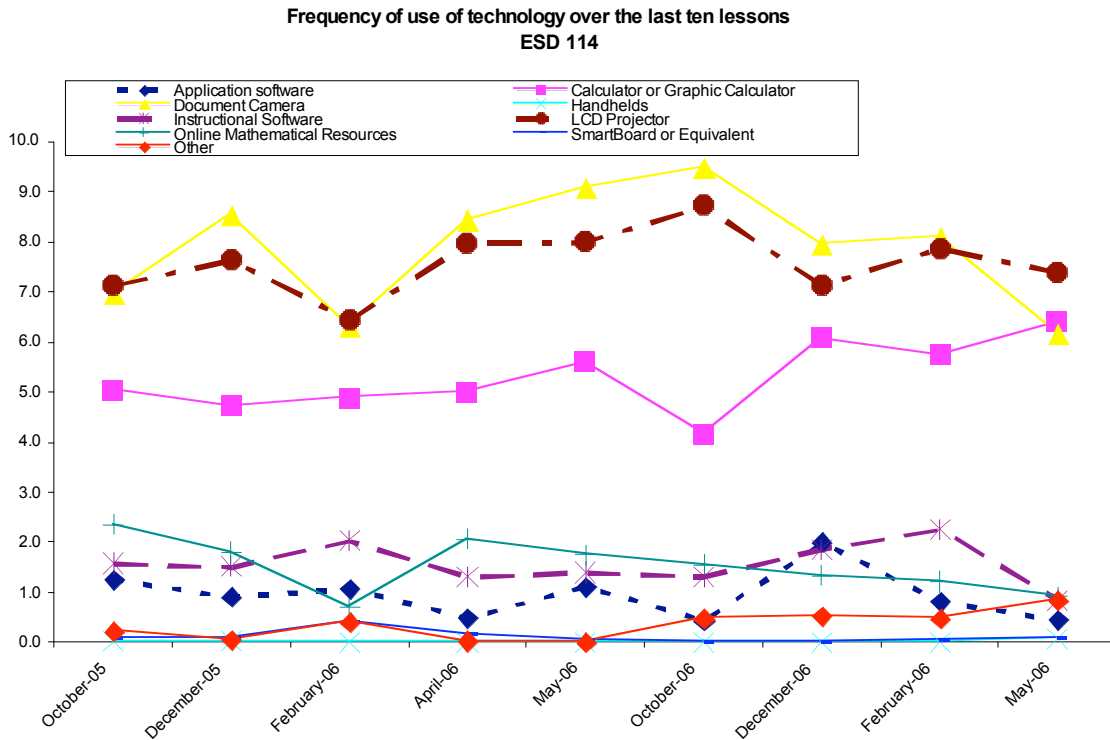
- Projector and document camera

May - 07:

- Accelerated Math program

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.



Item 11:

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- We are using calculators in a stock market simulation project.
- Students bring their math work under the Elmo to share with other students to discuss their thoughts.
- A document camera was used by students to explain their work and to justify their answers.

- Gave WASL style questions, then had them critique their work with the projector and help from the classroom. A very popular activity, even for the low kids.
- Students used the document camera and projector to share their thinking and the strategy they used to solve multiplication cluster problems. They talked about how to break numbers apart and the pattern they noticed with each cluster. Other class members also came up to discuss the same problem if they had a different strategy.
- Use of calculators to check accuracy. Applets to visually understand concepts.
- Students used NCTM Illuminations, Adventures in Multiplication Applet to learn more about rectangular arrays, multiples, products and factor pairs. We just got our technology hooked up and to answer the next question, we hope to do it weekly or even daily depending on the situation. Right now it has been less than monthly due to technology clutches.
- extended response WASL
- Applets: number crunching & decimal base block. Doc camera: sharing process statements and ways got to answers on extended response. Power Point: to show how to know which operation to use in a word problem
- Sharing/explaining work with document camera
- Using the "Patch" applet to discuss symmetry
- During use of applets and mathematical skill/concept games.
- projected student work on screen via document camera and lcd projector- student explained and showed solutions
- Use of number cruncher applet
- Students played a logic game as a whole class that was displayed using the LCD projector and an online math game. Some students got the game right away while others learned from the group the thinking strategies they were using. I just started using technology in this way and would like it to be on a weekly basis, but it is currently monthly.
- Kids constantly bring work to the cameral to show work. Applet
- Playing the Factor game during our discussion of multiples and factors.
- They used the document camera to look at different student's work to decide how to proceed with a problem.
- Students constantly bring their math journals to the document camera to show and explain their thinking.
- Students explain their graphs using document camera. Discuss why a graph increases at a greater slope and what that steepness means.
- Problem-solving activities that require students to justify their solutions and explain their solutions.
- Students shared procedures to create a polygon on a grid using Geo-Logo commands. The procedures were shared visually using a document camera and LCD projector.
- Everyday we show student work under the document camera. Last week I used the doc. camera, laptop and LCD projector to teach the kids how to use an applet.
- Show student work and explain applet lesson
- Our focus has been graphs/charts. Students have been constructing graphs with pencil/paper. Not much technology has been used other than the document camera to show student work recently.
- I had students put samples of their work under the document camera and go over what they were showing with the class.
- We used the ELMO to show and discuss student work and explanations

- Applets to observe a race and make the connection to a graph.
- Graphing programs used on lcd project
- We explored a math applet on-line together before breaking into small groups. I would like to find more computer programs and/or internet resources to support meaningful projects. With so much to teach it's hard to stray from designed curriculum prior to WASL in Spring. If you place document camera in grouping of technology support. I use it EVERY day!

December - 05:

- Students get to share their thinking with classmates by using the document camera.
- They were rating each other's papers 1-4
- My students have used some pattern manipulatives on the NLVM Algebra Manipulatives websites in the last two weeks.
- Sharing how they did a problem
- Sharing of work during debriefing
- They were able to explain their thinking about partitioning numbers, while answering questions from me and the class.
- Most of the time, students present their work via the Elmo. Recently, we looked at an applet called Decimal Train. Students discussed their strategies and discoveries as a class.
- Kids use the document camera and LCD projector daily to explain how they solved geometry problems. Daily used to share writing, and other examples by students. That technology is used a lot in my classroom.
- Finding combinations in the Set Game. Processing extended response questions.
- Used doc camera to talk about work and their process statements. We have been also doing quick quizzes online with varying skills.
- Using document camera to explain how they found mean, median and mode in data or to demonstrate a line plot, stem and leaf or coordinate graph
- We use fraction track in various ways to apply concepts of fractions to the game.
- I used the NLVM site to supplement students' learning in the Pattern Trains unit.
- Working with Geo-Logo on computer to create designs.
- Students presented homework solutions using document camera and lcd projector
- Sharing extended response results on a daily bases.
- Students used the Power Polygons computer program to draw polygons on a coordinate grid. Some kids were not able to interchangeably draw the same polygon on paper the next day using a coordinate grid on paper because they were confused about where to start (on paper always go back to 0, but the computer "jump to"..)
- Sharing math problems on the document camera.
- Daily WASL prompts which students present on the document camera
- In my algebra class we used an applet to explore writing linear equations to pass through particular points on a graph
- Geo-Logo and also document camera and projector to show thinking and progress in fractal project
- Explain their thinking using the document camera. Students called upon to reflect on someone else's thinking and whether or not the problem could be solved another way.
- We problem-solve once or twice a week which requires a higher level of thought and process. students share their results with the class using the document camera and projector
- Students shared their ideas explaining what a fraction means.

- We used geo-logo to explore coordinates
- Looked at student work with the document camera to determine which was easier to understand for a student that didn't know how to complete the task.
- The students use the LCD camera and the projector on a daily basis to discuss mathematical learning. For example, a variety of methods were shared showing many ways to solve an ACE question.
- Within the last month, I received a new document camera and have used it to explain the lessons in the book and show student work. This allows students the ability to interact more with the text and each other. Most kids seemed motivated to show their work, which has increased on-task behaviors.
- They explained their thinking using the document camera
- We used the applets on virtual math manipulatives for demonstrating various aspects of decimals (place value, comparing, adding & subtracting)
- Showing up student work and students explaining their math thinking to the whole class
- We used the ELMO to highlight student work and to begin discussing how student's came up with the particular answer
- We have been doing linear graphing, so lots of work with TI 73's. We started by speculating what various linear equations would look like before actually graphing them.
- Students used the document camera to show and explain their thinking on homework.
- Using my document camera & LCD projector to display and discuss student work. We've been working on how to show/describe fraction problems with pictures and drawings.

February - 06:

- When they had to do a Math WASL prompt question. We used the Elmo and projector. Students came up to explain their thinking and asked questions.
- I have used an applet on the Illuminations site called Concentration. I am using it to help my students learn the different symbols for the numbers 1-10.
- We use the document camera most everyday so students can share their thinking. We've use computer applications where appropriate, and when the computer lab was available.
- Students use the doc. camera daily to explain their mathematical thinking and how they arrived at an answer.
- Our grade level is still pursuing the availability of Illuminations in our math classes. Student computers are banned from "games" therefore, we cannot access that technology. I have had kids doing some Power Point Projects.
- Explaining their thinking with the document camera (showing work).
- Explained the process by which they reached their solution.
- They have brought their work up under the document camera to show their thinking so it is easier for the students to follow what they are saying.
- Document camera is used to share their thinking when solving math problems.
- Students were asked to find the perimeter and area of the classroom and create a blueprint on the computer using a CAD drawing program.
- I used the NCTM linear equation applet to improve discourse about relationships between representations with my eighth grade class. They actually acted interested for a while.
- Use of Doc. cam to explain their thinking on Ext. Response Items
- Students shared mathematical representations (different ways of arriving at the (same answer) under the document camera.

- Put their work under the camera for class to see the example they were explaining.
- WASL prompts are taught daily, along with math writing skills and students explain their work on an almost daily basis using a document camera
- We used applets to understand and practice the solution of algebra equations.
- Used online applet to construct and iterate fractal figures that they had designed.
- Students share work on document camera and explain their thinking. Others agree or disagree and explain why.
- Extended Response questions to support WASL work. Applets for learning new concepts.
- Sharing of student responses to WASL-style problem-solving tasks
- Students often share their learning and understanding through the use of document cameras and LCD projectors. Students also used calculators often to determine percent and decimal equivalents from fractions
- They use manipulatives nearly everyday to do math problem solving. Sometimes I use an online tool to introduce a concept, lesson, idea, etc.
- Using the document camera to share student responses during entire task occurs often. Being able to move manipulatives around so that the whole class can see the moves. Yesterday we were working with arrays for multiplication and it was easier to facilitate the conversation.
- Students display their solutions to problems and discuss possible answers.
- We used a virtual manipulative site to form a variety of polygons with tangram pieces.
- We used an applet to work on fraction parts/whole concept. I used my laptop with the projector to show kids the applet, then kids went on to do a paper and pencil follow-up with a problem to solve.
- We use the document camera daily to correct our opening exercise. The students come up and explain how and why they came up with their solution.
- Students used technology to promote higher order thinking skills by showing and explaining their solutions to problems on the document camera.
- Asymptotes on rational functions
- Daily use of document camera and LCD projector to show/discuss student work in order to scaffold student thinking
- My students have brought work to show under the document camera and have used their calculator to support their reasoning.

April - 06:

- Students used PowerPoint to create a scale drawing of the classroom.
- They put their work under the Elmo and explained to the class what their thought process was and why.
- Explanations of solutions to multiplication strategies (without algorithms) were shared.
- When they used a calculator to work inches into feet to discover what the "mystery data" was.
- The students have been having a discussion about strategies and discovering/testing methods using applets.
- LCD Projector and camera used for students to explain answers to questions regarding strategies used for finding patterns and ways to skip count. Explanation of mental math strategies on a daily basis. Explanation of math homework strategies.
- We used the doc camera to show mathematical thinking of extended response questions
- Discussed/evaluated student work on 6th grade math sample WASL

- We use the Elmo all the time to share our written thinking with each other.
- With the document camera explaining their thinking to other students.
- Investigating the shooting balls applet on the NCTM website
- Use of doc. camera
- Didn't occur except some sharing of student work under the document camera.
- Shared their written math
- Normally, almost daily, we use the document camera for discourse over student work. Just finished fractions block
- Used applets to introduce the idea of linear patterns
- Students share possible solutions using document camera and projector
- Showing student work on document camera and asking them to explain their thinking. Asking others if they can understand what someone else has done and if they agree or disagree with their answers/methods, etc.
- Sharing solutions to problem-solving tasks by use of projector and doc. cam.
- Explanation of how yo-yo practice affects improved performance. Used projector and camera to show tables completed. Used calculators to determine totals and percentages.
- Showing their work under the doc. camera
- We were able to show examples of symmetrical designs and lines of symmetry in pictures and pattern blocks using the document camera. We used calculators to test the speed of mental calculation against the calculator.
- My students use the document camera and LCD projector daily to share their work orally. I do this with my openers and with my daily work. My students use it during our explore and summary parts of my lessons. Recently, we have been using it for sharing sample WASL problems and showing student replies and rubrics
- We look at student work with the document camera on a daily basis.
- A student came up and drew what he was describing orally so that other students could see it projected on the wall. This helped other students understand his line of thinking.
- When scoring the WASL examples the students have come up to the camera to explain their thinking
- Quadratic equations and exponential equations on graphing calculators
- Students display and explain their work on the document camera
- Was able to project images from the textbook on to the whiteboard and have a deeper discussion of how/why formulas are used within geometric shapes.
- The students have been using the MS Shapes software on the Macs

May - 06:

- We use the document camera to facilitate student discourse surrounding mathematical concepts and ideas.
- We played an applet using the computer and Elmo. The students had to explain their reasoning to the class.
- Use of document camera to discuss with others what and why they did something
- Shared solutions to algebraic questions
- Explaining their thinking about a math problem and sharing their strategy for "counting up" w/money.
- Use of Applets for demonstration and/or practice.
- Sharing strategies for solving cluster multiplication and division problems with class

- Use box light, doc cam daily, students show their problem solving
- Document camera to explain their thinking about mathematics and discuss others' strengths and weaknesses about explaining their work.
- Students explain their reasoning and justify their work to their classmates with the document camera.
- We are studying geometry right now, and the projector and document camera is great for showing the drawings they are doing in their notebooks. We also use the manipulatives directly under the Elmo.
- We use document camera to share our understanding of math.
- exploring intersections of linear equations using graphing calculator
- MALT extended resp.
- Worked on computation pages. Used the document camera to show how they were solving 14×23 without using the traditional way.
- This happens on an almost daily basis with my students using document camera and projector. Dealing with division right now and have used "Study Island.com" for practice of skills learned in the classroom.
- Used graphing calculators to explore slope and y intercept in linear equations and draw conclusion about parallel and perpendicular lines
- Students used GPS to set out coordinates for a "treasure hunt" for other students.
- Students share their responses to problem-solving tasks...
- Every time kids show their work, they use the document camera.
- We have been working with geometry and the document camera has helped students show their drawings. Also, they have been using calculators and protractors to name the interior angles and the angle sums and to discuss the connections with the number of sides to the angle sum of a regular polygon. The document camera, LCD projector, and the calculators have all helped with student discourse.
- We correct daily work at the document camera and they are always able to use their calculators to check their work
- Students use the document camera every day to explain their thinking on how they solved problems.
- We used the internet, spreadsheet program, laptop, document camera, and LCD project during a "Weather Graphing Project." Students collected weather data for our city for a given month from the local newspaper. We recorded it, as a class, into a spreadsheet on my laptop. The laptop was displayed through the LCD project so we could check our accuracy. Data was crunched (measures of central tendency were calculated) and than groups were assigned a particular graph to make with the data. Graphs were hung in the room and analyzed based on the "visual" data you could get off it. A second city was chosen and new graphs were made to help determine any similar weather patterns. Class discussions were held and each class was responsible for creating a checklist to assess similarities. Individuals had to defend their choice(s) for landmarks to use in the checklist and define acceptable ranges to fall within. Finally, based on geographical location and other influences that affect weather, groups tried to locate a foreign city with similar weather patterns. A 30-year average of our own city was available on a weather related website and groups received a similar print out of the city they chose. This has been a project I've used the last three years when we finish up WASL testing. It's not something I do on any type of regular basis (next question).

- Students have used the NCTM's Illuminations applet for patterns and MS Shapes.

October - 06:

- They had to explain their reasoning and thinking to the class.
- We used the document camera for a lesson on patterns
- Use of document camera to explain and discuss with other students their mathematical strategies
- Used document camera and projector to show student thinking and bring about group discussions
- When we do the discussion portion of an investigations lesson. They share their thinking under the Elmo.
- Sharing math strategies to solve cluster multiplication problems and rectangular arrays of multiplication. Students shared and called on other students to give feedback, ask questions and make comments
- Students discussed findings with GCM and LCM and provide a rationale for their thinking - other students question/summarize or respond to work on document camera
- We have been using pattern blocks to learn the angles of regular polygons. The students, after discovering a couple of ways to prove the angles, have come up under the Elmo to show the students how they figured out what the angle is.
- We use the document camera daily to help illustrate our thinking.
- We followed the steps of a Pythagorean theorem proof from an applet and discussed the validity of each step and why they worked.
- Students model their division problem solving strategies under the LCD
- Sharing work and how they solved a problem.
- We used the Elmo and projector to explore enlargements and reductions and to talk about similarity
- Daily use of document camera and projector as students share their thinking and invite discussion
- We are currently working on developing a list of problem-solving strategies to use with extended response items. We've been analyzing student work from a "WASL-grading" perspective.
- Interaction with NCTM's applet, "Bobbie Bear" to teach the Fundamental Counting Principle
- Everyday, showing homework.
- Showing their work
- Students use the calculator to explore the relationship of digits/decimal point in the base ten system and multiplying and dividing by ten
- We are working on geometry and the students have been using the projector to share their polygon shapes and how they are constructed.
- They used calculator to solve problems. they used document camera to show how they solved problems.
- Using the document camera and LCD projector to analyze and discuss student work
- Student discussion has been at its best when students are sharing their work under the document camera. Other students see the strategies, hear their strategies, and feel comfortable either agreeing or disagreeing with their strategies and process. Each day we do this process of sharing and discussion. In particular, we used this yesterday when sharing our strategies for a math products game.

- Document camera computers

December - 06:

- Online mathematical resources (e.g., NCTM's Illuminations applets)
- They used calculators and document camera
- Base 10 blocks
- Showing and explaining WASL work
- Students showed stem and leaf graphs that they had created under the camera.
- I put a problem under the Elmo and we discuss what the question is asking then we break out to work on the problem, at times using manipulatives (whatever works for them) and then we come back and discuss under the Elmo what we found out. It is then that questions and disagreement happens.
- Sharing math thinking on journals.
- Show work and explain under doc. camera
- Students used iBooks too play Geo Logo, specifically the Power Polygons program. They drew polygons using x,y coordinate grids.
- Shared math problem on the camera and explained how he/she did it. Others observed.
- Students used graphing calculators to explore the effects of changing the coefficient or the base in exponential equations.
- As always, students share their responses to problem-solving tasks with the class, using the document camera and the LCD projector.
- We have been using the document camera and LCD projector to show the interior angles of regular and irregular polygons and how the angle sum compares.
- I use the Accelerated Math program every day and students problem solve independently or with my help.

February - 07:

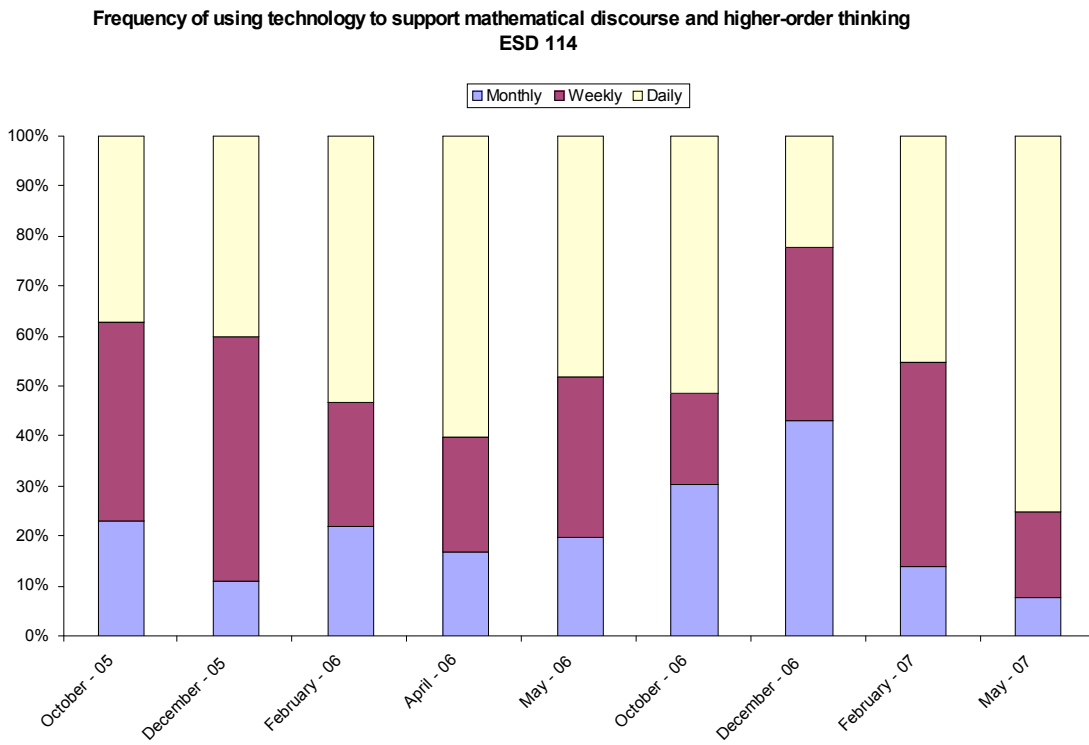
- The students used the document camera to explain their reasoning to the class about a WASL math prompt.
- When discussing their thinking on their journal writing
- Document cameras on a daily basis.
- Kids shared their WASL exemplar and we discussed how to share our thinking in writing.
- Use of LCD camera, daily
- Students explaining their thinking on WASL questions
- Used the document camera with their own work to justify their answer. We also used it to discuss 1-4 point sample WASL problems and why the anchor papers were scored as they were scored.
- We use our document camera daily in sharing our learning.
- Using dot pattern applets to generate tables and equations
- To demonstrate their thinking
- Show work, discuss outcomes for probability using a tree diagram
- Students showed their solutions to a problem and discussed with the rest of the class.
- Math teams were working on Absurd Math on laptops or using document camera to explain their thinking and invite other ideas.
- When working with the ideas of reflection, rotation, and pantomime possible shapes, students used the document camera and LCD projector to display their results to share with the class

- The students share strategies everyday on math problems using the document camera and student as questions and really press students to explain in detail their thinking the problem at hand.
- Showing their work under the document camera
- In opening review, students show their solutions and discuss the problem. The class used an applet to play fraction track.
- In my classroom the students switched papers and had to make sense of another persons mathematical thinking and reasoning. Each student was to show the others' under the document camera and explain to the class.
- TI 73's for linear graphing, statistics, and area of circles using pi.
- I teach remedial math so my students are concentrating on basic math skills.
- Students used the document camera to present two ways that they solved a story problem involving fractions.
- Students present their solutions through the document cameras.

May - 07:

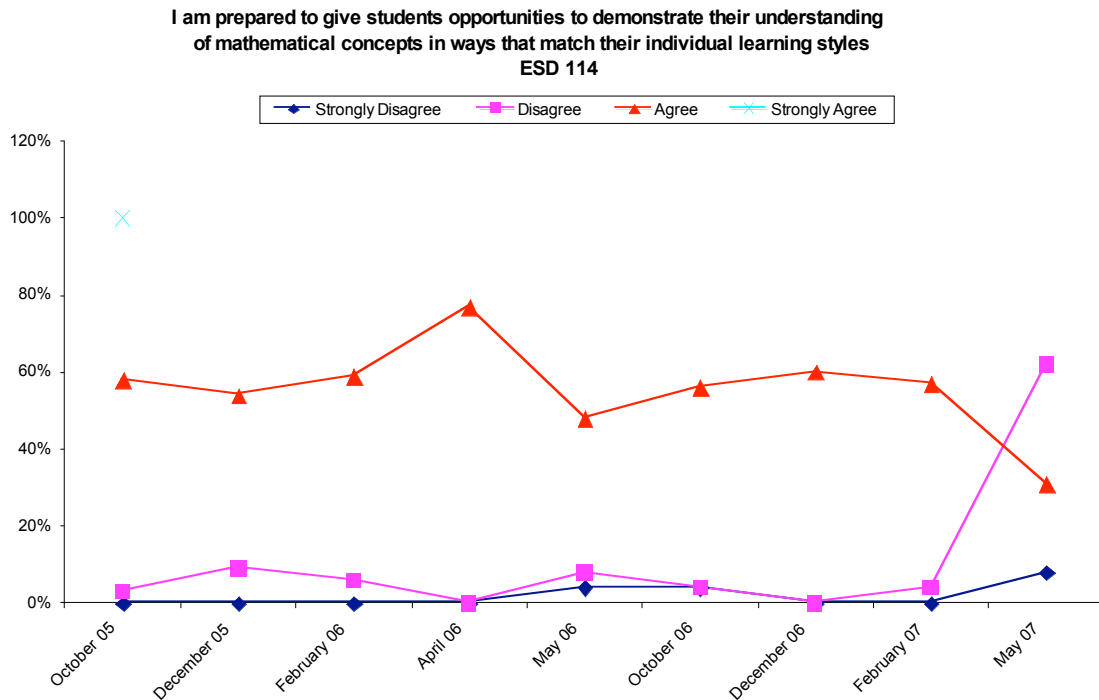
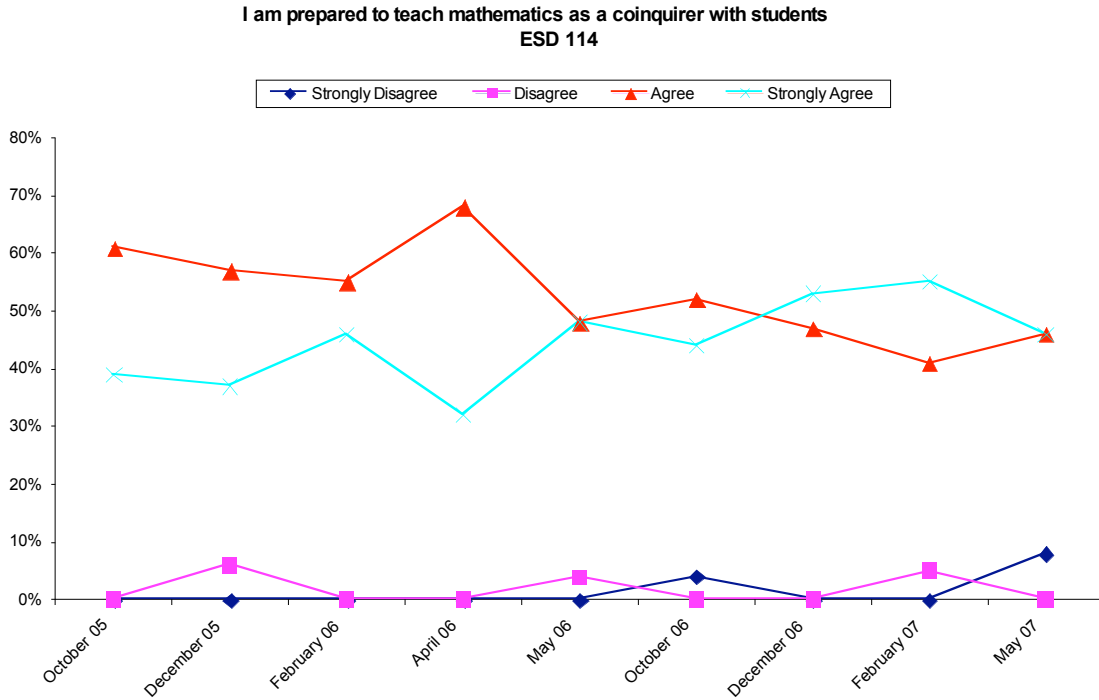
- Discuss their thinking with the class about their answers. Also engaging the other students in what score they think that their answer should get.
- LCD projector daily to demonstrate solutions to assigned problems etc.
- Showing student work under the document camera and then discussing that work with their peers
- When demonstrating their thinking using the journal prompts.
- Modeling long division
- We are using graphing calculators to explore linear relationships in 2 classes and quadratic equations in another.
- Showing their work
- Used the Elmo to demonstrate how they obtained their answer and use the calculator to check their answer
- Using graphing calculators to better understand exponential equations
- We are constantly using the document camera as a way for students to show how they solve problems.
- Graphing progress
- Presentation of student work

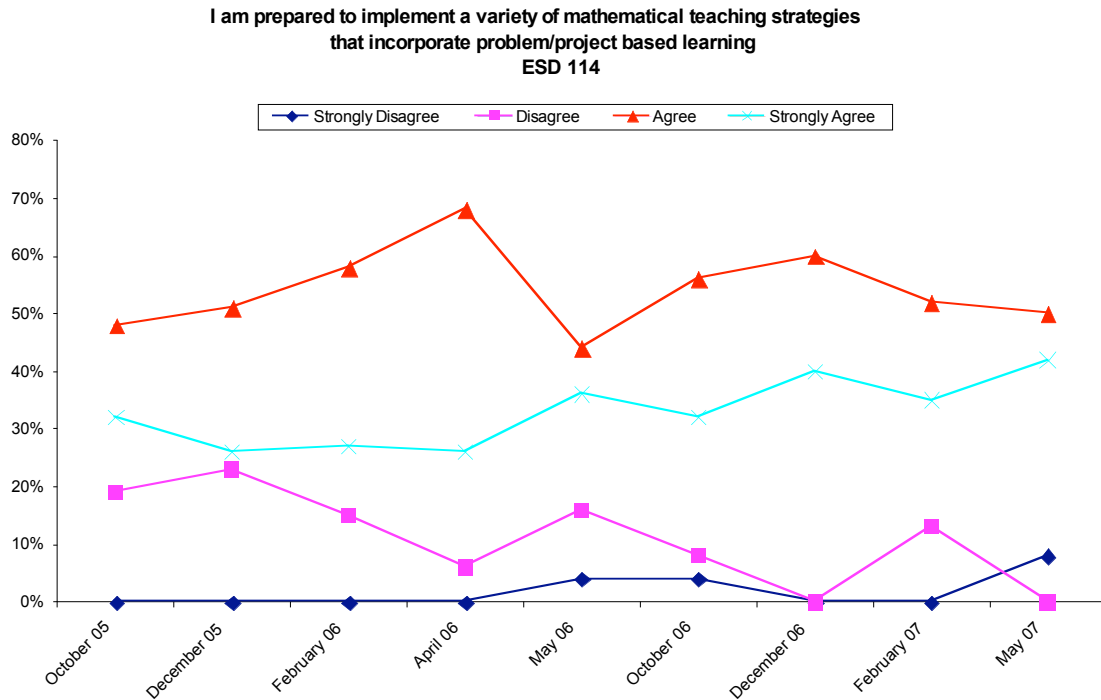
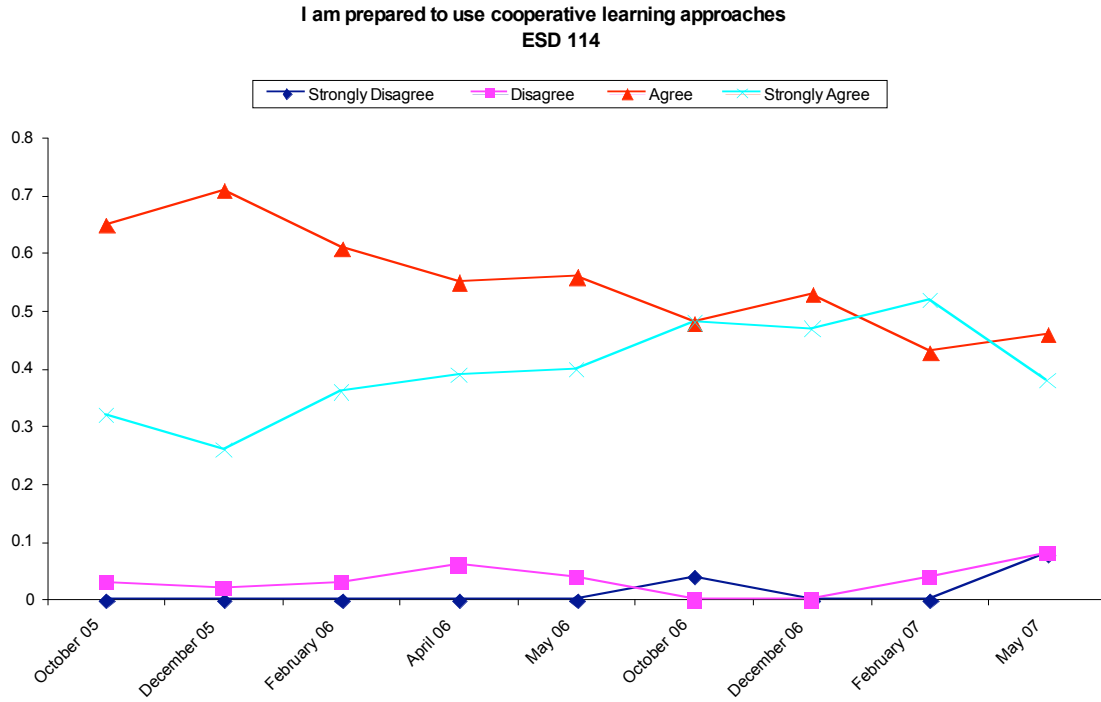
How often does something like this occur in your classroom?



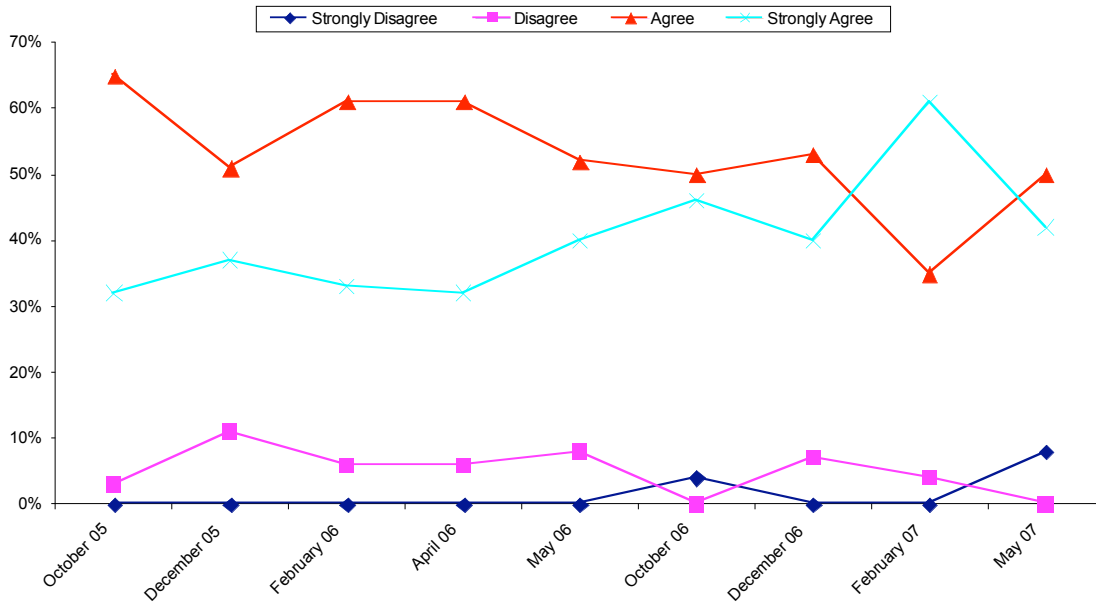
Item 13:

Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.

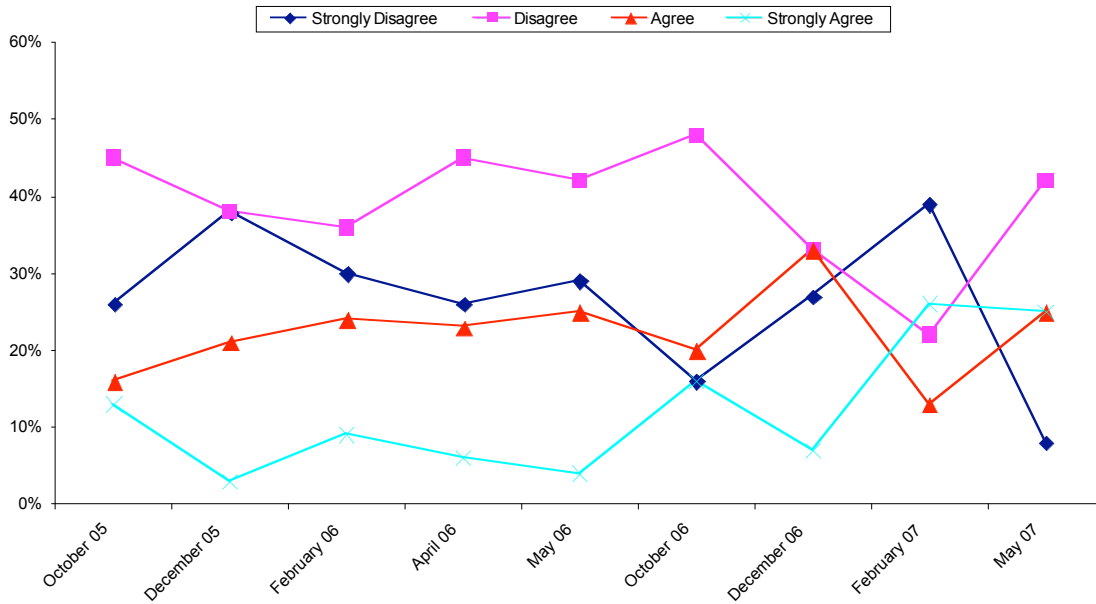




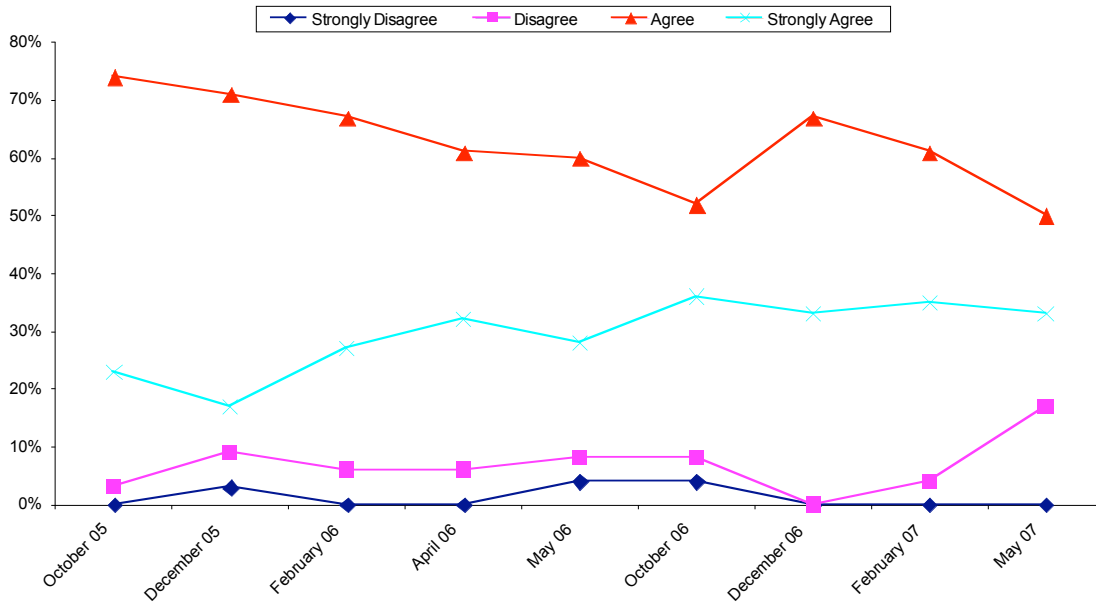
I am prepared to involve students in hands-on, concrete mathematical experiences
ESD 114



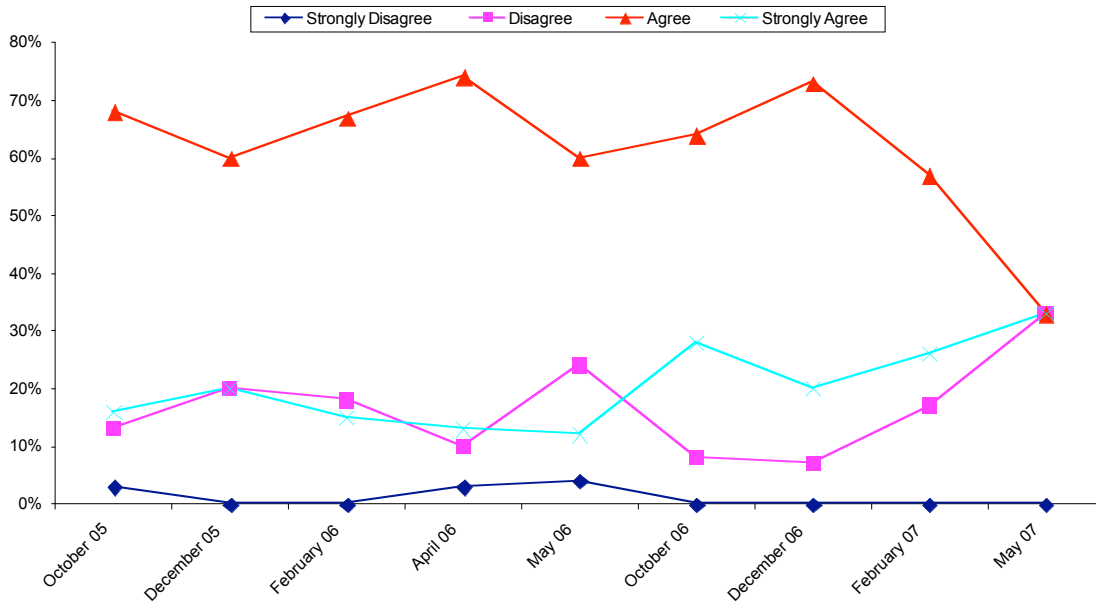
I am prepared to teach mathematics lessons that include the use of graphing calculators
ESD 114



I am prepared to locate online resources in support of mathematics learning
ESD 114



I am prepared to integrate computer-based activities
in support of mathematics learning
ESD 114



Comments:
October - 05:

- Use of Investigation Math encourages all these areas.

- My classroom has the "highly capable" cluster of learners, therefore I plan to utilize higher level thinking & learning with computer, math technology. The HI CAP coordinator is very excited about inclusion of technology and has the pullout group doing math computer activities.
- I only have basic calculators, which work for my students most of the time. I haven't put much thought into how I'd use graphic calculators. I do have 6 student computers and my computer for students to work off of.
- It is my belief that children learn best in an environment that encourages and supports hands on inquiry-based learning.
- I still feel inadequate in using cooperative learning though I'm improving
- I feel like our district is not supporting us when it comes to student technology. Here it is October and we have no working student computers in our classrooms. I realize they are having difficulties with the batch of computers they bought and are having to send back the motherboards, but it seems a bit ridiculous. The tech person is doing his job, but he has too much to do. We also, had to go retrieve our equipment (doc. camera, LCD projector) and install it without help because no one had time from the district office to help us. I figured it all out, but now we have improper cord usage (due to a shortage of power strips, cables, etc) and are having to stack our LCD projector boxes on books because we haven't had anyone be able to install them onto the ceilings yet. Other teachers who are not working with the NO LIMIT grant, were offered the same equipment at the beginning of the year and the district was able to install it for them (properly) right away. Interesting isn't it?
- I need help with resources for problem-based instruction. I have a large population of ESL students that I need to instruct.
- Disagrees are because of technical issues
- I am incorporating more cooperative learning activities such as "numbered heads" to allow more student discourse.

December - 05:

- The last question (integrating computer-based activities) I answered with reservations. We do have computer labs, but there is only one for 25 classroom, plus the librarian often uses it as well. This causes a lot of scheduling conflicts and limits the amount of time we can use it. I have only three computers in my class that students can use to access the Internet, so our activities are limited.
- Our district will not allow students to use the NCTM Illuminations interactive applets. I have tried to get them setup.
- I only use computer-based activities with the whole class. I do not have computers for more than one student at a time.
- I don't think my students would benefit from the complicated use of a graphic calculator. I have basic calculators for use.
- There are time constraints to incorporating problem/project based learning. It could be done once I teach Investigations more and see those opportunities. I think geometry has huge potential for that.
- I am still coming to grips with many of the issues above. Have not actually done too much research on online resources other than NCTM's site.
- While I am prepared to do these things, I don't always have the time to do them well.

- I shared with Katie and my cohort at the last meeting that I feel like I have reverted some in my teaching. I get overwhelmed with all their is to do in teaching and slip back into old ways. My solution was to focus talk moves during the entry task that was a smaller chunk of instruction.
- I never had the benefit of learning how to use a graphing calculator. Because of this, I am not "prepared." Does using a calculator help students understand mathematical concepts.
- I had graphing calculator training and it went well at the time, but I haven't had the opportunity to use it so I don't feel I remember it well enough now.
- Not enough time to cruise the internet looking for applets, etc. My laptop is not hooked up to the internet in a safe classroom environment(cord goes across the room to the front, and I don't have a cord long enough; I would have to buy one or borrow one from another teacher) to use it in front of the whole class. So using the applets is inconvenient and not practical at this point. Working on it.

February - 06:

- We are limited with computer access time--and we are limited on which on-line sites we can access. It takes days to get a site added--by then it is often too late.
- I am prepared to support online computer-based activities, but it is difficult when the district does not support our NO LIMIT team. We do the best we can, but have had many hoops to jump through
- Graphic Calculators are over my students' heads and we are still working on calculation skills and basic numerical understanding.
- I like the tech. and lessons I have but am not comfortable with things I am not familiar with.
- Still struggle to find the time.
- I am probably more prepared than this indicates. I don't do as much project and hands-on as I would like because of the pressure to keep up with the standards.
- Our computer lab still does not have student access to applets available due to filters put on by the district. I can use my computer to show up applets to introduce ideas, but there is no follow-up available for students to work individually on an applet. It is very frustrating. Also, I don't have the time needed to look up an appropriate applet that goes well with the lesson. I wish I had more time to coordinate my Investigations Curriculum with the applets that are available out there.
- I don't have a laptop or computers in the classroom. With the class I have I want to keep them in the class instead of using the computer lab that is in a more open area with the ability to disturb classes.

April - 06:

- We are very limited on access to technology. Three computers in class and problems in the computer lab accessing sites and/or scheduling time.
- Online activities, such as Illuminations, are a great opportunity for students, however, rarely have opportunity to use, due to lack of computer access.
- I have been using ThatQuiz.com as an extension and review activity for students that have their work finished (when others need more time). I really like it and it is FREE.
- Being prepared to do it and finding the time to do it are two different things. I believe I am prepared but I don't often have the time it takes to do it.

- Some of my answers changed about being prepared for hands-on activities and projects because of the geometry content and I had a limited amount of ideas for quick access.

May - 06:

- We are very limited in accessing computers for the whole class.
- I would like to see NO LIMIT! use part of the regional meeting time on graphing calculator training. I don't know this well. This would be a fun activity!
- My students don't have access to graphic calculators and their skills are low that I focus on that more than graphic calculators.
- Technology has become an increasingly important part of my classroom over the past year.
- I need more computer-based activities...
- I have asked for a couple of computers to be in the class so the students can access the applets and other math next year.
- I need to make better use of manipulatives.

October - 06:

- Limitations in on-line computers continue to be a problem
- We do not use graphing calculators in 5th grade, but I have personal use with them.
- I need more training in how to teach with a graphing calculator
- Finding the time to go on-line to find the resources to help students learn on the computer is very time consuming.
- The activities I see in Investigations (a fourth grade district sample) lets me see the great possibilities are out there for project based learning. I do not feel I know how to create these on my own or have the time to think of them and create the paperwork. I try to take from various resources and change activities in our district text.
- I suspect my answers will change frequently to the above questions. I have great weeks, and not-so-great weeks with mathematics instruction. However, it is the one area that I want consistency and improvement with teaching practices. I am so glad to be on this PLC!
- My students are very ready to willing and able to research geometrical information online as a final project.

December - 06:

- Very young children
- I only integrate computer-based activities when I see they are needed, not because they are available.

February - 07:

- We are severely limited on the kids accessing the internet due to limited number of computers.
- Wish I had more student computers
- These ratings are sure affected by my mood. Not very scientific feeling to me.

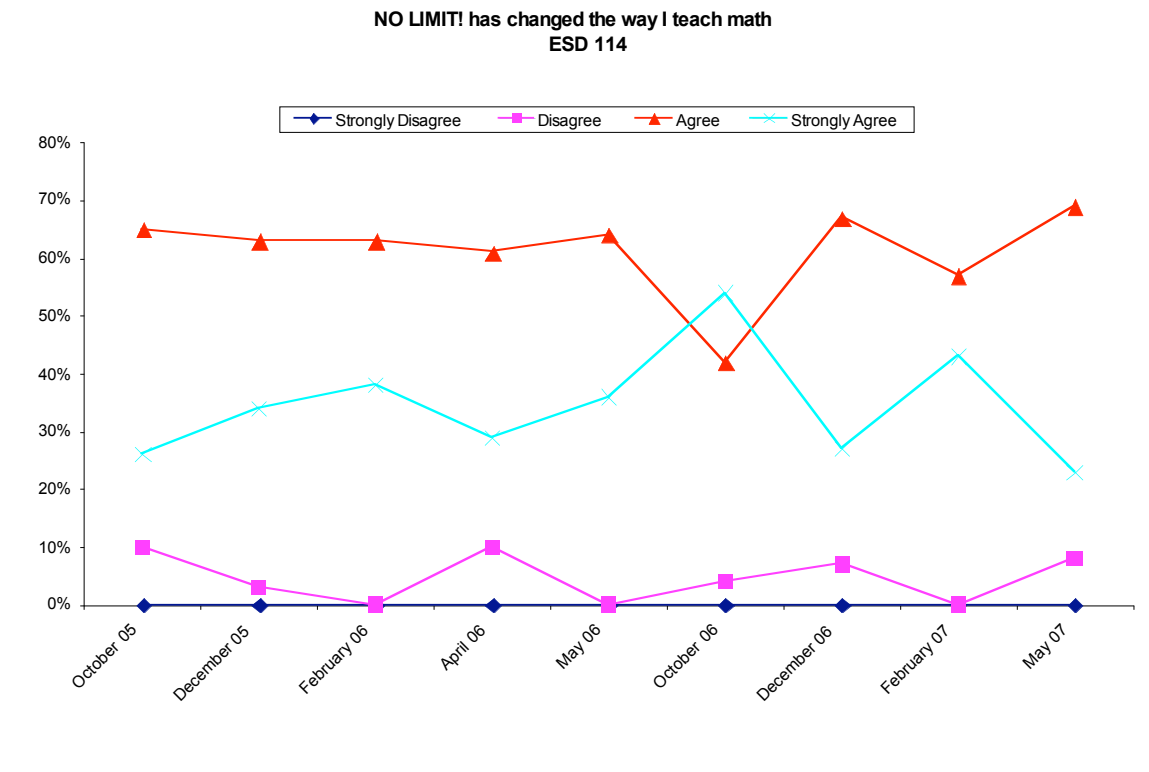
May - 07:

- We are severely limited in access to computers. Our lab is often booked up and we have only three student computers in class with on-line access.

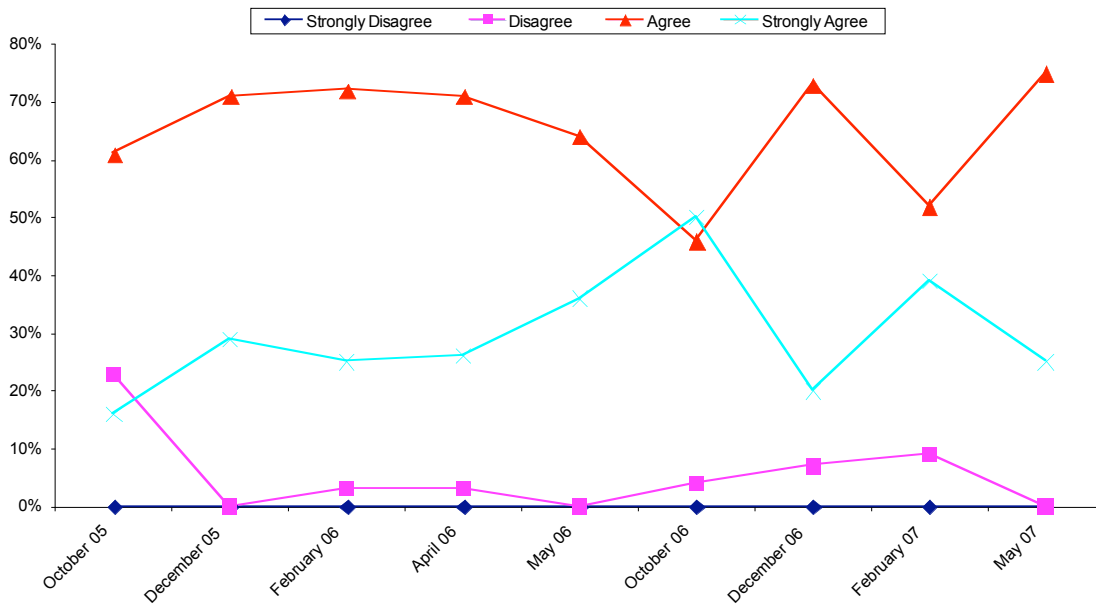
- Many of my students have signed up for the online Aleks program. The other students work on Addison-Wesley computation. I feel students need practice with math computation, something Investigations does not offer. This is my first year with Aleks but my 6th year offering computation worksheets.
- I need better equipment to incorporate computer based activities
- I have a math literacy class of 22 students using an online math program called ALEKS
- I would like to include more computer-based mathematics in my classroom.

Item 14:

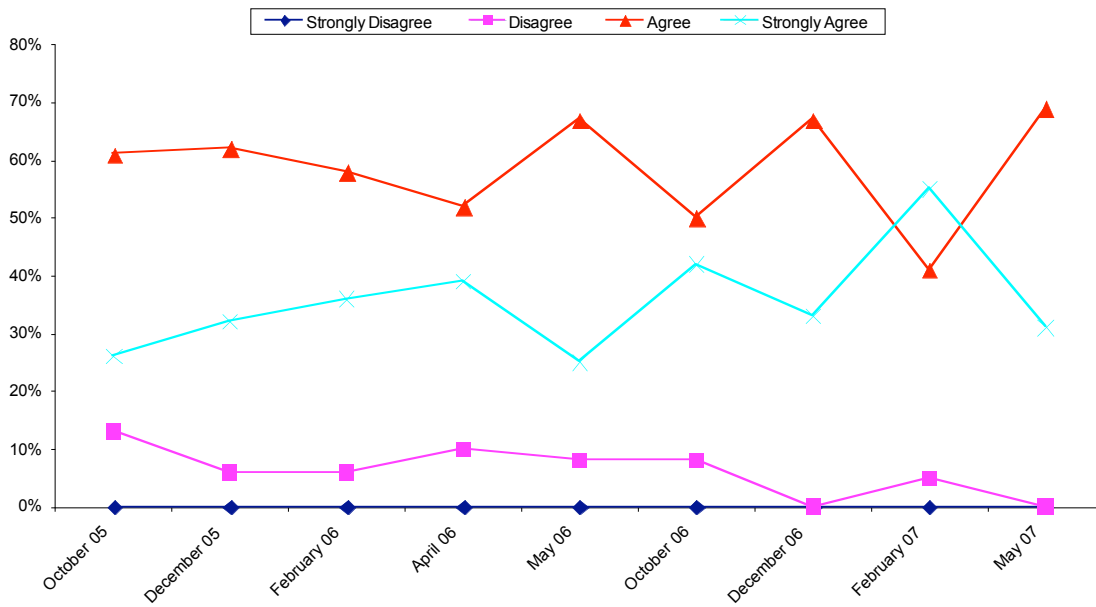
Please tell us how NO LIMIT! Has impacted your classroom. We are interested in your frank responses.



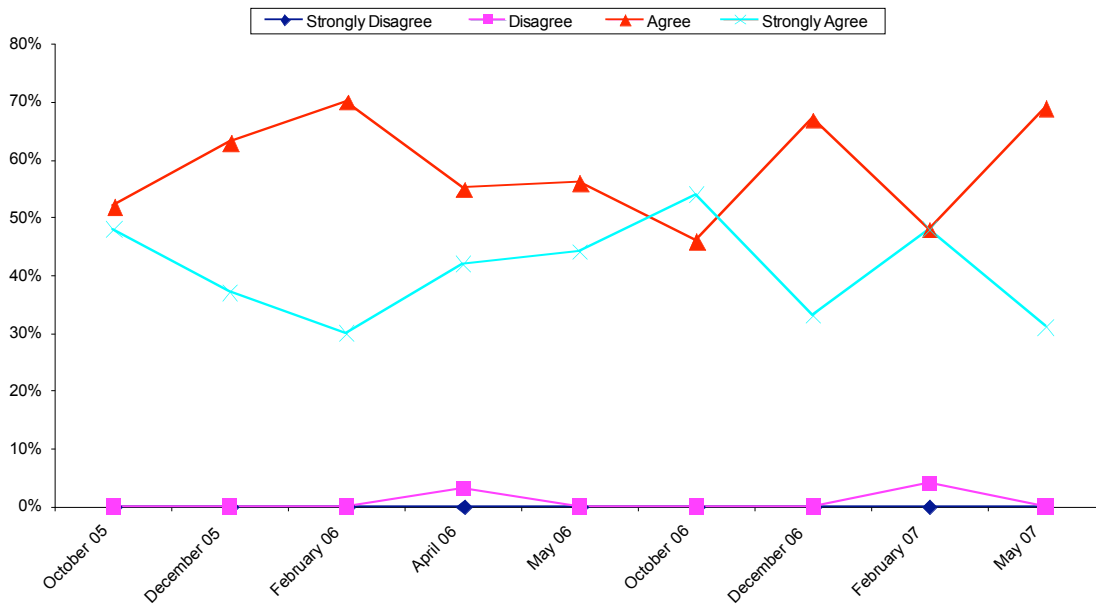
NO LIMIT! has changed how my students learn math
ESD 114



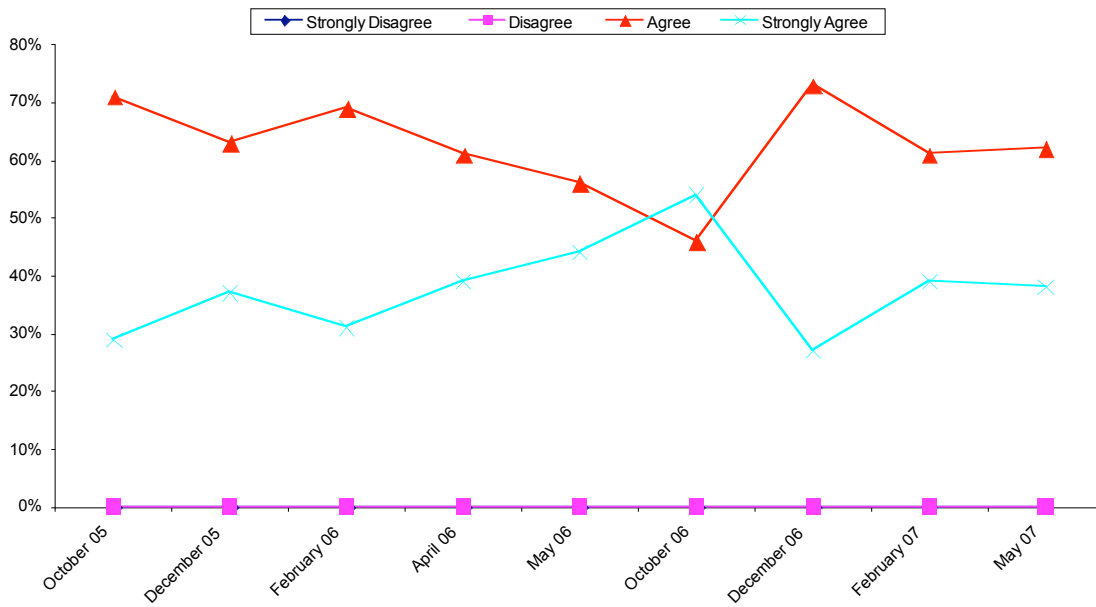
I feel more comfortable using technology to teach math
ESD 114



**My involvement in NO LIMIT! has benefited me
ESD 114**



**My involvement in NO LIMIT! has benefited my students
ESD 114**



Comments:

October – 05:

- Being able to meet and discuss with other staff members within our district and outside our district has benefited me in listening to other ideas and bringing about a better understanding of mathematical thinking in children.
- I already had a constructivist math philosophy
- NO LIMIT has enhanced my attempts to help struggling students visualize math and begin to understand the why's of a concept.
- Katy Absten has observed and taught lessons that I have gained a tremendous amount of insight from. Our group debriefs and the information is extremely valuable to my teaching. I am able to discuss instructional strategies and apply them to my teaching.
- Still lots to see, do, learn and incorporate into my class.
- I have no idea about the answer I marked below but had to mark one to go on
- Response is largely due to this being our 3rd year in program.
- I anticipate change when as I continue to learn from the PLC No Limit experience.
- Haven't been involved in No Limit long enough to say that it has changed the way I teach and the way my students learn math.
- NO LIMIT has been a part of a big change in our district. We have adopted problem-based, inquiry-based textbooks (CMP) largely due to training and exposure through NO LIMIT training.
- I wish that our whole school district really believed in and supported the importance of technology.
- There is a transition between my getting better and the student getting better.

December – 05:

- I notice that I have been integrating websites recommended by No Limit to help supplement the pattern unit.
- My philosophy and approach to teaching as changed dramatically as a result of NoLimit training.
- I'm a first year teacher who loves the no limit philosophy. So there hasn't been much to change (in regards to the first question).
- I use the technology daily.
- With our focus being on mathematical writing, we have really begun to employ WASL prompts in our daily lesson plans. Feel this will really improve students' skills as time progresses.
- Spend too much time on paperwork and tracking.
- My response to feeling more comfortable using technology is true but not nearly enough for me to be at all satisfied. Just a beginning, I hope.
- I feel better prepared to describe and/or defend why something is the way it is. Most of this comes from repeated exposure to the material. I am getting better at helping students see/identify their own misconceptions and/or errors. The document camera has aided this process 100%.

February – 06:

- We have a challenge with our PLC in that we are coordinating lesson plans across fifth & fourth grade levels. We have to adjust lessons so that they fit ability level, grade level and HI CAP levels. Our meetings have been very valuable in preparing these types of lessons.
- Best learning experience I've had since leaving college.
- I'm a first year teacher sooo...there isn't a change in the way I teach math.
- Regional meetings confirm that students are benefited from technology in math. I feel more confident and am willing to reach out for additional resources to teach math. Math is exciting and I have benefited from my training and colleague collaboration.
- We had a guest speaker come in to show us how to use the clickers and our Smart Boards.
- The 5th grade in our district is working on aligning the curriculum with the state standards. We are double dipping our understanding and instruction with information from the No Limit and the districts training.
- A lot of what No Limit has done is strengthen what I was previously doing with Investigations and added the technology to allow kids to have more of a voice.
- If nothing else, because of our isolation and small size, the collaboration that occurs at No Limit meetings is greatly beneficial to me.
- Have had some very useful time together since Christmas break.
- I believed I've changed my response about using technology because its use is not increasing in my teaching. I feel at stagnant point in improving my math teaching. Tamara and Katie have been encouraging about baby steps.
- A lot of the above is done with our grade-level teams. Discussion then carries over to the PLC.
- I feel that the population I am teaching at this time is not benefited by No Limit. If I were teaching a population and community that was not apathetic about learning I would be more inclined to use the strategies I have learned.
- Introduced school wide vocabs for other teachers outside their subject content.

April – 06:

- My whole style of teaching has changed due to my No Limit experience. I've taken a constructivist approach when teaching math.
- I'm a first year teacher so I haven't changed anything in the way I teach math. My philosophy, education, and No Limit are all closely related.
- I value the ideas and strategies that I have learned from my NO LIMIT group. I enjoy the collaboration that NO LIMIT has provided. I benefit from the feedback of colleagues and NO LIMIT directors and team.
- I have more resources now and just started to use them has made it easier for me to access appropriate materials on my own.
- I am responding for this month only....not a good month for math. I felt frustrated having to balance No Limit with my needs as a teacher.
- I am much better at engaging my students with technology and do it much more often than I use to.
- I believe I learned much more from the first round of NO LIMIT where the focus was on Mathematics and best practices.

- I have changed and have been encouraged by my cohort and Tamara and Katy to feel good about small steps. About midyear, I felt like I had reached my peak of change. I know where I need to improve over the summer to be prepared for next year.
- I have to say the document camera has benefited me the most. It allows me to use student work to facilitate learning. But I don't feel I'm a better math teacher or able to explain the concepts better.
- I think my first exposure (3 years ago) had huge impact on my students and my classroom instruction. This year was minimal.
- Sometimes the influence it has had on my students is hard to measure. Different groups each year present unique struggles and challenges. I firmly believe that my knowledge of the subject matter increases each year and lends itself to better classroom exploration. I know without a doubt that the use of my document camera and LCD projector have enhanced the learning we do.

May – 06:

- Best experience of my career.
- There is still lots of work to be done between collaborating with special and general education.
- Networking has been a very important piece of the No Limit experience. I have picked up some great ideas and met some wonderful people during our meetings.
- This grant along with the Investigations math curriculum has clearly helped my TITLE math kids be more successful.
- It has been a great experience collaborating with different people and learning new ways to engage the students.
- The document camera is a MUST in any mathematics classroom that wants to promote student discourse.

October – 06:

- Talk moves and classroom discourse has been very important in student achievement and understanding. Document camera has been a wonderful resource to student collaboration and sharing strategies.
- Love the document camera!
- I know the benefit of being part of a PLC and having time together to focus on content and teaching. The reading I have done as part of No Limit has made changes in my teaching. I have less of a sense or concrete evidence that my students benefit. I think the benefit will show more profoundly over the course of a few years.
- I am predicting that these will be my answers since this is the first year of participation.
- I am new to NO LIMIT and my answers in no way reflect my view that this PLC will greatly influence my teaching. However, this early in the game I cannot honestly say we have moved forward enough to change our instruction.
- I have not had the benefit of much training from no limit as of yet. I feel like No Limit is just an extension of my education at Evergreen State College.

December – 06:

- NO LIMIT allows teachers the time they need to collaborate. We are expected to teach in a collaborative way, yet teachers aren't always given the opportunity to collaborate with each other to accomplish this.

February – 07:

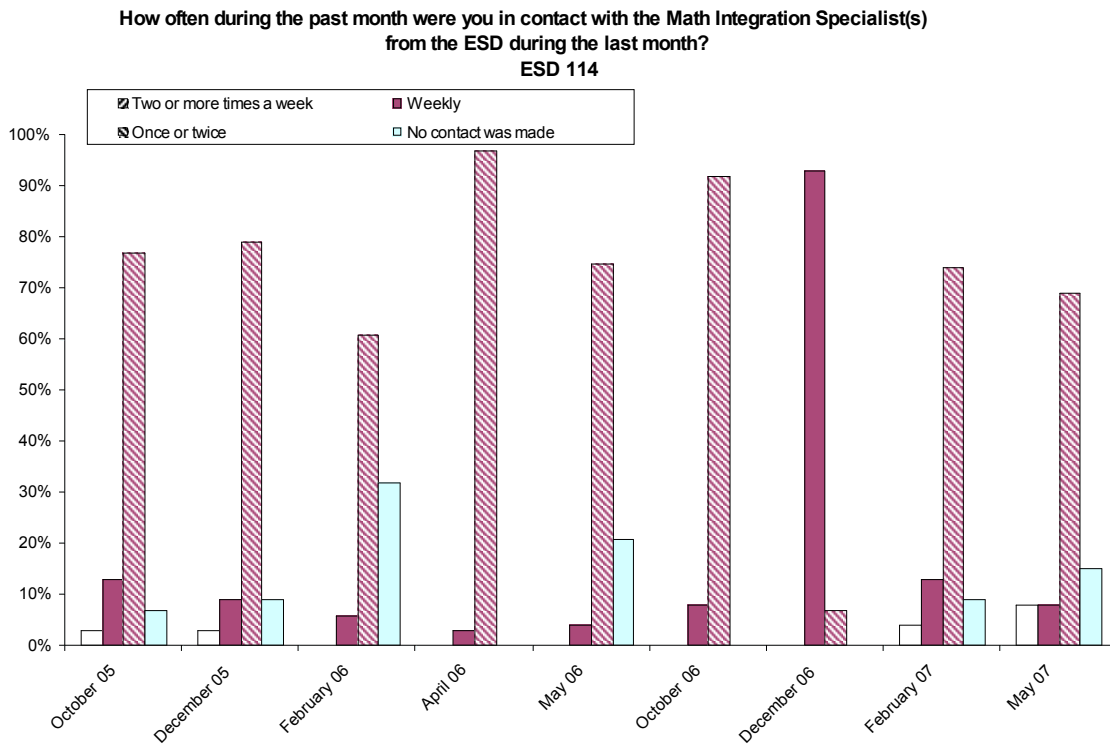
- I am more aware of using technology even if it is just the use of calculators to build concepts. I don't use tech as much as I should though. The greatest benefit for me is the time spent with my PLC group.

May – 07:

- I don't know what I would do without my camera and projector!

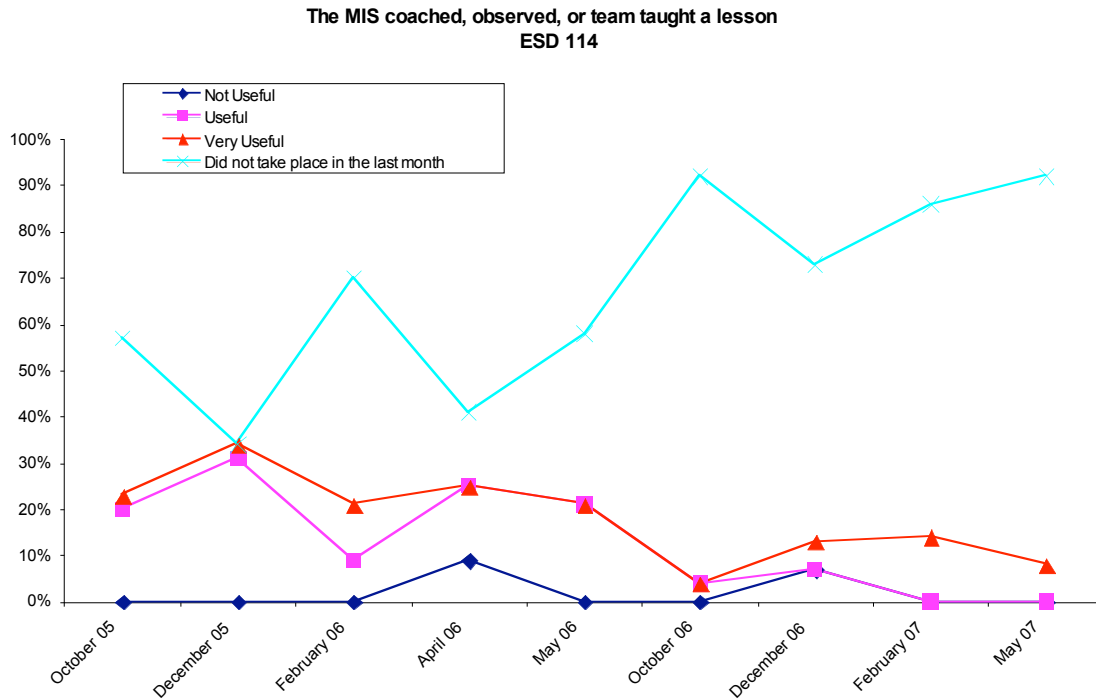
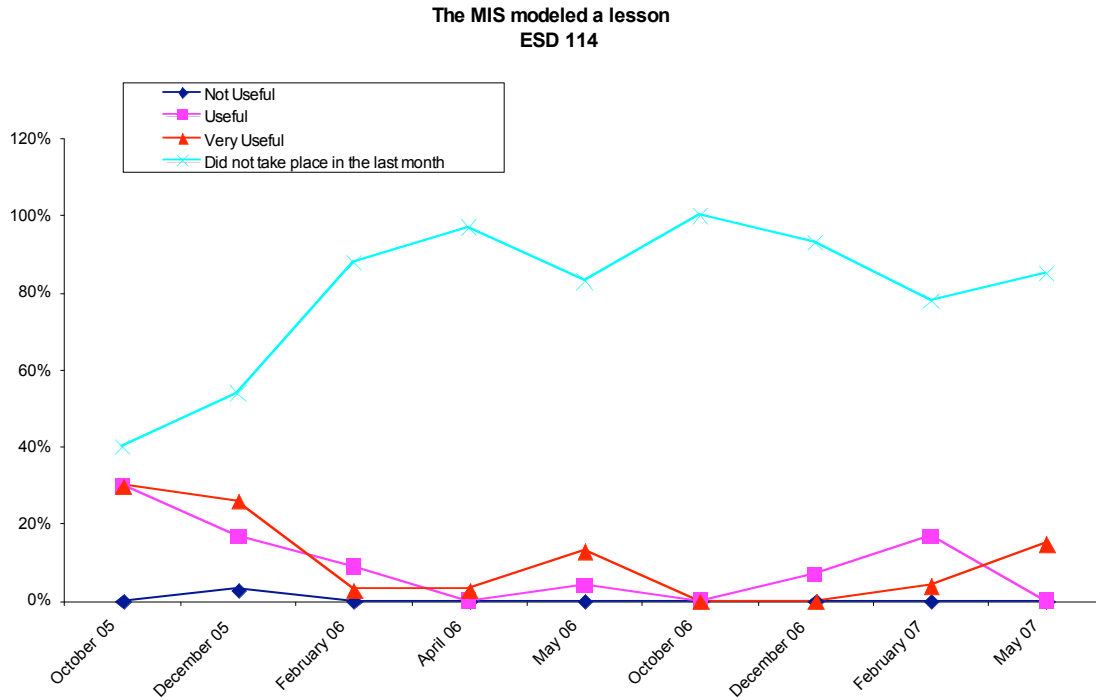
Item 16:

How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?

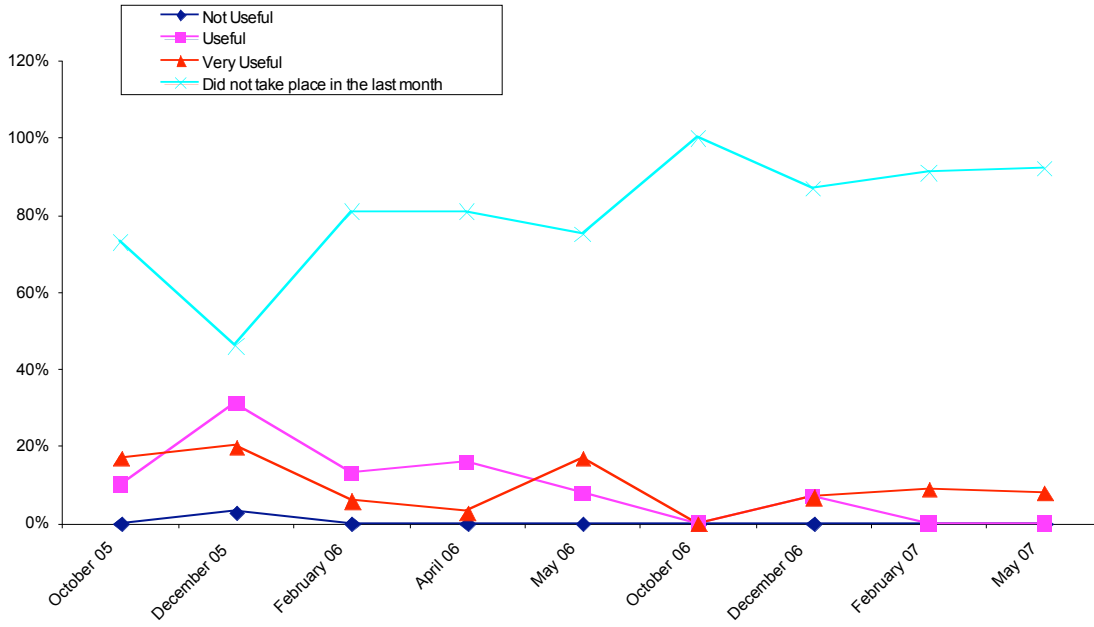


Item 17:

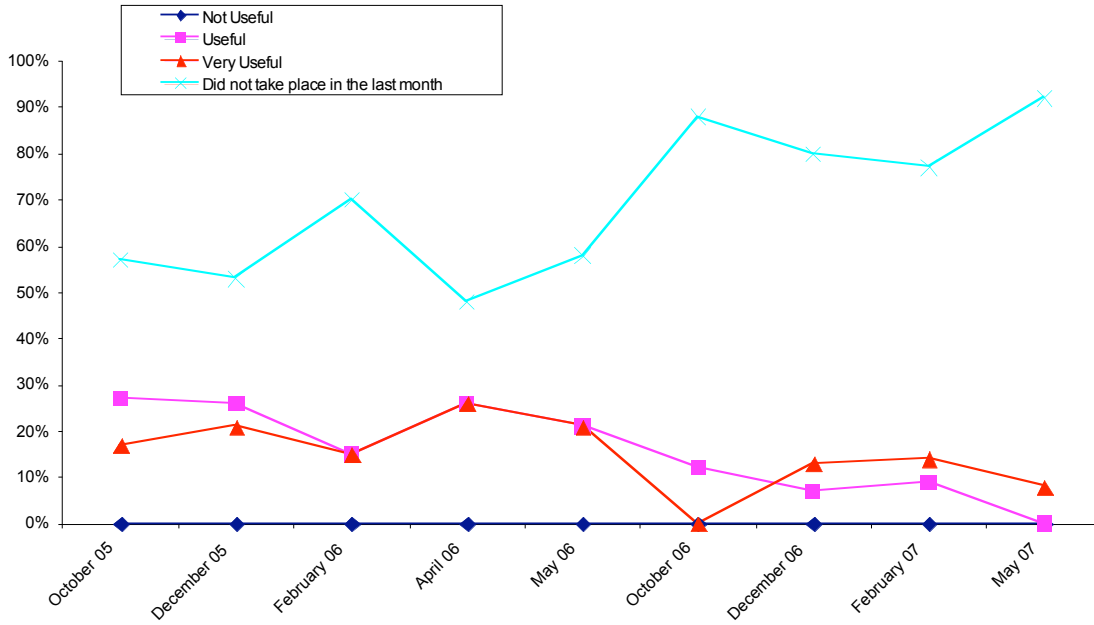
Please evaluate the following MIS activities over the last month.



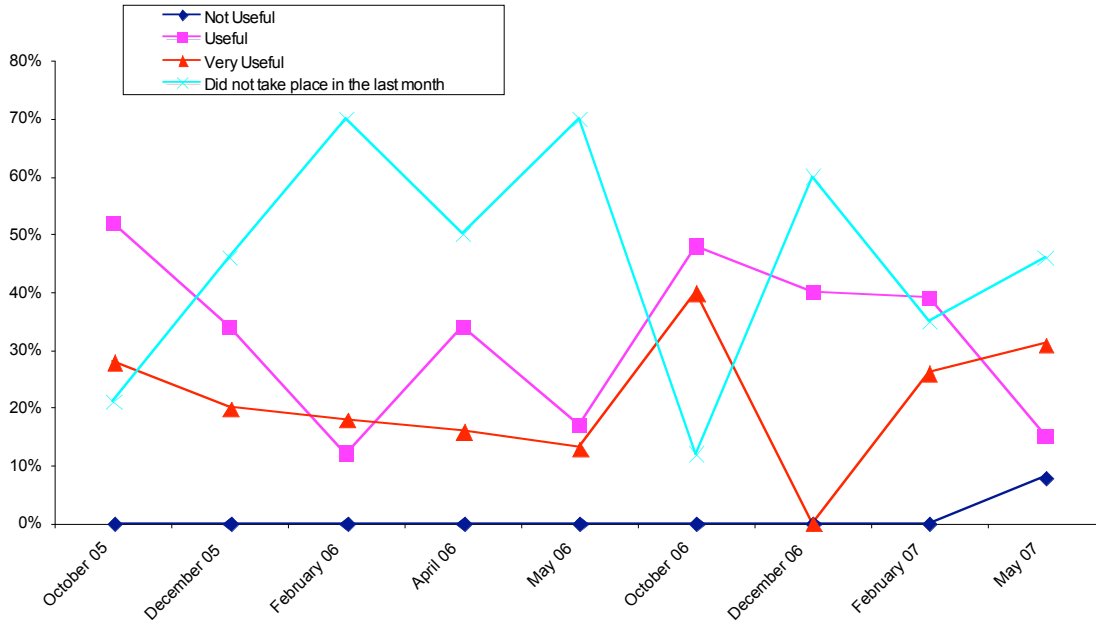
The MIS worked with students
ESD 114



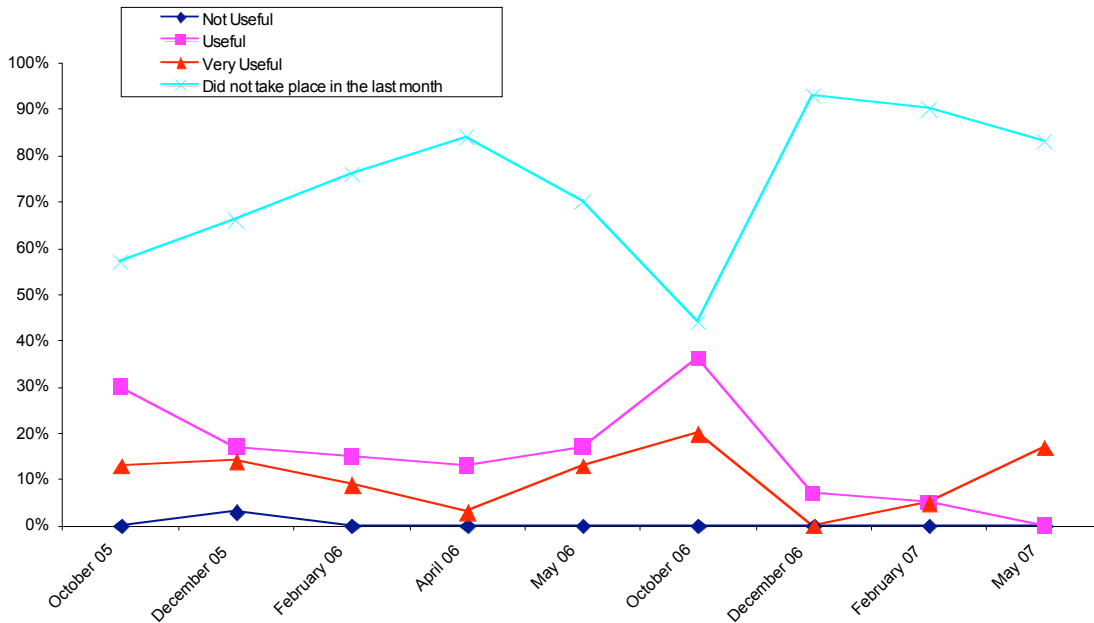
The MIS helped with planning a lesson
ESD 114



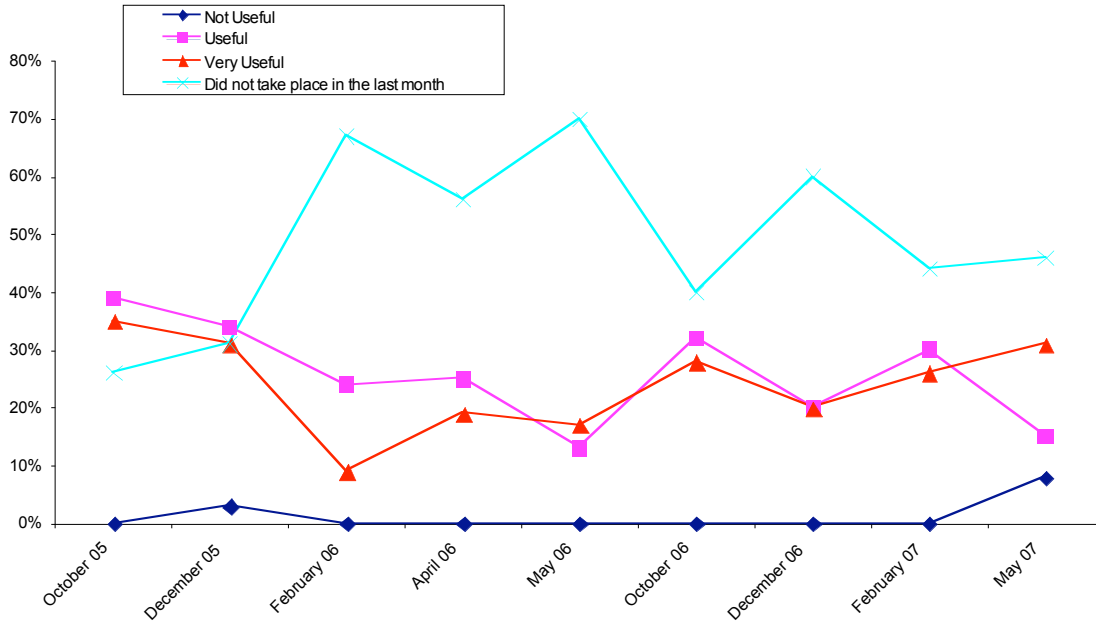
The MIS helped with schedules, logistics, or administrative issues
ESD 114



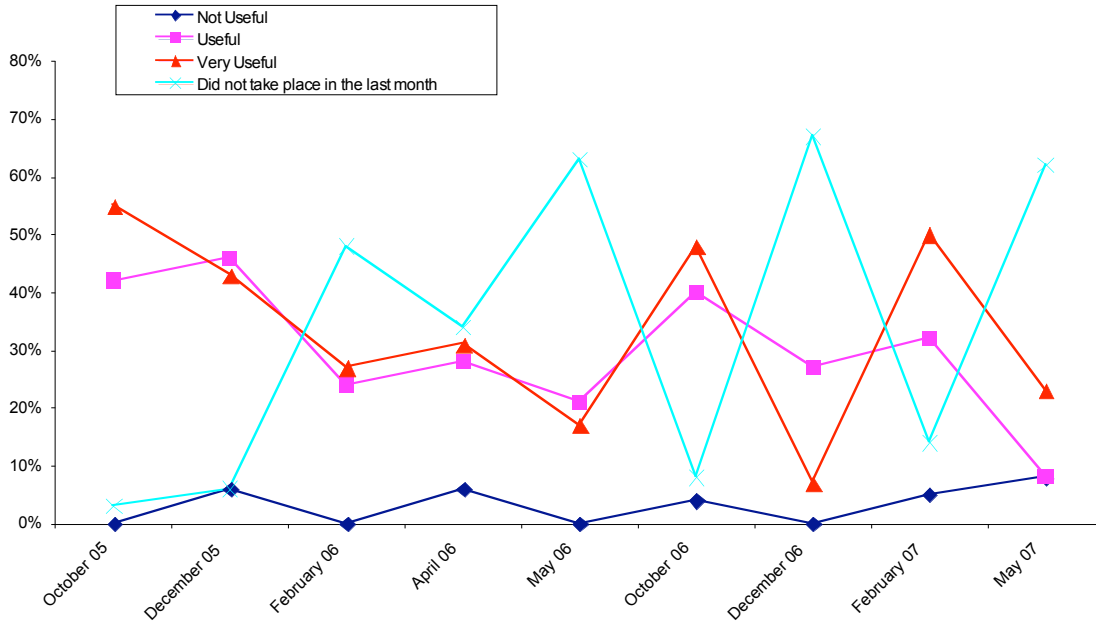
The MIS helped with technology
ESD 114



**The MIS provided instructional resources
ESD 114**



**The MIS facilitated a Professional Learning Community meeting
ESD 114**



Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

October – 05:

- Best practices and looking into grading
- Students use evidence to support mathematical conclusions
- The focus will be to improve student oral and written explanations to mathematical inquiries using grade level strategies and techniques.
- We've come up with our focus question for the year, and are currently finding resources to better understand the steps we need to take.
- Narrowing the focus of our PLC goal.
- Design and implementation of extended response assessments.
- Our focus is to narrow the gap between low-income students, especially in the areas of geometry. We have decided to focus most particularly on the "after" part of the 3-part lesson, to engage students in discussion and learning strategies. Additionally, we are focusing to include "21st Century" training and the adoption of the Investigations Curriculum into our PLC / NO LIMIT. Geometry seems to be an area that our school is low in, as with the rest of the state. The gap between low-income trend appears to be rising, however, it is parallel and we'd like to see it start closing in as the trend continues to rise.
- Portfolios
- Portfolio set up and questions (WASL Prep/portfolio style) within grade levels. Set up of visit from MIS. Discussion around data from WASL.
- Integrating technology to increase student interest/reduce discipline referrals, increasing math talk
- Attempting to begin concerted effort to improve student ability to write about mathematics
- Our focus has been to refine our focus for this year.
- Improving classroom discourse led by the students
- Currently Problem Solving Portfolios to support our mission of Best Practices in Grading ...
- That Our focus is students will be able to support their mathematical conclusions with clear explanations and evidence.
- Students communicate using evidence
- We have been attempting to develop a coordinated effort to improve the mathematical writing skills of our children using research and best practices.
- The focus of our meetings is using classroom discourse to improve student learning and classroom climate.
- Students use evidence to support mathematical assertions and conclusions
- We have decided to focus on the use of technology to engage students and encourage meaningful discourse and Math talk. Secondary focus to align curriculum to GLEs
- We've organized our student math portfolios and decided on our first prompts. We've also examined WASL data in depth - looking at student strengths and weaknesses and connections between content and process strands.
- Their focus has been helping us figure out a focus for our building level PLC's this year in math. Katie and Jeff have been great. What really benefits me is when we work with our own schools at the regional PLC meetings, not necessarily working with other schools. The reason I want to work with my own building's PLC at regional meetings is because then we get more time to get more done and usually at those meetings we're all jazzed up and ready to

go...but then we have to work with other districts. Sometimes I learn valuable things from other districts, but not as much as from my own PLC.

- Getting organized. Sharing how we are implementing math discourse and general problem solving.
- The use of technology will increase student on-task behaviors and achievement
- We have been working on making portfolios for tracking improvement in problem solving skills in WASL-like extended responded questions.
- To encourage math talk
- Student discourse.
- Discussed the NW Math conference with the individuals that could not attend.
- Creating building wide student portfolios of extended response questions. Analyzing test result data
- Our focus is to integrate writing with Investigations show that students improve their ability to show mathematical learning through writing We want our students to be able to write about how they solved a mathematical problem.

December – 05:

- We are looking at our grading practices.
- We are trying to get the students to become more effective communicators in math
- Our PLC meetings have been focused on using journal writing to show mathematical thinking.
- Communication
- We are looking at our Geometric Sense scores on the WASL, and have decided to focus on improving performance in that area.
- Decreasing the gap between low income and non-low income students in the geometric strand.
- Meeting planning, continued work towards extended response goals and development of the math folders, scoring and discussion of those extended response papers and reflection with NO LIMIT peers.
- Focus: Questioning. Asking questions to provoke learning and getting students to share thoughts on learning & process of learning. Trying to concentrate primarily on geometric sense.
- We are focusing on development of portfolios for Extended Response questions. We have administered 2 out of 6 portfolio problems. We are also addressing new grading procedures. We will be reading books on this to change our grading practices.
- They are well led and focused. We are focusing on grading practices. We have developed math portfolio questions that are directly related to the WASL strands (part of our 1st goal), we are also using data that we looked at from last year's WASL scores to improve our teaching techniques.
- Use of technology - specifically the document camera -to motivate and engage students and to improve meaningful discourse
- Classroom Discussions book talk that led into a 4 square strategy-thinking sheet that we developed and tweaked to fit our needs.
- The PLC focus is to help students develop their ability to show mathematical thinking through journal writing.

- Our focus has been on increasing and improving our students' abilities to write about their math learning.
- Increase class discussion using talk moves
- 1. Best Practices 2. Best Practices in grading
- Students will be able to support their mathematical conclusions with clear explanations and evidence.
- How to get students to communicate their learning.
- Still focusing on developing a rubric for scoring our students writing about math as well as scheduling for No Limit visits. Also collecting data for our project.
- Our group is focused on improving classroom discourse to promote better student thinking and participation.
- Use of technology, specifically the document camera, to motivate and engage students and to improve meaningful discourse (math talk).
- Portfolio response questions focused on each strand. our PLC decides together what the focused strand will be and when to assess.
- We are now focusing on evidence of student learning. We look at student work and how their responses explain their learning.
- We are reading and discussing the book provided by the ESD on Classroom discussions. We also bring concerns to the group.
- Our main focus is to increase student discourse in the classroom using the 5 talk moves and the 3 talk formats.
- To utilize technology (especially document camera) to increase student discourse.
- Building wide goals
- We are using portfolios with extended response prompts for various strands to help prepare students for WASL extended response questions.
- We are focusing on geometry and measurement skills of our students and how to use technology and teaching styles to shorten the gap between low and non-low income students.
- I was unavailable to interact this month because of a death in the family.
- Math talk and the use of technology. Use of document camera to engage and improve work.
- promote students discourse through the four talk moves
- We are focused on grading practices and possible transition into a standards based classroom. Also, we are continuing our focus (from last year's grant) on extended response questions. This year we have created a portfolio documentation system.

February – 06:

- We are all trying to come to some agreement about rubrics, clarifying questions, student work, etc...
- Mathematical discourse verbally and written to prepare for WASL type questioning
- Increasing geometric sense.
- Meeting focused on upcoming MIS visit. We co-planned a lesson for fractions using pattern blocks and Power Polygons. Target: Kids will identify parts of a whole. Meeting also focused on inclusion of 21st Century concepts, team planning & assessment, scheduling and continued growth for our PLC focus: Narrowing the Gap between low-income students and scores. In addition, we have planned other meeting dates to stay abreast of curriculum, planning and assessments

- Grading practices, curricular alignment with the learning strands, portfolio development, WASL schedule development
- Facilitating communication in mathematics by modeling talk moves and asking students to demonstrate their thinking to the class through use of a document camera.
- We have been focusing on Talk Moves. We have also been continuing our focus of consistent expectations and grading by using weekly WASL style questions.
- Our focus is on integrating writing into math in the way of math journals.
- We are currently focusing on grading practices, in addition to our overall goal of improving on WASL 2 and 4 point questions.
- Best Practices in Ext. Response items. Best Practices in Grading
- To have students be able to explain their mathematical conclusions with clear evidence and explanations. Develop a rubric our PLC can use to assess student progress on our focus.
- Katie was very helpful in my technology woes. She quickly acted, problem solved, and solved the issue! Yeah! Thank you!
- As has been the case over the past few months, we are focusing on attempting to teach our students how to better express themselves when writing about mathematics.
- We are considering how increased participation in discourse improves student understanding of math.
- We are still clarifying our specific expectations for student work
- Use of technology, specifically the document camera to engage students and increase mathematical discourse and math talk.
- Portfolios, WASL, Grading practices
- improving student responses to extended-response items. Tracking student progress in portfolio format.
- Trying to find more time to do all the things we need to do and said we'd do. Improving geometry scores is supposed to be our focus.
- Twice a month we discuss the ESD loaned book on Math Talk. We also problem solve teaching issues. We have added twice a month meetings about scoring WASL prep questions.
- Portfolio development
- We are working on improving student performance on WASL-like extended response questions through practice and work on showing/communicating their thinking.
- Working on Geometric Sense, narrowing the gap of low and non-low socioeconomic status of students. Focus was to teach a lesson using an applet and using the 3-step teaching as well as talk-moves. We also made a scoring guide for a common pre-assessment on geometry.
- We are working on grading WASL type questions to familiarize ourselves with the format and grading.
- There are two parts to the focus of our meetings. One part is to increase student involvement in math lessons by using teacher talk moves. The other is to improve student discourse.
- WASL, talk moves
- Our school is working on student portfolios based on WASL-like questions. We are continually creating the next question, designing its rubric, or discussing the results. A secondary focus is looking at alternative grading practices.
- The focus of our PLC meetings is to use the Talk Moves and the Talk Formats as discussed in the book: *Classroom Discussions, Using Math Talk to Help Students Learn*. We are also

focused on using WASL like practice questions to prepare our students for taking the WASL this April.

April – 06:

- We are focused on improving our students' abilities to answer WASL 2 and 4-point questions. We are also researching best practices for grading.
- To get the students to explain their thinking better using numbers, pictures, and/or words - we want to develop a rubric lesson planning together
- We are working on common math assessment, particularly in the geometric strand.
- Lessening the socioeconomic achievement gap in geometry.
- Development of portfolio questions.
- PLC Focus: GLE aligned and grade level aligned assessment with Investigations Curriculum and NO LIMIT input.
- We haven't been able to have a meeting lately, due to district issues and other commitments. When we have found time to meet, we've discussed portfolio questions for the rest of the year and WASL.
- Evidence of student learning. Aligning curriculum with GLEs
- Discourse is our main focus.
- We are focusing on Writing as it pertains to Math, i.e. Math Journals.
- Grading and Problem Solving
- Students need to support their mathematical conclusions with clear explanations and evidence.
- Again...No Limits was not a priority for me this month. I had other issues to balance.
- Primarily planning for the Fair scheduled in Bremerton next month. Working out the details of what and how we will present our focus.
- Our focus is on the improvement of students' discourse, both written and oral, to improve student understanding of math.
- While our focus is on Mathematical discourse, much of our PLC time is spent on logistics, scheduling and paperwork. It seems a waste of time.
- We've been exploring aspects of grading, as well as what should be included in a grade. our building is looking at revising report cards and homework policies.
- Planning for Integration Specialists visit. Making sure we include activities that include our regional and local inquiry foci.
- Working on decreasing the achievement gap in the geometry strand on the WASL. Using NO LIMIT procedures and protocol to facilitate math teaching.
- Continued discussion of classroom discourse. team scoring of WASL like practice items. Discussing our final project.
- Student discourse and WASL practice and preparation
- Focusing on evidence of student learning and aligning the curriculum to the GLEs.
- Improving student performance in problem solving situations.
- The focus has been to hone in on a target for growth in geometry. We are also preparing for our final presentation.
- The focus of our meeting is to improve student discourse, thus improving WASL scores. Another related focus is to read and discuss the book Classroom Discussions Using Math Talk to Help Students Learn

- Increasing problem solving strategies through the use of extended response / WASL prep type questions. We have been gathering and documenting selected works in a portfolio format.
- Our focus has been to use writing in the class in increase mathematical thinking and improve students' abilities in expository writing.

May – 06:

- We are continuing our focus on improving answers to WASL type problems and working on a student portfolio system.
- To help each other be better math teachers.
- Focus was to have students engage in more mathematical thinking through math journal prompts
- Worked on teaching techniques with intentionality.
- Narrowing the achievement gap and coming up with ways to do that.
- Development of student portfolios and effective grading policies.
- Focus: Questioning and discourse with student strategies for problem solving. Next Year we hope to focus on the 5 step process of discourse with students
- WASL controlled our April-May. No quality time left of PLC/MIS.
- We haven't had as many in the last 6 weeks; lots of changes at school and WASL interfered. They are winding down and seem to be focusing on the final presentation. We usually work to the point and focus on the task at hand. That enables us to get lots accomplished in final form.
- Our focus has evolved from using document cameras and improving student discourse in math communication to finding and collecting evidence of higher order thinking as well as aligning our curriculum with the GLEs.
- Classroom discourse
- Using writing journals in math to improve students' ability to explain their thinking.
- Classroom discourse improvement
- 1. Ext. Resp. Items 2. Grading Policies and Practices
- Trying to get No Limit assignments fulfilled
- Ongoing attempt to make our students better writers of mathematical issues and concepts.
- Our focus is on improving classroom discourse.
- Increase student ability to use evidence to support mathematical thinking and conclusions
- This year our focus has been on the development of math portfolios to demonstrate students' problem-solving abilities and approaches.
- We are trying to decrease the achievement gap (between low socioeconomic kids and high) in the geometry strand on the WASL.
- Our focus is on improving student discourse with using the Five Talk Moves to be more specific with our instruction.
- Our focus was on using Talk Moves and improving WASL scores.
- Improving student discourse and communication between buildings
- Our latest adjustment has been to look at best practices and information regarding teaching IEP students. Next year we are going to a "full inclusion" model.

October – 06:

- We will improve student performance on probability and statistics through the use of portfolios
- Using mathematical journal writing to show students' understanding of math concepts and to develop their expository writing skills.
- Getting more out of mathematical journal writing
- We are analyzing data with the ultimate goal of closing the gap between low income and non-low income students.
- Analyzing WASL data to set a PLC goal for the year.
- Currently: focus is on proposal of grant funds, which were absorbed by the general fund. We are trying to include 2 members of our PLC across all grade levels and involve them in our PLC local and regional meetings. Both members were involved in NO LIMIT previously and wish to continue their efforts of PLC and student discourse in lower grade levels, so that all grades in our school are part of the PLC No Limit has offered.
- Aligning GLEs with our middle school curriculum - CMP (specifically Number Sense)
- Discourse in the classroom
- Our focus is on helping our students to improve their ability to explain their thinking both orally and in writing.
- Book study, review student work, plan for data collection
- To improve students scores on the Probability/Statistics strand of the WASL using portfolios to assess student work.
- They are fine. We all have other pressing items so not always easy to put forth 100%.
- We are focused on classroom discussion and how it affects learning.
- Improve student performance on Probability/Statistics using portfolios
- Right now, our membership may be changing due to funding issues. we have been discussing possible reconfigurations to help us still maintain focus on our goal of inclusion.
- Improving student attitudes toward math through the use of portfolios.
- Decreasing the achievement gap between socio-economic classes with math scores (in geometry strand) on the WASL
- Figuring out the goals and scheduling for the year. Curriculum alignment.
- Book study, scoring student work, No Limit project details
- Our focus is to keep on using the Talk Moves and the Talk Formats as tools to increase student discourse and to increase student understanding. We will measure our successes by on-task time, teacher talk time vs. student talk time, and with the use of our WASL style prompt questions.
- Formulation of our inquiry question
- Our focus this year is on "full inclusion" with all students in the regular education math classrooms.
- Aligning curriculum across the grade levels
- Latest meetings involve budgeting decisions for our use of the yearly grant money. This has been a very long process, involving district personnel and our building administrator. This week, however, we hope to review WASL data in mathematics.
- The focus of our professional learning community is to make sure that students are clear in expressing their mathematical writing skills.

December – 06:

- Mathematical journal writing
- To use mathematical writing when explaining their thinking
- We have worked on strategies for meeting needs of lower level learners.
- Alignment of the curriculum 6-8 with Connected Math and the GLEs
- Student discourse in the classroom and teaching in a constructivist way.
- Writing in math.
- book talk and looking at student work (WASL extended response)
- To improve our Probability and Statistic WASL scores by planning mini units between other math units.
- Snow days cancelled the meeting...we are behind. Also, a teacher is out on medical leave until mid Jan.
- Our focus is on improving classroom discourse as a way of improving participation and achievement.
- We are focusing on meeting the needs of the struggling learners - both IEP and general ed kids.
- Our focus is to continue the Talk Moves and to increase student discourse.
- Aligning curriculum with GLE's in number sense.
- The PLC is looking at practices that help them teach special needs students inclusively.

February – 07:

- To bring up our probability and statistic score on the WASL using extended response prompts and portfolios
- Working with students to improve their communication skills in mathematics using mathematical journal writing prompts
- We are using the NCTM focal points to assess our curriculum's thoroughness in number sense.
- Planning to implement Number Sense strategies to narrow the achievement gap. Also to align the NCTM focal points to our Investigations curriculum.
- Working across grade levels in place value
- Integrate IEP students into regular classroom.
- Aligning curriculum with state standards
- Writing in Math.
- Book study and looking at student work
- To improve student scores on the Probability Statistics strand of the WASL.
- Organizing probability goal
- Our focus is the effect of improving student discourse on achievement.
- Improving WASL scores in probability and statistics through use of portfolios.
- Working with struggling learners (resource and IEP students). We use an inclusion model of curriculum delivery, so we're working together to find ways to meet the needs of this specific group of kids.
- Classroom discourse
- To close the achievement gap in the area of number sense (scores on the WASL and MAP)
- Book study once a month. Examining student work and addressing math instructional issues. Working with our focus question.

- Our focus has been on using discourse in the classroom to promote and increase understanding and explanation of mathematical concepts and how to reason effectively.
- Curriculum alignment
- We talked about the conference.
- Needs to be better organized, we are all over the place usually. As a new teacher, I let it go...I have too much on my plate. But, next year I would like to really help us get more focused. Our last meeting focused on what we had done the last time???

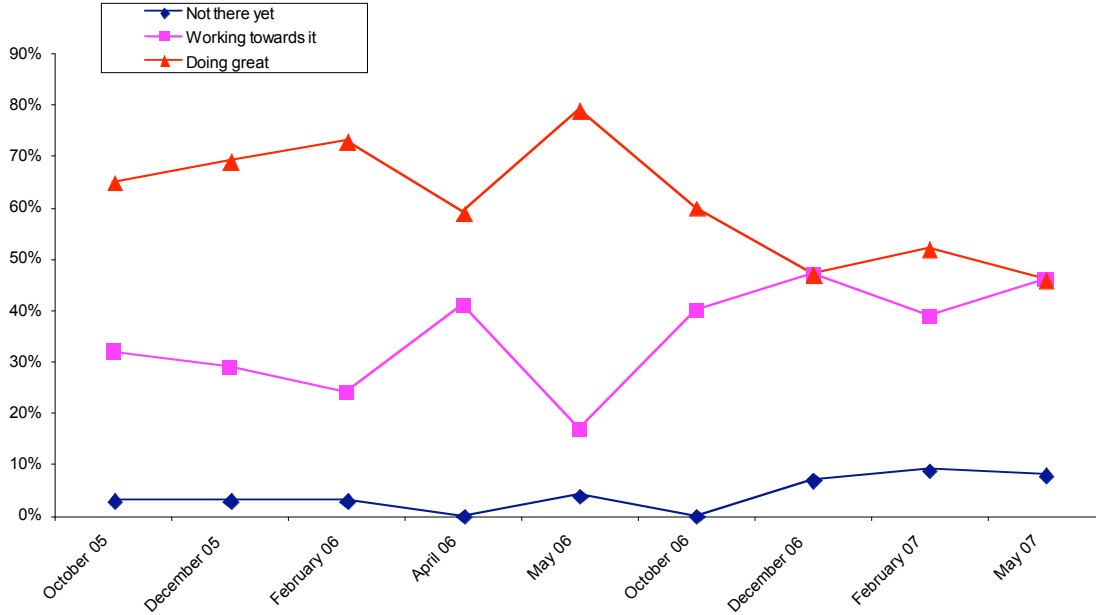
May – 07:

- To raise test scores on the WASL in data and probability through the use of portfolios.
- We worked on aligning the GLEs with our math curriculum, and identified holes.
- We really have fallen apart. We have had major middle school transition issues, not knowing what we are doing next year.
- Curriculum alignment with GLEs
- Integrating writing into math.
- We came together to organize and talk about the next requirement. Unfortunately, we didn't get to talk about probability very often (which was our goal set in the fall) because we were tied to meeting requirements at school and for No Limit.
- Our focus is on the role of discourse in the classroom and how improving classroom discourse might improve student achievement.
- Special ed
- Our focus was in improving talk moves
- Curriculum alignment, Pacing and preparing WASL like tests.
- Haven't had on since the beginning of the year.
- Align curriculum
- Explore inclusive practices within the mathematics classroom.

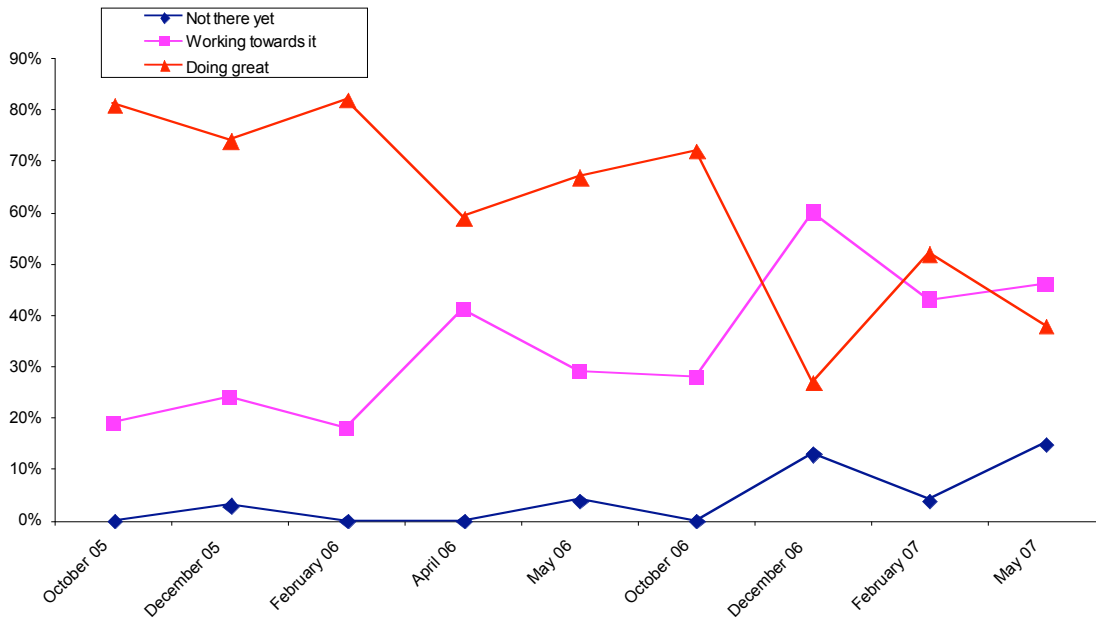
Item 19:

Please evaluate the effectiveness of your PLC meetings.

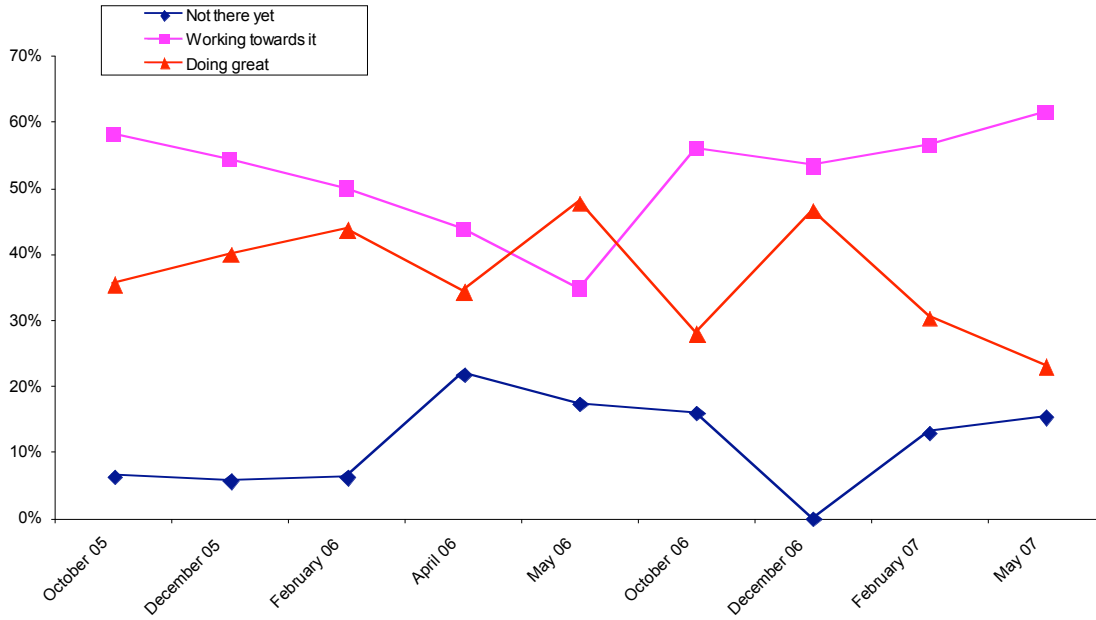
**We are working smoothly as a team
ESD 114**



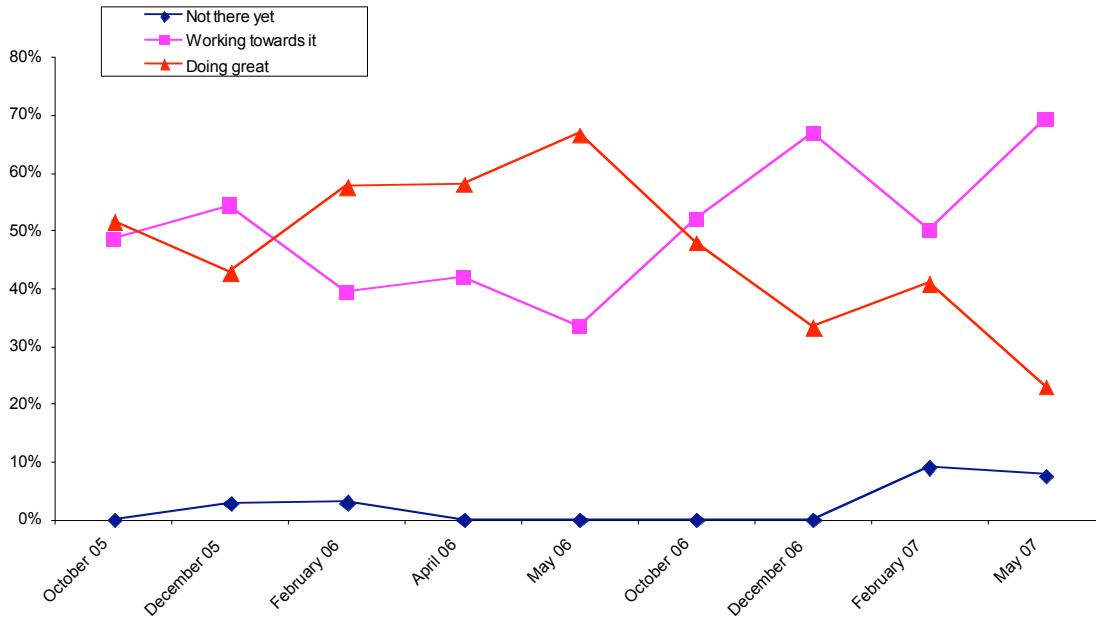
**We are maintaining a regular meeting schedule
ESD 114**

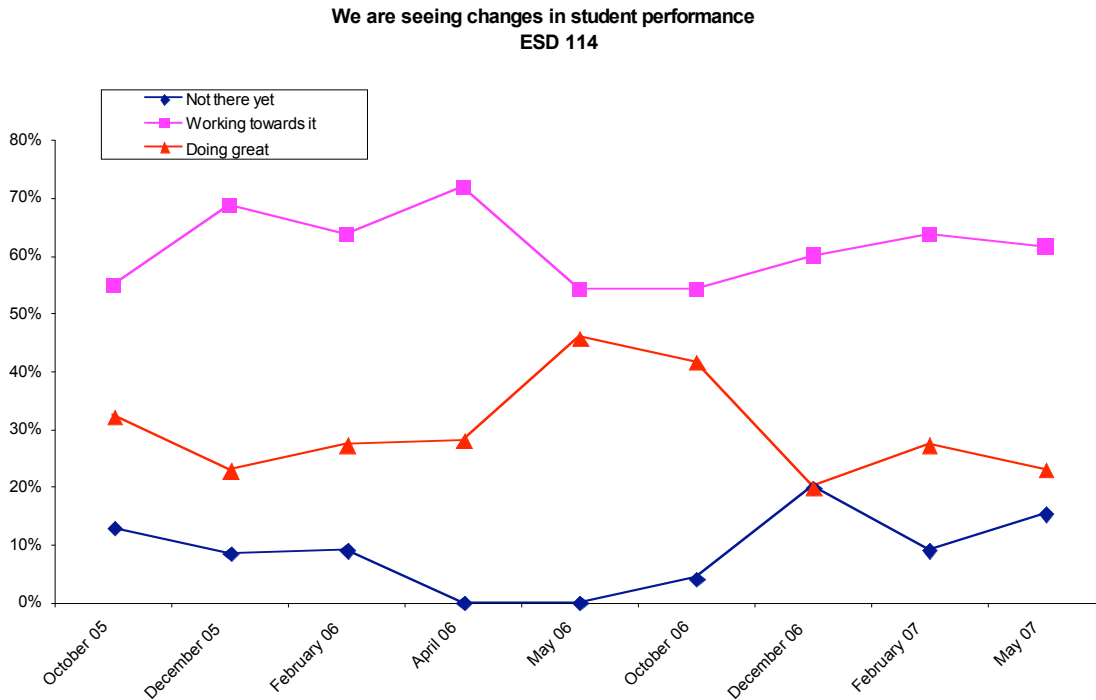
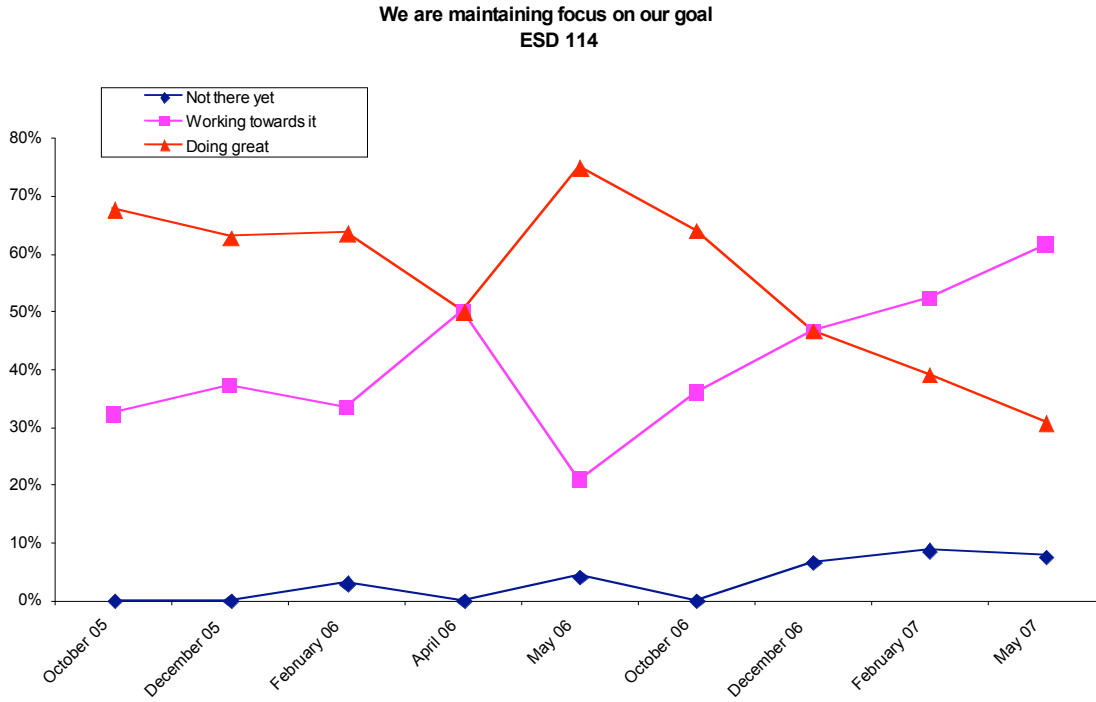


**We are reading and sharing research
ESD 114**



**We are using new teaching strategies in the classroom
ESD 114**





Comments:

October – 05:

- We have a terrific team and are well on our way to reaching our goal(s).

- We discuss our success & weaknesses every day after our math lessons. What worked? What did not? It's very valuable to compare lessons. We're working toward rubrics for particular lessons and assessments, so that we are consistent.
- We haven't discussed student performance yet, so I answered for myself and my classroom.
- We are still getting our feet wet attempting to collaborate on the issues and coming up with some type of rubric.
- Many new members were added to the grant from the previous two years.

December – 05:

- An incredible team spirit has developed
- Grade level assessments to be consistent
- Listening and being open to new ideas is hard for some people. Sometimes people are late. I want more guidance from our NO LIMIT coordinator to help us proceed forward.
- Still too early to tell about some of this.
- Our PLC has hit a lull in our progress.
- Students I am receiving from the 6th grade are starting at a much higher level with regards to extended response skills and competency. I believe it has a lot to do with our efforts last year with extended response work.

February – 06:

- We are all working on common goals and student achievement.
- Our book study isn't going as planned
- We are doing well. Sometimes frustrated with all the meetings that take place in our teaching lives. To have to meet for No Limits often can add to the stress.
- Still not happy with results, but this may be due to socio-economics as well as past learning experiences of our students. We are optimistic, however, that eventually this will change.
- Scott keeps us focused. He keeps us working toward our goals.
- Using records of student portfolios school wide has been a powerful tool for enhancing students' abilities with problem solving strategies.

April – 06:

- Collaboration, along with team planning and same assessment has provided benefits for student achievement.
- We do not spend time with student work (except for portfolios and that is not on all the teams). The teams are very different in what they accomplish with student work.
- Our students do seem to be writing about math more eloquently, although still not what we had hoped for
- We have a set schedule, but it isn't enough time to really do the job.

May – 06:

- Portfolios still need some development. Effectiveness hasn't been observed yet.
- WASL focus took away from work time. We all became frantic...
- The hardest thing is trying to gather student evidence that our focus is really working.
- This year's main focus was student portfolios using WASL-like questions. Very powerful learning/teaching tool. Great to see progress over time. These portfolios will be handed up to the next grade level for those teachers to use as a resource.

October – 06:

- We are much further along this year and have set firm goals and meeting agendas. We are better able to stay focused and use protocols for meetings. We work tremendous together as a team. We hope to include 2 new members (who were previously involved, but moved to lower grade levels) in our PLC and continue the wealth of working as a collaborative team, across the entire school.
- The number of NO LIMIT participants from our building was just downsized by 3 teachers due to budget issues in our building.

December – 06:

- Some work more than others
- Our PLC focus has been confusing. We are very disjointed right now. Many changes in our building/district have impacted the effectiveness of our PLC.
- We are behind.

February – 07:

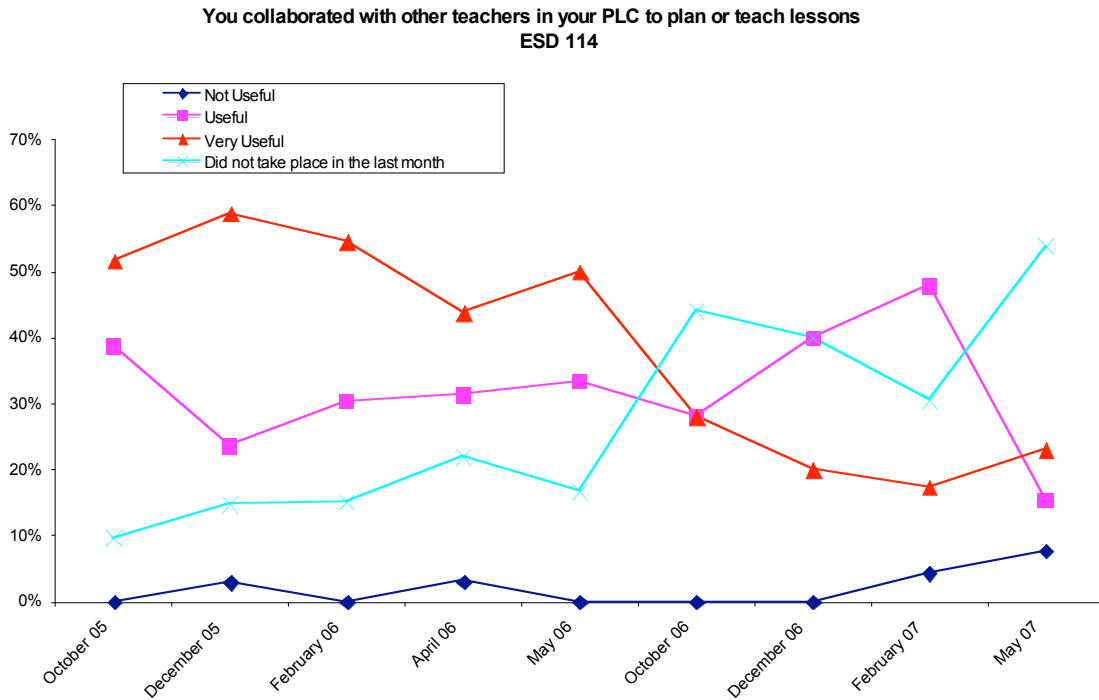
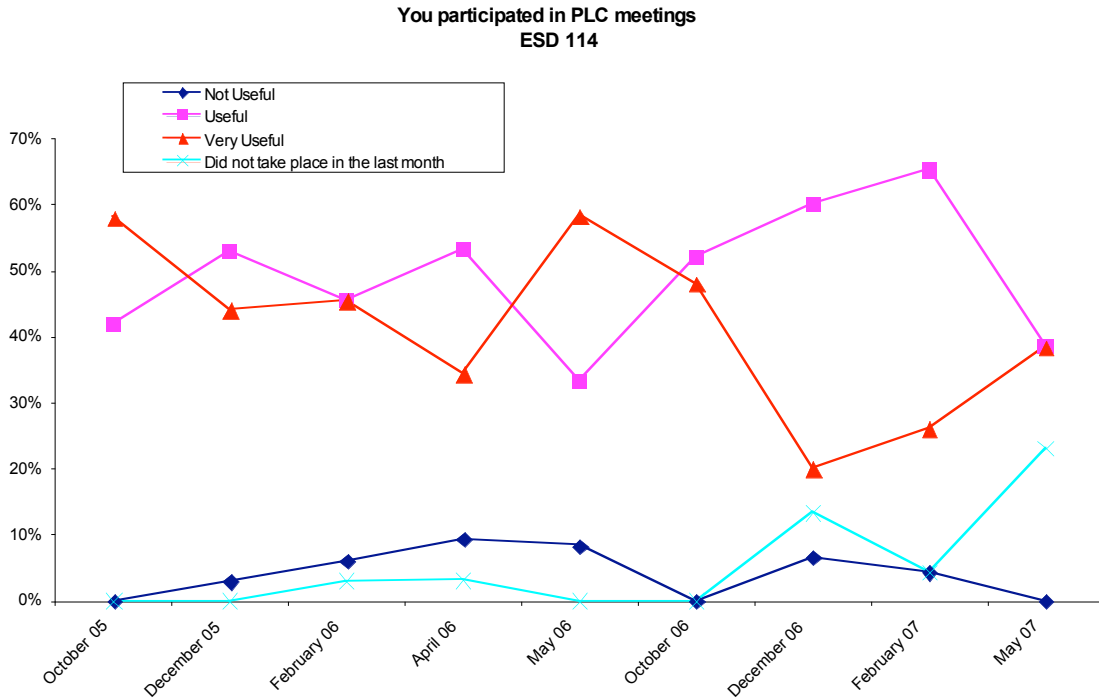
- We will implementing new strategies starting next week.
- Students are doing better on extended response items.
- Hard to work with this group and get everyone motivated and on the same page. I want us to improve in the above areas, we are a great group:-)

May – 07:

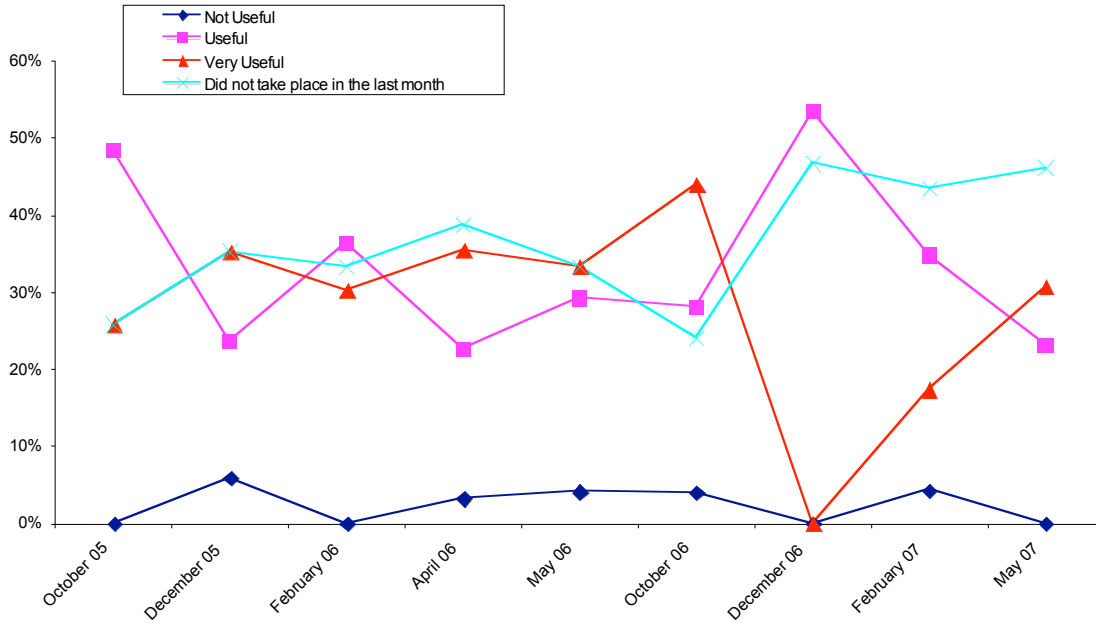
- We have not done much lately.
- Over 50% of my students missed 10 or more days of math instruction. (Some over 30). It is very difficult to maintain continuity and classroom disruptions with a revolving door of students who do not regularly attend class. This is part of the reason I have over 70 students on ALEKS. This program takes students where they are at, not where I'm teaching.

Item 20:

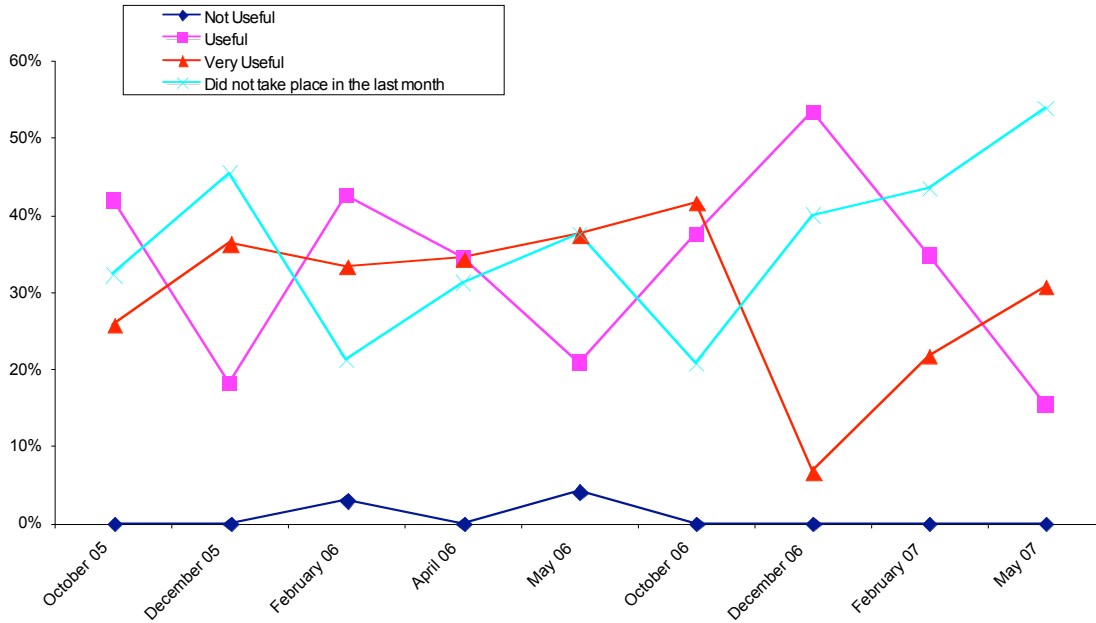
Please evaluate your PLC over the last month.



**You worked with teachers in your PLC to align curricula across grade levels
ESD 114**



**You worked with teachers in your PLC to align curricula with state and/or national standards
ESD 114**



Comments:

October – 05:

- Our PLC works very closely to all stay on track and focused. We meet regularly, discuss, plan and prepare to compare results. It has been a valuable experience and as a teacher, I have gained new perspectives for teaching math and assessing results. Thank you.
- I did observe/help monitor with another teacher. It would've been nice to have time to pre talk the lesson; as I was pretty much an observer with my students and then helped monitor the class. Overall, good start.
- We've spent a lot of time over the past few years aligning curricula and are working on the extended response aspects at this time...

December – 05:

- Worked on scoring rubric for portfolio question.
- I was unable to attend due to a death in the family. I did receive notes when I returned but I have not met with anyone, yet
- Love the teaming approach both within my grade level and within the entire building as a math department.

February – 06:

April – 06:

- PLC meetings have been very useful
- We already have a set calendar, so the aligning curricula with standards is sort of a done deal for now.
- Not a good month for No Limits
- As I mentioned before, PLC time is taken up with scheduling and clerical issues.

May – 06:

- We didn't align curricula, this had been done earlier.

October – 06:

- Regular meetings set for Mondays after school. Team Time during our Late Start Mondays, devoted to PLC. Training is emerging throughout school. Our PLC has trained all grade levels and supported by principal
- We have already aligned our curriculum as best as possible at this time. Now our group focus is on discourse in the classroom. We are in the preliminaries on setting up lessons together.
- In our last PLC meeting we were discussing our PLC focus and how we could narrow it down so that we can find better ways to measure our success and gather data.

December – 06:

- None

February – 07:

- None

May – 07:

- The biggest problem with the state of Washington, is providing curriculum that matches what they want taught. Alignment becomes a teacher-by-teacher effort to drop this or add that. (A very ineffective way to raise the bar.)The CMP series has it only half right. My students struggle with the simple computational aspects of math while trying to learn high-level concepts such as exponential equations.

ESD 121**Year Five**

No Summary received from ESD 121 for Year Five

Year Six

Puget Sound ESD Year 6 Summary

Training and professional development provided for teachers: amount of time, dates, and content

- 3-day Summer training – August 16-18, 2006, included sessions on various mathematics content (graphing, remainders), technology & software info, research articles.
- 1-day Winter training – January 23 or 30, included mathematics content (fractions), website sharing, WASL updates
- 1-day Fair Share – May 15 or 22, each PLC shared what they learned, technologies purchased, future plans
- Each school was allotted an additional 7 hours of MIS time structured around their individual needs. Examples of how this time was used: wireless slate training, einstruction and examview training, digital camera training, refined GLE training, math/parent nights, school improvement committees, additional coaching sessions, etc.
- All schools were scheduled for at least 5 visits of 2-3 days for coaching.

Conferences attended by teachers (please note if any presented at conferences)

- National Board Jump Start, Best Practices (Linda Foreman), First Steps, CMP (Bridging the Gap), OSPI Summer & Winter Institutes, Boeing Math & Science, Doug Reeves Assessment, NW Mathematics, Framework for Understanding Poverty

Conferences attended by you (again, please note if you presented)

- OSPI Winter Conference, NW Mathematics, TMP Summer Institute (Sandy presented), WERA (Sandy presented), OSPI Mentor Academy, TI73/Navigator Training, COE training, OSPI content review, OSPI Instructional Coach trainings, TDG, NCSM, NCTM

What PLC structures were in place in Year 6? Why were they structured in that way? Were they different from previous years? Why?

- Teachers were asked to meet as PLC's at least 3 hours per month. Each building had their own schedule. Some met weekly, others met twice a month, and some only met once a month. MIS's attended as many meetings as their schedules would allow. This is the same as last year except the majority of the teachers were not paid for their time. (Only one district provided monetary support)

Math curricula in use by NO LIMIT! teachers

- CMP 1&2, Saxon, IMP, Addison Wesley, TERK, Glencoe Algebra, First Steps, Accelerated Math

Technology purchased in Year 6. How were the choices made? Were teachers happy with choices? Were you? Why or why not?

- Digital cameras, camcorder, DVD/VCR, SMART wireless tablets, Green Globes software, einstruction, sound systems, projector bulbs, basic skills & problem solving software, document camera, printer, screen, memory sticks, some still pending.
- Teachers made the decisions as to what to purchase and all have been happy with their choices.

Successes and challenges of Year 6 (these are a combination of what teachers felt as well as the MIS's).

- Challenges – Time (too many meetings), getting equipment repaired, getting equipment (so districts red tape was very frustrating), need closer technical support in the buildings to mentor peers, adoption of different materials, working together, did not meet AYP, building had to reimburse district for subs from last year, how do you make Saxon fun?
- Successes – Watching teachers use technology and change the culture of their classrooms, increased student engagement, networking, sharing resources, increased computations skills, increased focus on GLE's, working together to promote mathematics, increase in student performance, increase in time w/team discussions & planning, schools are purchasing more document cameras and projectors.

Anything else you'd like to add.

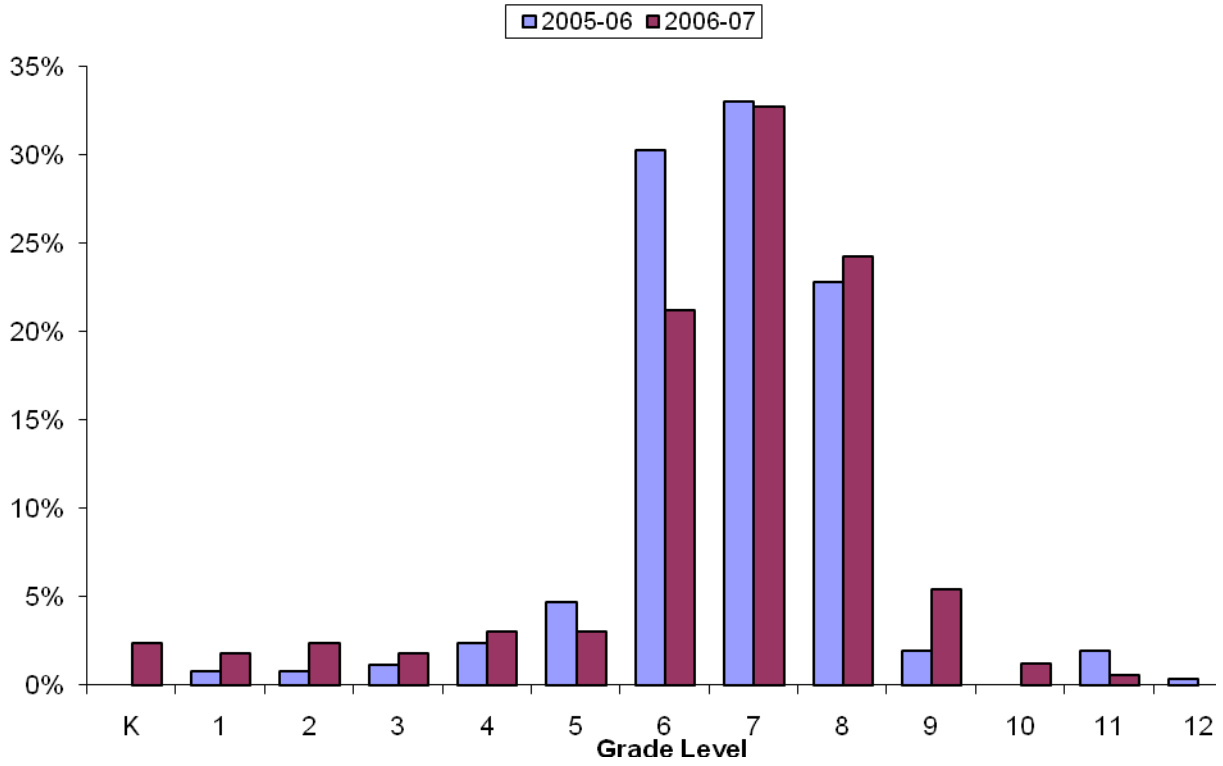
- From a coaching perspective, we feel that if our job were to continue another year, we've learned so much that we could be more effective coaches with each year of experience. Two of the three of us were brand new and used much of the year to reestablish relationships and trust with the NO LIMIT! Teachers.

**Log Report 2005-2007
ESD 121**

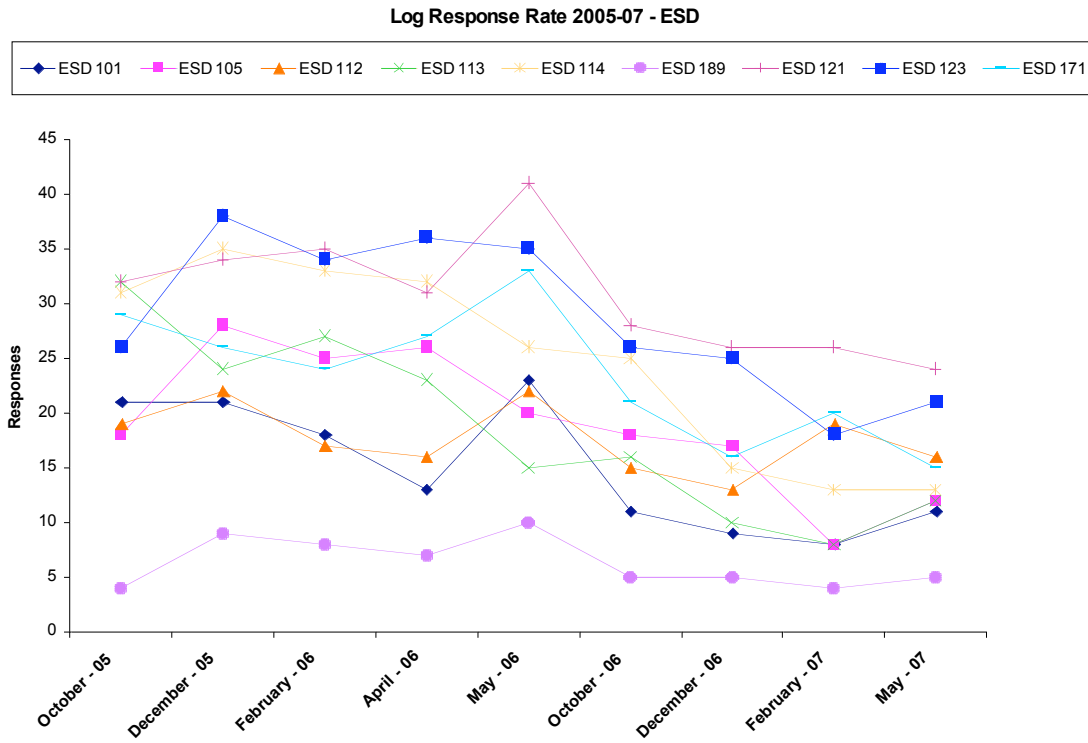
Item 6:

The grade levels you teach:

2005-07 Grade Level Participation - ESD 121



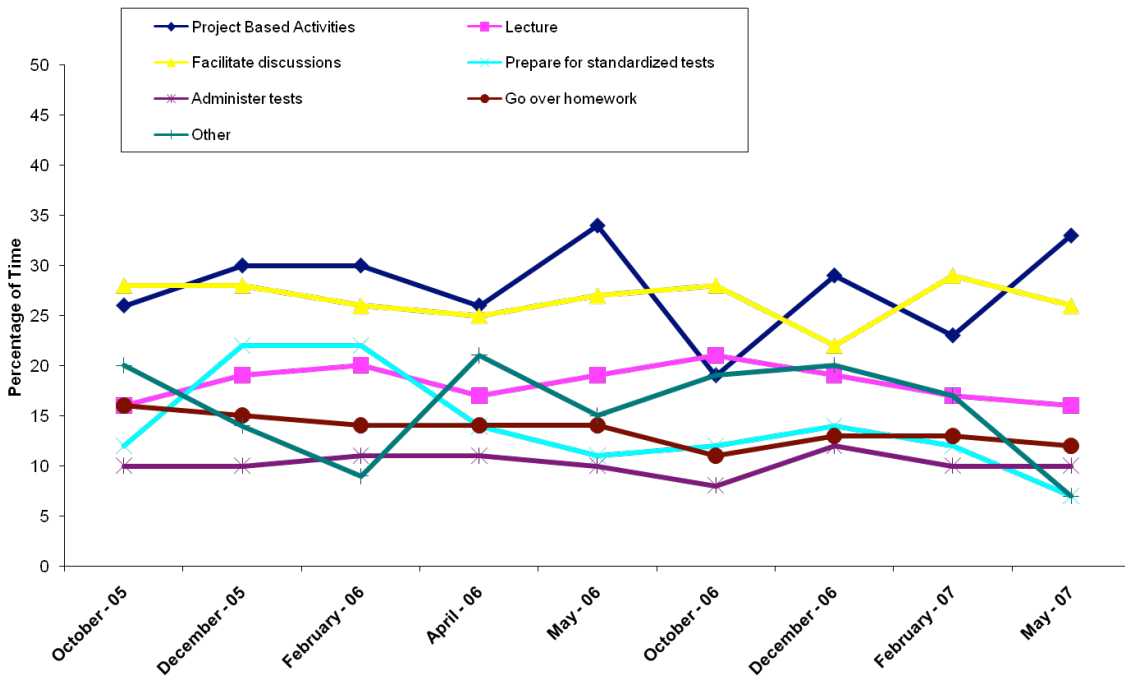
Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?

Classroom Activities in an Average Week - ESD 121



Other, please specify:

October - 05:

- Conferencing most often due to students in need (special Ed)
- Talking about Grade Level Expectations, working on basic skills and working on critical thinking activities.
- We read math related literature, work on enrichment activities
- Grading papers and entering them into the grade book
- A bit difficult to partition up the week this way... did my best.
- Warm-Up Activities(Basic Skills)
- Going over forms that will help with learning math and WASL
- Early Work
- Basic Skills Review and Problem Solving
- Teaching a values curriculum, for example Lion's Quest.
- Personal relationship building and other school activities or announcements
- The context of my students home lives often precludes homework being completed or attempted, therefore I often utilize class time assisting students to complete homework assignments.

December - 05:

- Monitoring/troubleshooting student group/independent work on Connected Math curriculum.
 - Group work, individual seat work, presentations
 - Parent conferencing is based on daily phone calls.
 - Many things roll into one- for example- math concepts, test prep,and lecture tend to blend a lot.
 - We read storybooks related to math topics, we write about problems we solved. We also spend time working on the computer with math activities.
 - Working with students on the fundamentals of computer operations, using software, word, PowerPoint, Coaching teachers on technology, Troubleshooting
-
- Practicing math concepts and problem solving
 - Entry tasks
 - 1 hour per week, Lion's Quest a program for values education
 - The numbers don't add up to 100%. The way I structure class, facilitating discussions is part of learning about subject matter; they're inseparable, as is prepping for tests; we daily do entry items then discuss as part of our routine.
 - Classroom management, administrative activities, math fluency activities

February - 06:

- Classroom discipline discussions/reinforcement.
- Most of the discussion in class is based on most of the discussion in class is based on WASL format writing.
- Reviewing materials covered previously/recently to assure mastery.
- Practice skill work

- Many of these topics are interrelated and go hand-in-hand with each other. Perhaps it is my cluttered manner of delivery, but I find it difficult to categorize my teaching into such narrow fields.
- Bell work, attendance
- I have a new group of students in the Learning Assistance Program; therefore, I have to work with them on effective skills for working in groups.
- The total is more than 100% because there's lots of overlap in categories...

April - 06:

- Accelerated Math and Connected Math
- Discipline, rewards
- Students work on "partner" activities nearly every day I am not calling them "project based" because the activities can be completed in a single day.
- WASL PREP
- Completing class work assignment from the CMP text.
- The closer we get to WASL season the more time devoted to reviewing and practicing math communication skills. We have been working on these all year but seems like the practice is intensifying!

May - 06:

- NO this does not add up to 100% - answer is based on average week
- Group work and student sharing
- Group Work
- Working with students on concept understanding
- Working teachers and staff to integrate technology in their classrooms, troubleshooting, special projects
- Reading Response Sheets.
- Review of basic skills through entry tasks

October - 06:

- Overall I am just trying to make sure we cover all of the CMP lessons according to the pacing calendar.
- Helping students who need extra help.
- Corrective Math direct instruction program
- We are using Accelerated Math so we use some time for that.
- In my class, we have many discussions about math concepts; students are given protocols to follow to ensure that they know the benefits of listening and understanding different points of view
- We have adopted a supplemental math program, "Saxon Math". This program requires a lot of direct instruction which lessens the time for student discussions.
- We have a new curriculum
- Facilitating individual, pair, or small group inquiry of mathematical concepts
- Science Labs
- We have implemented a new math curriculum - Saxon. VERY direct instruction. A lot of time spent with students working independently on their daily written practice. Integrating some CMP work into the curriculum where possible.

- Problem solving methods

December - 06:

- CMP curriculum
- Accelerated Math, choral work
- We spend about 10-15 minute daily doing Accelerated Math.
- New Math Program - Saxon - requires a lot more direct instruction
- Going over related mathematical topics -- fractions and Zeno's Paradox

February - 07:

- Working in groups, sharing ideas about mathematical concepts
- CMP and Accelerated Math
- New Saxon Math this year, lots of direct instruction, requires some creativity for student engagement
- I facilitate a computer Lab.
- Giving feedback from assessments

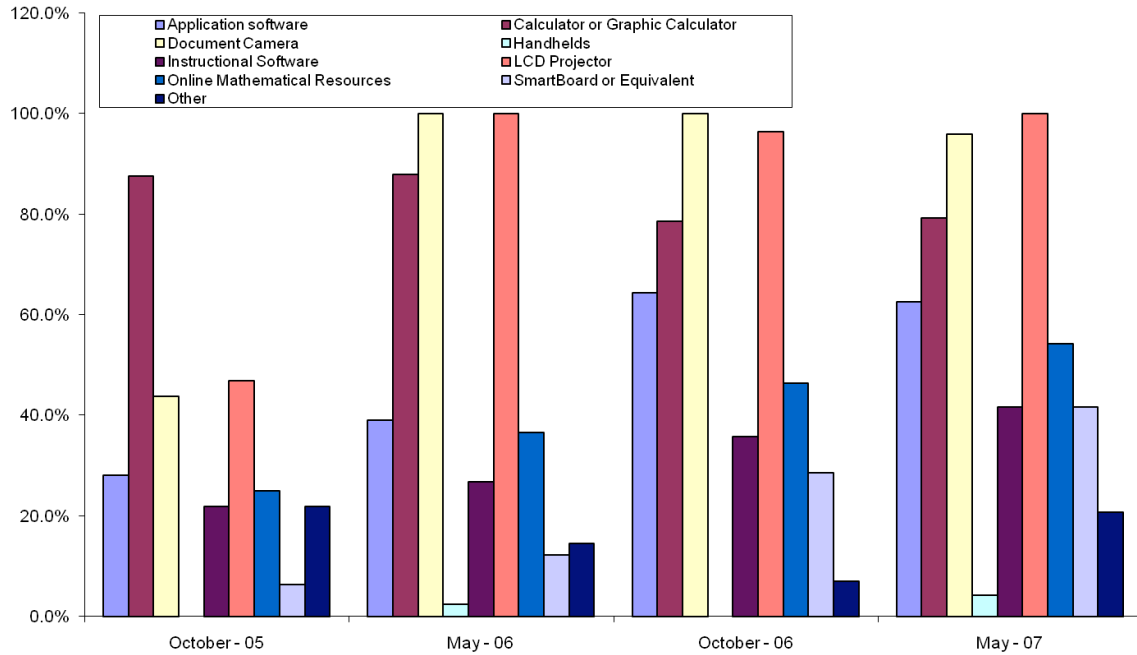
May - 07:

- Following curriculum plan.
- Secondary Math curriculum was adopted this year. Saxon Math involves alot of direct instruction. Have had to get creative with teaching this curriculum.
- Administrative activities, especially in first period
- Mandatory meetings

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.

Type of technology available to participants
ESD 121



Other:

October - 05:

- Computer/printer in the library
- I don't have my technology yet.
- Smart tablet
- Document camera, but no projector yet
- Projector
- Overhead & computer to poster various things
- Two computers available to students

December - 05:

- Basic calculators
- Smart Wireless Slate
- Printer, TV/VCR, speaker, DANA
- Digital Video, Video Editing software

February - 06:

- One computer and printer
- Student computers and multi media computer
- Laptop
- Teacher laptop

- TV/VCR/DVD
- Video camera

April - 06:

- Student computers
- Airliner smart tablet
- Digital camera, video camera
- Quizdom
- Lap Top

May - 06:

- Laptop
- Laptop
- Laptop
- Quizdom
- Digital Cameras, scanners
- Laptop

October - 06:

- Leapfrog
- Digital Cameras

December - 06:

- Smart slate
- Digital Cameras

February - 07:

- Smart Slate
- Digital Cameras, Video Editing Software

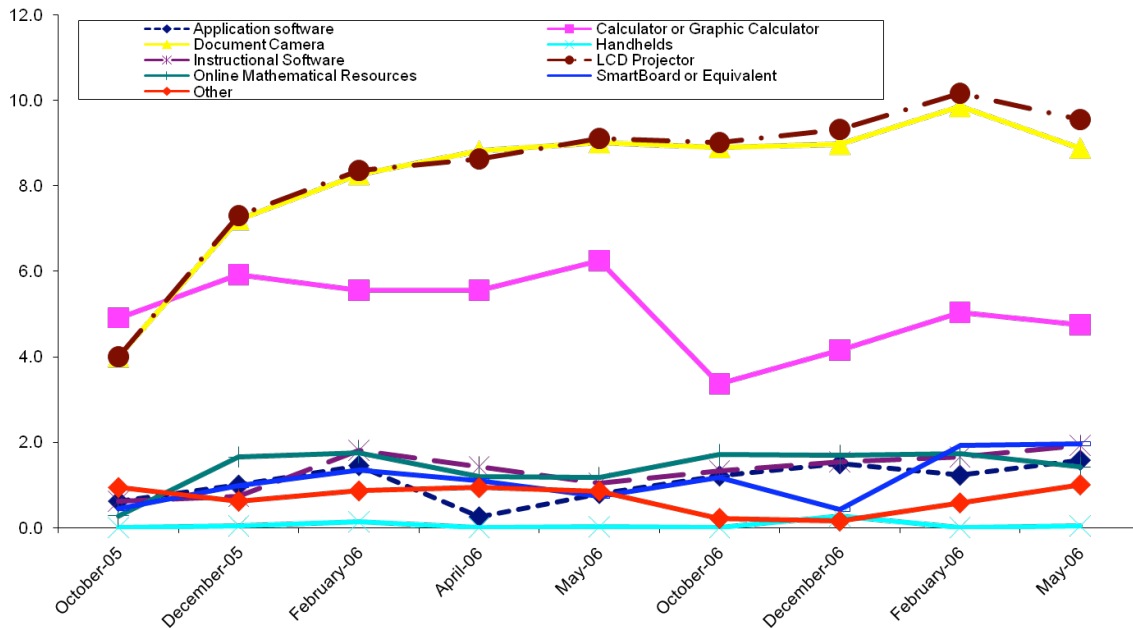
May - 07:

- Accelerated math program and scanner
- Digital Cameras, Scanners

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.

Frequency of use of technology over the last ten lessons
ESD 121

**Item 11:**

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- Students conducting a statistical investigation to determine some typical characteristics of their surveys
- We used the calculators during a math lesson
- Calculators for the Connected Mathematics Program
- Students bringing work up front
- They haven't because I don't have my technology yet.
- Students used computers to support the process of explaining their solutions on specific assignments.
- Slope patterns with graphing calculators
- Using the document camera and LCD projector to compare a coordinate grid made through excel to ones that they have made on grid paper.
- Students used calculators working in Variables & Patterns CMP
- We used the projector and document camera to learn how to graph in 4 quadrants on a coordinate graph.
- When they were allowed to come up and explain their graphs.

- We used our new document camera daily for two weeks, and it was fabulous, but I have 38 students now, and until we get an LCD projector, the TV screen is too small to be used effectively for our document camera. I can't wait until we can use it again - it's like night and day for student led discussion.
- Our technology is new this year. I am still waiting for our comp tech guy to run Internet line for classroom use....
- Borrowed a document projector to show students' work and discussion
- I'm just getting started and the students have only been really using the calculators... not the new technology yet.
- To work on recursive...and fractions for the other math class
- Calculators
- Connecting real-life problem to algebraic description (and solution) to graphical representations to relevant data tables (in any order)
- Students made estimations of answer and check accuracy of their guesses.
- Sharing their thinking about how to interpret graphs.
- 1. Shared solutions to problems, and other classmates gave feedback 2. Compared data from a science investigation and conjectured why results between groups differed
- When re-teaching the concept of factoring and greatest common factor, the class used a table inside an application, so they could visualize how each of the numbers had an effect on the number they were the factor of.
- We have taken some parts of the book on scanned them into a power point presentation. This was done for a review session so that the students could discuss the section with the rest of the class.
- Our technology equipment has not yet arrived in our classrooms. A calculator is the only technology available right now.
- Students work produced from a class project were displayed under the document camera as students presented their results. Questions, comments, were addressed and discussion ensued.
- The development of the Pythagorean Theory. Students had to develop a length of a right triangle on grid paper of the route a helicopter would use in exercise 2.1 in the book looking for Pythagoras.
- They presented a problem of the week and used the document camera
- Students share their work using the document camera and projector

December - 05:

- Online computer games and drills.
- Using the document camera to share their work with the class while explain exactly what they did and why.
- Solving math problems and presentation of their projects.
- Just got it - am in the process of hooking it up
- An assignment was not up to par and I brought an example of great work as a model of what to strive for.
- Students share work via document camera and projector to discuss the best strategy in a factor based game.
- Student work was shared via document camera/LCD

- Students were given a released WASL item to solve. The WASL item was shown to the students using a projector and document camera. The students were able to use a calculator as a tool to help them work out their solution.
- Learning how to use and graph on a graphing calculator
- Students displayed their responses to a question using the document camera to show their work while they explained it to the class
- When we work with review of daily work, we use the document camera and the projector. Children who have earned a calculator license can use a calculator whenever they want.
- We used the graphing calculators to test our mathematical equations that the students wrote.
- They used the document camera to show their work and explain how they got their answer.
- They came to the overhead (I do not have a doc cam) to justify answers.
- Used the document camera and projector to share examples of their work.
- Students share their answers generated using graphing calculators and then they share their thinking and results in a class discussion by using the document camera. We also do mad minutes every day which are displayed in a power point format with the LCD projector.
- Displaying their assignment using the doc camera then describing strategies used to complete task with other students.
- Share and discussions different methods
- Explaining their answers to other students and answering "what if"
- My main responsibility is facilitating a computer lab. I recently installed Geo-Logo...Investigations Sunken ships on our lab computers & third through fifth grade computers. I worked with students and their classroom teacher to find the ships. Another one of our projects is a weekly television show where we feature a WASL problem of the week. The winners have the opportunity to present their solution on TV.
- Use calculators for graphing. Getting familiar with ELMO and projector to use for display of projects and work
- Comparing even and odd polynomial functions
- Used graphing calculators to demonstrate understand of linear relationships and displayed use using document camera and projector
- Students complete daily Entry Tasks focusing on number sense and problem solving. We show their process using the Smart Board or Document Camera every day.
- Presenting solutions to POWs
- My kids routinely show their thinking through their math journals. They present the journals to the rest of the class via our document camera.
- Students gave feedback to peers on extended response WASL release items, according to a rubric.
- Students display and explain their work with aid of document camera. Graphing calculators used to calculate and as part of curriculum investigations
- Document camera is what we use daily to facilitate kid-to-kid conversation about their work/thinking and processes.
- Students used the document camera and projector to demonstrate process and solution for mathematical problem solving.
- Homework and group presentations with document camera
- Giving examples of mathematical reasoning

February - 06:

- My students have been doing WASL, step by step type prompted problems online at various websites.
- They show their work to their classmates on the document camera and discuss what is good and what is bad about the appointment.
- All their presentations are displayed over the LCD projector.
- Geo Logo the teamed up to play "Battleship"
- Helped in discussion of problems and what they meant when they wrote an answer down
- Exploring polygons my scholars learned about coordinates numbers and played games on the computers. There were scholars playing the game and other scholars were watching and waiting their turn. It was exciting to see the energy produced from such activity. The scholars looked forward to the next opportunity to learn more games using the coordinates and other strategies from the Trek program. Which is also connected to our math curriculum.
- Students share and discuss answers using document camera. I would draw diagrams with smart board.
- Students viewed a gizmo on the explore learning website, and then answered questions using cps responders. Responders provided immediate feedback to teacher and students for understanding
- AS we work through our math, we are constantly using the document camera and projector to view and examine student work. We also evaluate extended answer questions on a weekly basis.
- They used the calculators to graph equations and multiply.
- Students have asked to use the document camera to support their thinking.
- Combination of document camera (students modeling mathematical thinking) and LCD projector for PPT presentations
- Students explain the steps they used to solve their problems and share them in front of the class. Other students add to and share questions and comments with those students.
- We used AAA Math to review and retrieve concepts that the students should have mastered in previous years.
- CALCULATORS ARE USED IN THE SPED ED CLASS AS APPROPRIATE AND ON AN ONGOING BASIS.
- Students use the document camera and LCD projector on a daily basis to share their thinking, use of strategies and solutions to problems.
- Students are allowed to display and share their work using the document camera and projector.
- Students shared their reasoning behind answers- used the document camera/projector combo
- A team of students instructs the rest of the class on a new geometry concept (ex: volume and surface area of spheres) using the document camera and showing examples, setting requirements for work shown, and reviewing the materials produced by the students.
- My students used the technology when they worked on word problems. Students work with partners or groups of 3 to 4. After giving them time to work, I let some of them show their work and explain their reasoning for how to solve the problem.
- Different students shared their work (encouraging student presentations)
- Bring up their assignment and explain their response and to project application to another situation.
- Students used a Virtual Manipulative website.

- Graphing calculators used to support computations done by hand
- Demonstrating alt. solution paths to non-routine problems
- Graphing equations...solving Pythagorean Theorem
- Students answered a WASL-style problem using QIPS. I copied three samples of students work for all students to grade using a checklist. Groups had to present and support the grades they had given.
- Giving presentations to peers
- Before a test students were asked to review certain concepts with the class. They used the document camera and graphing calculator to describe to write a linear equation and enter it in a graphing calculator.
- Students used graphing calculators to find the actual numerical value of square roots when working the Pythagorean Theorem
- We've had great success with Gizmos from Explore learning and also in using Scilinks to do online dissections and to use the info to compare/contrast different characteristics between different phyla. We also use released WASL items as warm-ups.
- Students placed graphs and tables under the document camera and supported answers to problem questions.
- Each day, students have an entry task which is projected on the screen. They are to answer the question, and then various students are called upon to share their responses via the document camera/projector

April - 06:

- The students have computer time each Friday. We go to math sites to explore, work problems and play games.
- Teaching WASL strategies, and problem solving examples.
- Students present they WASL pre-tests over the LCD projector and the constant using the calculators to master their answers.
- We put student work on the screen and discussed what part of the student work showed the elements u s a.
- They worked on the MCS Mentor program to evaluate student work on WASL prompts.
- Students compared answers in daily journal and constructed their own positive resolve of how to answer the problem.
- To share their work with the class
- Classroom performance system responders...students discussed and worked out problems and selected from a set of answers using the cps responders
- Every day when we discuss problem solving we use the document camera and the projector.
- The students in my classroom use the document camera to show their work and explain their strategies to the classroom.
- They showed their work on the document camera and then explained how they got it to the class.
- Explaining mathematical reasoning to the class when presenting the solution to a problem.
- I used a few online math quizzes and supplemental sites to enhance background knowledge for the kids.
- Students use the doc. camera and LCD projector to share their thoughts and findings and discuss them on an almost daily basis. Because they can actually show all the work they've already done, the student conversations are much more focused and specific - they don't have

to recreate their work on the board (which always leaves out all of the mistakes or ideas they may have tried partway.) In particular, it's allowing them to talk more easily about HOW they get their answers or exactly what part of a problem they do not understand.

Conversations are becoming more student-driven than they used to, though I still have to learn how to get out of the way.

- I teach Special Ed math..... Calculators are often used to support their answers..... I try to include problems which encourage higher order thinking skills.
- Students are given problems to solve and they complete the process using the document camera as they work.
- Students are encouraged to share their work using the document camera with the class to discuss their thinking.
- Students discussed a PowerPoint presentation on integers.
- Students used document camera to evaluate each other's work as they created problems and solves them sharing strategies via the doc camera.
- Different students shared their work (encouraging student presentations)
- Showing their work with the Camera
- DISCUSSION OF CIRCLE HGEOMETRY - UNIT CIRCLE CONCEPT DEVELOPED
- Every day, I have a problem solving exercise on our Power Point. We begin the QIPS process together. Students work the process in pairs. Then, I record their process using the smart board as they share orally.
- Document camera and LCD used to support instruction of WASL released test item questions and to show our students' examples as well as released student samples.
- Students used the laptop and projector to present science projects that required the use of mathematical reasoning and representation.
- We use all of our technology daily. Kids use the document camera to show WASL test questions
- Use document camera and projector to share in class work and homework on a daily basis. Once a week we do MALT problems using CD and projector.
- WASL practice

May - 06:

- We did hands on equations algebra lesson and used the doc camera to support the lesson.
- They use the document camera and LCD to display and discuss their work. They have also done skill work on the computer.
- during discussion; 2. Presentation (group); 3. Daily class work
- Opening math story problem - showing how they solved the given problem
- We are exploring comparing and ordering fractions in their great, least and equal forms.
- Sharing student work on the document camera.
- Students used smart tablet to demonstrate concept to class and themselves
- Used graphing calculators to discover the relationships between a linear equation and its graph. Used document camera to share plans for tent layout/location given a disaster. Used document camera to simulate a mathematical newscast.
- Sharing their written responses to problems
- When students were showing how they had developed a graph.
- After the students had time to work on a math problem, they were asked to explain how they came to their answers. To help with this I asked the volunteers to go to the document camera

and show us. The volunteer could either work the problem fresh or show the finish product and talk us through the process. I believe we were working on how to add fractions with different denominators.

- They used the graphing calculator to prove their answers were right.
- Presentation of mathematical thinking
- We use technology daily to show our work and show our explanation of our thinking. We also use it almost daily to show what good work looks like either from other students in our class or from MALT items on-line. We also use the sites like Illuminations and Gizmos to help understand concepts and watch some of the WA state math videos/DVDs that were given to us during a No Limit meeting.
- Internet-based geometric inquiry about volume
- Showing their own work under the document camera.
- We've been working on geometry concepts - angles, area, etc. In comparing ways to manipulate lines and shapes, having the document camera/projector combo meant that as we talked about what we found for area, for example, students were able to show their work directly and ask questions and comment about what they saw. For one problem, students put the shapes they had designed to meet perimeter and area requirements up without labels, and used them as a problem for the rest of the class to solve.
- I began using the Prime Time Math CD series. But, I am now encountering difficulties with the power strip.... I think it may have a short..... The school has no additional strips.
- Power point presentation on solving WASL type prompts
- Students used document camera to capture their work and show it on the whiteboard-justified their answer and thinking.
- Reviewing Homework with critical and constructive evaluations
- My students were explaining how to solve a problem using an equation with one variable.
- Student's presentations
- Students presented their checkbooks...
- I am the technology facilitator at my school.
- Evaluating expected value for student-made games of chance
- Students complete warm-ups. Everyone gets an opportunity to show their results, if it is neat and thorough.
- Projector and Camera...demonstrated problem solving process and explained reasoning
- Students practice computation skills using Accelerated Math.
- Presentations and student explanation of work
- My students put their math journals under the document camera daily. They always do this to discuss their strategies in dealing with fairly open-ended problem solving.
- Students used the document camera and LCD to help present and explain their probability games that they created for the treasure hunt games.
- They show their work on the document camera, and then explain to the class the steps they took to solve, and their thought process throughout the problem
- Document camera used to show student work and spark class discussion / comments
- Students use the document camera and projector to present their work and finding in investigations.
- Students use the document camera with projector often in explaining how they worked mathematical problems.
- The same way we always have

- Sharing answers using the document camera; scoring student work samples
- Showing work w/the projector / document camera and student discussion on it

October - 06:

- Using CMP lessons
- Use document camera to view individual/group work
- After the students had completed a problem solving problem, they shared their work using the document camera.
- Sharing work via camera/projector
- Students used homework as examples to describe the math work that they completed.
- Used document camera to explain their thinking
- We use technology on a daily basis in the form of the document camera and projector. We also use Accelerated Math 4 out of 5 days a week.
- I had a student bring her work to the document camera and explain to the class how she approached the problem; as she explained I heard two students simultaneously say, "ohhhh!" indicating that they "got it". I then had one of those students come to the camera and demonstrate "where" they were stuck and where they "got it". It was a great moment.
- Use the doc cam and LCD projector to do a problem so the class can view. Other students can then come up and add/subtract to the problem.
- Students use the DC and projector to display and explain their work to the class.
- Students share the work in their journals using the document camera and projector.
- My students were explaining a word problem showing the 4 steps I am teaching them to follow. 1. Read the problem twice. Visualize the problem. Restate in your own words. 2. Select an appropriate strategy. 3. Estimate the answer. Solve the problem and show your work. 4. Check your plan or strategy. Answer all the questions).
- Looking up concepts online
- Sum of interior angles of a convex polygon in Euclidean Space
- Students present their graphs using the document camera.
- Sharing and scoring work
- Analyze student work on document camera with projector
- Students showed examples of their work on the document camera.
- Used released WASL items for entrance "warm-ups"
- Students completed science labs and presented their finding with the use of projectors and document cameras based on scientific method.
- Presenting their mathematical work
- We use the document camera and projector on a frequent basis. Also, I've used my laptop computer with many interesting technological programs available.
- Sharing student work at camera

December - 06:

- To show student work examples and lead a class.
- Projecting their work to show the other students
- Students shared their work and justified to their thinking to other students.
- Students show work through document camera, projector. Class discussion about work.
- We use the technology every day to share student thinking.

- Used document camera/projector to share work, used Accelerated math to improve basic skills so constructivist approach can be used for new material
- Modeling mathematical thinking
- Using the doc cam and projector to do the problems so the class can comment and give responses...They love to get up and do the math because it's seen by everyone.
- My students regularly show their thinking on the document camera. They are able to show their work and challenge each other's work.
- Students used calculators to practice the strategy of checking their answers.
- We use the document camera with all mathematics discussions so that students can share their work and discuss solutions
- My students were explaining how to use the greatest common factor to simplify a fraction.
- Internet
- When reviewing and correcting assignments, I allow students to show their work.
- Students share their work using the document camera.
- Probability: using an applet spinner web site to analyze what happens as the number of trials increases, approaching theoretical probabilities
- Students discuss their work daily, demonstrating their thinking using the projector and camera
- Used document camera and LCD to display examples of student work to meet GLE standards
- Students use the document camera and projector to demonstrate their mathematical reasoning frequently during the week.
- Sharing work on the document camera.
- Presentation of student work at document camera/projector
- Students use projector and document camera to analyze each other's problems
- I introduced the students to graphing calculators and we used the calculators to write equations, prepare tables and graphs. Using the calculators, we were able to compare the graphs of up to three equations at a time. The students were able to quickly compare and contrast graphs and to relate the different shapes of graphs to the different equations.
- Used the doc camera and projector to show work on the whiteboard and discuss it
- Students brought their work up to the document camera to explain what they had done and why they had done it.

February - 07:

- Use document camera to show individual work
- Project we did at end of Pythagoras unit. Students graphed results looked for patterns.
- A student came to the document camera to share her strategies for solving a problem using the Pythagorean Theorem; she explained exactly how she solved the problem to the class while displaying her work. As she went on explaining, students that previously had difficulty with the idea, began saying, "aHHh ha!" It just reminded me of the power that each student has when they are provided the chance to help someone else get it; and I didn't have them make posters or write on transparencies, it was a spur of the moment decision that really benefitted students in the class.
- Student demonstration & support to homework questions/solutions.
- Anytime we use the LCD projector and document camera, we discuss the work.
- Explaining mathematical thinking to class
- They constantly show and explain their work on the document camera.

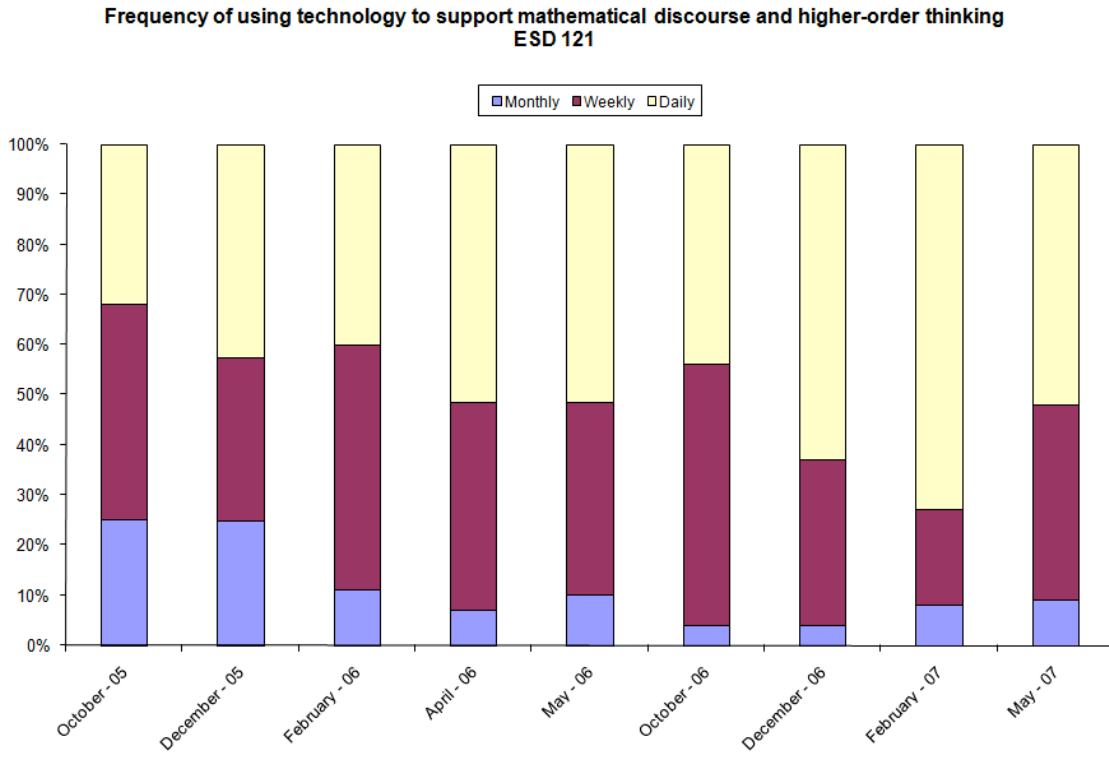
- Doc. Camera and Projector to show and explain their work and thinking to the class.
- LCD projector/document camera used for sharing different strategies for problem solving
- We use the doc camera and projector every day.
- My students explain how they worked their problems using the document camera. I have typed my lessons on the LAPTOP, and I use the document camera to present the lessons to the students.
- I facilitate a computer Lab. However a kindergarten student was playing a math game online. He asked me for an answer. I asked him a series of questions to help him figure out the answer.
- Using the ELMO to display answers are explain
- Students share their work using the document camera.
- Use of online resources from Shodor illuminations, and two other sites to develop concept of similar and congruent figures, and translations/dilations
- Shared with peers a variety of problem solving strategies
- Graphed linear equations on graphing calculators
- Students are working on geometry, so they use manipulative with the document camera to demonstrate understanding and to share their own mathematical reasoning with other students.
- Students sharing work and showing different ways to work problems using the document camera
- They share work using the document camera. The 7th graders are learning to use graphing calculators.
- Students entered data on an exercise modeling half-life of radioactive isotopes into a spread sheet and utilized data to prepare graphs for a presentation. Student graphs were compared using document cameras. Graphs were then critiqued by the class as to correctness--(all required pieces being present) and ease of reading. Further discourse developed on finding slopes of individual line segments within the graph.
- Students used the projector to show their work to their peers.
- Students regularly use the document camera to come up front and describe their thinking and their work.
- Sharing their work with the class.
- We use our document camera daily to discuss and demonstrate our work. The software is used to develop charts and graphs.

May - 07:

- Looking at CMP lessons online
- After completing an individual design problems student presented their solution
- Along with sharing strategies for solving problems with the document camera, students also show their strategies using the Smart Board. Observing other students solving problems while talking through them, classmates get to hear and see math in action. Also, they learn more efficient ways of thinking and problem-solving that may work better than previously learned methods.
- Sharing work with class
- Used Geometer's Sketchpad to model relationships among secants, tangents, angles, and arcs.
- We used graphing calculators to discover the values for percentages of red vs. other color jelly beans in 2 kinds of jelly beans.

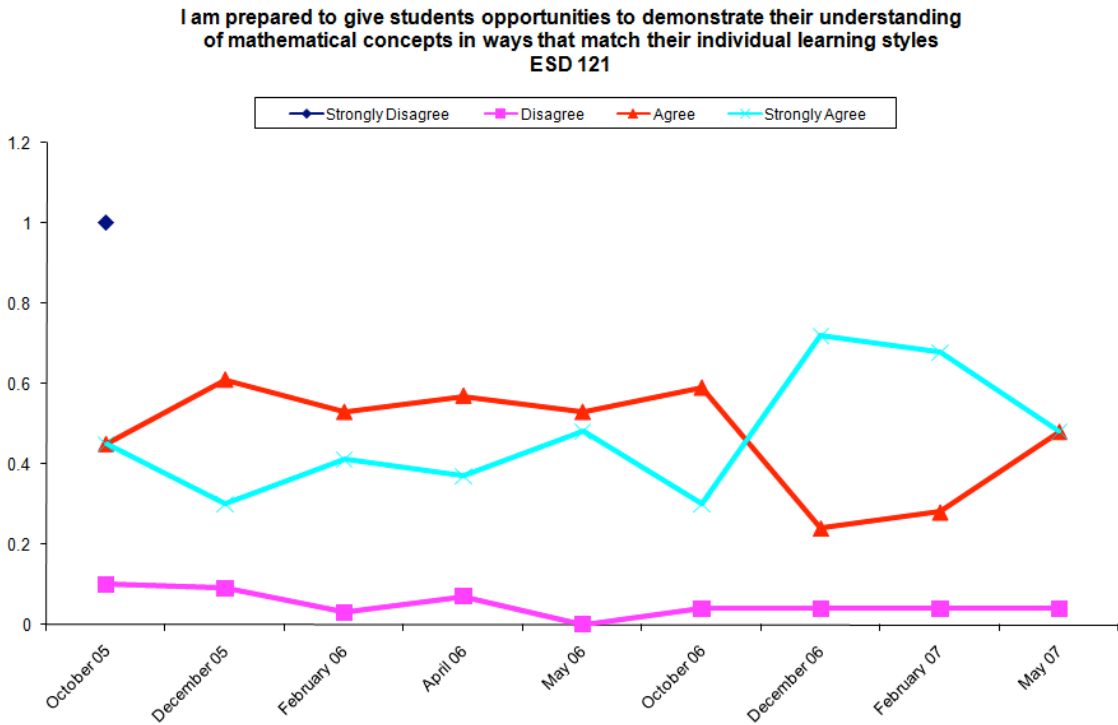
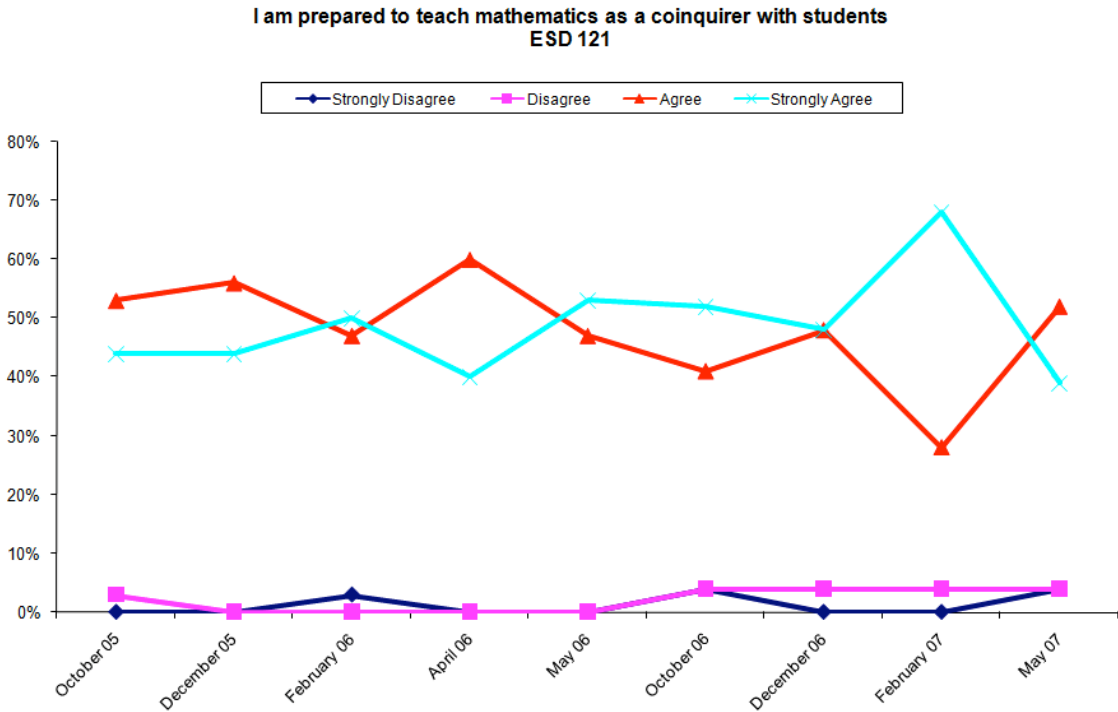
- Using the doc cam and projector to show the class how they worked out a problem
- Went on-line to view websites that are interactive math activities.
- Students share their work using the document camera and projector every day. Students use graphing calculators regularly.
- My students were solving a word problem. They were allowed to use the calculators, and some of them presented their steps to the class using the Document Camera and the LCD projector.
- Calculator
- Fitting linear graphs to student data
- Students work in teams to estimate the length or area of an object displayed on Shodor Interactivity's Estimator.
- From an animated power point on solving 2 step equations we discussed which properties made it possible to complete each step
- Students use the project and document camera daily to show and discuss their problem-solving strategies
- Students used the document camera and projector to demonstrate probability games they created to go along with the CMP text What Do You Expect?
- Students were able to show their work and explain in front of the class.
- Sharing work at the document camera and projector and using calculators to verify answers to problems
- Students answer problem solving questions and put them up on a screen using a document camera
- Using graphing calculators to simulate coin tossing for probability
- Use graphing calculator to graph quadratic equations that students wrote
- Students explained their work on the board and we used a video camera to record student responses as to how they solved their problem and answered critical thinking questions.
- We used the CPM to generate discussions, document camera to share work, and the internet to access information.

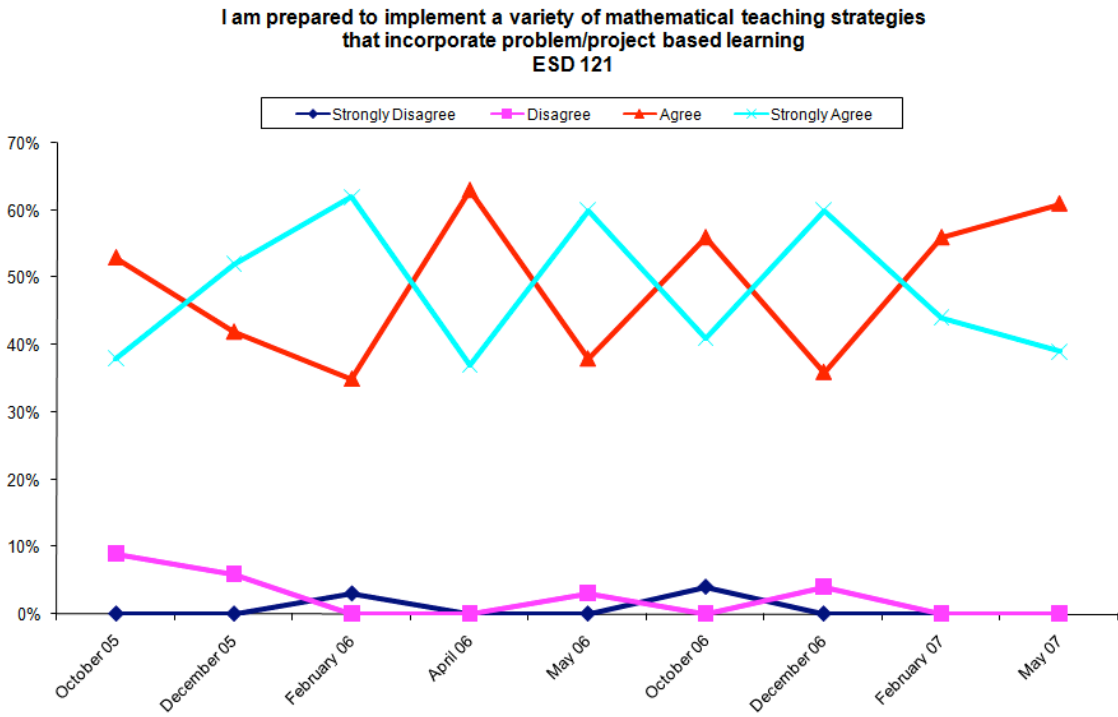
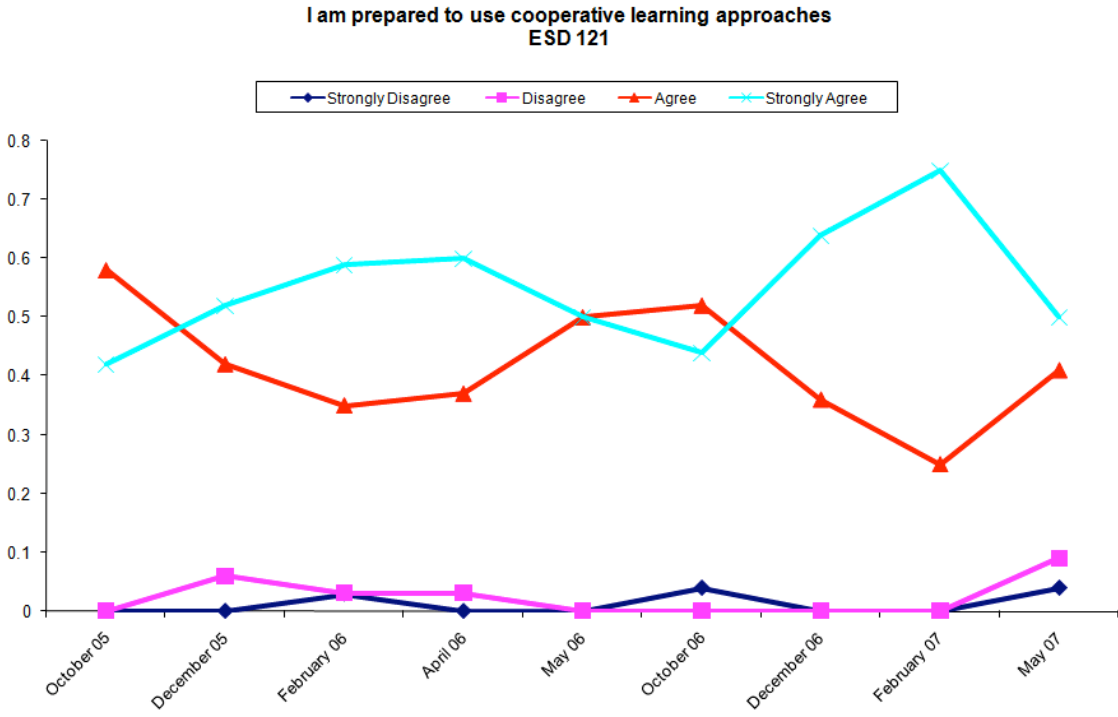
How often does something like this occur in your classroom?

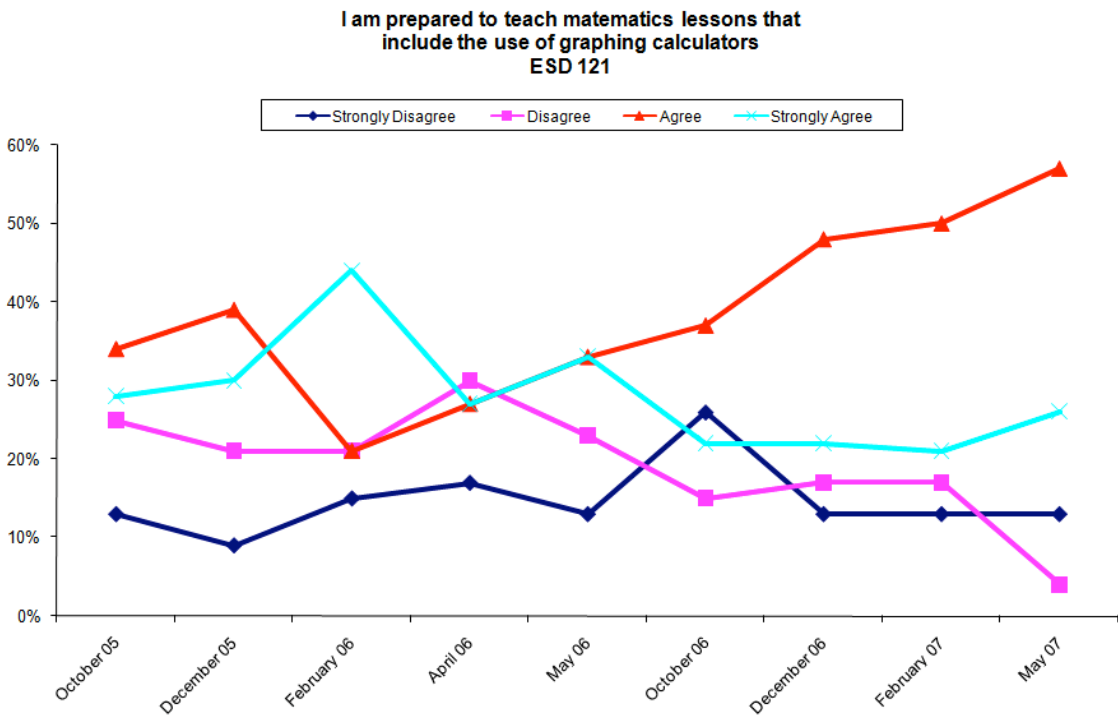
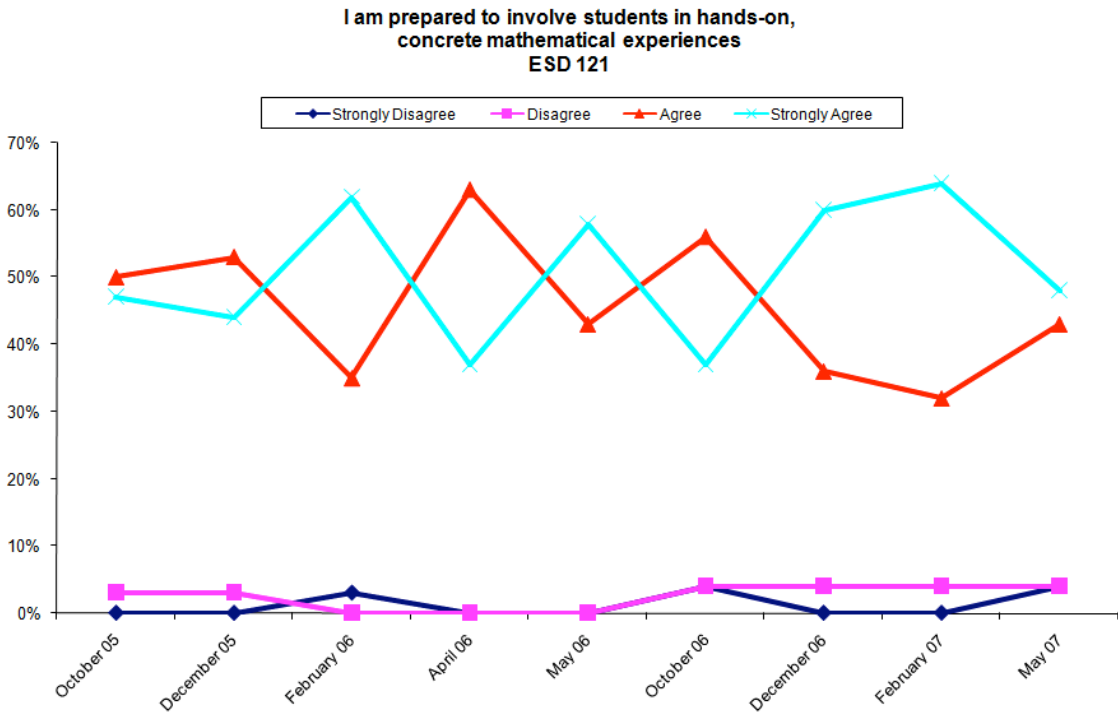


Item 13:

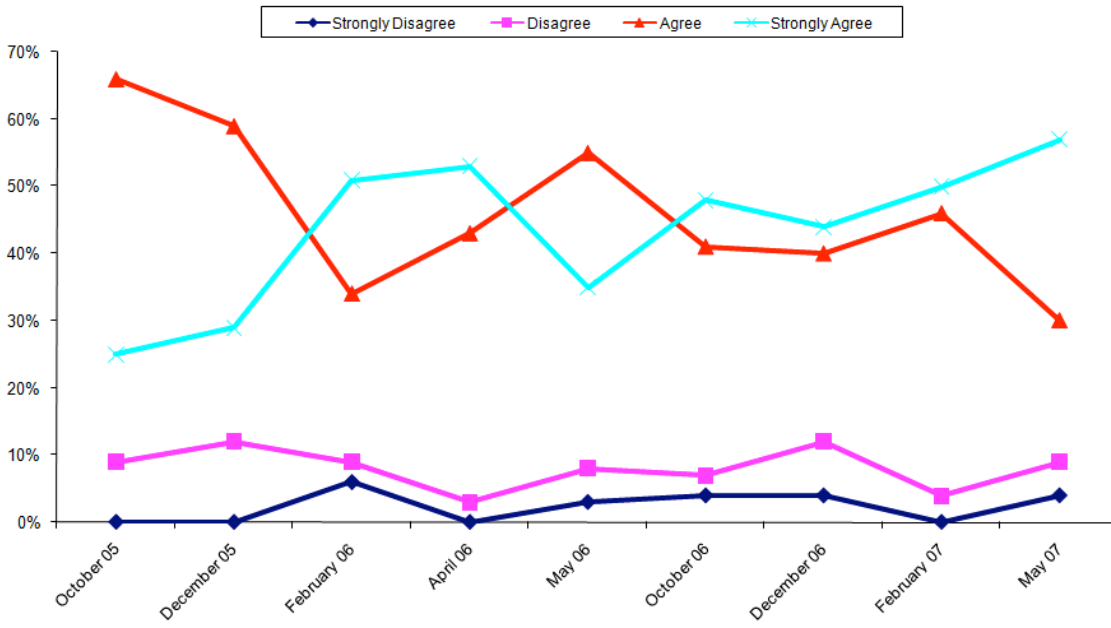
Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.



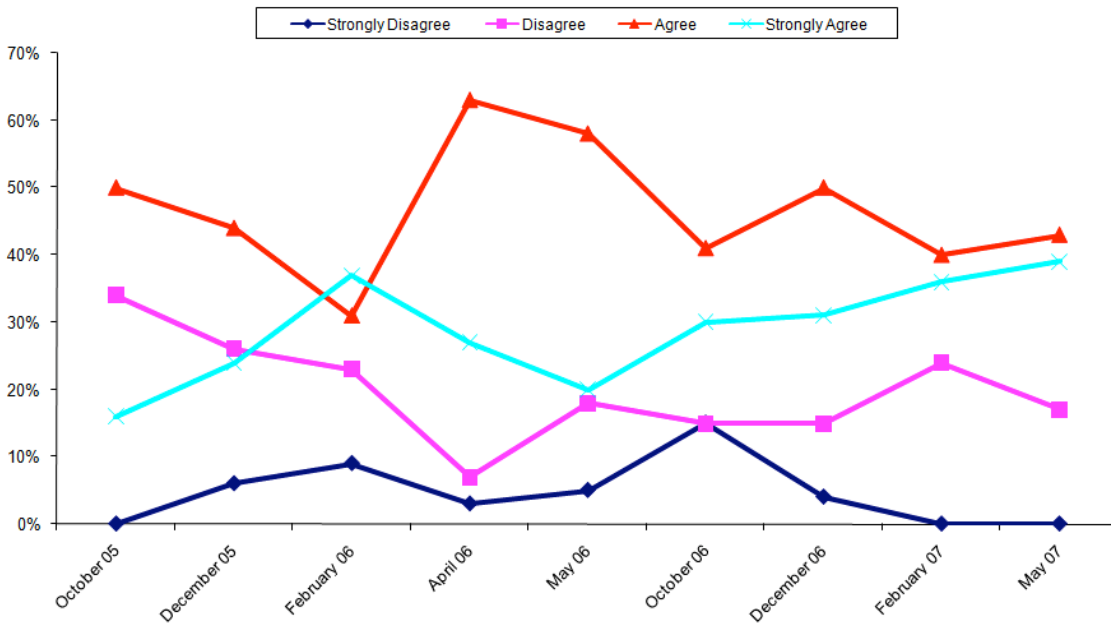




I am prepared to locate online resources in support of mathematics learning
ESD 121



I am prepared to integrate computer-based activities
in support of mathematics learning
ESD 121



Comments:

October - 05:

- The entire school computers are located in the library for students to use.
- The above answers are based on what I have available
- I don't have my technology yet and I am very curious about the delay.
- I do not use graphing calculators in my curriculum so there is no reason for me to 'be prepared' to use them.
- Don't have the material yet
- I wish the above section had something between disagree and agree - several of my responses should really be "In part, but not entirely." I marked disagree on anything that I do not feel that I am totally ready to handle. I do think I'm part way there and am working on several of these things.
- I don't know what you meant by having students demonstrate their learning by using their individual learning style...need more details. Also, we do not have graphing calculators to use.
- I am planning on learning how to use the graphing calculator and to take additional classes on using technology and teaching mathematics.
- Lack of resources is a major problem
- I don't have access to a computer lab, so computer-based activities are limited.
- I would like to be offered the choice of "Somewhat Agree" as a survey response
- At this time, with the particular student body I'm working with, graphing calculators would only detract from their learning experience.
- As soon as I have technology available to me I will integrate computer-based activities to support mathematics. At the moment I use the computer to supplement my teaching.
- The implementation of technology in our school has been painfully slow. It's now October 21st and I'm still awaiting my laptop from the district with the proper software for it to be functional.
- We have still to receive our equipment and on-line computer access. I am sharing my the current equipment with the sixth grade teaching team for all content areas

December - 05:

- Looking forward to getting and working with the Math/Technology things like Document Camera that we was promised.
- Students will research information resources online if there are computers in the classroom for them.
- Limiting factors is my knowledge of computers
- My class does not use graphing calculators- we do not need them we use regular 10-key calculators with basic functions.
- If I could get the technology working properly and hooked-up I could use it.
- I need updated computers for my classroom.
- The questions related to having a specific math class are not applicable.
- It is hard to teach class lessons on computers since we have limited access to the computer lab.
- The only thing keeping me from locating online resources is that it is time consuming. There are a lot of poor quality activities which waste time in seeking the good ones.

- Access to technology remains a key problem at Summit K-12. Our students come from homes that are frequently too affected by our present, Federal Government's lack of concern for the needy and, subsequently, have little or no access to higher tech.
- Physical specifics of our building allow very limited access for my classes to work on computers. There are no student computers in my room.
- Daily.
- Still need hardware issues resolved in order to get efficient access to online resources for students. Currently no functional student computers in classroom

February - 06:

- The students need computers to type their assignments due to complains from other students who can't read others hand writings.
- If I indicated that I am not prepared to teach or integrate mathematics learning, I am answering these questions in accordance with the amount of technology I have or do not have in my classroom, available for the scholars' immediate use.
- I am working at getting better at Web activities
- I have the equipment but it is not set up because of my classroom's electrical needs.
- THE COMPUTERS IN MY CLASSROOM ARE VIRTUALLY USELESS.
- We have 40 graphing calculators for the entire student body.
- I am going to work on learning how to use the graphing calculator.
- Not applicable, I facilitate our computer lab.
- We have no access to enough computers to do anything computer based
- Computer-based activities for all kids require an accessible computer lab.
- I have yet to incorporate use of computer-generated lessons with the class. There are no individual student computers. The only one students can be involved with is the laptop from the grant, and I am hesitant to allow students to use it, even within the context of a lesson employing the LCD.

April - 06:

- There are a few key components that would greatly enhance my math instruction. I.e. smart boards or quizdom units.
- Graphing calculators are not used in the 6th grade. We only have basic calculators. My preparedness in the other questions is not due to No LIMIT.
- I'm actually realizing that I'm not nearly so prepared on some things as I thought I was. In particular, this grant has shown me a lot of online resources to use, but while I'm comfortable with technology, this does not mean that I'm actually able to find the time and best methods to integrate web resources into my classroom. I think that my ability to teach math has improved greatly this year, but in some ways I feel I actually have more to learn than I did - mostly because now that I'm really connecting with my students, I'm able to see more gaps than I used to. I'm very comfortable with cooperative learning, but I am not always able to provide a variety of ways for a student to demonstrate understanding.
- My struggle is the fact the computers in my room cannot support most modern software nor can they handle the interactive math activities on many Internet sites. I finally (think) have the laptop the school is allowing me to use functioning without glitches..... I share my room during my planning time with another teacher.... so, it is hard to find time to play around with my document camera and get things going.....

- Have only one set of graphing calculators for whole school.

May - 06:

- I am a teacher that has my classroom set up for scholars for activities from pencil and paper, object to concrete level, and to the level of technology. Where ever the scholar's are my job is to take them as far as I can motivate them to excel to the greatest potential.
- 6th grade does not currently have a use for graphing calculators so I do not use them in class.
- I have not focused on online resources or computer activities, though we've talked about both during our No Limit! Training. We have one computer lab at school, and it's usually booked. I have three computers in my room available to students, but this does not go far with about 27 students in my math class. I've focused on the camera and projector this year. I think it's better to integrate slowly, but more meaningfully and in depth rather than a little bit of everything.
- My four classroom computers are nearly useless.... they are outdated ... slow... cannot support new software ... cannot run online programs. I have reported this to my administration and computer services....
- Only teacher's laptop is in the room and I don't allow students to access it. I can connect it to the projector for lesson purposes.
- I am the technology facilitator at my school.
- Finding appropriate online materials is a very time consuming task
- Not enough computers in my room

October - 06:

- I am wondering if the ideal of "every student understanding of mathematical concepts in ways that match their individual learning styles" is unrealistic given time and resource constraints.
- We do not use graphing calculators in the 6th grade.
- I created a proto page site for my students to use. They can find the homework and online support for the concepts they are exploring.
- I am continuing to work toward having more than 1 functioning student computer. Our building is very dated and new technology creates many challenges (blown circuits, etc.)
- I facilitate a computer lab.
- Don't have access to computer lab
- Have graphing calculators, but have not used yet, plan to
- The Saxon curriculum does not lend itself to inquiry based instructions, although, we continue to work at integrating the two diverse approaches to math instruction.

December - 06:

- These surveys are getting tedious
- Graphing calculators are not used in my grade level
- I am a computer lab facilitator
- With reduced focus on inquiry based mathematics this year it has been difficult to coordinate and provide adequate opportunities to do inquiry
- The classroom computers in our school do not support online programs and are too slow to support math software programs.

February - 07:

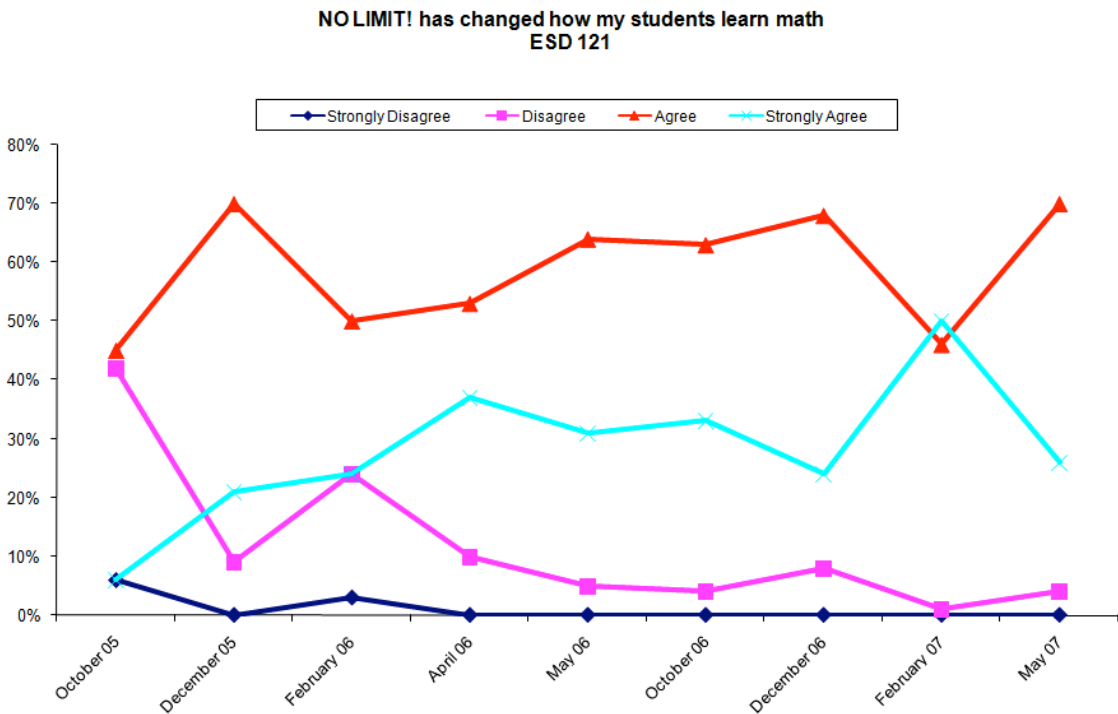
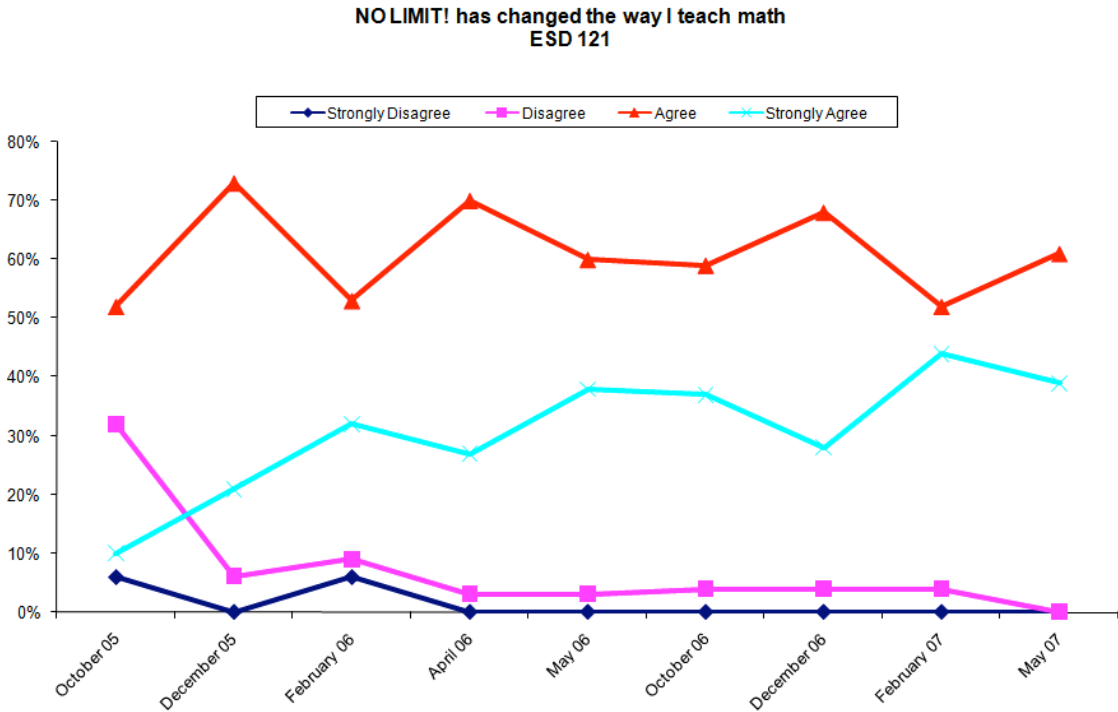
- May need some training myself first
- Need more computers to be able to have students get their hands on them.
- I am not prepared for the two above, because I don't have graphing calculators or classroom computers
- We do not use graphing calculators in 6th grade.
- I facilitate a computer Lab.
- Lack of a computer lab limits some strategies to demonstrations with discussion, but demonstrations allow directing inquiry and focusing direction of inquiry
- Need more coaching on using computer based activities in support of mathematics learning
- Computers for students not available in classroom
- Integrating computer-based activities is limited to my one computer with Internet being used with whole class lessons. I do not have facilities at my school that would allow me to have students use these programs on their own. It is frustrating that except for 12 computers in the library we do not have a computer lab for whole class instruction.
- Our computer network is weak and too difficult to plan to depend on computer/internet access during class time.
- We do not have the flexibility to develop project based learning to its potential.

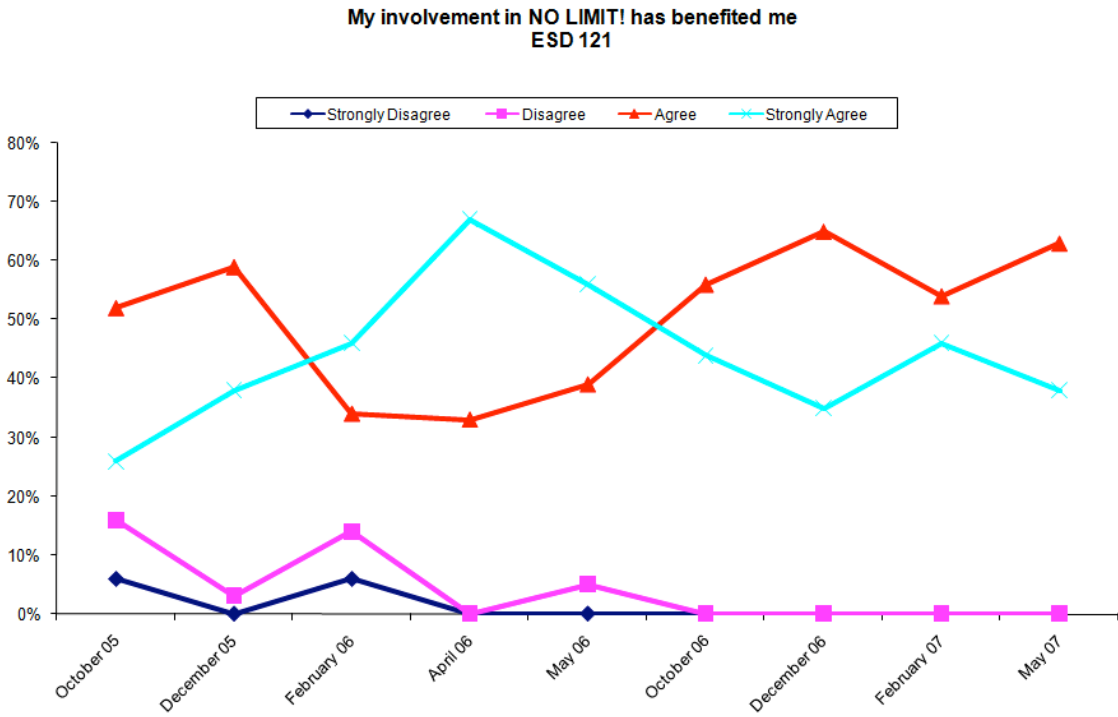
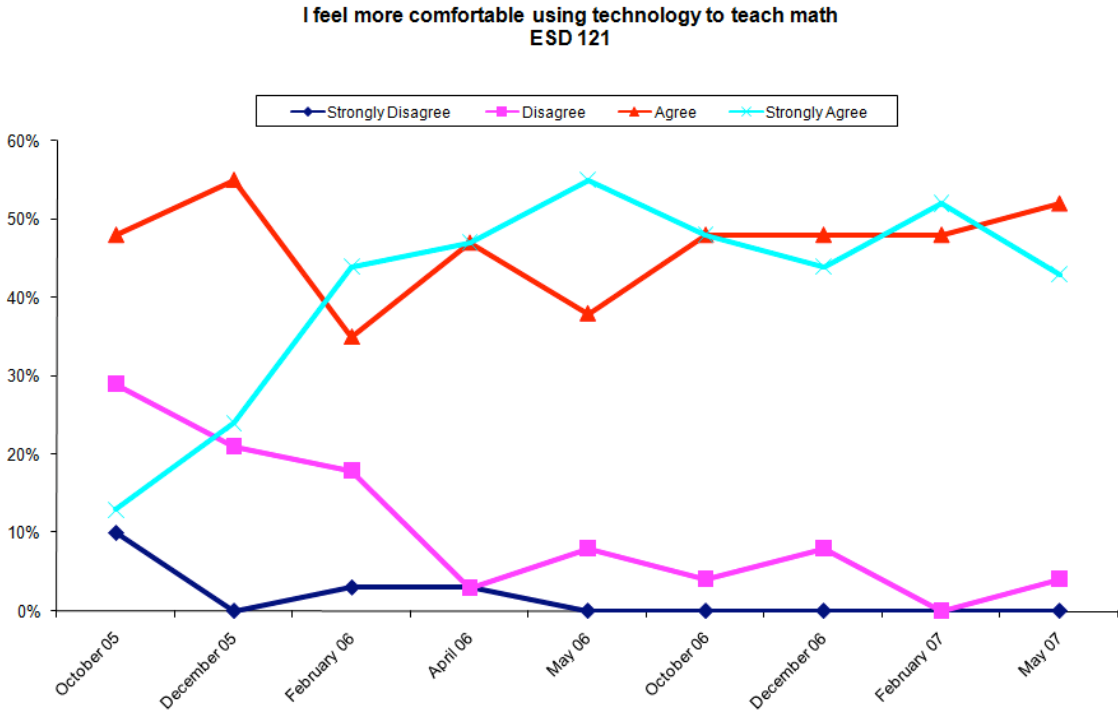
May - 07:

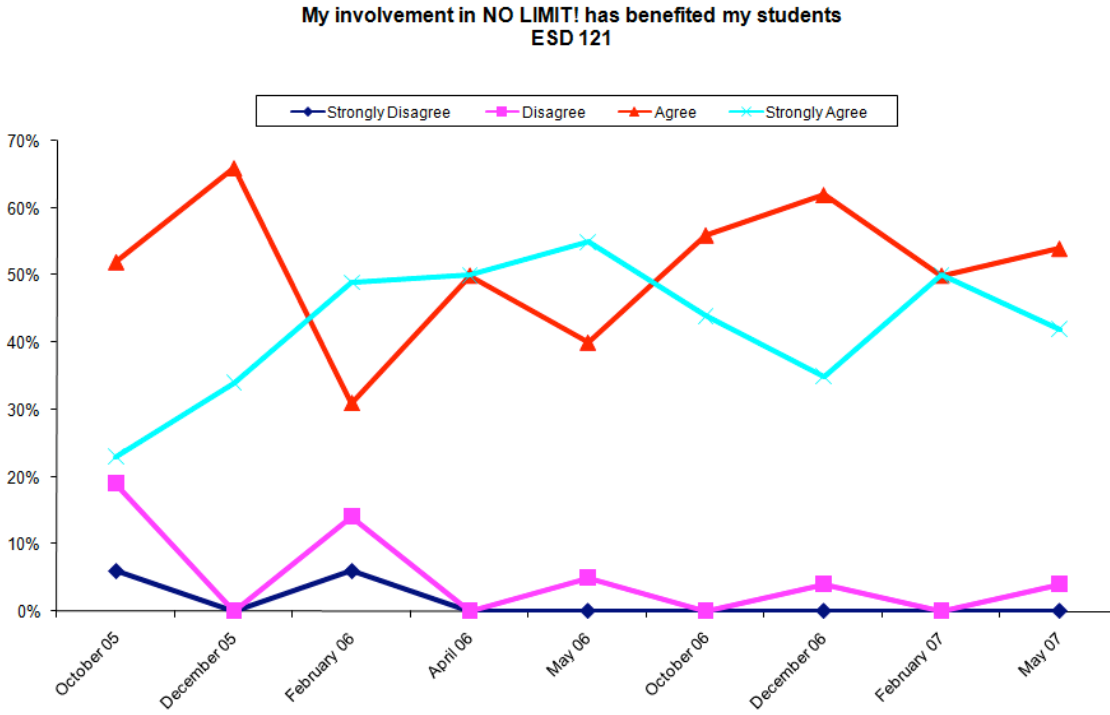
- Our math coach has helped in using tech.
- We only have a school set of graphing calculators. I am working on project based ideas to implement into my curriculum.
- I'm a computer lab facilitator
- As far as the computer-based activities are concerned, it is very frustrating that Lochburn does not have a computer lab available for math teachers to use in group lessons. There is a lot of great software out there that would enhance what I am teaching, however, with one desktop computer in my classroom and one laptop, it just doesn't work. Everyone who knows anything about education understands that the kids learn more successfully by doing it themselves, rather than, watching me do the activities.
- I still have not mastered the smooth integration of on-line resources into my lessons. I have done this more this year and plan on continuing to build this into my lessons when possible. It does increase student engagement.
- I have had little to no experience with the graphing calculators.

Item 14:

Please tell us how NO LIMIT! Has impacted your classroom. We are interested in your frank responses.







Comments:

October - 05:

- The students need some technology devices in class
- At this time I cannot answer the questions since nothing has come our way - yet
- Too early in the grant to fully tell the impact of the NO LIMIT! Grant. Technology has not made it into the classrooms yet.
- I don't have my technology yet. I also found it frustrating that the training in August was completely devoid of any training on how to use technology to improve student learning.
- I have not seen the technology yet for my class and most of the things that we trained on over the summer had already been incorporated into my class.
- I would be marking strongly agree on all of these IF I HAD MY TECHNOLOGY - but I am feeling extremely unsupported by my district and school admin. On this. The only reason we've gotten the one (two as of this week now) piece of tech so far is a very kind soul in the tech/network analyst dept. in the district who was willing to navigate muddy waters and managed to help expedite a bit. The fact remains that it's now November, and I am not able to use the 3 pieces of technology as a coherent whole that the grant wants me to have.
- We're still waiting on the arrival of our equipment. I have borrowed other equipment and find the students excited and looking forward to getting our own equipment to use on a regular basis.
- I'm not comfortable with it all yet because I haven't been able to use the laptop.
- I am looking forward to getting and using the equipment funded by the grant.
- We do not have our technology equipment so I am still doing things the way that I did last year.

- Have not received any equipment. Our school is still trying to budget/buy batteries for all graphing calculators, but NO LIMIT has opened my eyes to ask student more why questions when they give me an answer.
- ONLY DISAGREE BECAUSE MY DISTRICT HAS NOT BEEN ABLE TO GET ME THE EQUIPMENT WE OREDERED MOTHS AGO! I am greatly looking forward to using the document cameras and projectors, when they arrive...
- I have not received the technology promised to implement strategies in my classroom I anxiously await the products arrival.
- I would like to respond as "Somewhat Agree" to those I selected as Agree
- As this school year progresses I see my involvement with this grant becoming greater and greater.
- There has been no impact from technology because we haven't received it yet.
- Because of the document camera the benefit to students and myself is the immediate feedback it provides to students about the content.
- I've only use the document reader in the classroom. There is nothing more to report on.
- I have always felt comfortable using technology, long before this grant
- No equipment has been delivered

December - 05:

- We will be holding our first Math Olympiad at the school thanks to NO LIMIT.
- The devices given to me from the grants has done a great deal of impart in my classroom environment.
- It will benefit my student once everything is up and running - soon
- I do not blame NO LIMIT! For the lack of benefit to myself and my work. That Seattle Public Schools has reneged or disregarded NO LIMIT! Efforts to help incorporate technology into my classroom are not NO LIMIT!'s fault. I blame SPS for the lack of assistance and technology my classrooms suffers from.
- Life has changed for the better!
- It is nice to be able to let students come up and put their work up for examination with having to take the time to recopy it on the board or on an overhead. Math engagement is more immediate. I also like being able to pull up materials on the internet and not having to waste copy paper for everything we do.

February - 06:

- I feel that the equipment has helped me and my students but I could have received this equipment on my own and had the same effect. It isn't a result of the No Limit grant.
- The LCD projector is more beneficial to the student learning environment than before.
- No Limit! has increased our involvement to think as WASL activities are presented. We do not necessarily teach to the WASL, but my scholars are beginning to show gains in their abilities to critically think.
- Technology is a way to bring up interest in the student.
- My NO LIMIT! person has put her money where her mouth is! She has supported our staff and principal 100%. Our teacher core for NO LIMIT! We have met since September every Thursday an hour before school learning, sharing and putting together problems for the whole school (K-8th grade). She does the training before school and then stays all day working in our classrooms around the building. Our principal really enjoys the opportunities

she has in planning activities that help scholars understanding the content areas of mathematics. The scholars look forward to her day at our school because there are fun activities that encourage them to work in groups or teams.

- AT MY SCHOOL I HAVE NOT RECEIVED A DOC CAM YET.
- Hooray for NO LIMIT!
- I appreciate the workshops and the assistance from the NO LIMIT staff.
- Not applicable, I facilitate our computer lab.
- We are working on a way to report to parents and students what they are learning and why they are to learn it.
- Most of the NO LIMIT Training has focused on concepts taught to pre-service Math teachers. I need more training focused on USING technology to teach Math.
- We need more time to do the above!!! Would love to be able to do all those things on a more consistent basis as a team.

April - 06:

- It is much better. Students feel more confident about showing how they achieved a particular result and enjoy using the technology to highlight their work.
- The benefit of No Limit has clearly been the technology and the time spent with the PLC at our school. The time spent at the ESD has been a complete disappointment.
- No LIMIT has brought more focus to my teaching as has the Master's program I am in.
- See above comments - they all seem to address this issue. I'd like to note that it's not just the tech that's been of benefit - having a math consultant working regularly with our small team, giving specific feedback to my classroom and teaching, has probably been the most valuable part of this grant. The document camera and projector have been huge assets - best tech I've ever added to my classroom and by far the most integrated of anything I've tried - but as wonderful as it is, I think my teaching has been even more impacted by having someone come, observe, share thoughts, be a sounding board, provide resources, and specific feedback, as well as a willingness to put in extra time to solve any specific questions and problems I have. That's priceless.
- It will take some time for me to become more adept at what I'm trying to change

May - 06:

- I would do it again!
- Anything that helps the learning process is good!!
- I think NO LIMIT! has impacted my classroom by not just training the teachers but giving them a person qualified to take us to such heights as moving out of our little comfort zones (rooms) to using tools like document cameras, projectors, and computers to enhance learning and involvement from teachers, scholars and parents. My scholars were so charged when they saw this equipment brought into the classroom. I had already prepared them about this adventure. I told them of the difference in the overhead projector and its limitations. I informed them that the new tools would give them more of an opportunity to use their skills in a far more better way than they have even imaged. I made a diagram of the equipment or the back board (because of my artistic talent) of the backside of the document camera, projector, and the side view of the projector. I then had the scholars view the actual machines and then the diagram of the objects on the back board. We had some discussion as to where would start to connect the machines. The scholars proceeded to number the

connections that needed to take place in order to successfully run the machines as they were intended to run. They were so excited and so was I! My heart was skipping beats as one scholar at a time would go up to connect their part to the machine. They counted six steps to successfully connect the document and projector in order for it to function as expected.

When the sixth connection was made we all held our breath and waited! "WOW" "OH Ms Beeler LOOK IT'S ON!" The scholars were jumping out of their seats with great satisfaction on completing the first try without any mistakes. We continue having every scholar taking turns in connecting the machines each morning until everyone had a turn experiencing the joy of watching the lights on each machine turn from red to green. When they finished we would clap for them on being successful in connecting the machines to its completion.

When you teach them the proper care of the equipment and allow them to handle them they do a swell job. I am very proud of my scholars!

- It's too bad our school didn't get the grant renewed for next year. We've got a new crop of math teachers coming into the fold who will not benefit from these tools.
- If I had access to newer computers, I could incorporate so much more of what I have learned from NO LIMIT. I have seen Quizdom in action and would love to have a set of my own.
- I wish our school had been chosen to continue with the grant. Alas, we were dropped.
- As part of the "No Limit" team I feel that we were change agents in our school. Our goal was to create a climate where math became part of the culture of our school. We have taken a very positive step towards that.
- Before no limits grants, I knew through research SPED students would greatly benefit from using computer and project based material. I am pleased with my limited use and look forward to seeing student progress even more next year.
- I could not go back to not having the equipment.
- Yes, we got the equipment to use but no I don't feel the experience was worth it or prepared me any differently other than just having the equipment on hand
- I am looking forward to more opportunities to implement learned strategies and incorporate them into my personal teaching "toolbox". I still feel like a novice in many ways but we (students & I) are getting stronger!

October - 06:

- I would like to clarify that the benefit from no limit has been the access to technology and paid time to meet with PLC. The classes at ESD and the support from the ESD were mostly a waste of time.
- I am a relatively new teacher; I taught .5 years before I received my "triad"; I cannot imagine not using the technology! It should be required in every classroom to have a doc cam, pc viewer, and laptop.
- Being part of the PLC, I use more math in my class than I would without being a part of the PLC
- The process of getting the technology has been very slow.

December - 06:

- Students visit online resources related to math more often than they would, if I were not part of the NO LIMIT! Project.

February - 07:

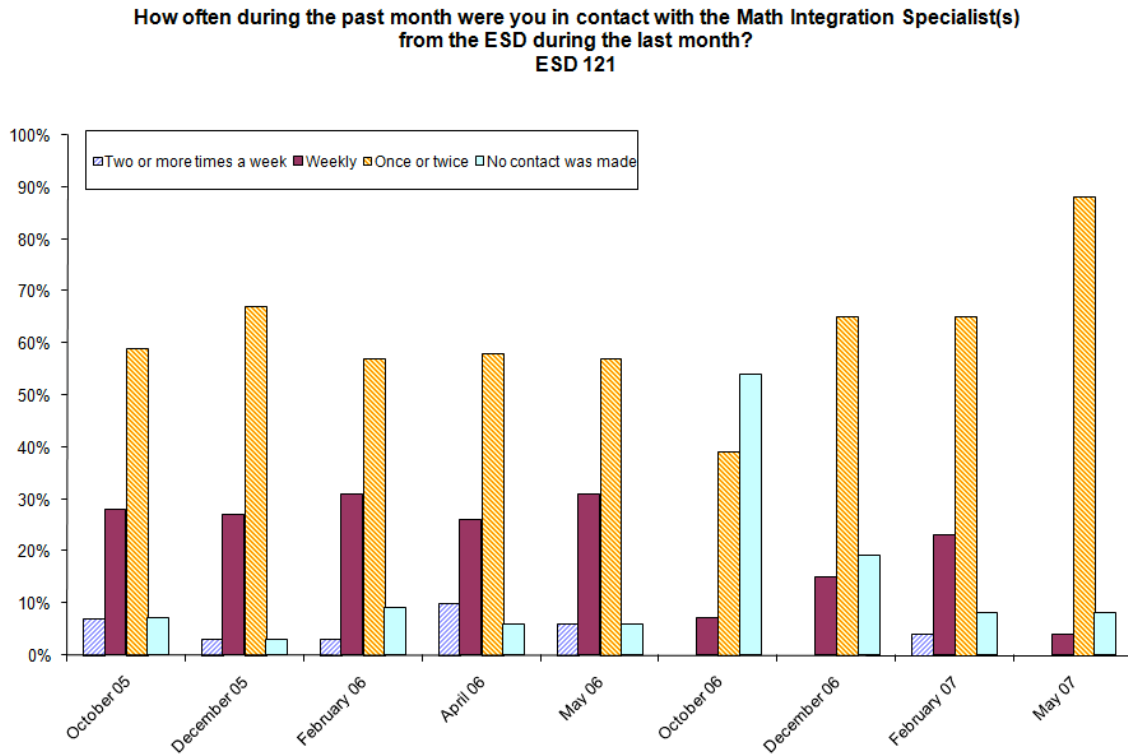
- The camera alone has made it sooooo nice to be able to have students be able to modle good work and sometimes even show some not so good work.
- There is no doubt that No Limit has changed the way I teach. I was lucky to be a first year teacher and included in the grant, I didn't have to work with the overhead for very long!
- Students in my classroom are learning more as a result of no limit.
- I have students use more math related web site because of NO LIMIT!
- Discovery of useful applets and sites containing applets have positively augmented instruction
- This year I do not feel as connected to the NO LIMIT project as last year ... we still have not been able to access our funds and we have much less time working with (Sandy) NO LIMIT.
- This is my first year teaching math. I am a science instructor and this would have been impossible without the technological assistance. I would have felt like a duck out of water without gravitating toward developing my pedagogy with the technology in my classroom.

May - 07:

- I'm a computer lab facilitator
- The biggest impact has come from using tools on the laptop to combine student data in spreadsheets or inputting them into PowerPoint spreadsheets; using PowerPoint to create lessons that actively capture student attention, using applets to capture student attention

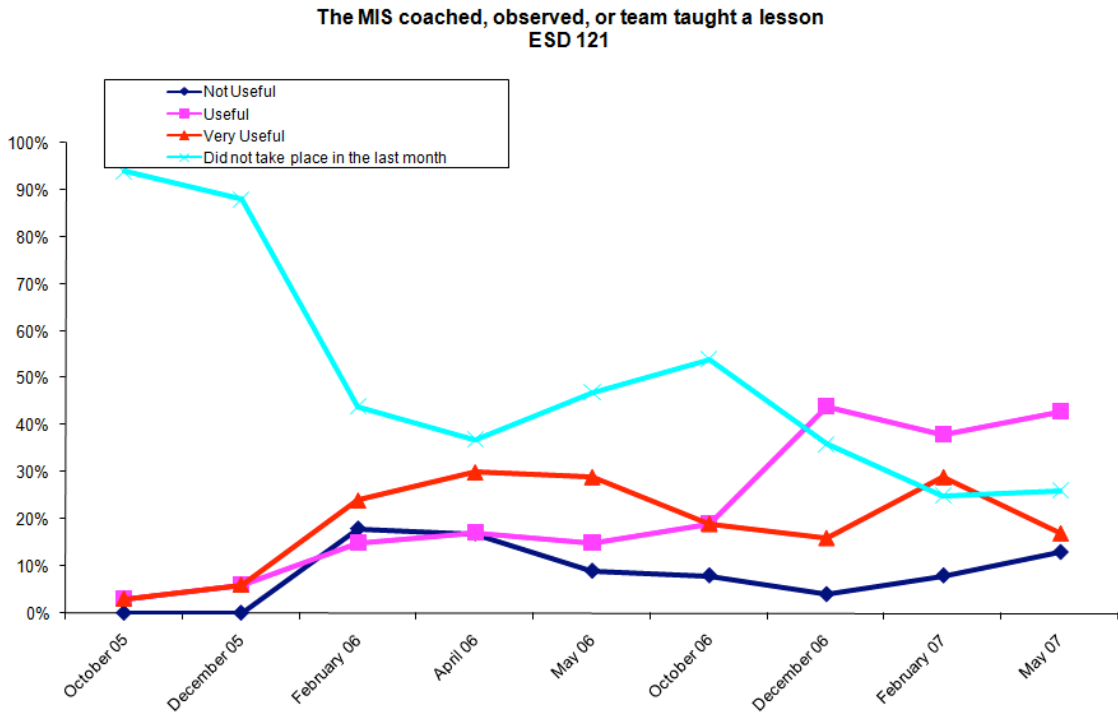
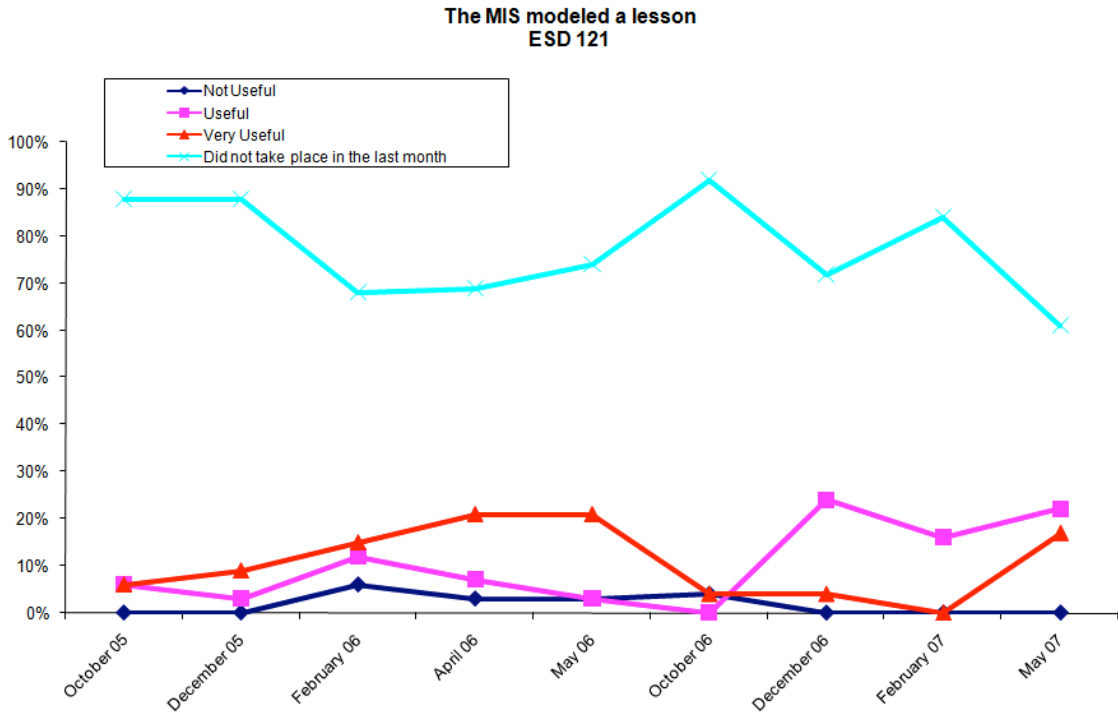
Item 16:

How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?

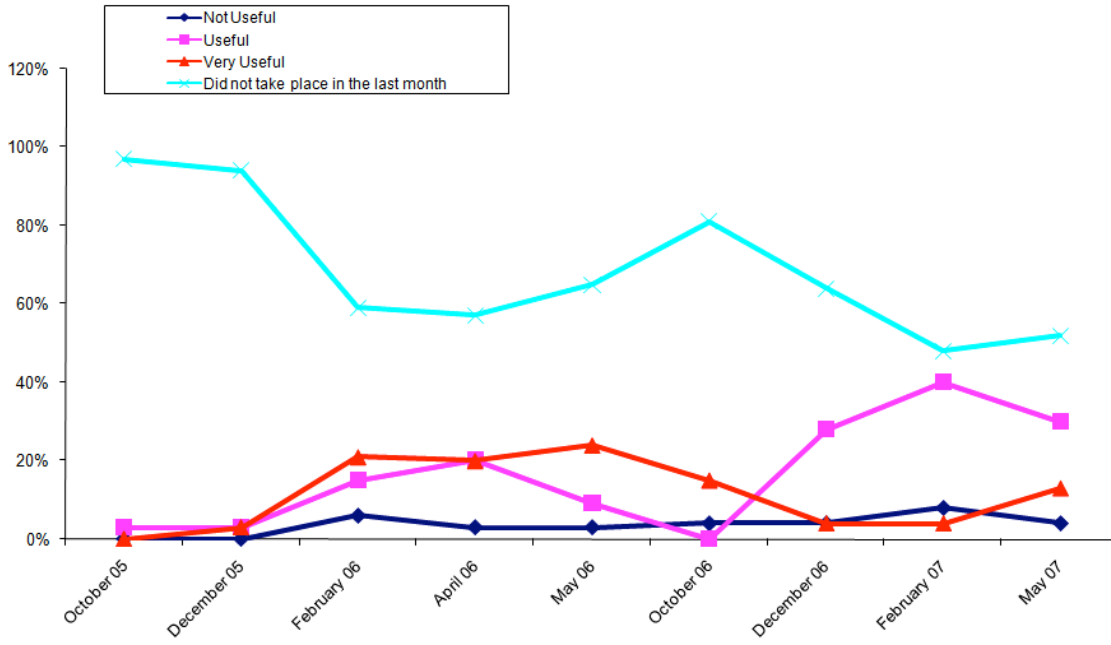


Item 17:

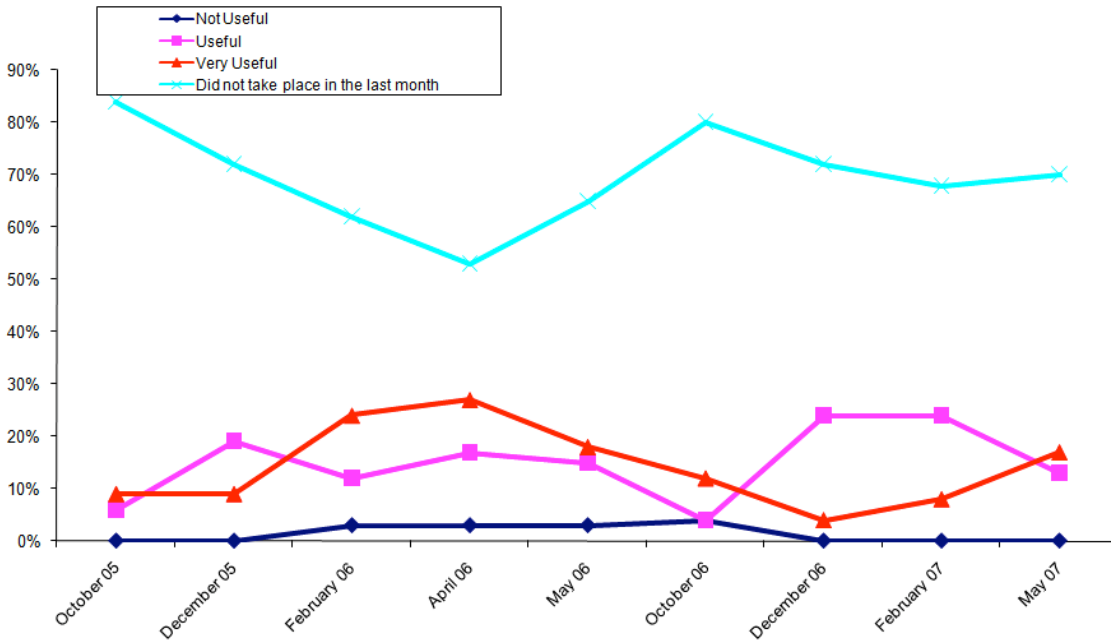
Please evaluate the following MIS activities over the last month.



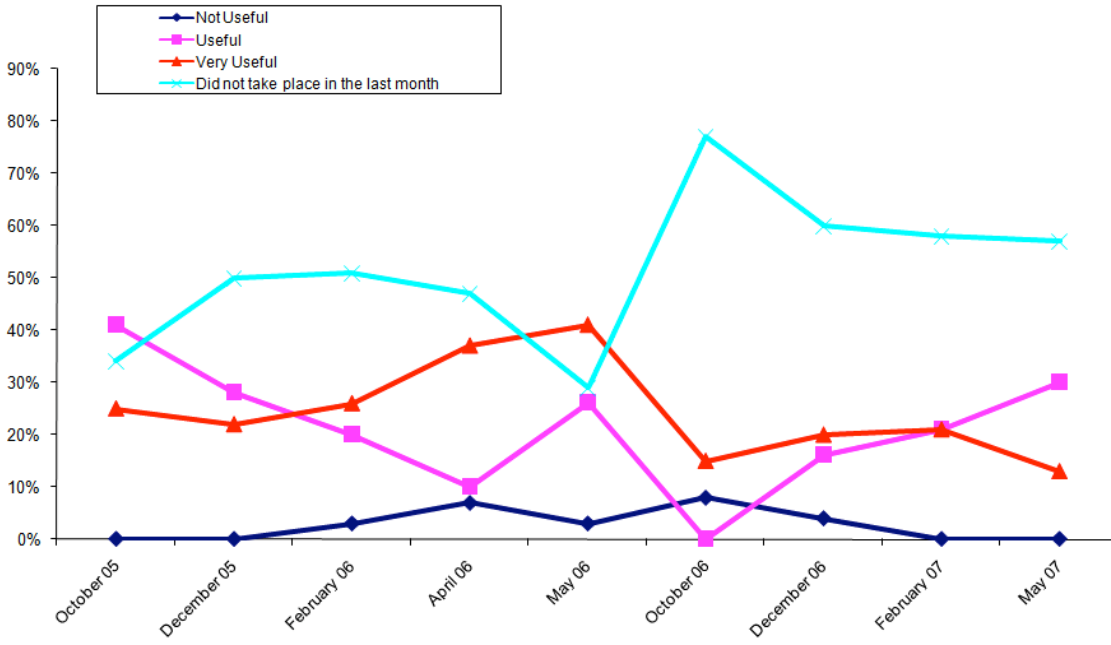
The MIS worked with students
ESD 121



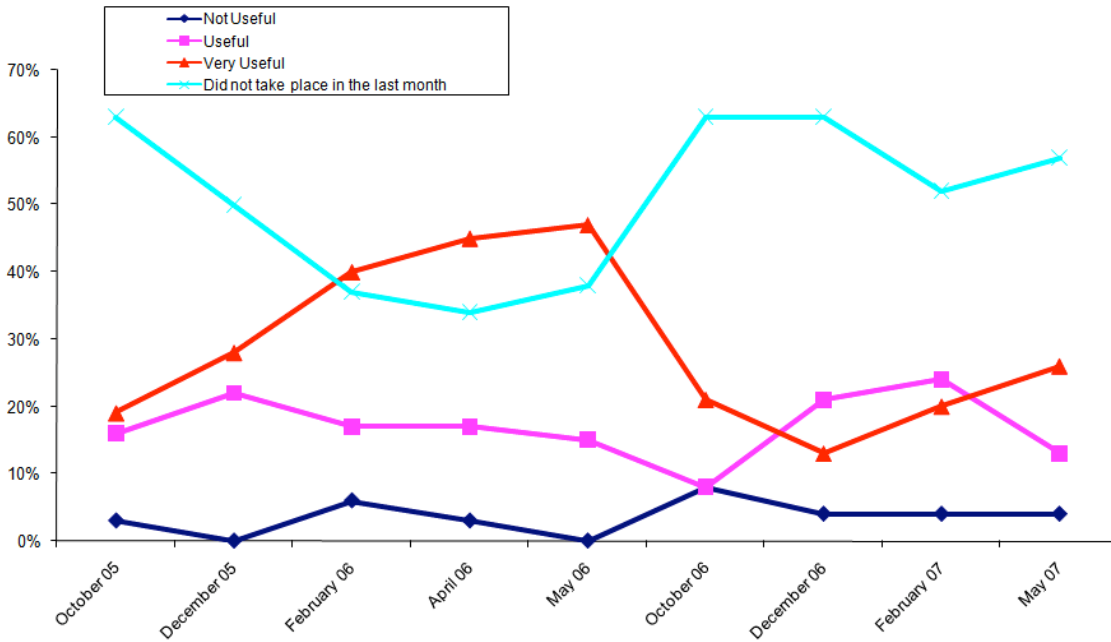
The MIS helped with planning a lesson
ESD 121



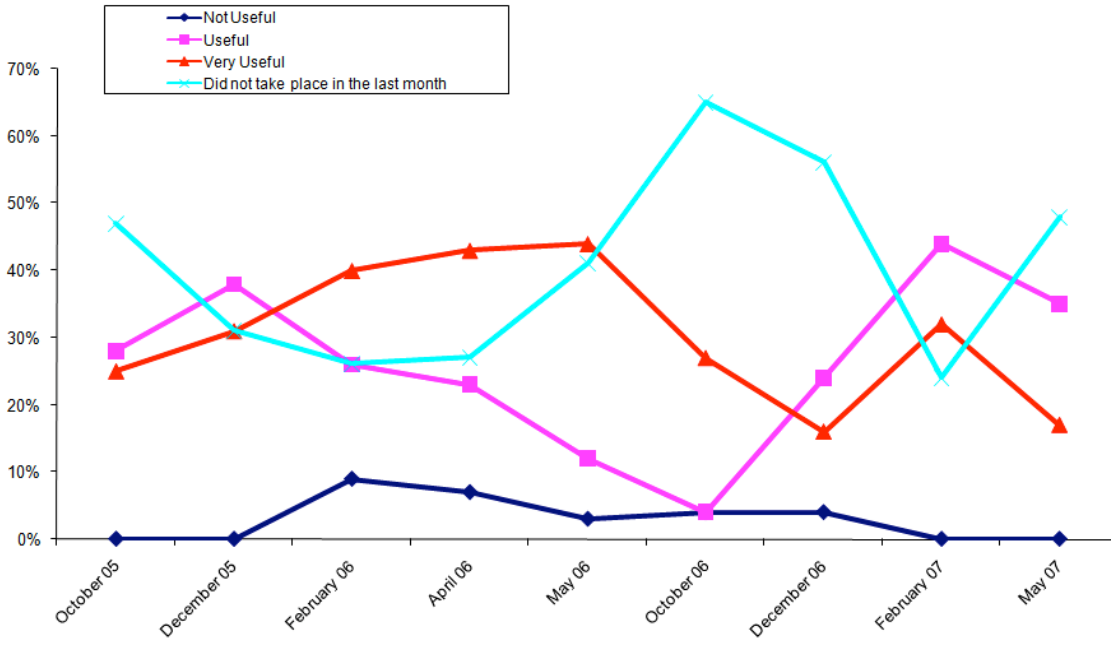
The MIS helped with schedules, logistics, or administrative issues
ESD 121



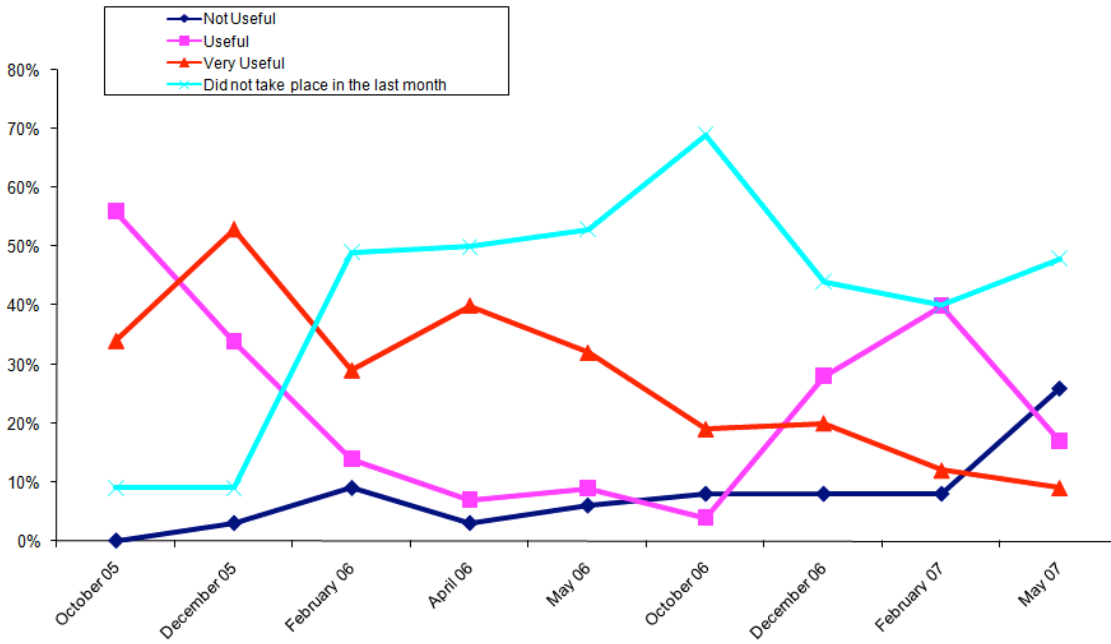
The MIS helped with technology
ESD 121



**The MIS provided instructional resources
ESD 121**



**The MIS facilitated a Professional Learning Community meeting
ESD 121**



Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

Comments:October - 05:

- 1. The use of technology in the class. 2. The use of exemplars of WASL base question to teach in the class 3. The use of math rubrics in scoring the students' works.
- How better to teach math using anything and everything
- Should Lochburnís Professional Learning Community (PLC) initiate the use of the new Professional Learning Community Meeting form to document PLC meetings and PLC actions taken? If so, should this form be kept within the HLPT folder on Lochburnís shared drive so that participants can add agenda items for meetings themselves? Do all NO LIMIT! Grant participants currently have a shortcut on their desktop to the HLPT folder on the shared drive? Do all participants understand the intent of this folder? Review of MALT and 7th grade math WASL Prompts / Scoring which were placed on Lochburnís shared drive within the HLPT folder labeled iMATH WASL PROMTSî.
- WASL growth
- The focus of Gray's PLC is student learning at this time. We are looking at extended day problems and developing rubrics. We are also looking at ways to improve our students' basic skills while using critical thinking activities.
- The bulk of the discussion is on what we will do with our technology when it arrives. We also hypothesize when the grant training will include how to use technology to improve student learning.
- Exchange of ideas on how we are using the technology in the classroom, and decided to provide new ideas to the plc at our next meeting.
- Work on extended response questions and rubrics.
- Looking at how to use the technology to help increase our students' scores.
- All meetings were focus on enhancing student learning and achievement
- We have been discussing assessment and how to make it common between us.
- Right now we have been more concerned with getting everything up and going and that has been our focus at the moment.
- Looking at WASL data to find a focus
- Note for above - our MIS is great - and she did do more of the above than I've indicated, but it's been in other classrooms, so I just marked for my own room. Our PLC is rather bitter right now. We do discuss how to differentiate instruction and that is helpful, but we are not able to do what we expected to do - talk about how to use our new tech to improve our classrooms. I'm afraid it's left us scattered, and unwilling to spend much time as a PLC overall, which is extremely unfortunate.
- We are focusing on the use of vocabulary to further enhance students' communication skills both verbally and written.
- Our focus so far has been on utilizing our technology in basic ways (getting used to it; research; and lesson study.
- We discussed WASL data; evaluated student extended response work, identified the students in level 2 and discussed plans for improving student performance.
- We are starting with Communications ...standard forms etc...Consistency.
- It is all about improving math for the kid--WASAL, tests, coop. learning, etc.

- Connecting our math program K-12, assisting students who are behind grade level, incorporating technology to reach these students
- Helping students to communicate mathematical understandings.
- Math content area reading.
- Our PLC is in the process of developing our focus. We will work on planning and scoring with shared problems and rubrics.
- Thus far we have focused on basic changes to our instruction of math as it relates to WASL results. We have focused these changes in so far as they can be made across the entire math department. We have not begun to analyze student work in relation to any changes. We are unsure how to proceed. the development and implementation of PLC's is very slow as there is a lack of support tin knowing how to get them started, what the framework of change is, what the operating procedures are, other than what I have learned from finding information on the internet.
- Sharing student work, a strategy for multiplication, vocabulary
- We have been looking at math communication skills, vocabulary development, and have started to discuss development of a problem solving strategy to be used throughout the building.

December - 05:

- Student Learning in Math and school wide Math/Tech involvement.
- Writing in Mathematics and how to use our technology to enhance our lessons.
- 1. Improvement of school WASL test score 2. To come up with general math writing style for the entire school. 3. To develop the students/teachers for the preparation of the coming WASL Test. 4. Teachers develop team work among each other.
- Ongoing assessment, school wide math solving strategy,
- Looking at helping our students to learn how to write mathematically better.
- Our current focus is on the variety of ways we can use technology to improve student learning versus just using it because we have it
- Examining student work
- Communication
- Trying to get to a point where we are working on Lesson study.
- Still working out the bugs with our laptops..... I still do not have a doc cam.
- Improving communication and understanding of math
- Written communication in math, as well as reading comprehension in math.
- 1. Building on student ideas, the border problem 2. Class participation through the eyes of students
- The benefit of working together as a school
- At this time our focus has been our events. WASL problem of the week. Planning a math Olympics. Sharing solutions and problems and that we have with technology.
- It is all about the students--learning styles, grades, content, etc.
- Reaching the unmotivated or behind-grade-level student
- Communication, consistency across grade levels, assessment
- We have started a school-wide Math Challenge. Every six weeks, every student is tested on fluency (multiplication and division facts) and comprehension (WASL-style problem). We score the work as a team and announce/post the results for the school.
- Sharing and reviewing student work

- Trying to get the technology we've agreed to into our rooms. Trying to get grants to get Smart Board into our rooms.
- Improving written communication on short and extended response questions. Finding a common writing format for students to use school wide, so we can find areas of strength and weakness in math content areas in order to improve instruction. Using Connected Math Program (CMP) to better reflect EALR's and grade level expectations. Sharing ideas for technology use. Finding on-line resources. Future focus will be sharing student work.
- Sharing of ideas to increase student achievement and involvement for all members. Student work is brought by members for sharing, comments and evaluation. Math and technology issues are discussed.
- Our focus right now is to integrate tech even more and to, as a 6-7-8 grade-level team, to come up with a relevant math item which focuses on writing in Math.
- Our PLC is working on extended response questions and scoring. We are testing out scoring rubrics with the students and plan to fine tune the rubrics with student input and PLC discussion.
- Problem solving and support of peers with lesson planning

February - 06:

- We are working on introducing Problem of the Week at all grade levels. Also, we are working on small group instruction with students.
- Mostly WASL writing format and to improve the school WASL score.
- Getting all teachers in our building involved and on board to make sure that our scholars are getting the same learning skills and experience that we get in our Regional training sessions.
- Improve student learning
- Our meetings consist of planning compiling problems for a series of weeks in advance to present to the whole school. (K-8th grade). Putting together a presentation for the Regional Meetings. Planning a project that will include the whole school. (Warrior Olympiad!!!!) Giving prizes to the winners of the problem of the week. Planning the end of the year celebration. Planning how to get scholars excited about taking the WASL! We are involving the Communities around the city and state because of the MIS.
- Technology, lesson study, math night
- The use of technology teaching students
- Communication
- We have been working on Lesson Study and using the technology to enhance that.
- We have mostly been focused on using the technology and finding resources to use.
- If by the PLC, you mean the rest of my No-Limit Team, we meet on a grade level basis 2-4 times per week to coordinate instruction and exchange ideas and materials.
- Our focus is to increase student understanding of math through written communication.
- We are focused on how we can prepare our students for the WASL using the technology we have.
- Lesson study and resource development. PS Sandy Gady is excellent and should be in charge of the whole NO LIMIT department.
- Consistently implementing strategies to help our students decode mathematical prompts, identify a useful strategy, and clearly explain their process of problem solving.

- We have been focusing on problem solving and the Grade Level Expectations. We are revising the GLE's so that our students can understand them when we post them in our classrooms.
- Connecting mathematical ideas: 1. about the students and the curriculum 2. Continuing our discussion of proof convincing others. Lesson analysis and reflection. Background of the lesson Class Participation through the eyes of students. Why math discussions? Why Whole-Class discussions? Methods of Encouraging student Participation
- The focus of our meetings has been planning a Math Olympics and learning how to use Quizdom.
- Learning how to use the equipment we FINALLY received
- There has not been a PLC meeting since December where the MIS attended
- We are working on aligning our school curriculum to the GLEs and WASL. We have implemented and are tweaking a school-wide Math Challenge program. The 7th grade is designing and piloting a tiered Math program two days a week.
- Communicating understanding and vocabulary development
- Improving the quality of math instruction by our teachers through sharing of teaching strategies and ideas. Sharing student work samples for constructive comments.
- Often it's sharing ideas and things we've discovered/resources. Things that work to help kids achieve in Math. Also, things that are very specific to our building/kids.
- Varies, we have instituted times in the day that students receive extra help because of our discussions in PLC and we have also instituted uniform problems that we can all analyze.

April - 06:

- Getting ready for sharing times, and getting new ideas and materials. Focusing on team work and lessons.
- We discuss how to take the lead in implementing best technology practices in our school. We plan specific events and talk about the long-term projects we would like to do.
- WASL writing and scoring methods. How to improve the WASL scores of the school.
- What can we as a group do to improve student learning?
- We have concentrated on making the Grade Level Expectations kid friendly and on the short answer and extended response questions.
- We have focused on being the leaders at our school in creating a balanced math plan.
- Lesson study
- Focus is on helping each other better understand how we can integrate technology into our mathematics lessons...
- School wide participation in a math challenge which includes problem solving, school wide acceptance of a problem solving format, development of the problem solving format, student work, Share Fair
- Helpful when they were here. (Medical leave)
- Multiple engagement strategies to engage all learners
- We haven't had any official meetings. The only collaboration that has taken place is between the staff members. No one from No Limit has talked with us regarding aspects of the grant, other than these surveys and when the orders for our equipment must be in.
- Our PLC meetings have varied. We had a hard time finding our focus, really - we're all in different places, with a wide variety of needs and challenges. Of late our focus has shifted from how to improve our own math classrooms to how to recognize math learning in our

school. Right now there is very little, or no, recognition of academic excellence. We've started a program that we hope will change that, but it's been a bit derailed by the WASL testing. It seems to be a long term goal - we're implementing it on a small level, and at this point I think we're shooting for school wide this next school year. We often stop in our meetings to address specific concerns that have arisen since our last meeting. We almost always have at least one teacher asking the group to troubleshoot a math unit, or some other challenge in the classroom.

- We have been working on "Lesson Study" integrating our new technology into this activity. We also recently had a Family Math Night and used No Limit! Technology during the presentations.
- Our focus is to improve mathematical writing, helping students to improve the way they communicate their understanding and to also increase use and understanding of mathematical vocabulary.
- How to use our new technology in the classrooms and to effect change in our math department as a school.
- She is awesome and should get a pay raise.
- Decoding WASL style questions and utilizing problem solving and math writing strategies.
- Class participation (Through the Eyes of students) Continuing our discussion of proof convincing others
- Communication ---students, teachers and parents.
- Engaging students in deeper problems
- We share cross grade-level successes, ask questions, and plan for school-wide programs.
- We are now reviewing our accomplishments for the year, to give a presentation to the entire group of teachers at ESD in the May meeting.
- We are working with the look of our district SAI and using specific formats for student work. Rubrics, formulas, etc.
- Looking at student work to identify broad areas of opportunity

May - 06:

- To reach out and work together as a team instead of working independently.
- How to implement Math and Tech in our building to support a culture of learning.
- Writing in Mathematics!
- The basic focus was how to improve the WASL score and to master the students how to answer questions using QIPS process.
- Integration of technology to improve the educational process
- Evaluate student work, rewrite GLE and score WASL problems.
- The focus of our plc meetings has been communication targeting state of the art instruction connected to our overall school goals.
- Extended response questions and assessment.
- Writing in Math
- School wide changes to involve more assessment of the students.
- To understand Lesson Study.
- Integrating best practices and technology
- We mostly focus on sharing resources and discussing what we had learned in our No Limits Team meetings/professional development time.

- Again, I go to the question of, "Who is the MIS in our district?" This was never discussed in our group of No-Limit people. The teachers working on my installment of the grant regularly meet and discuss lessons and their impact on the students.
- We were scattered. We are a very disparate group (it's a k-12) school and it took a long while to find our focus. We finally worked on trying to develop WASL style questions which each class solved once a week. Problem solving and writing were very much at the forefront of this - we all worked on increasing our written responses from students. I'd like to try again in the fall, feeling more committed and able to find a workable focus.
- We had so many "projects" this year..... When we met, we typically discussed the ongoing agenda, what needed to be done/by whom, we discussed technology issues, we had been putting together ideas for our Fair Share, etc.
- Improve written communication skills and increase use of curriculum specific vocabulary.
- Lesson study
- Our focus was to increase our students' ability to communicate in math, and we did this through a variety of strategies.
- We focused on revising the Grade Level Expectations so they would be easier for our students to understand them. We worked on ways to increase our students' performance on short answer questions and extended response questions. We worked on parent involvement at our school.
- Communications with other teachers, parents, and students
- Our focus was to plan and make it happen.
- It's morphed into trying to institute school-wide math involvement
- We are working together to affect the math climate of our school. We proposed a new schedule to assure every student gets Reading and Math interventions every day.
- Communicating understanding
- Increasing student participation in mathematics
- Helping students write better in mathematical terms
- Our focus was on raising student test scores and their ability to model problem-solving techniques.
- We discuss what works and share with one another.
- We worked on Lesson and book study activities.
- Looking at student work and developing classroom strategies

October - 06:

- Very focused
- The focus of the PLC is to look at student work and look for common mistakes and find a solution. Provide guidance and support to each other to impact student learning.
- Developing a balanced math plan, implementing use of technology to support math learning goals, exploring standards based grading and reporting, coordinating math work with district initiative (State of the Art Instruction), Implementing math challenge school wide program,
- Focused on using technology to help increase student learning
- Implementing Best Practice based on the work of Linda Foreman. Finding and using significant problems in CMP Continue to improve process goals
- We focus on lesson planning and alignment of GLE's. We also reflect on lessons we taught and make changes where needed.
- Scheduling difficulties has stopped us from meeting so far...

- Increase written communication. Increase use of math vocabulary across the curriculum
- We are still focusing on helping our students to improve short answer and extended response questions and each teacher will keep a folder on at least one student in his/her class math class to evaluate the progress of that student.
- We are reviewing roles and setting our goals.
- Sharing ideas, developing engaging open-ended lessons, how to use technology
- We are focused on creating a standard approach to standards, grading, and assessing students in math for the entire school.
- We are working on teaching students to develop evidence, and standard 4
- Mathematical communication, assessment
- Increase communication understanding of students by working collaboratively on MALT assessments, and studying the results.
- Our building goal is ongoing relevant assessment. Our PLC has been focusing on using technology/strategies to improve student scores/success in Math.
- Our focus is positive. We talk about developing helpful strategies in teaching math.
- Developing and implementing strategies to help students communicate mathematical thinking. Our PLC also recently planned and implemented a Family Math Night.
- We are working on expanding last year's problem solving approach and on incorporating more math vocabulary into our school's curricula.
- Ongoing assessment and use of technology to help students achieve higher levels.

December - 06:

- To increase the availability of technology this helps with understanding math.
- Integration of technology in the classroom
- Math instruction
- The focus is on using the technology in the classroom to increase student learning.
- Align EALRs, find and use significant problems, enhance student discourse, focus on communicating understanding and problem solving.
- Review of what's working in the various grade levels and what we can do to solve problems that are cropping up.
- Improve written and oral communication, self-scoring by students using rubrics
- We talk about how we can impact the school-wide math education at our school.
- We have been working on the mathematical content introduced by the Saxon math program as it relates to our grade level expectations, standard based lesson planning, and WASL and district based test results.
- Our focus is to continue/implement our goals.
- Student Improvement
- We are using most of our time for cross grade-level discussions to align and balance our curriculum.
- Developing a rubric to assess our goal, assessing student work to monitor progress toward our goal
- Helping students discuss and explain their mathematical thinking.
- Common grading with rubric developed by the team of Malt tasks
- To increase problem solving skills.
- We share with other math teachers strategies using technology that are working in our classroom.

- Communicating mathematical thinking
- Focus was on developing and fine tuning a common assessment for seventh grade math, including developing scoring rubrics and providing feedback on how well the assessment was working.
- Focus is on student discussion

February - 07:

- Has not happened yet
- Improve student learning.
- We try to link our work with NO Limit to the many other programs and trainings we have on our plate. We take part in the Teachers Development Group, and First Steps in Mathematics; along with trying to develop an alignment of CMP to the GLE's, we are also trying to align the curriculum so it transitions smoothly, and so we aren't hitting concepts and learning that aren't required until later in school. .
- Focused on student assessment
- We had a lot of snow days that interfered with meetings in Jan.
- Written communication/common vocabulary language across curriculum.
- We use this time to talk about several of the initiatives we've implemented in our school such as accelerated math, team activities and state of the art instruction days.
- We have focused on parent involvement and implementing the Standards Based Lesson Plan design in our classroom. We have had class visitations to see the implementation of the Standards Based Lesson Plan design in 2 math classrooms.
- Increasing enjoyment of math by students
- We are hoping to improve our student's ability to communicate in mathematics.
- Analyzing student work
- On-going relevant assessment, aligning classroom assessments with WASL type assessments
- Evaluate student work examples. Strategize for more effective teaching methods and ideas.
- The focus is on improving mathematical understanding and improving WASL/MAP scores.
- We discuss ways to implement technology into our classrooms
- We have used time to discuss and explore the new district curriculum. We have also used our time together to explore ways to get parents involved in math with their students through two family math nights this year (number two coming in March). We have also looked at communicating mathematical thinking.
- How we are going to utilize our NLG monies this year
- We have had interruptions.... snow days, building canceling meeting times, etc.
- Bickering mostly, although it would be nice if we could function as a group with a common goal instead of our leader trying to prove they are in charge. There needs to be more sharing of ideas instead of the PLC being run as a staff meeting.
- We are focused on helping one another develop our proficiency and beginning toward reaching out to others in the building. We have a large influence on the tech in the building.

May - 07:

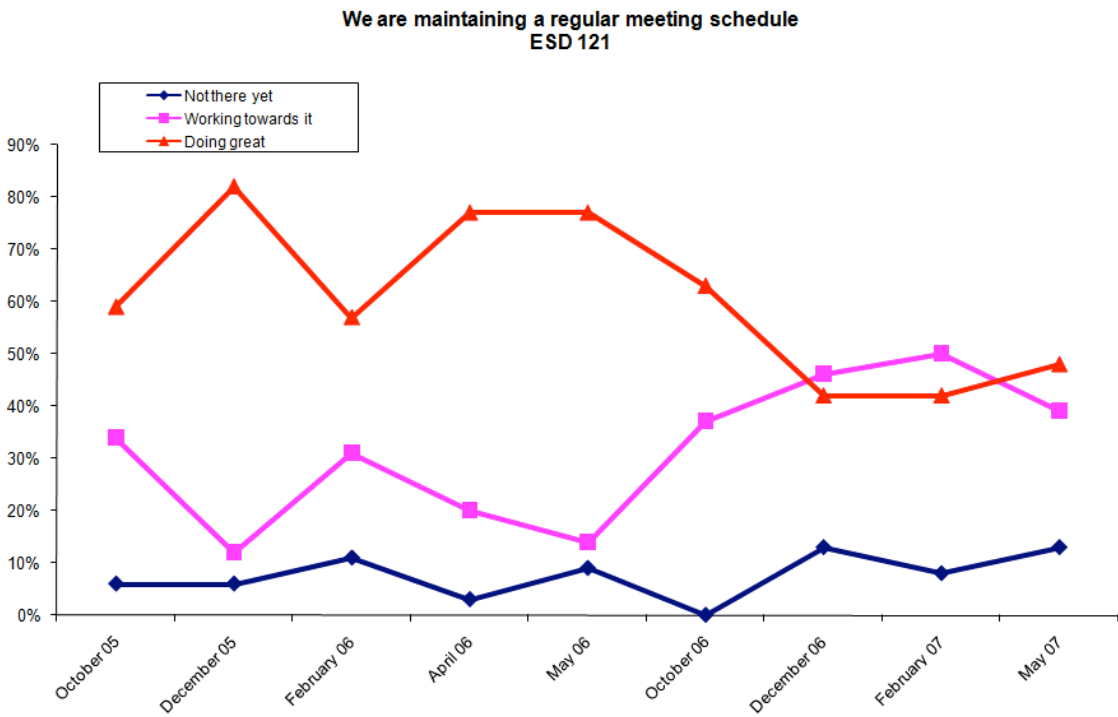
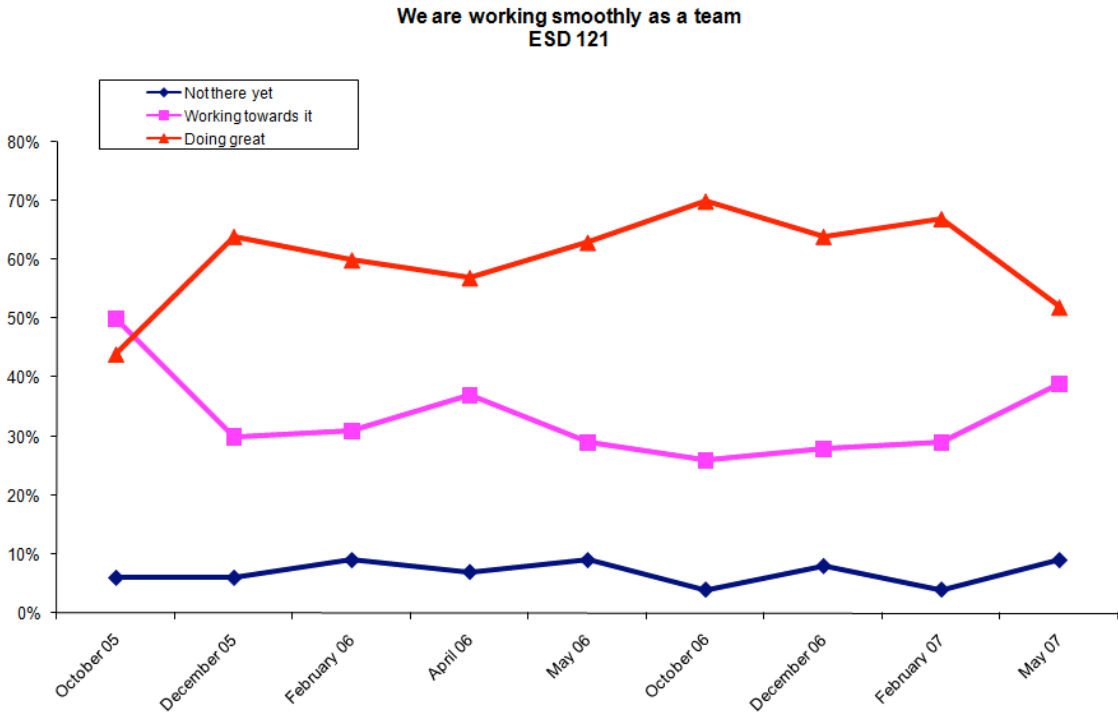
- How to take scholar math and tech learning to the next level.
- Did not meet this year
- Synchronizing the CMP and technology other than graphing calculators.

- Focus was on improving math teaching and learning in the building by improving practice of core no limit staff and then sharing with the rest of the staff
- Technology integration and "questioning".
- How to incorporate the technology we have into building better lessons; getting the accelerated math working and being a better resource for the class
- Reviewing student work samples to build on strengths and weaknesses in areas of math
- Our PLCs are very functional and drive the direction of our math department and its practices.
- We have been focusing on helping our students to learn the basic concepts to help with problem solving. We have worked on evaluating data, parent involvement, and standard based lesson planning.
- Problem solving
- Math oriented--schedules, improvement of math
- Trying to align curriculum
- We are focused on closing the achievement gap and finding ways to meet every student's needs.
- Our focus was on communicating understanding
- Getting our students to explain their strategies better
- Assessment
- We coordinated with one another about the no limit math grant program.
- Communicating mathematical thinking was our goal. However, this year other "goals" were imposed - blending Saxon and CMP, planning and implementing Family Math Nights, etc.

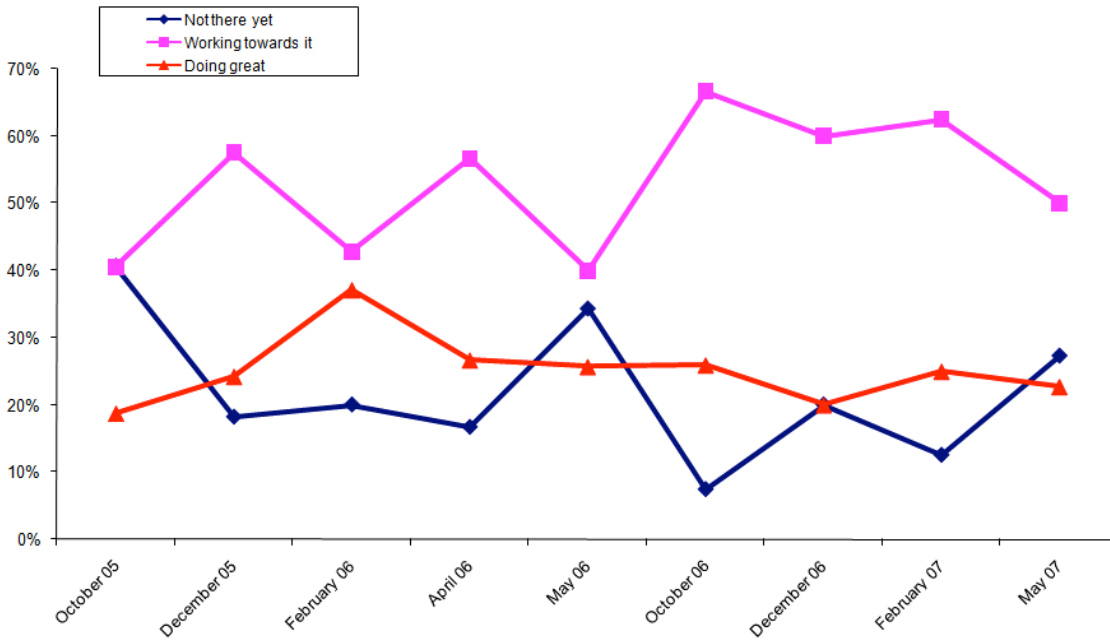
- Working on unit planning and assessment
- Evaluating student work and lesson planning
- To be dysfunctional
- Focus on training with CPM.

Item 19:

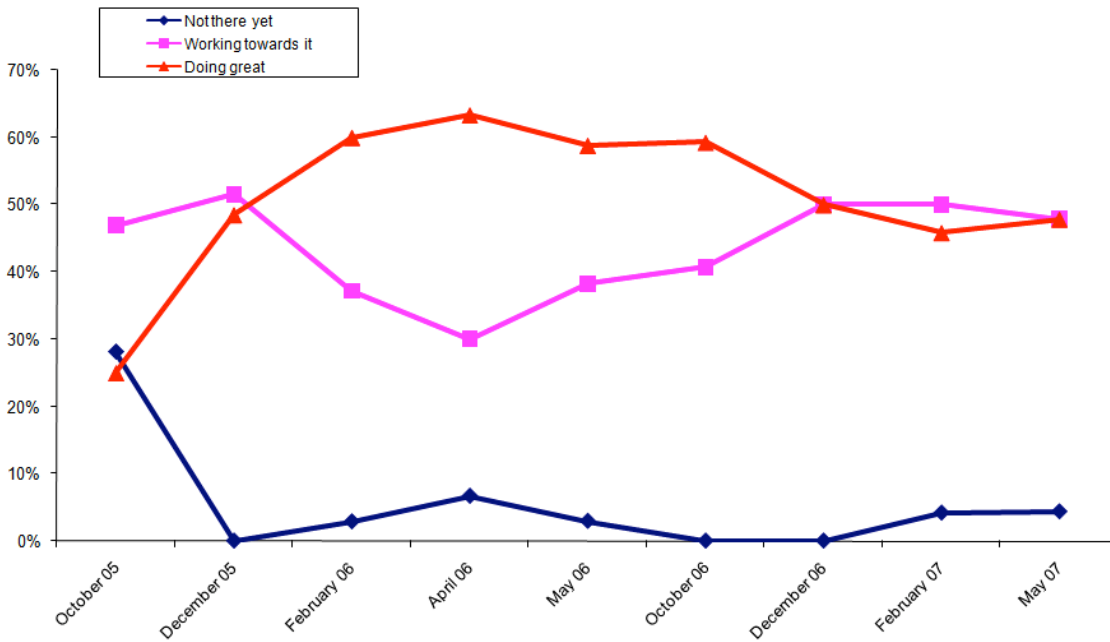
Please evaluate the effectiveness of your PLC meetings.

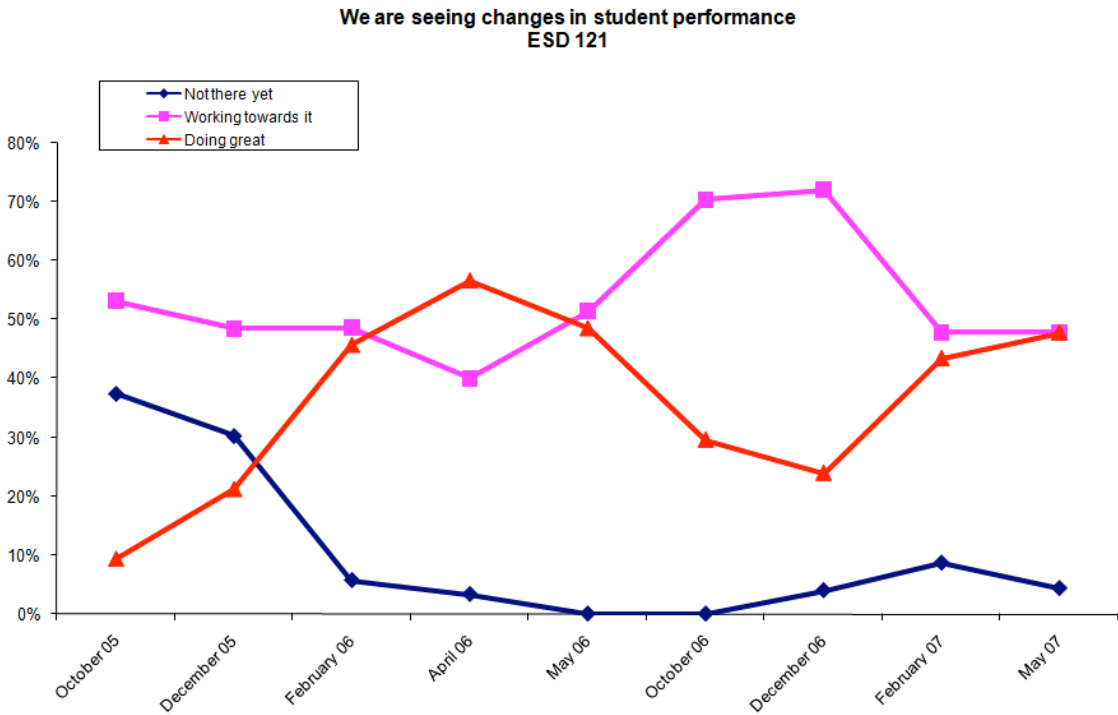
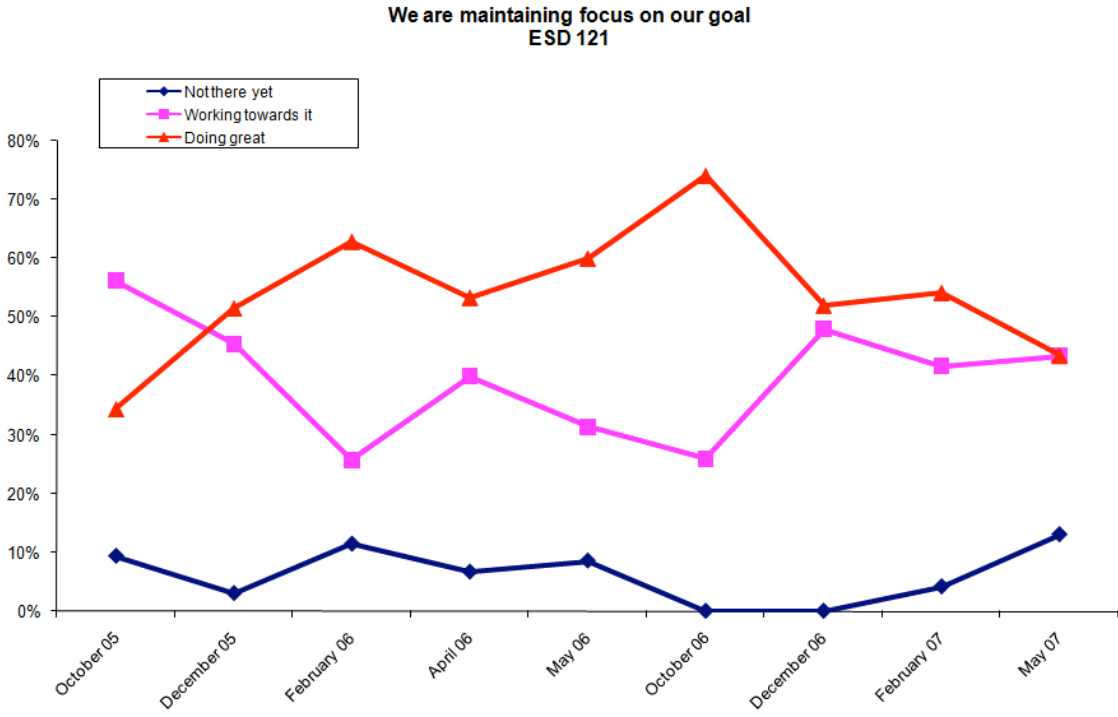


**We are reading and sharing research
ESD 121**



**We are using new teaching strategies in the classroom
ESD 121**





Comments:

October - 05:

- First meeting - we will get better
- We are new to the No LIMIT grant and are just beginning to form a team.

- Again, it's the issue of not having the tech. One of our guys shares links and research all the time. What little we have tried with the document cameras (w/o LCD projectors) is highly encouraging and has immediately impacted student performance in participation, and meaningfulness of student conversation. I'm astounded that one piece of tech has such an enormous impact. We are working towards making our PLC meetings more students driven and getting back onto track despite the lack of tech.
- The use of the PLC is a great way to share students' work and discuss strategies and their effectiveness.
- Many of our students need a basic foundation on concepts in the strands.
- We have room to grow.
- Again, we have not been able to implement technology yet because the technology has yet to be delivered.
- We just don't know what to do!!! How do we find a goal (other than we want to improve WASL scores!) We analyze the data incessantly, but we are fumbling in the dark in the setting up of the PLC>

December - 05:

- So far so good.
- We are frustrated.

February - 06:

- Also doing some presentation to the school staff so that students can get more knowledge from other subject area.
- Scholars are working on problem solving using the WASL format throughout the entire building (K-8) on a weekly base, competing to be first place winner(s) at individual grade level(s).
- I feel like the team is kind of falling apart

April - 06:

- We are still enthused about the WASL Olympiad we held and looking forward to our next NO Limit meeting.
- Is the PLC the group of people involved in the No-Limit at our school? If so, we do lots of these things. If we're supposed to be working with some other groups, we need to know who they are so that we can begin communicating.
- People are starting to get tired. My perception is we need to be more structured in our approach to the process. WE will work on this for next year

May - 06:

- We had a successful year as a PLC.
- The circles above are a reflection of the core-teachers I'm working within our grant.
- This is varied. I feel like I, personally, have made real strides in the teaching strategies, my individual goals, and student performance. I'm not sure that's true of our PLC as a whole. We haven't done much reading of research as a whole, though one of our members does so constantly.

October - 06:

- Great effort on our part
- We use student evidence to help guide our decisions.
- Our MIS is out until November I believe

December - 06:

- Have not met yet
- We are off to a slow start this year. We have had no contact with an MIS this year. I question if we are receiving the support as outlined under the terms of the grant and for which we are "paying" out a large portion of the grant monies.

February - 07:

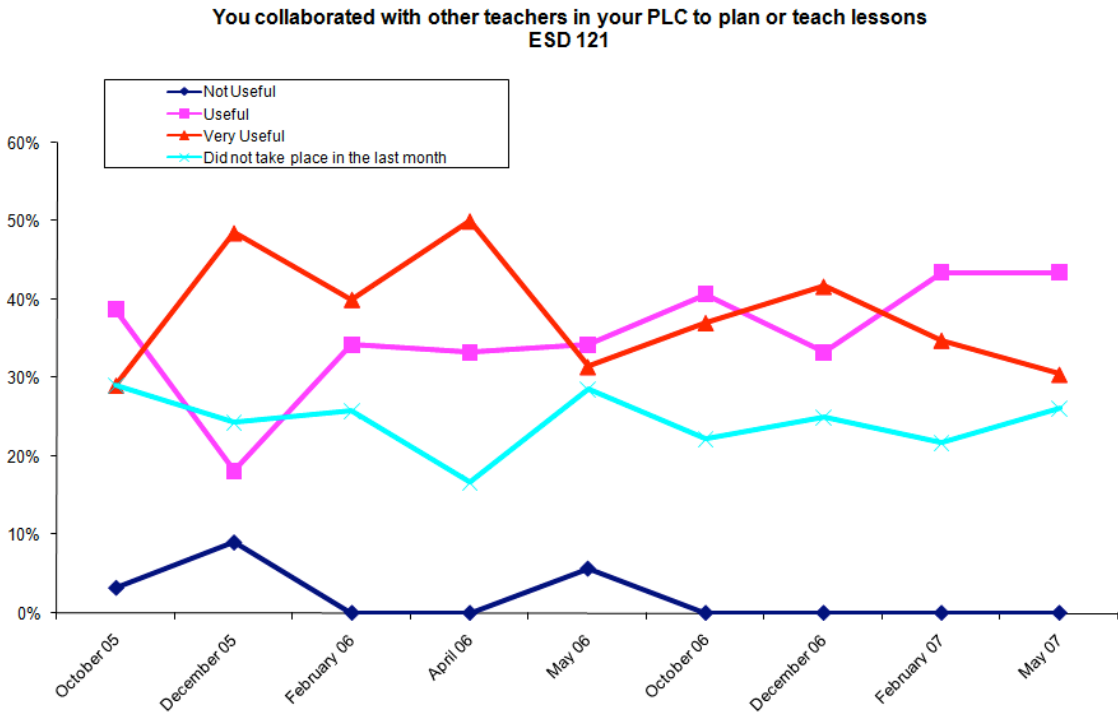
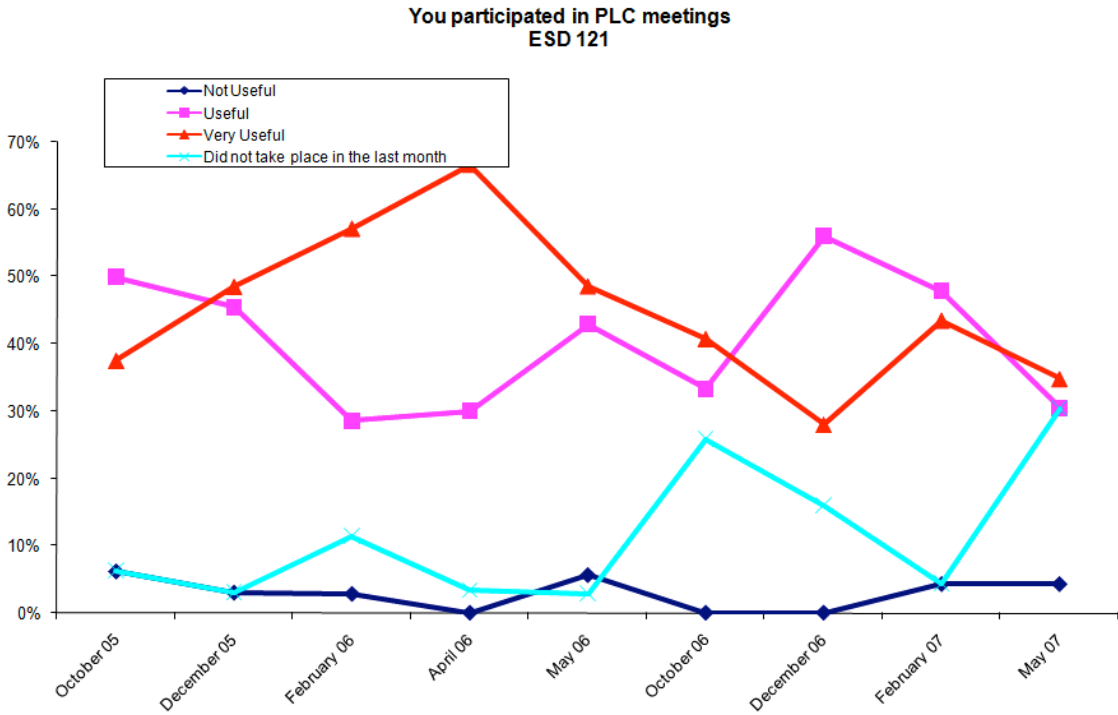
- Has not met yet
- Our PLC meets every Thursday morning.
- we have had interruptions to meeting schedules due to inclement weather and last minute changes in district meetings
- As a school we are doing a book study and several members of the team are also part of another book study. Also, we are meeting with peers from other East Tacoma schools to look at ways to improve mathematics learning for our students. This has been a BUSY math year for us all.
- We have no goal as a group. We have been told the goal is to look at student work, but that doesn't happen.

May - 07:

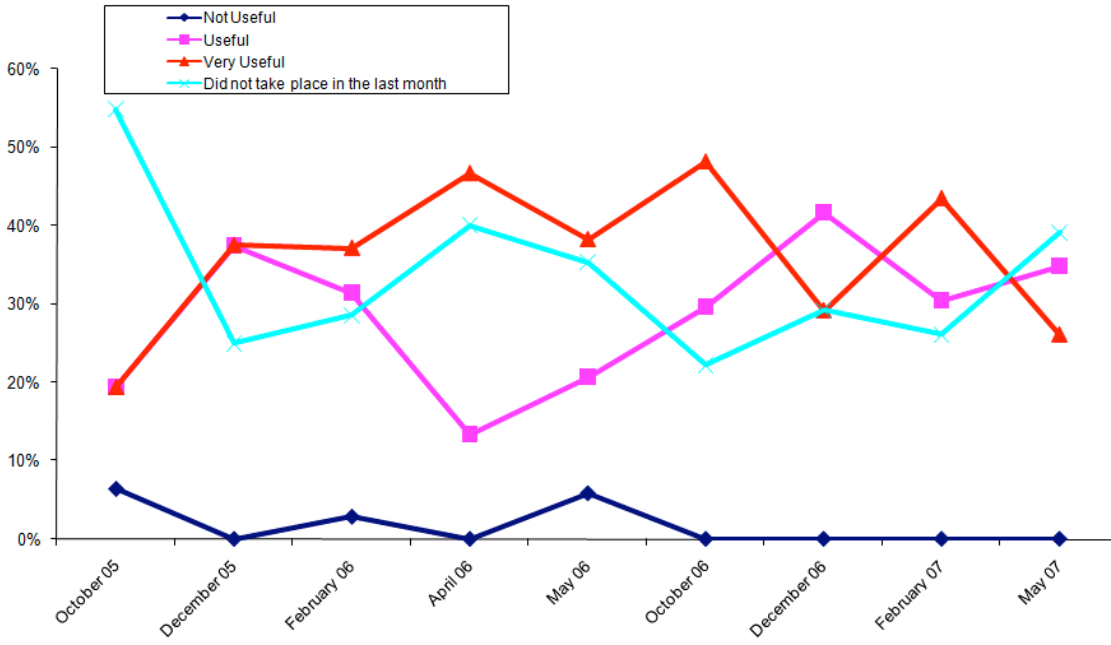
- We have seen nothing but great changes.
- Always a work in progress
- Our vision underwent change at the district level. These changes took us off course from our goal. There was not much we could do about this.
- As an individual teacher, I am meeting all of the goals. As a group, we mostly back bite and pick stuff apart.

Item 20:

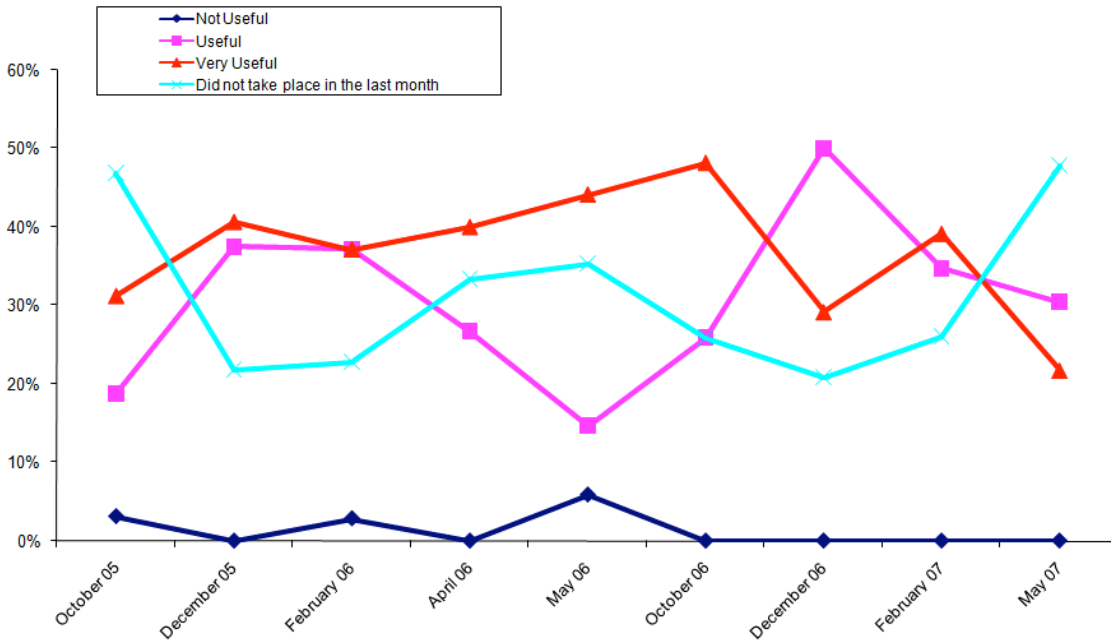
Please evaluate your PLC over the last month.



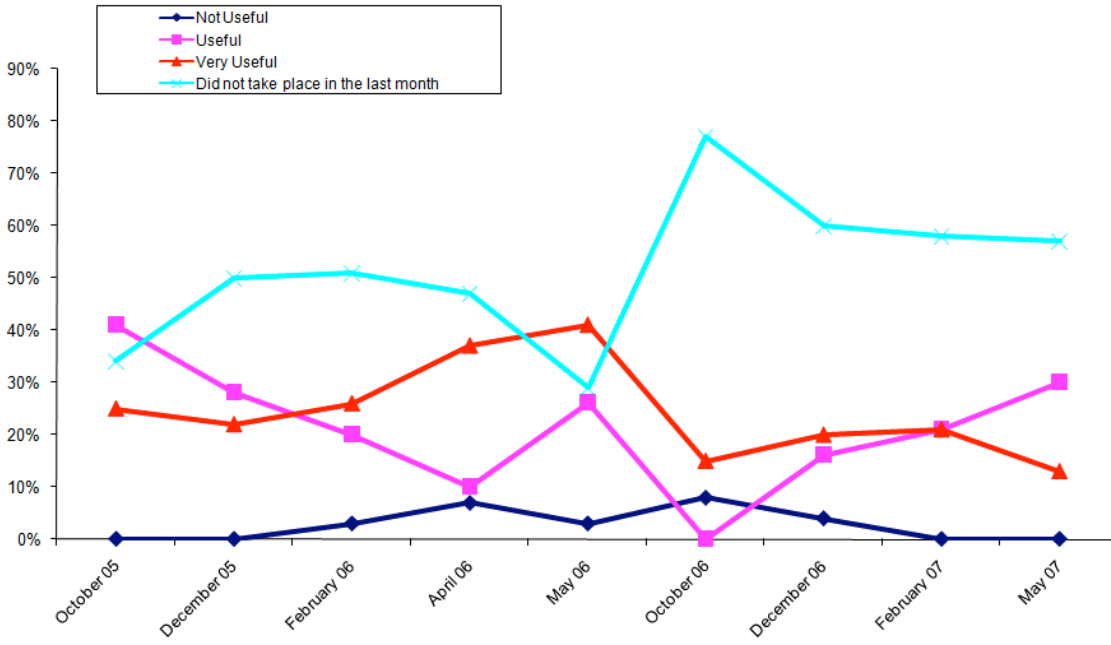
**You worked with teachers in your PLC to align curricula across grade levels
ESD 121**



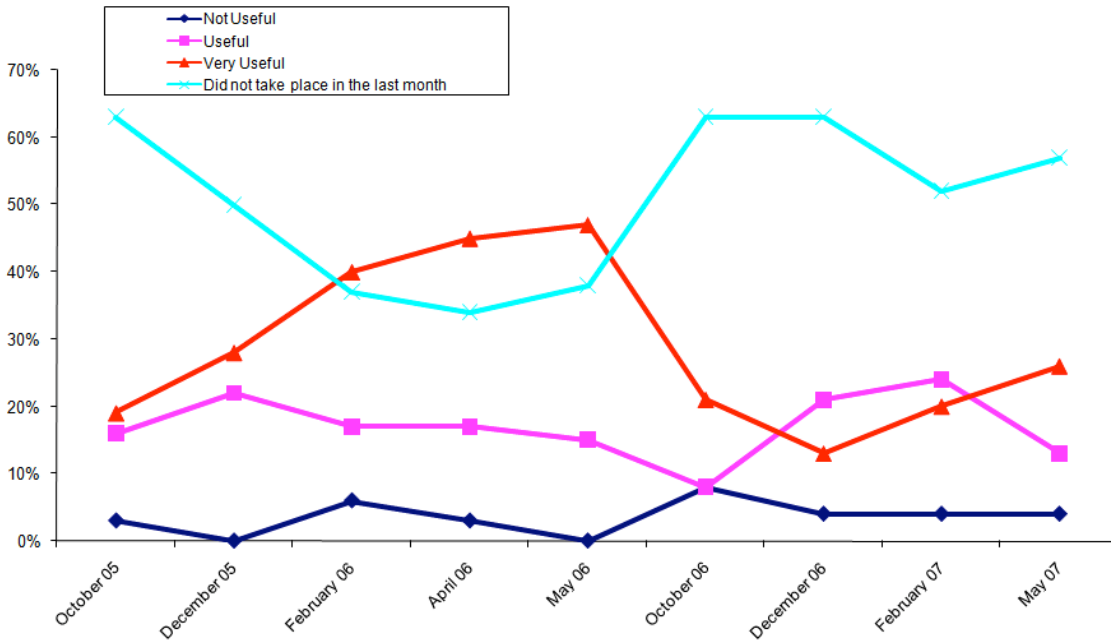
**You worked with teachers in your PLC to align curricula with state and/or national standards
ESD 121**

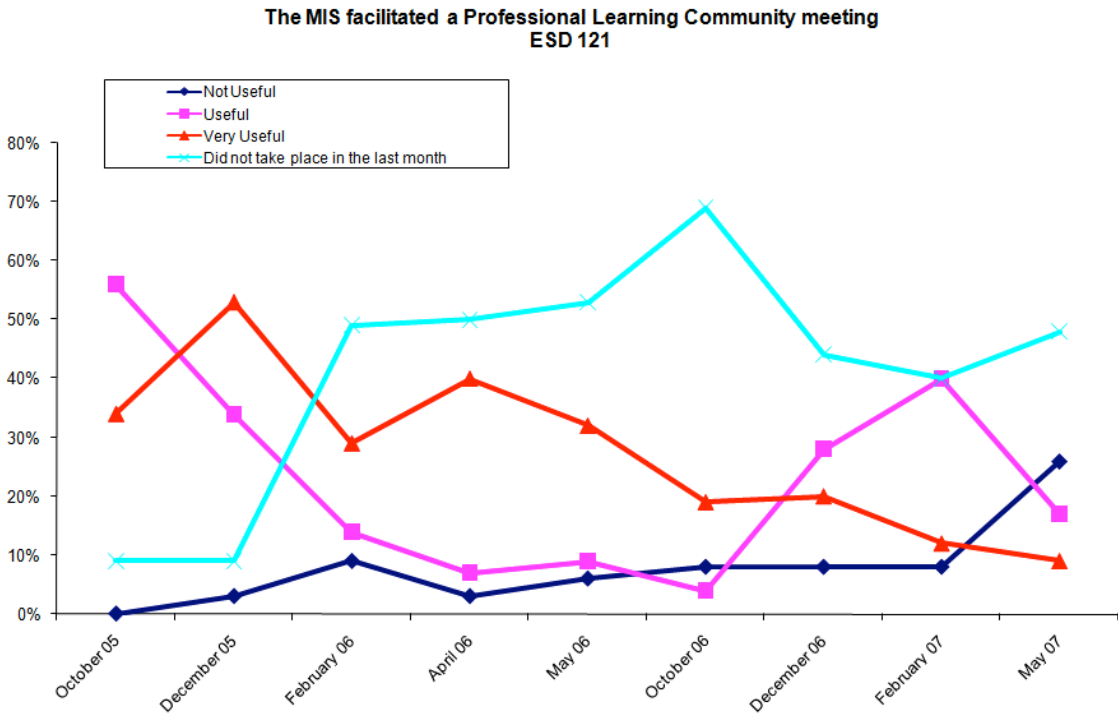
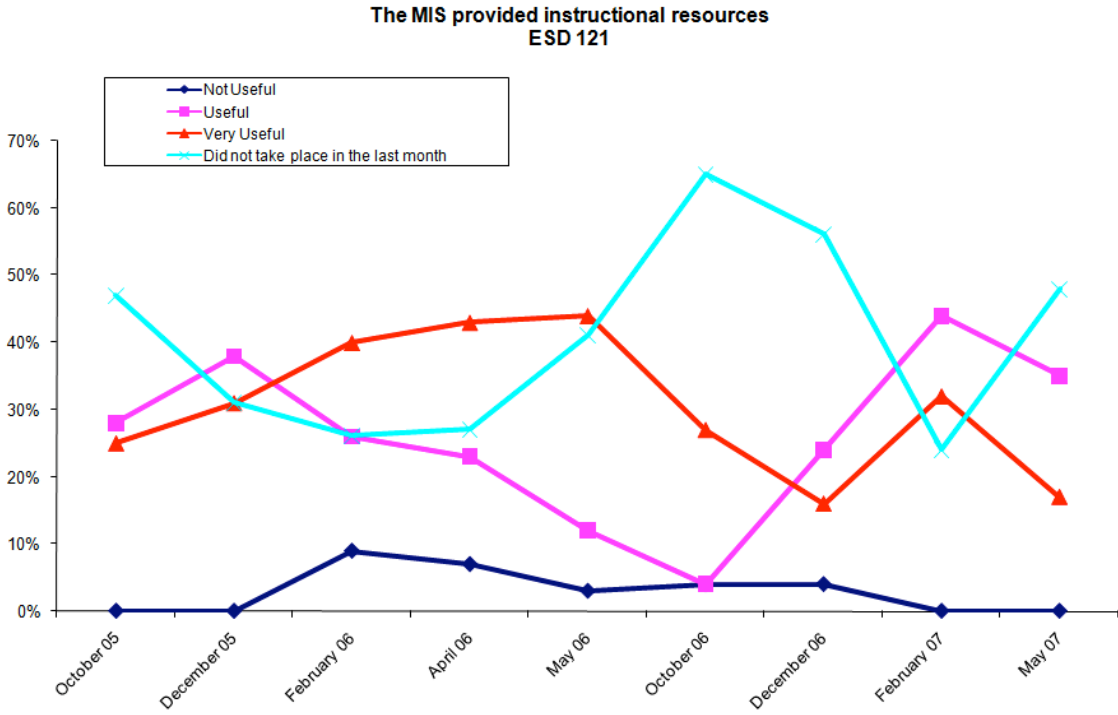


The MIS helped with schedules, logistics, or administrative issues
ESD 121



The MIS helped with technology
ESD 121





Comments:

October - 05:

- Again, first meeting we will get better

- A lot of the alignment has already been done but we have spent time looking at the alignment itself and feeling good about the job the district has done.
- As a school, we have already done the alignment-we do not need to do this as a PLC team.
- Attending the PLCs does require additional commitment of time but I feel it is well worth the time invested!
- We need to work on these areas.
- Another area for growth.
- We have had two meetings and that has been to determine our focus. There is more than one grade level involved.
- Our math department met during the summer to align curricula to the GLE's. Again, how do we use PLC's EXACTLY? How are they managed? Is there any training on facilitating these PLC's? We are supposed to have them because of the grant but we have received very little support in the implementation of them.
- We are involved in curriculum alignment outside of our PLC

December - 05:

- Our team is moving full steam ahead and working well with each other.
- We had parent conferences this month, which wacked out our schedule

February - 06:

April - 06:

- It is always good to dialogue with others.
- our curricula has been aligned for a while. We did not need to do that again.
- Again, these answers are only valid if the group members exist OUTSIDE of our building. Otherwise, we've been working together on lessons and sharing materials quite well.
- The PLC meetings are great, but as I stated earlier, we've taken longer than some to develop a focus. I think we've come a long way, but honestly, some of our meetings are more useful than others. I'd like to keep working on it, because we have come a long way, and I think it's important that the dialogue continues. We certainly haven't achieved as much as I would like, but we've achieved far more than we would individually.

May - 06:

- We are communicating with other teachers as well.
- We were getting ready for the Share Fair.
- I am the technology facilitator at my school.
- I'm teaching at the upper grade level; the others are working with lower grade levels

October - 06:

- We are starting off to a fresh start.
- Time was spent with entire math department aligning 6th - 8th grade curriculum
- We have done the alignment many times across the school. We did not need to do it again with the PLC.
- We met in pairs, not in whole group because of scheduling hassles

December - 06:

- Have not met yet
- We have already aligned the curriculum. We don't need to do it again!

February - 07:

- Has not met yet
- We have already aligned the curriculum! We will be realigning after the new set comes out sometime this summer.

May - 07:

- We actually have another committee at our school outside of our PLC doing curriculum alignment. Most of us are not part of this group due to other commitments.

ESD 123**Year Five**

ESD 123 NO LIMIT Final Report 2005-2006

Training and professional development provided for teachers: amount of time, dates, and content:

- ◆ ESD 123's Summer Math Institute (5 full days), attended by all but 3 of our participants, served as the main summer training for the group. Teachers could choose from Investigations training, CMP training, K-5 Building Mathematical Understanding, 8-10 Building Mathematical Understanding. Technology components were presented by Tom Reardon.
- ◆ Five regional meetings/trainings were provided.
 - August 17 – NO LIMIT Kick-Off Part 1 – full day
 - Getting to know each other activities
 - Introducing the grant project – goals, elements, requirements
 - Math
 - Looking at Student Work
 - Introducing PLCs
 - WWU and Pilot surveys
 - September 29 – NO LIMIT Kick-Off Part 2 – full day
 - Reviewing grant goals and elements
 - Working with data in PLCs
 - Math
 - Introducing eCove
 - Introducing Moodle
 - Concurrent sessions provided on CMP, available ESD NO LIMIT resources, further work on Moodle
 - December 8 – full day
 - Optional graphing calculator training provided by Duane Olsen. Fifteen teachers participated.
 - February 14 – full day
 - John Van de Walle (half day) – focus on student centered teaching
 - –Concurrent sessions (half day)
 - SmartBoard and Airliner
 - Writing in mathematics
 - Computers in mathematics – software and internet options
 - May 18 – full day – Share Fair
 - Sharing the year's work in triads
 - Sharing the year's work with participants from two other ESDs (Wenatchee and Bremerton) via My e-Coach
 - Math exploration
 - PLC reflection/planning

Conferences attended by teachers (please note if any presented at conferences):

- ◆ Several teachers from each PLC attended the Northwest Math conference in Portland in October.

- ◆ Several teachers attended the OSPI winter conference in January.
- ◆ Several teachers attended NCCE in February.

Conferences attended by you (again, please note if you presented):

- ◆ Both of us attended the MIS face-to-face sessions
 - Ellensburg – September – 2 days - both of us facilitated portions.
 - Vancouver – October – 1 day – both of us facilitated portions
 - Renton – January – 1 day – both of us facilitated portions
 - Vancouver – February – 1 day
 - Snoqualmie Pass – June 3 days
- ◆ Mary coordinated the steering committee all year
- ◆ Both of us attended the Math Helping Corps Cadre meetings in our region whenever possible
- ◆ Both of us participated in a book study (Student-Involved Classroom Assessment, Richard Stiggins) during the first half of the year
- ◆ Both of us attended the Northwest Math Conference in Portland in October.
- ◆ Tami attended a math weekend with the Math Solutions team in October.
- ◆ Mary attended a training on My e-Coach in December.
- ◆ Both of us attended the 2006 Math Leadership Seminar by TDG in Portland in February.
- ◆ Both of us attended the NCSM meeting in St. Louis in April.

What PLC structures were in place in Year 5? Why were they structured in that way? Were they different from previous years? Why?:

Our eight PLCs functioned similarly in some ways and differently in others. During the grant proposal writing process we asked each group to plan for half days each month and most did. However, as the year progressed, getting subs for half days became troublesome and many groups shifted to whole days every other month.

- ◆ Our Consortium group (Waitsburg, Dixie, Starbuck) met half days (roughly monthly) for a total of 21 hours. They also visited in each others' classrooms at least once, and we visited each classroom at least once.
- ◆ Pomeroy met half days (roughly monthly) for a total of 24 hours. We visited each classroom at least once.
- ◆ Housel met with us for 2 hours at a time during their Wednesday early release times plus one full day for a total of 16 hours. They also met without us in between those times, and it was evident to us that work was being accomplished during some of those meetings. One of our NO LIMIT teachers became a part-time coach in the building this year, and did multiple classroom visits in that capacity.
- ◆ Ochoa met half days (roughly monthly) for the first part of the year, then switched to full days due to the sub situation. We met a total of 24 hours. They receive classroom coaching through their building.
- ◆ McLoughlin Middle School is involved in Critical Friends PLCs so we formed the NO LIMIT PLC around a Critical Friends format for three ½ day meetings and three full day (6 hour) meetings. We met a total of 27 hours. The math coach from the building met with the PLC and co-facilitated the PLCs. She also did classroom coaching.
- ◆ Stevens started with a half day meeting, then immediately switched to full days (every other month) due to the sub situation. We met a total of 27 hours. They receive classroom coaching through their building.

- ◆ Park was unable to get half day subs from the beginning. We struggled to get time to work with them. Their Wednesday early release days were used, but that required including all math teachers (making the group size over 15) and doing department business for a portion of the time. NO LIMIT teachers were paid to stay an extra hour after their normal day ended (also offered to other interested staff) , meaning that at the end of the “normal” work day, most of the other teachers would leave and we’d get down to serious NO LIMIT work for an hour. This didn’t work very well. We ended up working with this group for a total of 15 hours. They also received one full day of SmartBoard training from their district which was considered (by the district) to be NO LIMIT PLC time. We were never allowed in their classrooms.
- ◆ Kennewick High School: This group works exceptionally well together with a strong teacher leader. They met for 4 hours at a time, six times during the year, for a total of 24 hours. In addition they had a 6 hour SmartBoard training in October sponsored by their school district. Because they were a high school group, we recruited Deb Rydeski from Math Helping Corps and hired another high school teacher, Cassie McGehee, to work with the group in 2007. Tami met with this PLC once during the year and Mary met with them three times.

Math curricula in use by NO LIMIT! Teachers:

- ◆ Park, Housel, McLoughlin, Ochoa, and Stevens use CMP in grades 6-8.
- ◆ Starbuck purchased CMP2 and began using it this year in grades 5-8.
- ◆ Waitsburg piloted CMP2 (several books each grade) this year, and have adopted it for 2006-2007.
- ◆ Pomeroy piloted CMP2 (two books in 7th grade) and hopes to purchase it for grades 6-7 next year.
- ◆ Dixie uses a traditional series. Our Dixie teacher used some Math and the Mind’s Eye and Marilyn Burns materials this year, and hopes to have access to Investigations next year.
- ◆ Kennewick High School uses several fairly traditional series, but worked to integrate lessons from summer training into their curriculum.

Technology purchased in Year 5. How were the choices made? Were teachers happy with choices? Were you? Why or why not?:

Since the money for technology purchases was granted directly to buildings/districts, we had little to do with those purchases. We did remind each tech director of the grant language requiring that each classroom have at least a laptop, projector, and document camera. We also sent out the document that Dennis developed indicating possible 2nd tier purchases to use for remaining funds (after the required technology was in place).

Most buildings used the bulk of their funds to procure the required technology. In Kennewick, at both Park and Kennewick High, most teachers already had the required technology so they purchased SmartBoards and Airliners (with a little extra help from district funding). In the Consortium, some of the remaining funding was used to provide desktop videoconferencing equipment for the teachers so they could communicate better across the miles.

Some teachers struggled to find out how the money was spent. They asked for accountings from their buildings/districts to no avail. We had no recourse with districts or buildings about how the money was spent.

Successes and challenges of Year 5:***Challenges***

- ◆ PLCs were new, as was the collaborative inquiry cycle. Both provided challenges to us.
- ◆ Keeping math in the picture was a struggle at first. Each PLC developed its own focus, and all were general instructional questions. No group asked to focus on improving their own mathematical understanding, but we feel strongly that mathematical understanding should be part of every gathering for mathematics professional development. We later forced “math for us” into each PLC meeting, and it became a part of what we do together, along with written reflections on their work.
- ◆ One of the schools came to the grant with a technology agenda and focus and was never able to appreciate the math portion of the grant. Our meetings with them were few and unfocused. We met with the principal in the middle of the year, and he promised specific time to meet with the teachers. However, their math department meetings interfered and became a focus rather than learning math or working on math together.
- ◆ One teacher left the PLC meeting in January over an issue that surfaced with another teacher in the room. She never returned for another PLC meeting, but used her subs to be gone from the building on the days we met. We have spoken with the principal and assistant principal are recommending that another teacher replace her next year and that her equipment be given to the new teacher.
- ◆ Getting teachers to collect and consider student work proved to be more difficult than we expected. We wanted to have them focus on the work of three students over 5 months. We discovered they didn’t know how to do this and that we should have provided more scaffolding for them to be successful.
- ◆ We provided clock hours for several “extra” projects for the teachers to do if they wished to earn more clock hours. No one was interested in any of the extra projects and many teachers didn’t even want the clock hours for the meetings they attended.

Successes

- ◆ Reform curricula in Waitsburg, Starbuck and (hopefully) Pomeroy as a direct result of summer math institute.
- ◆ Most PLCs functioning well and poised to do great things together in their second year.
- ◆ Regional meeting with John Van de Walle was well received. Several PLCs use his book as a reference now when they have math issues to discuss.

Plans for Year 6. How is your ESD adapting to the reduction in funding?:

Next year’s funding will provide for 1.2 MISs for 6 groups. We strongly believe in the power of the PLCs and will focus the bulk of our work there. We created a grid showing NO LIMIT services 05-06 in one column and projected services for 06-07 in another. PLC time remained constant at 7-9 half days, while other components were reduced. We’ll still have four regional meetings, but classroom support (which was previously “as requested”) is now “available, but limited”. We have identified one “lead” teacher from 5 PLCs (one PLC has only 2 teachers in it) and will provide 2 full days of special training for them early in the Fall on leadership for

mathematics. The intention is that these teachers might see the vision of continuing PLC meetings in their schools after the grant is gone, and become the building leader of the PLC.

Anything else you'd like to add:

Year Six

ESD 123 Final Report for NO LIMIT!

June 2007

Schools awarded grant in 2006-2007:

McLoughlin MS (Pasco SD)	5 math teachers
Ochoa MS (Pasco SD)	5 math teachers
Stevens MS (Pasco SD)	6 math teachers
Kennewick HS (Kennewick SD)	5 math teachers
Consortium: Waitsburg SD; Starbuck SD; Dixie SD	6 math teachers
Pomeroy Elementary/MS (Pomeroy)	<u>2 math teachers</u>
	30 teachers total

Only 5 teachers were funded by the grant per building (except Pomeroy with 2 teachers funded) but three buildings chose to pay for additional teachers to attend the PLC meetings and other trainings that were available throughout the year. In addition to the 30 teachers served, one administrator attended all PLC meetings and all trainings with his teachers.

Grant funds paid for one full-time Math Integration Specialist (Mary Anderson) and the second Math Integration Specialist (Tami Matsumoto) was paid for 47 days from grant funds.

Training and professional development provided for teachers: amount of time, dates, and content:

- ◆ ESD 123's Summer Math Institute August 7-11, 2006 (5 full days), attended by 16 of our NO LIMIT teachers, served as the main summer training for the group. Teachers could choose from the following classes: Investigations in Number, Data, and Space, Connected Math Project, MathScape, Best Practices in Mathematics K-12, Technology in the Secondary Classroom.
- ◆ Four regional meetings/trainings were provided. All events consisted of six hours.
 - ✓ "If We Slow Down, Will They Ever Catch Up?" by Dr. Sandy Atkins:
 - October 19, 2006
 - November 30, 2006
 - February 21, 2007
 Teachers worked on identifying areas where students misunderstand math and planned interventions for those areas.
 - ✓ Share Fair – May 15, 2007
 - Teachers shared their experiences working in the NO LIMIT PLC this year and their plans to continue PLC work in their building. They worked on math, specifically to

identify pentominoes, create them, and use them in games like Blokus. Teachers shared the ways they had used Moodle, airlines, and websites in the math classroom.

- ◆ Two regional 2-hour meetings were provided for administrators from the NO LIMIT schools with Dr. Atkins:
 - ✓ November 29, 2006
 - ✓ February 21, 2007
 Dr. Atkins showed the administrators some of the research on how to work with struggling students and gave them information about supporting their teachers to do this work.
- ◆ Two Leadership meetings were held bringing one leader from each PLC together to form a leadership team for NO LIMIT. Four of the six buildings participated.
 - ✓ September 29
 - ✓ January 25
 The focus of these meetings was to share the importance of continuing PLCs in their buildings beyond NO LIMIT and to encourage these teachers to take a lead in so doing. To do this we looked at the research on teacher leadership from the classroom and we planned together for the PLC meetings for their individual buildings. We also worked on a math problem together at both meetings.
- ◆ PLC meetings by building (see below):
 - Topics every PLC worked on in common:
 - Every PLC worked on math for at least 1 hour every meeting.
 - Each teacher reflected on their practice at every meeting.

Stevens MS (Pasco)			Kennewick High School		
Date	Hours	PLC Focus	Date	Hours	Topics
9/19	6	Best Practices for: ✓ student self assessment ✓ discourse ✓ basic facts – Van de Walle ✓ looking at student work	9/28	6	Best Practices for: ✓ press for student understanding ✓ teacher reflection about practice ✓ problem based learning – Van de Walle
10/26	6		10/31	6	
1/18	6		12/5	6	
2/27	6		1/24	6	
Total	24		Total	24	
McLoughlin MS (Pasco)			Consortium (Waitsburg, Dixie, Starbuck SDs)		
Date	Hours	PLC Focus	Date	Hours	PLC Focus
9/20	3	✓ student reflection and self assessment ✓ disequilibrium in math class ✓ read parts of Chapin book <u>Classroom Discussions</u>	9/30	4	✓ technology to connect students to world ✓ read parts of <u>The World is Flat</u> ✓ used work from Best Practices class they attended in August ✓ studied WASL data ✓ planned lesson together, observed Tami teach it,
10/18	3		12/2	5	
11/8	3		1/27	4	
12/6	3		3/24	6	
1/17	3		Total	19	
3/28	3				
Total	18				

					debriefed lesson
Pomeroy			Ochoa MS (Pasco)		
Date	Hours	PLC Focus	Date	Hours	PLC Focus
9/25 VC	1	✓ discourse ✓ press for student understanding ✓ once for each teacher we: planned lesson together; observed lesson (Tami taught it); debriefed lesson ✓ basic facts – Van de Walle	9/12	6	✓ writing and math ✓ differentiation ✓ assessment for CMP units
10/24	3		11/21	6	
11/7	6		1/9	6	
2/28	5		3/1	6	
4/12	5		Total	24	
Total	20				

What conferences did your teachers attend? Did they make presentations?

Teachers attended the following conferences.

Name & location of conference	Number attending	Presentations?
NCCE in Spokane	2	No
Teacher-to-Teacher (science & math) in Houston	1	No
Writing in Math in Spokane & Seattle	4	No
NCTM Regional Conference in Texas	1	No

What conferences did you attend? Did you make presentations?

Mary & Tami attended these MIS Meetings:

- October 5 in Olympia Agenda: Sharing with other MISs
eCove, eCoach, PILOT
- January 9 in Seattle Agenda: First Steps introduction
TI-73 training
- April 27 in Yakima Agenda: Create suggestions and questions for Assistant Superintendents about the math initiative in the state of Washington. **Tami couldn't attend.**

Mary attended the following PD; *Tami attended through NO LIMIT, also.

- October 17-21 NW Math Conference in Victoria
Agenda: Best practices of math education
- November 2 NCCE Tech Forum in Bellevue Roundtable Facilitator
Agenda: Use of technology in K-12 education
- *January 10-12 OSPI Winter Pre-Conference and Conference
Agenda: Best practices of math education

February 14-17 2007 Leadership Seminar in Portland
 Agenda: Best practices of math education
March 18-24 NCSM & NCTM in Atlanta
 Agenda: Best practices of math education

What PLC structures were in place in Year 6? Why were they structured in that way? Were they different from previous years? Why?

By the sixth year of the NO LIMIT Grant we were very clear that we needed to meet as PLCs on a regular basis during the school day for at least three hours. That was a stipulation of the grant that we made when we coached buildings during the application process. Therefore, we met for three-hour or six-hour blocks of time monthly or bimonthly.

It was a new experience for our teachers to meet together for this length of time. We felt the teachers needed time to read, reflect, do math together, and relax with each other. The structure was not hurried, but it was planned. We developed norms in the first meeting and followed protocols for most activities. Part of our effort was to help the teachers find a common focus that would support their work in the classroom. We found that even two years was not enough time for many of them to agree on a focus as a group.

One building came with a focus during the first year and carried that through the second year. We met with them only part of their six-hour meeting each time. The rest of the time they had a teacher leader and worked together on a joint project to create lessons using the SmartBoard that they could share with the entire high school math department. The focus of their lessons was to help struggling math students. They were very focused and self-motivated.

Each PLC meeting had common elements across the buildings. We would do at least one hour of math together, math for the adult learner not necessarily to pass on to their students. We would read something together from an article or a book and discuss it. We purchased several books from ESD grant funds that we gave to individual PLCs as they requested them. A number of times we had the teachers bring student work with them and we would discuss the student work together. We would often end each session by giving them time to work together in small groups to plan for units they would be teaching.

Tami and I developed this format over five years of working as MIS together. We both believed math was the area in which they needed the most work. We did not visit classrooms this year as we had in the past because our time working for the grant was cut almost in half. But, the PLC meetings were mostly the same as they had been in the previous year. Classroom visits were held three times during PLC meetings.

Math curricula in use by NO LIMIT! teachers

Building	Instructional Materials	Grade
Stevens MS Pasco	CMP	6, 7, 8
Ochoa MS Pasco	CMP	6, 7, 8
McLoughlin Pasco	CMP	6, 7, 8
Pomeroy	CMP	6 th and 8 th grades
Kennewick High School	Variety; but they worked with struggling students and made their own lessons for these students; used lessons from Math Learning Center	9 th grade
Consortium: Waitsburg	CMP	6, 7, 8
Consortium: Dixie	Investigations	3 rd , 4 th , 5 th grades
Consortium: Starbuck	Investigations	6 th grades

Technology purchased in Year 6. How were the choices made? Were teachers happy with choices? Were you? Why or why not?

Last year most of the money was spent on technology so this year we suggested they spend the money on professional development. The first year of the grant, building money supported their attendance at the ESD Summer Math Institute. The second year, many of them used their grant money to attend the Math Institute. The decision to purchase was made within each building by the teachers and administrators. We were mostly satisfied with the process.

Building	Technology	Notes
Stevens MS	2 airliners SmartBoard Math manipulatives	Some money went for PD
McLoughlin MS	5 Airliners 3 scanjets Camera + accessories	Bought books with rest of money; Dave attended Northwest Math Conference in Victoria 10/06
Kennewick HS	5 replacement bulbs; document camera; 150 scientific calculators; 1 projector	
Ochoa MS	None	All money was spent on PD this year
Pomeroy	Document camera	Evelyn used all her money to attend Math Institute 8/06;
Consortium	Digital camera	Rest of money was spent on PD and books Brad: school paid for Math Institute 8/06

Successes and challenges of Year 6

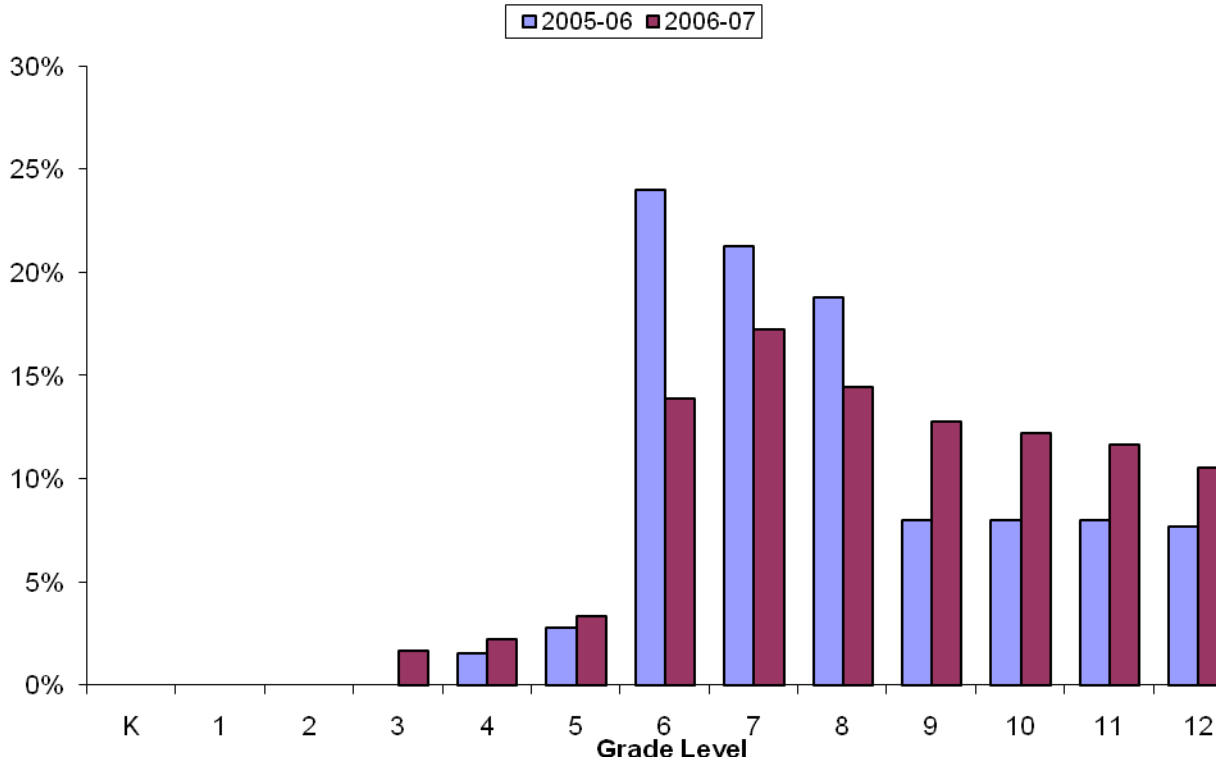
1. The regional meetings with Sandy Atkins were probably the biggest success this year, as attendance was good and the feedback was exceptionally strong. However, when we attended PLC meetings following each of her sessions and asked the teachers what part of her information they were using, few had any specifics to offer. They needed more time to digest her message and to include her ideas in their lessons and they didn't have time for this except at the PLC meeting.
2. Professional development (PD) that is held during the work day on a regular basis is a new venture for teachers and they need time to embrace the possibilities. The NO LIMIT format provided the impetus to meet with other math teachers for several hours every month. Through such experiences teachers will gradually begin to see PD as an important part of the work day.
3. There are many factors that go into successful PD and many of the important factors were not available for us. For example, we worked with only a few of the math teachers in a building, so work that we did was harder to implement as a group. Getting a sub was difficult, especially because the teachers who were in our grant were expected to attend other trainings as well. Efforts to improve student learning in the building were disconnected. Teachers were pulled in many directions.
4. One challenge is how to grow teacher leaders. Many teachers do not see themselves as leaders; they need to change some of their thinking about who they are as a teacher. Change takes time. Over the six years of the grant we have had two of our teachers leave the classroom to accept leadership positions (one is now an assistant principal) and both said that part of their impetus came from their work with NO LIMIT. They were probably also at the "ready" stage in their career.

**Log Report 2005-2007
ESD 123**

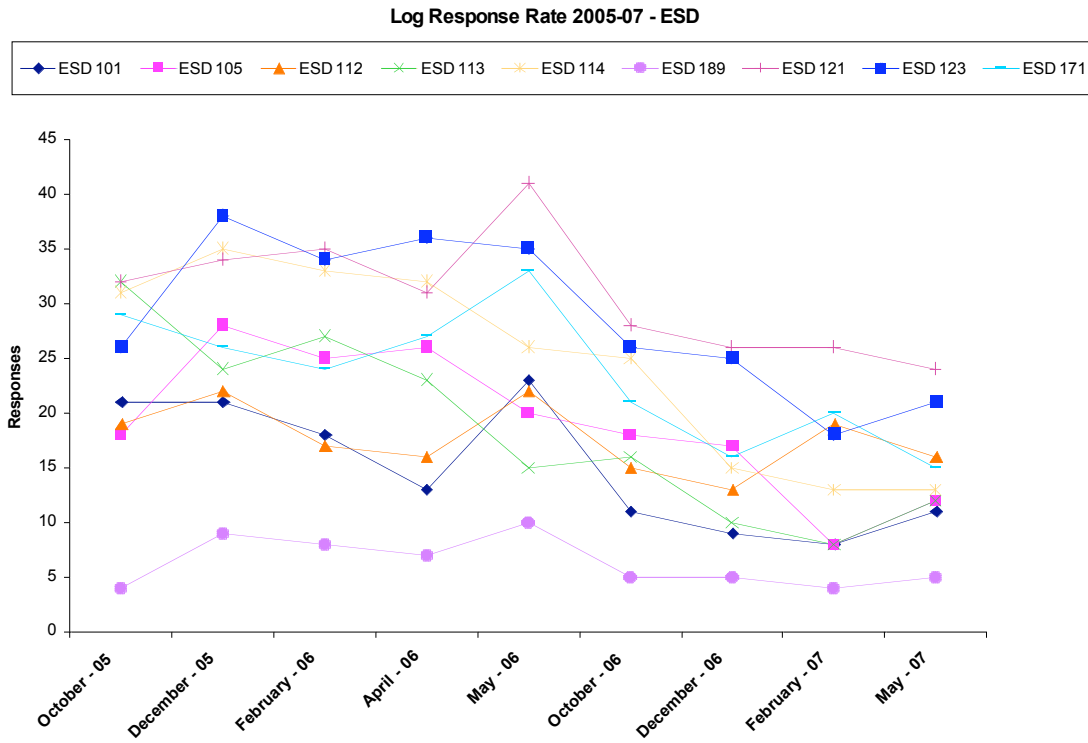
Item 6:

The grade levels you teach:

2005-07 Grade Level Participation - ESD 123

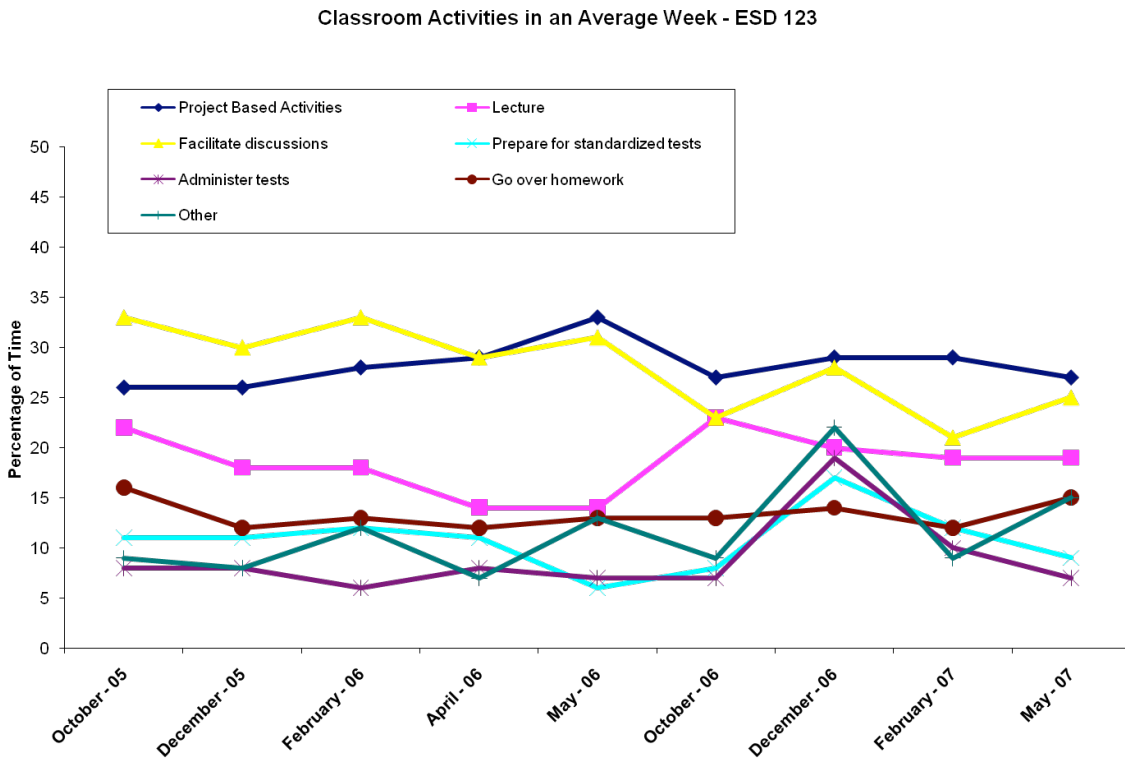


Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?



Other, please specify:

October - 05:

- Many of these overlap
- Because the connected mathematics curriculum is aligned with state standards the work we do prepares students for the standardized test (WASL). We cover homework assignments in the student discussions.
- Allowing time to work on assignments (group or individual).
- Yes, I know that my numbers add up to more than 100%. That is because some of the stuff I do crosses over areas.
- Grading all the above!
- Some of these activities overlap, that's why it adds up to more than 100%. For example, facilitating student discussions might be happening while students are involved in a project based activity. Or, I might lecture in a mini-lesson if kids are "stuck" and then we'll get back to our project.
- I give time in class for students to work on their assignments so I can go around and help them with any questions they have.
- Math Pacing are entry task problems the first 5 minutes of class.
- Meeting with students individually or in small groups providing help and formative assessment

December - 05:

- Allowing time to work on individual assignments.
- Class interruptions such as; assemblies, testing, discussion of school issues.
- 10% of class time is allotted to personal reflection and journaling about what we have learned. Students may write questions for the next class period as well.
- Entry Task
- Assigning the homework and grade book work.
- I would love to spend more time in other areas besides the preparing of students to take a test.
- Working on computer program in one of my classes
- I teach other content areas.

February - 06:

- I allow quiet or group time to work on projects.
- Material that is not covered in the book
- Guest speakers, non-math activities
- Time spent on remediation of basic skills, and or discipline.
- Entry Tasks - students work review problems and then we go over a real-life application of the math concepts we are currently covering.
- These don't add up to 100% because some activities overlap. For example, students have discussions while they are involved in project based activities.
- Other - while students work on assignments I make my way around the room to answer questions and check out who understands it and who doesn't.

April - 06:

- Time is allowed to work independently or with a group each week.

- Most of our time is spent on the student discovering the math concept. We are doing CMP for the first time this year and it is somewhat hard for them. But they are getting it. I am excited to see how this will carry over into next year.
- Too much time is spent in preparing for a test.
- Discussing applications and purpose of today's lecture
- These don't add up to 100% because some overlap
- Working with students on practice problems.

May - 06:

- We have spent more time the end of the year focusing on project based math. Our current curriculum does not support this, so it has been a challenge for me to develop or discover this type of math.
- Allowing time to work alone, with partners or in groups.
- Entry task – real life application of the math concept.
- Working on assignments together in groups or individually as I help them.
- Going over homework assignments are often student directed and discussed

October - 06:

- Homework assignments are rare in this book
- Silently Working on Individual Assignments
- Remediation
- Use of technology, going over real-life applications of math skills acquired
- Housekeeping items

December - 06:

- Showing other student work and working off of mistakes
- Entry Tasks, Getting Started on Homework
- Some of these activities overlap
- Assessing reading
- Loving my job

February - 07:

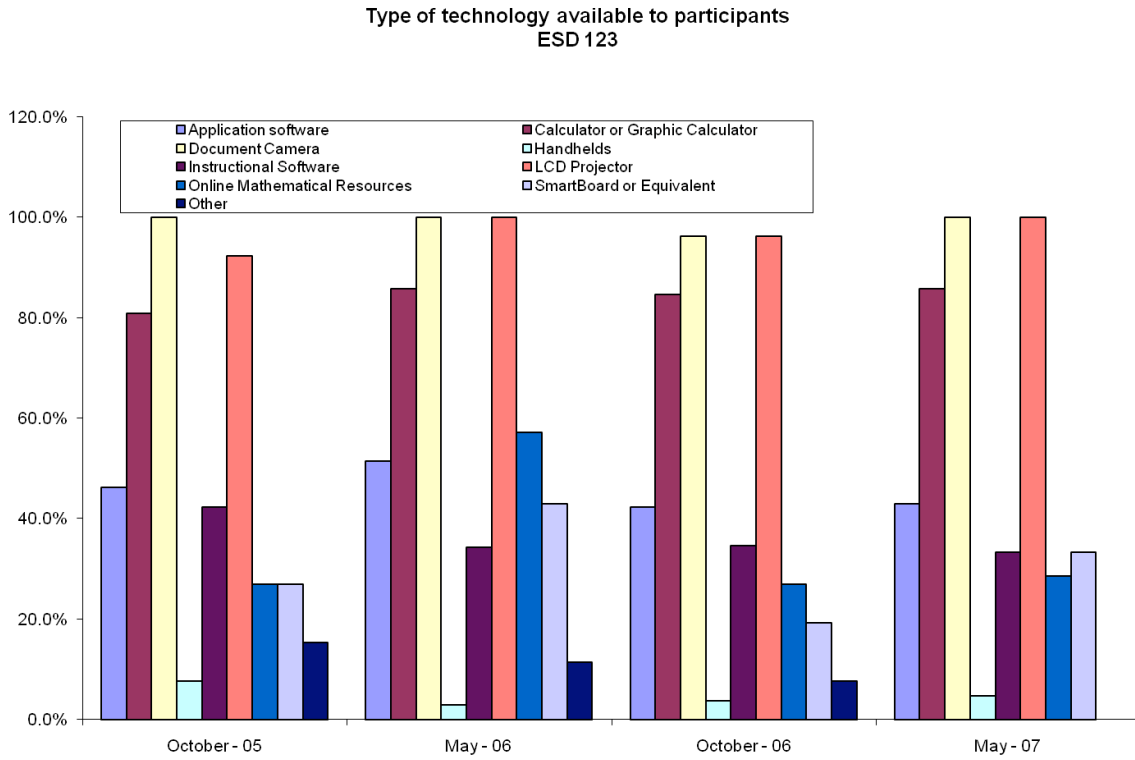
- Allowing time for work.
- Entry Tasks and working the classroom on extensions to the lesson
- I have a student teacher now for 3 of my classes

May - 07:

- Learning new concepts using the Connected Math and the Dialouge that it gives
- On maternity leave during month of April
- Individual/differentiated instruction for struggling students
- Entry Tasks
- Independent work
- Some of these overlap.

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.



Other:

October - 05:

- Digital camera, scanner
- Laptop
- Laptop, airliner
- 9 computers/26 students

December - 05:

- Digital camera
- Laptop
- Airliner
- Airliner

February - 06:

- Digital camera

April - 06:

- Airliner
- Digital camera
- Airliner
- Calculators are non-graphing

May - 06:

- Airliner
- Digital camera
- Airliner
- Braille materials, Pac-mate

October - 06:

- Digital Camera, Web Cam

December - 06:

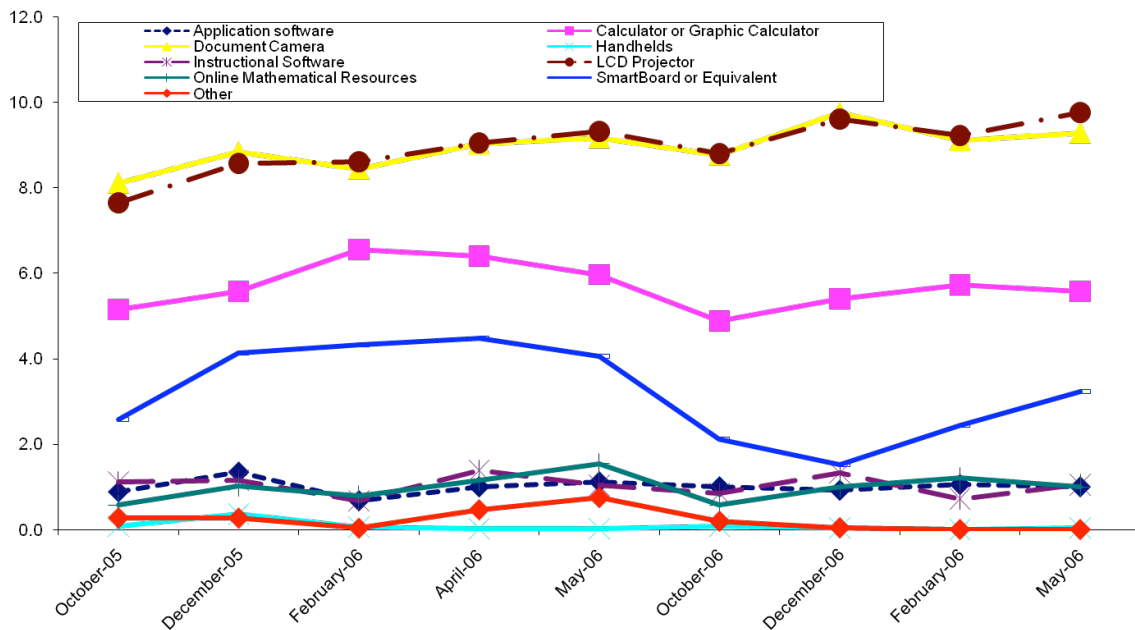
February - 07:

May - 07:

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.

Frequency of use of technology over the last ten lessons
ESD 123



Item 11:

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- Students shared their work (graphs) with classmates using document camera and projector and used Microsoft Excel to show another resource for showing all types of graphs
- Shared work under the document camera
- Our students used excel spreadsheet to graph and organize the number of steps we logged in the last two weeks.
- Students share answers from their own paper every day in class. I rarely show my own work, instead I ask students to show and share theirs.
- Document camera is used when problems/issues arise that are better viewed by all using the camera, which makes manipulative and written explanations easily visible to all.
- Students were to show the process they used to add and subtract integers. they used positive and negative symbols to demonstrate that when you add a positive and a negative numbers, a positive and a negative cancel each other, and when there no more of one (positive or negative) that is the answer.
- Students use the document camera and digital projector to illustrate their understanding of a problem. They may also use it to show their work and show examples. I use the camera to list their ideas during a discussion and illustrate things they are explaining to me (record their thinking).
- Showing and explaining work using document camera/projector
- We had a problem on similar figures. The students had a great discussion using the SMART Boards about different ways that they saw the problem. There were a lot of "Oh, I get it" talk going on.
- We used the airliner and the smart board today to name multiples and factors. I just received these two pieces.
- Using a spreadsheet to plot shots made in basketball to shot missed, then calculating the percentage.
- Sharing their work with graphing and analysis of graphs
- My students used the graphing calculators to look at graphs to find similarities and differences among them.
- Showing their work done in groups on the document camera; doing problems on the Smart Board.
- Sharing student work on the document camera
- Sharing work with the class using the document camera
- I just got the camera and projector yesterday. The calculators won't come out until the next unit.
- We had graphs that we were working on and the students showed examples of their graphs on the document camera so we could compare and talk about what is best to do for representing data.
- We use the document camera almost every day to allow students to show their work and discuss different strategies for solving problems.
- We compared answers to problems by showing the class the work from students' notebooks and discussed their work.

- Discussing student work - having them explain their work
- Graphing calculator
- Students e-mail me with solutions/explanations to problems.
- Looking at the thinking of other students.

December - 05:

- Students use technology to share their work and discussions
- Graphed $y=mx+b$ equations on calculators and create equations/tables and explain how the three are linked by slope and y-intercept.
- My students share their entry tasks and homework with the document camera
- Practice WASL prompt
- Our students used a spreadsheet to show how many steps the entire grade school took during the Health Challenge. We also showed the results using various graphs.
- Sharing their ideas and thoughts with the document camera.
- Use of the document camera to display methods developed by students. This allowed students to share ideas visually with all the students.
- Students demonstrated to the rest of the class how they were able to solve the problem. They showed and explained the steps they went to reach their answer.
- My students completed a problem from CMP and each group shared their answers using the doc. cam. And projector. After sharing, we created a 4 point rubric and the students scored the solutions. Each group then took the scores and graphed the results for each problem using an online graphing resource.
- Students use the camera to show their work and to explain how they got the answer that they did
- Explaining their work, answers
- Smart board used as an interactive teaching aid. Students would demonstrate in front of the class their skills on certain math concepts.
- We used power point. I had students select a math concept to share with the class. They found real-life applications for the concepts and shared those as well.
- Students used the document camera/projector to compare ratios.
- Students used graphing calculators to explore the graphs of lines and their equations
- We use the document camera and the LCD projector almost every day. It is a great way to go over assignments and questions that they have. My students are becoming very familiar showing their work to the rest of the class and getting feedback and questions from them as well as me.
- Students built and used a grid for moving tiles to check perimeter, built and used a Venn diagram for finding common factors and multiples, played the product game, manipulated numbers for other activities.
- Used Geometer's Sketch pad when working with similar triangles to find the height of buildings, trees, etc.....
- We take shots at a basketball hoop in class as a reward for good behavior. If a student makes a shot they get a piece of candy. In order to take a shot they need to earn a chip for good behavior. I have created a spreadsheet for the class and we record shots taken vs. shots made, we predict how many shots will be made, we figure out the percentage of shots made, and find the mean, mode, median, and rate.
- Sharing work with equivalent fractions

- My students put up their homework on the document camera in Geometry to show how they wrote a proof.
- We made a "human" box plot of data (how many children are in their family) and graphed it on the smart board. They are also using graphing calculators to enter data and make box plots to find the five-number summary.
- Smart board shape manipulative found in the gallery. Saving and sharing student work in the smart board notebook. Students sharing work with the document camera.
- Showed their work that they had done using the document camera.
- They have been using the graphing calculators to discuss relationships between graphs, tables and equations.
- There's an interactive website used to illustrate solving equations. I used a hyperlink in my lesson plan in smart notebook to get there, and had the kids use the interactive scale that was projected on the smart board.
- We use the document camera and projector almost every day to show student work when having a classroom discussion.
- We used graphing calculators to find the line of best fit (trend line) in a set of graphed data.
- Anytime they solve problems as a group or partner
- Solving linear equations
- Students used on-line graph facility to post/display/explain science data.
- Explain their method for doing the coordinate graph
- The concept of slope is discovered using the smart board by moving premade points and describing the rate of change.
- Document camera used to share a student's method for finding the area of a parallelogram.
- Showed student examples of their self-evaluations- critiquing them and improving others.
- Students shared with each other an area model of multiplication of fractions

February - 06:

- Students use technology to share their work
- Students used smart board to show representations of fractions and the 8th grade used graphing background for finding slope-y-intercept and calculating rise over run.
- My students use calculators to find the mean of a data set.
- My students use united steaming to review fractions
- We used the Smart Board to show how easy it is to divide decimals when dividing them by 10, 100, 1000
- We work on communicating our mathematical thinking at the beginning of each class Monday through Friday with a "writing prompt." The focus of the prompt is on communicating mathematical understanding, not necessarily gaining new mathematical understanding. It is a three step process. Students share their progress with each other after every step. Students are asked to question their own written communication as well as give each other feedback about what makes sense or doesn't make sense.
- Calculators are used to handle basic math problems, while maintaining our focus on the concepts being developed.
- The students share with the rest of the class their strategies for solving a problem.
- Students have graphed work using a graphing web site. Students also share/explain their work almost daily using the doc. camera and projector.
- Explaining thought process involved in solving problems

- Students demonstrating Pythagoras there on the Smart board.
- Transformations
- Students were working on a scenario involving a specified data set (mode and range). Students used the SMART Board to share/compare strategies.
- The students used the graphing calculators to graph the equations of lines and promote a discussion on the slope of a line and how it changes as the coefficient of X changes.
- Projecting students work on the LCD projector
- We use the document camera everyday to show and discuss our work in class. We also use calculators but still practice without them as well. We have also used our classroom computers for a tiling exercise.
- Used TI Graphing calculators to predict the average price of a home in Seattle and to decide what type of function we were dealing with and how to make further predictions on the housing market by using that function.
- They have created visual representations of fractions and shared them with the document camera.
- Sharing work on assignments to other students
- One of my students put their proof in Geometry on the document camera so that we could discuss the method he used.
- Using the Smart Board to make right triangles of different side lengths.
- Sharing work on the document camera. Visiting math websites on the computer and having that displayed over the projector.
- Students showed their work using the document camera.
- They used the graphing calculators to investigate different equations and their graphs. They grouped the graphs and gave reasons for their groups. Then, they looked at the equations to make general statements about which kinds of equations would produce which kinds of graphs.
- We worked problems on the smart board where we were solving systems of equations by substitution. To show how that relates to solving a system by graphing, I just brought up a graph and we graphed the equations. The students saw the point of intersection is the solution to the system.
- The students use the document camera to share work and have discussions on good problem solving strategies.
- We were graphing different math relationships and describing the look of them. Students shared their graphs on calculator on the document camera and pointed out the certain look of them and the certain look of their equations.
- Technology is such an integral part of day to day life in here - kids are using the technology to display their work or show students how they do math.
- Showing how different types of polygons tile
- I had the students get into groups and each group worked on the same problem. One student used the smart board to work a problem out and explain how to do their problem to another group.
- Students shared work to display different methods of solving the same problem
- Share and discuss math with the doc camera/projector
- Sharing of at least four different ways to do an addition of fractions equation

April - 06:

- Students use their work for discussion
- Students use the Smart board on a daily basis. We recently did a Mapping lesson for "looking for Pythagoras" CMP book. I scanned a copy of the map and students plotted the routes on the smart board for moving from place to place. Lesson 1.2 in the book.
- My students used calculators to find the mean of a given data set
- Showing flat shaped folded into cubes or other shapes
- We did a simulation activity and used the smart board and the projector to make the lesson more effective
- My students regularly participate in sharing their ideas and answers to questions. Students regularly come up to the front of the class and share their work using the document camera.
- Using the document camera and smart board to share mathematical ideas and work.
- A student was able to demonstrate to the rest of the class how a coordinate graph showed the positive and negative slope for a set of data.
- We have recently been participating in many WASL practice test items in math and students have been sharing strategies for solving problems via the doc. cam. And projector. Students have also started using a journal on Moodle regarding their successes and failures in math class.
- Share answers using the projector and document camera
- Sharing problems solving strategies
- Creating tessellations on the smart board
- State modules for the WASL
- Students used document camera/projector to illustrate their concepts to their peers and give each other feedback. Students used computer resources (internet/spreadsheet/PowerPoint) to present to peers using linkup to the projector
- We were working on a problem that involved working backwards. The students had great discussions regarding different ways of looking at and thinking about the problem.
- We used the graphing calculator to calculate the slope of a line and to find the difference in the rise over the run
- Projecting student work on the document camera
- We use the Document camera everyday to discuss their answers and explain how they did it.
- Students often use the airliner and the smart board to demonstrate their solution to a problem.
- Collect data and use calculator to find function
- Demonstrated adding fractions.
- We used the graphing calculators to find the standard deviation and other statistics info. We also used it to graph box and whisker graphs.
- Sharing answers on doc. camera - practice WASL questions
- Used NCTM's Illuminations applets to simulate probabilities
- Students used the document camera to show their work and explain their thinking
- My students did a unit on graphing and the document camera was a great tool for comparing graphs as well as setting a standard for what the graphs should look like.
- My students show their work on the projector which leads to in depth discussion about how to do math, specifically the problems that are shared.
- Students were working on finding squares whose vertices could fit at integer coordinate pairs, and after exploring, students shared their results by placing them on the document camera for all to see.

- Students are always using either the smart board or doc camera when presenting their work
- Students journal on-line at least 2 times per week regarding their learning generally or regarding a specific problem, etc.
- During WASL Prep, show other students' work and evaluate the points earned. The pros and cons of each work.
- They used the smart board to illustrate how the Area changes as the dimensions change.
- Today during the exploration of ratio I was displaying with the document camera, some simple ratio using tiles and they were expanding on those ratios using their own tiles.
- Using the document camera to share student work and different ways to reach the same conclusion.

May - 06:

- Students used the projector and camera to enlarge pictures to make coordinate graphs
- Students showed/shared/critiqued student work on document camera.
- Using internet sources to understand the law of large numbers
- The kids used a document camera to explain their mathematical thinking on a simulation project we were working on.
- Calculators used to do basic problems allowing students to focus on larger problem.
- Students used the document cam and projector to demonstrate the relationship between the volume of a pyramid and the volume of a cube.
- Students share their homework assessments with their classmates
- Showing/explaining thinking about problems
- Geometer sketchpad on the smart board.
- We used graphing software to graph information we had gathered (pie, bar, line, etc.) and analyzed data.
- After students work through problems as a group, they may be selected to come to the document camera to share a strategy.
- Used the graphing calculator to find the graphs of equations involving exponents
- Showing their work to the class on the Document Camera
- They use the document camera to display their work and to explain it.
- Calculated exponential growth and decay of real-life applications and looked at the graphs for interpretation.
- Today we explored Geometry and had the students use the document cameras to define angles and how to use a protractor.
- Sharing solutions
- My first year Algebra students used the graphing calculator to make observations about how changing a number (slope, y-intercept, different parts of a quadratic) in the equation can change what the graph looks like.
- Sharing student work with the document camera and projector. Also, I use the smart board to allow students to see examples of how to show their work and how to use the manipulative.
- Showing results of projects on document camera
- Students showed different ways of finding the area of irregular figures
- We worked together using calculators (I demonstrated on the document camera) to find the sides and angles of triangles in real life problems.
- My students show their work to the classroom very often and then have in depth discussions as to the outcome of a problem and how to improve the solution etc.

- Student shared idea on finding the length of a triangle using the Pythagorean Theorem on the document camera.
- Each day, I have students share their work on the document camera or on the Smart Board - leads to great discussions
- Presented and discussed their work
- Students frequently share their work (both product and process) or demonstrate their explanation regarding a solution to a problem.
- Used the doc camera to explain their reasoning
- A water tank problem that was on its side to calculate the volume of water in the tank and how much it would take to fill it up.
- Studying probability used several different emulators like spinners, dice, and coins to study what happens when doing many trials.
- Sharing strategies
- Graphing linear and nonlinear equations

October - 06:

- Using calculators to graphs equations
- Students used the document camera to share bar graphs. We as a class were able to analyze each one applying the concepts that we have learned to understand what was correct and what was different
- Getting up in front of each other and sharing their ideas about their work.
- The students shared their data tables and coordinate graphs to show relationships between two variables
- Students shared work on a particular problem using the doc. cam and projector.
- Students share work on the camera and projector
- Sharing problem-solving strategies, graphs
- Algebra II Dance--graph of Absolute Value
- Use of the graphing calculators to project values in a linear progression
- Graphing various equations on the graphing calculator and evaluating what each graph should look like and why?
- Used doc. camera to share problem solving strategies.
- We used the graphing calculator to find the intersection of two lines after learning to do it by hand.
- Used calculators to help find patterns and write rules
- My Algebra class used the document camera to show their graphs and explain their conclusions
- Students are sharing their "how" and "why" of process; comparing and contrasting strategies;
- Provided their answers to class and had to explain their thinking process of solving the problem - regardless of correct/incorrect answers
- Through solving problems on the smart board
- Student shared work for classroom discussion
- Being able to show similar triangles on a projector
- Students demonstrated to class how to achieve product by showing examples and explaining process on LCD projector
- Checking answers when dividing fractions and decimals
- Displaying and explaining thought processes to solve problems.

- Inquiry based investigations
- The students often share the process that they used to get an answer in math. They do not share the answer as often as what process they went through.

December - 06:

- Students leading discussions with display of their work
- Sharing work via projector and document camera helps students to be able to explain ones thinking which leads to a deeper understanding.
- Students often share their work using the document camera.
- The students shared their fraction models and representations of different fractional parts
- Students use the document camera to share their methods for solving problems.
- Showed their work on the document camera
- Graphing calculator to calculate the slope of a line and comparing positive and negative slope
- I have my student's do a math project every week that involves using excel and creating graphs. Then they have to write about what the graph is telling them and then they discuss each other's graphs and what they thought.
- Finding an algorithm for predicting weights of pumpkins and finding the line of best fit.
- Exploring the difference between equations and expressions.
- My students used the graphing calculator to find out how changing a, b, and c, in a quadratic changes the position of its graph.
- Showed their work with the document camera. Used graphing calculator to demonstrate how slope affects a line
- Students used the graphing calculator to graph two equations to see where the point of intersection was. They then had to think about what that point meant in the context of the problem.
- On almost a daily basis students use document camera and projector to communicate/share their thinking about math process with classmates and teacher
- Needed to demonstrate the process for reaching the answer on the document camera and projector
- Plotted points on a graph on the smart board to calculate the regression equation
- Looked together at an applet that showed how equations can be balanced and discussed how positives can weigh down the scale and negatives were balloons. Discussed the similarities and differences of the model to the pouches and coins model we had previously been using.
- Using the document camera to explain how they answered a problem.
- We are working with computer and document camera to share ideas with the whole class
- Graphing linear equations
- Organizing and displaying the concepts learned in Bits & Pieces I.
- Students will show their peers how to calculate a problem as well as defend their stance

February - 07:

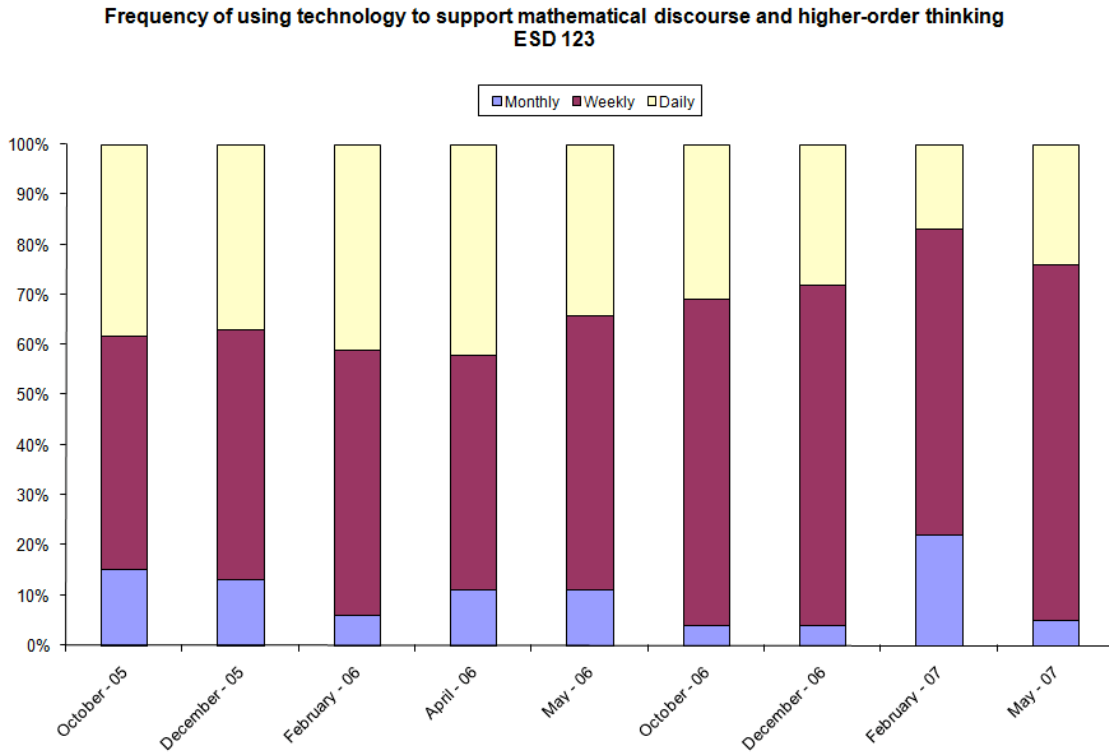
- Used graphing calculators to determine theoretical probability of games of chance. Document camera and LCD projector to display students' games and promote discussion
- Students use graphing equations while working with slope intercept form.
- The students used the document camera to show their strategies for solving a problem. It was a strategy the few students in class were able to come up with.

- Students recently used online software to create tessellations. We also used United Streaming to view a video about polygons.
- Sharing solutions to problems
- Collecting Data and finding the line of best fit. Using correlation coefficient to identify the type of function.
- Shared area models with the document camera.
- We used graphing calculators to compare different graphs so that they could see how changing a coefficient in an equation changed the position of the graph
- Graphing linear equations
- Students communicate on a nearly daily basis the how and why of the process they use to solve problems, perform math operations/assignments.
- Demonstrating lines of symmetry
- They would come up and explain and do problems on the smart board.
- Looked at an online applet that showed a geometric proof for the Pythagorean Theorem. This was a follow-up to a hands-on activity that used another geometric proof.
- Show different ways to answer a problem from their written work
- Presentation of their mathematical thinking.
- Share with group work done

May - 07:

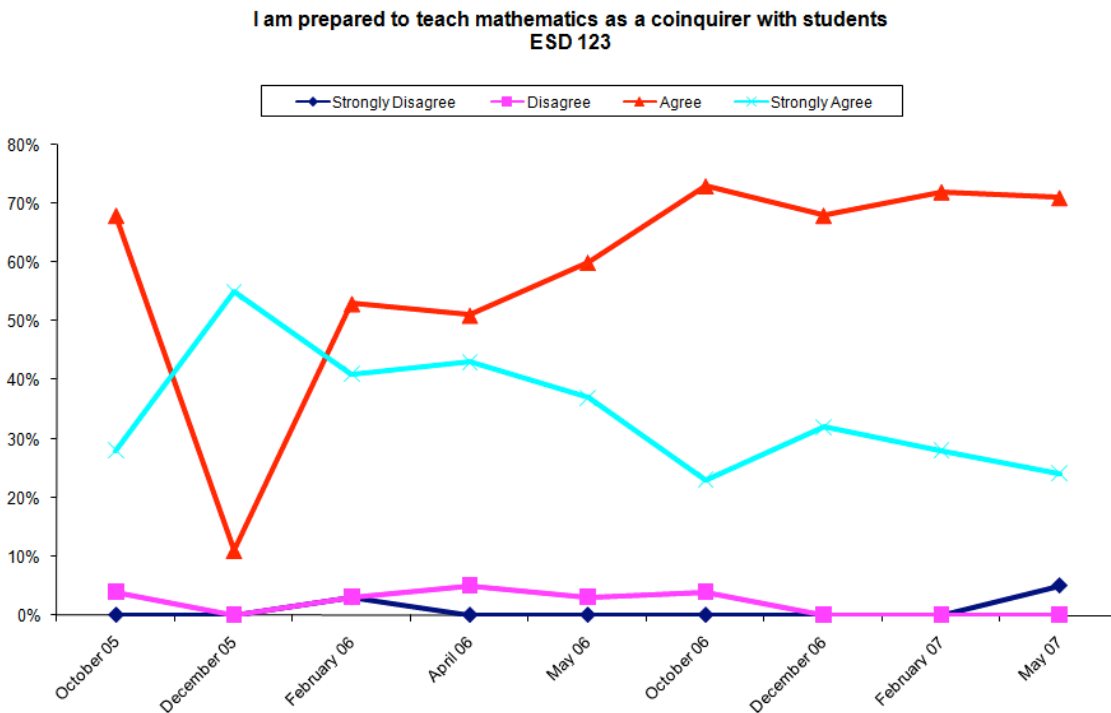
- Students use graphing calculators to solve problems
- Students present homework assignments
- The students were sharing their answers and used the document camera and the projector to show the class the steps they used to found their answer.
- When sharing their work with the class they use the camera to show their work.
- Used graphing calculator for statistical analysis of numerical data
- We created a spreadsheet and graph that helped with probability lessons
- We used the Ti-84's to graph vertical motion problems and predict various times and heights of the objects thrown or dropped.
- Created three graphs to show data they collected.
- We used the graphing calculators to find intercepts of polynomial functions. We graphed different functions after talking about what we thought it would look like.
- They used graphing calculators to support their conclusions about slope.
- Algebra students used graphing calculators to look at graphs of higher-order polynomials and discuss lines of best fit.
- They journal on-line (Moodle) at least one time per week--often daily.
- Review of content
- How to create the formula of a Geometric sequence?
- We journal on moodle
- The students were learning how to use the quadratic formula to solve problems. We looked at the solutions on a graph
- Organizing and displaying students' mathematical thinking.
- Used LCD to share work with class
- When graphing the mean, median, and mode of student names, the graphs were displayed on the document camera.

How often does something like this occur in your classroom?

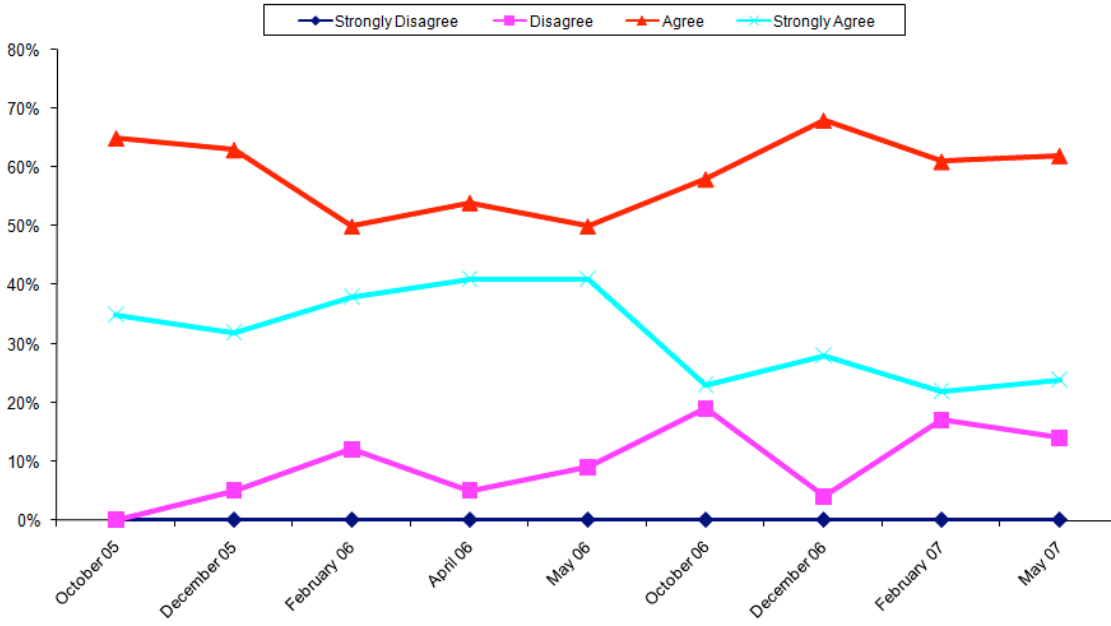


Item 13:

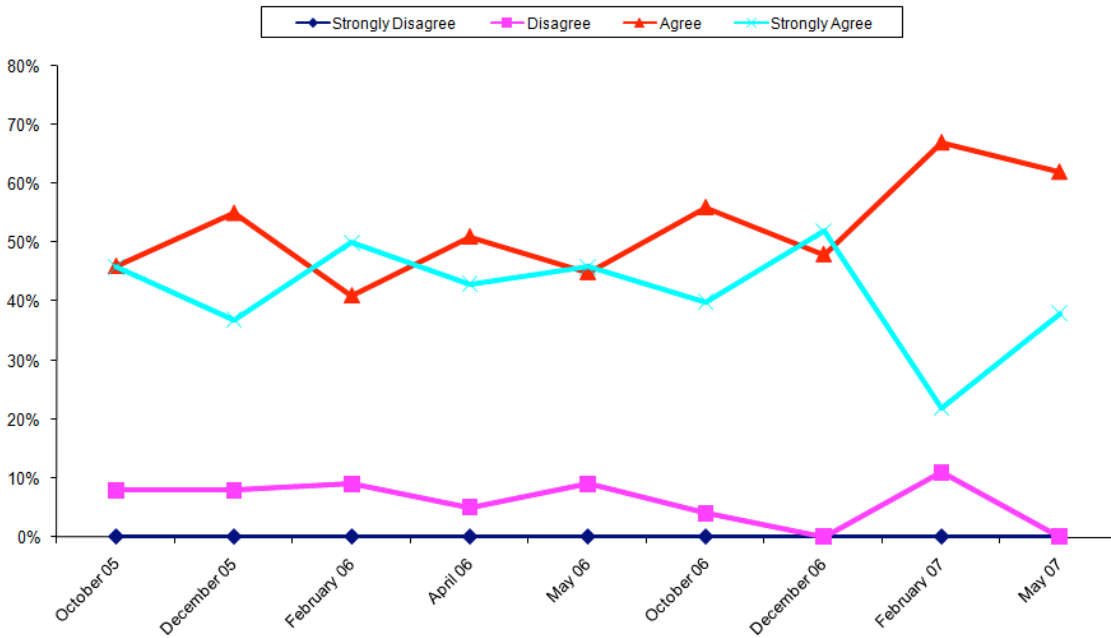
Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.



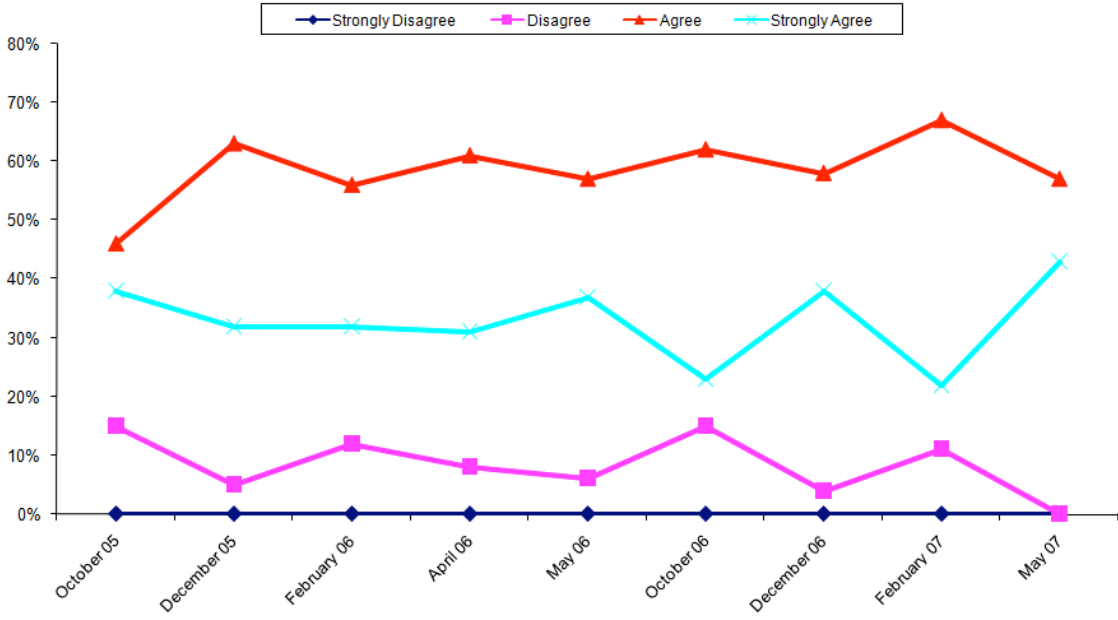
I am prepared to give students opportunities to demonstrate their understanding of mathematical concepts in ways that match their individual learning styles
ESD 123



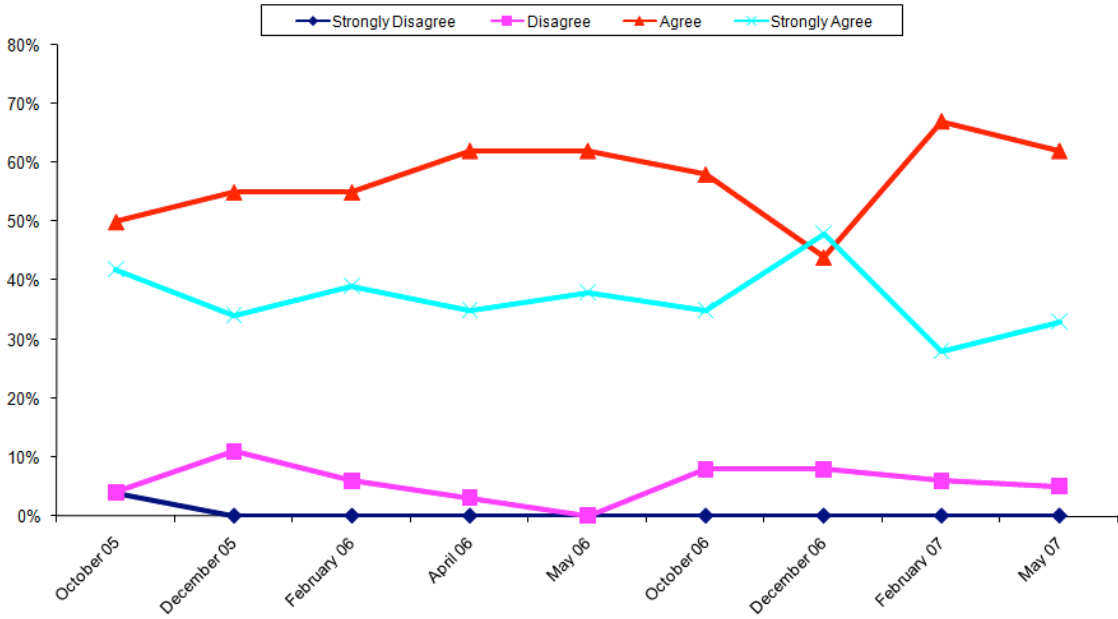
I am prepared to use cooperative learning approaches
ESD 123

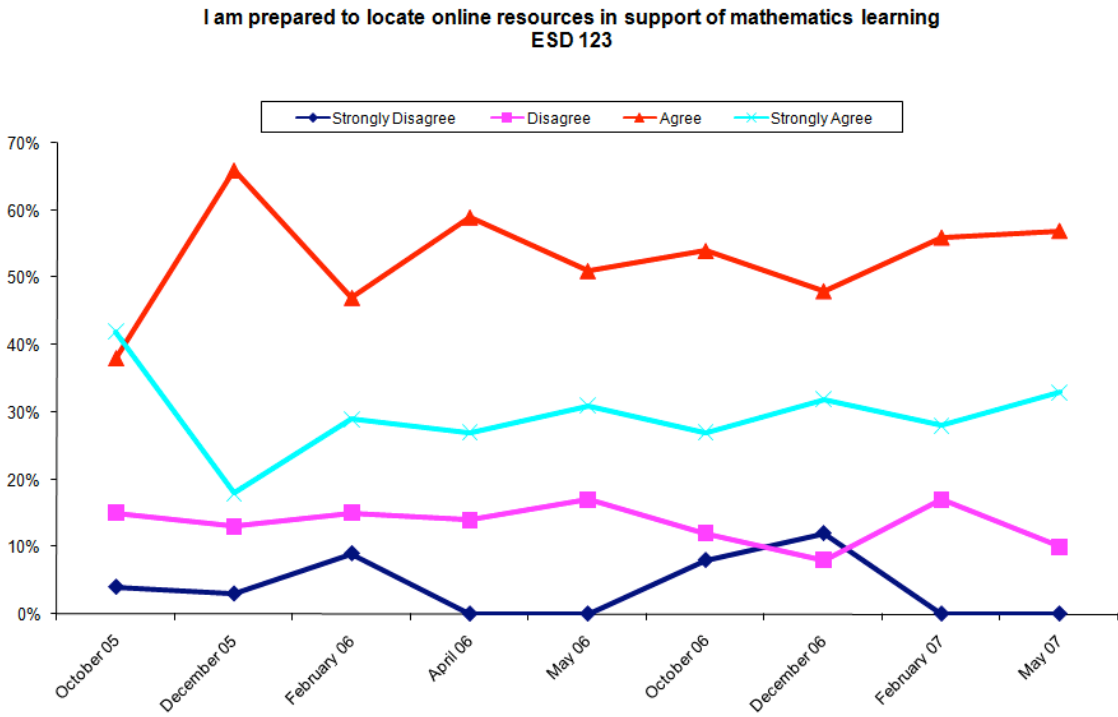
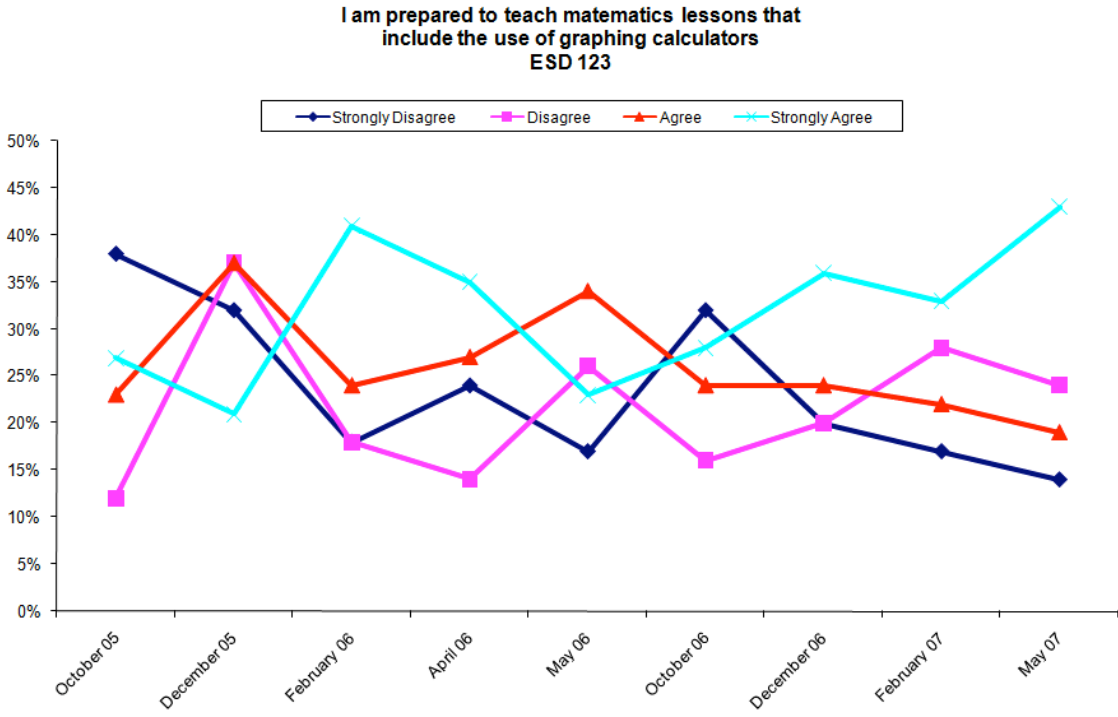


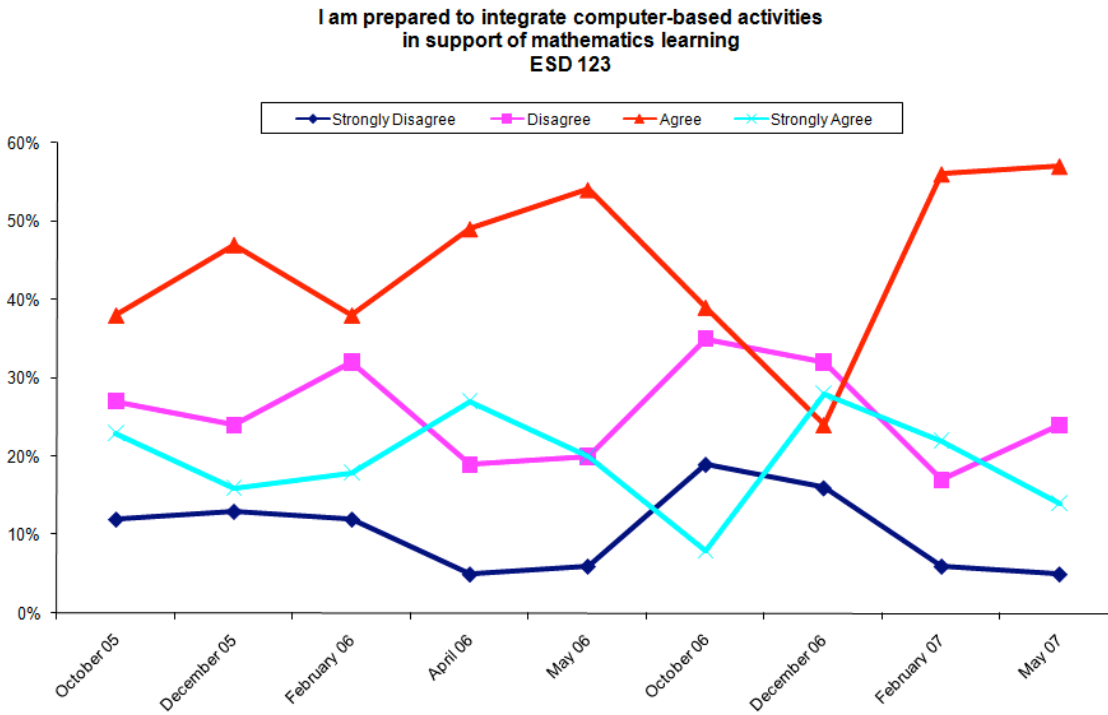
I am prepared to implement a variety of mathematical teaching strategies that incorporate problem/project based learning
ESD 123



I am prepared to involve students in hands-on, concrete mathematical experiences
ESD 123







Comments:

October - 05:

- In order to involve students in hands-on, concrete mathematical experiences I need to have access to materials that are not currently available.
- I believe our curriculum limits us to these discoveries.
- I have a minor in math and have been teaching Saxon for the past 3 years. I have not had the time nor created the time necessary to go beyond what the curriculum has to offer. My students have not had the opportunity, until this year to use technology in my math classes. I am ready to integrate that into my teaching and think they are ready to learn to use technology as a math tool.
- There is still so much I need to learn, but so little time!
- We have neither computer in the classroom not access to a computer lab.

December - 05:

- Lack materials to provide concrete materials for hands on experiences
- This is the first year I've had a document camera or a projector, so I'm learning as I go. I need to research good websites more.
- There are not enough minutes in the day for me to learn every new thing that comes along nor is there time to use even all the tricks I already know.
- It is difficult to do all the above in one lesson. Some of these I do over a period of time with separate lessons. My class works better individually than as a group. But at times they exhibit good co-operative behavior for lessons not related to math.

February - 06:

- I feel completely comfortable trying out these new ideas and practices. Finding the time to implement some of them is another matter. We are on a WASL timeline now.
- I do wish that I had curriculum that supported my hands-on, deeper understanding mathematics
- I enjoy incorporating technology into my math class but need some examples, or instruction as to how to do it more often and more efficiently. I have found some great online resources, however I have a hard time adding to our class time. I will probably feel more comfortable next year when it's not the first time that I'm teaching CMP. This year I am trying to keep my head above water with CMP and changing my style of teaching math.
- I frequently struggle with the 'hows' and 'whys' of inquiry based math.
- We are always in the need for time to visit sites and learn from others what is out there. So there are things I am doing, but there is always room to find out what is bigger and better out there.
- Need training in above

April - 06:

- I feel that I am strongly prepared to try new things, strategies, and incorporate technology in my classroom. In my short 5 years of teaching, they have become necessary tools, but also lesson enhancers.
- I am prepared to teach with online and computer activities however my students have no access to computers
- I feel like I am weak in the area of integrating computer-based activities into my math class. There are a number of factors. Two of which are time and knowledge.
- I am learning to incorporate more technology into my lessons. I'm using the projector and computer much more frequently. I probably don't use the document camera with student work as much as I should. That's my next area to focus on.

May - 06:

- Need more professional development to stay up with the technology.
- I often visit an online interactive math dictionary to help kids get a visual with a definition of a math term. This is the only online resource I use. There is so much material in the adopted curriculum- Connected Mathematics Project- I just stick to that.

October - 06:

- I am prepared, however, that does not indicate that I have the materials or resources to carry out these items
- I have no student computers in my classroom and it is difficult to take an entire classroom of students to the lab.
- Difficult to schedule time in the computer lab
- As a new teacher to the material I do not have the time to explore all the avenues available to me. I also do not have the access to computers to involve the students in computer based activities.

December - 06:

- I do not have access to student computers in my classroom. Getting students to the computer lab is very time consuming and does not usually correlate with our pacing chart.
- Need time to collaborate to find resources to incorporate into the classroom.
- I am capable of teaching and using graphing calculators, however, they are not available to the 6th grade classrooms in my building.

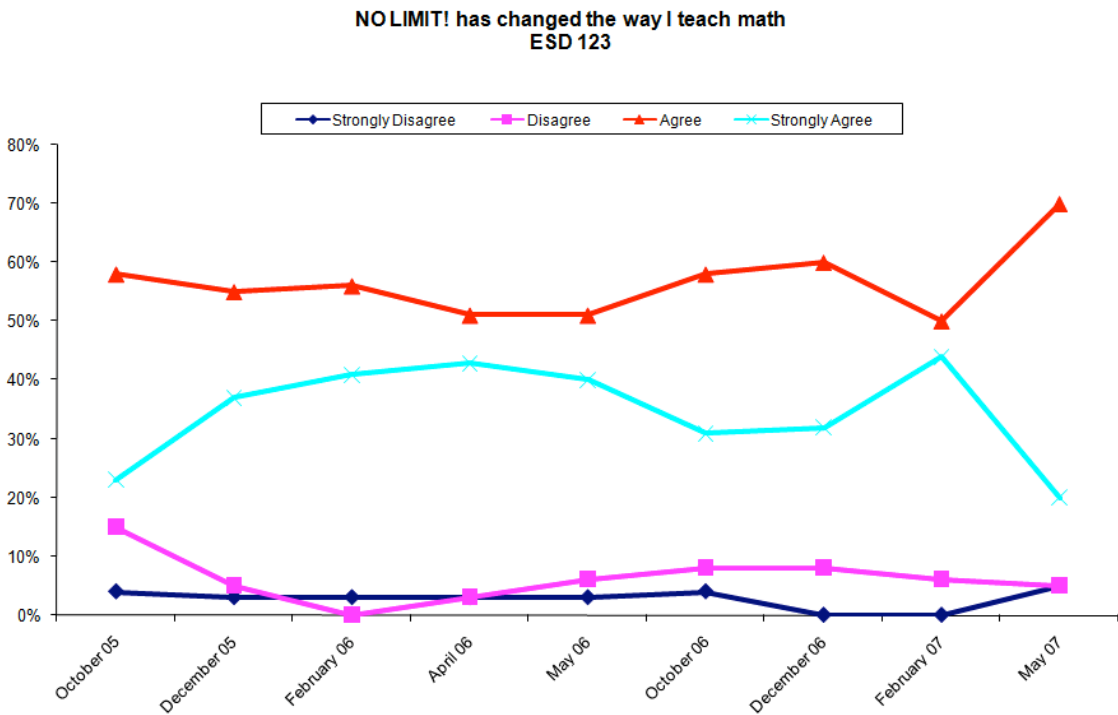
February - 07:

May - 07:

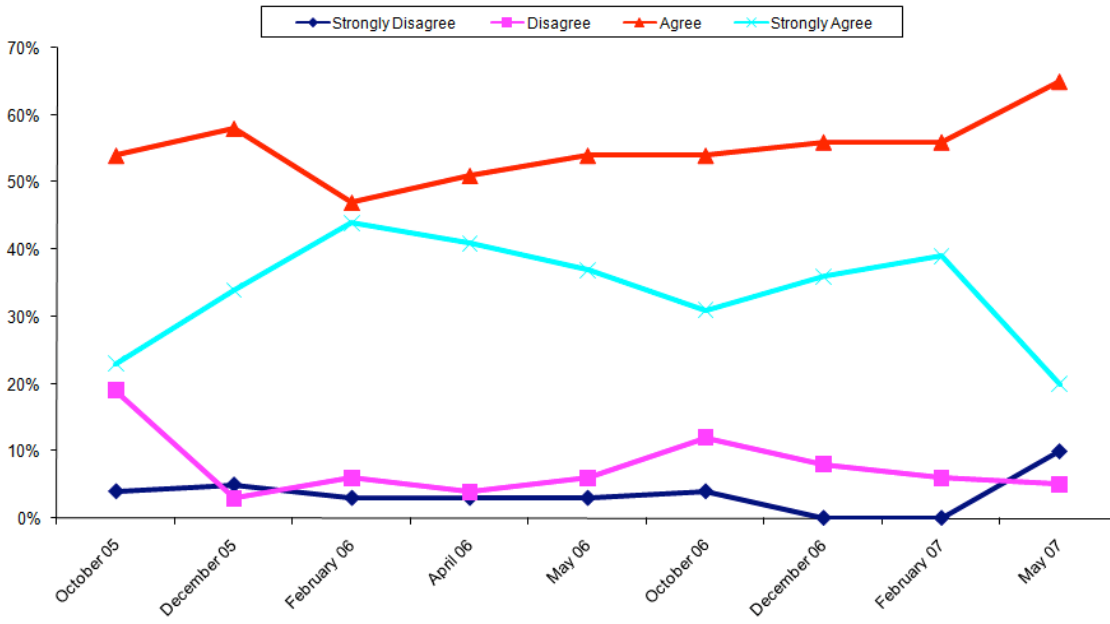
- That the present time I do not have access to graphing calculators, but it has not been a necessary instructional material.

Item 14:

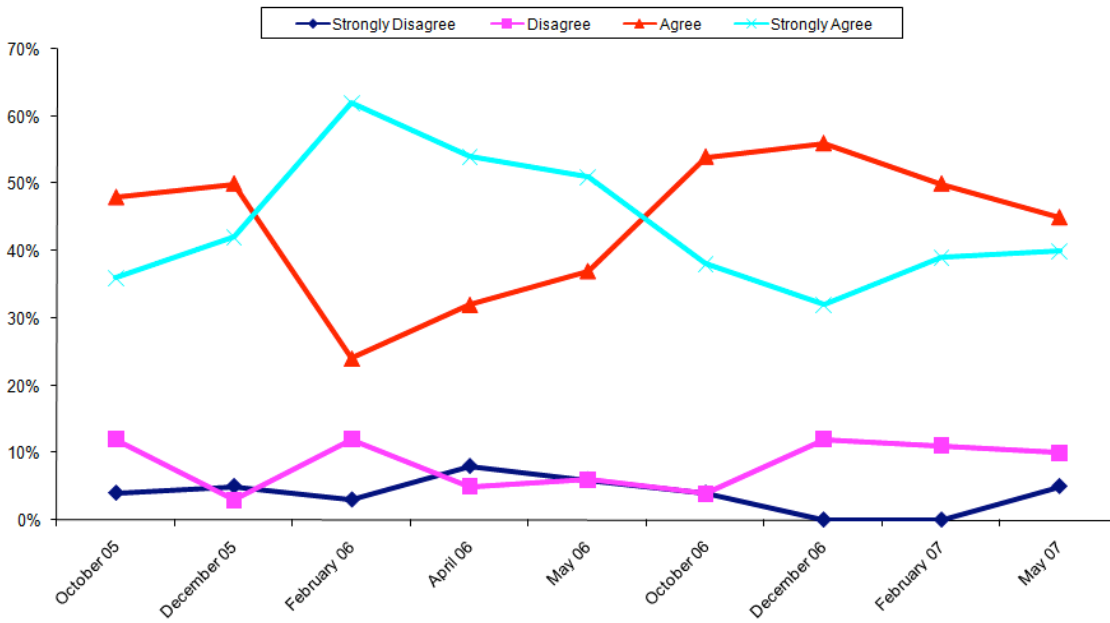
Please tell us how NO LIMIT! Has impacted your classroom. We are interested in your frank responses.



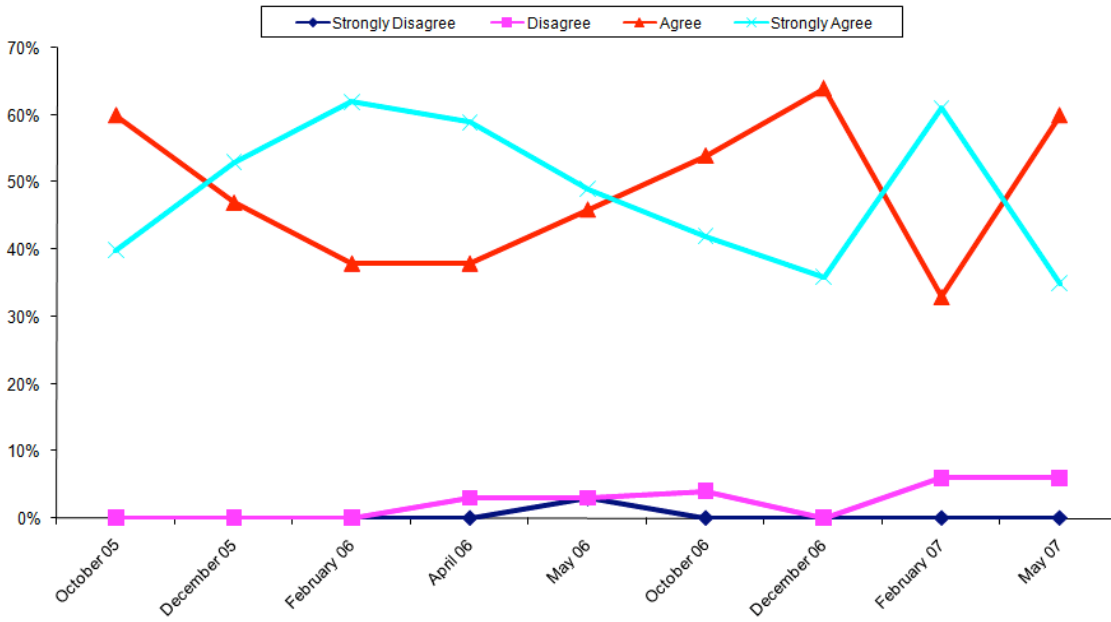
**NO LIMIT! has changed how my students learn math
ESD 123**



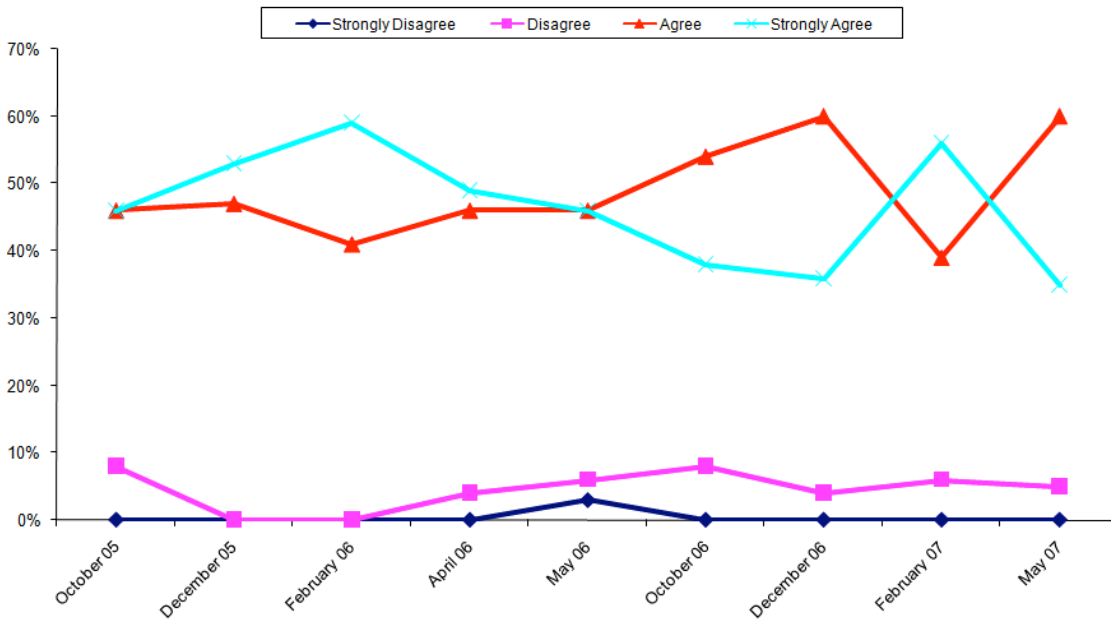
**I feel more comfortable using technology to teach math
ESD 123**



**My involvement in NO LIMIT! has benefited me
ESD 123**



**My involvement in NO LIMIT! has benefited my students
ESD 123**



Comments:

October - 05:

- Again, curriculum

- At this time my answers would be more neutral than either disagree or agree.
- Getting new technology is the thing that has benefitted me and my students the most at this time. I don't feel like I have gained any greater knowledge or understanding of math as a subject area because of the grant, yet.
- I feel the biggest changes will come when all the technology gets here and when we have had more time to implement some of the things we have discussed.
- I was involved in TELDEC years ago and so far, have seen nothing new from NO LIMIT! I have benefitted from being able to meet with co-teachers, but so far we've only had one meeting and we haven't gotten to anything that directly affects my students.
- The above section answers are based on our beginning the use of CMP--the training provided this summer will change the way I teach math.

December - 05:

- NO LIMIT has changed the face of our math department and teaching. It is engaging, challenging, and our WASL scores are improving each year. Our sixth graders this year are higher and stronger at basic math skills than previous years.
- This is my first year at this grade level, so it is difficult to compare how students would have learned without No Limit, but I do know I have benefitted and so have the students in a multitude of ways!
- Because of NO LIMIT! We now have CMP instead of Saxon. That has changed my teaching style dramatically and it has changed the way my students learn. They are now able to communicate understanding which was missing with Saxon. I actually look forward to math class and the discussions it invokes!
- A few students don't like CMP as much as a traditional approach, but with time, I believe they'll grow to understand how this technique gives a deeper level understanding.
- This is the first year I have taught Connected Math. I think that most of my responses are due to the change in the curriculum. No Limit has allowed me to visit with others that are new to CMP. I absolutely love CMP; my students enjoy it as well.
- Not only math, but all other subject areas that I teach, including science and reading.
- The document camera has made a HUGE beneficial impact
- I'm writing up my lesson plans in Smart notebook. Next year, when I go to teach each lesson, (since I don't have to recreate all that, there will be more time to change things in the plans that I'd like to and really focus on what the kids need.
- The technology purchased through your grant has helped my students get to the math quicker. When I say get to the math quicker I mean making quicker connections, understanding, discussions, etc.
- My way of teaching and the use of technology have totally changed my way to teaching math and students learning math
- My cohort has not received ANY technology training with our new items.

February - 06:

- Am going to listen to John Van de Walle tomorrow with No LIMIT. Have two of his books and they are referenced by me for topics we cover in class. He is a valuable resource and I am excited to go here him speak.
- Without the technology NO LIMIT! Has provided my students wouldn't get share their work and explain it as often as they do. I also get the chance to use my computer more often

during lessons. I feel that the time provided for collaboration amongst the PLC and whole NO LIMIT groups has been valuable also. If nothing else, it has given me new ideas and energy for teaching math.

- I find it challenging to find the time to 'play' with the technology...so that I can become proficient using it.
- I cannot live without this technology piece - if I changed schools, I would have to find a school that also has the technology.
- This is happening throughout the school (K-8).
- This is a work in progress
- The trainings are worthless and a waste of time. The only reason NO LIMIT is worth it is due to the technology I get in my classroom.
- From our meetings we have branched out to start a curriculum committee for math. These meetings have just begun and are on the right track. We have assigned material to be gathered for our next meeting.
- I was already implementing best practices. What I was missing was the document camera, which makes student sharing so much easier.
- We work both with our PLC and with the middle school math teachers in our district for all of the above.
- It has taken this year to get comfortable with using the technology and then next year some more changes will take place.
- We have met and worked on aligning our math curriculum with the GLE's, however, I'm feeling very frustrated with the whole process.

April - 06:

- The technology received in the grant has changed my teaching overall including math. Because I was exposed to CMP and the district is now adopting it my teaching style in math is drastically different. I still have a lot to learn, but it is all for a good reason!
- Our district had not really focused on the middle school math curriculum. No Limit has really changed that. I believe that student achievement will begin to improve, largely because of the support No Limit is providing.
- Can't teach without the technology anymore!
- NO LIMIT provided me with a document camera and projector, which has made doing what I do easier. It's also easier for students.
- Except for the use of document camera there has been no change
- This year has been a year to learn how to use the technology. Planning will take place this summer to change how I do things in my class.

May - 06:

- Without NO LIMIT, my classroom would be missing most of the tools used on a daily basis in EVERY class.
- I have always used and felt comfortable using tech in my classroom
- As a teacher who is in the grant for a second time I know that the first time I was in No Limits made a huge difference in the way I teach. The ESD support staff for the grant made sure that I had access to any tools that I might need. They also made sure that they came in to watch every teacher in the grant. They knew what was going on in our school and could tell give you ideas on how to improve. They also made sure that the teachers had significant

training with equipment that we received through the grant. I have been disappointed in how little help we have received this year.

- I cannot teach without the technology.
- Having the smart board, document camera, and projector has totally enhanced learning. This is seen not only in math, but also in science. Every classroom should have these three items of equipment.
- No Limit has provided the resources, professional trainings and mentoring from the No Limit people to - especially Tami Motsom
- I enjoy collaborating, but the use of school time is not beneficial to students.
- Too much time away from students

October - 06:

- Because of No Limit! We are working collaboratively to improve math instruction and we have adopted CMP II as our middle school curriculum.
- Can't teach without the technology - it makes learning math so much more fun.
- I just became involved in the program and have not done much with it yet.

December - 06:

- Can't ever go back to the old way of teaching!
- We benefit from collaborating with my colleagues and learning more math myself. We have not done anything with learning how to use technology.

February - 07:

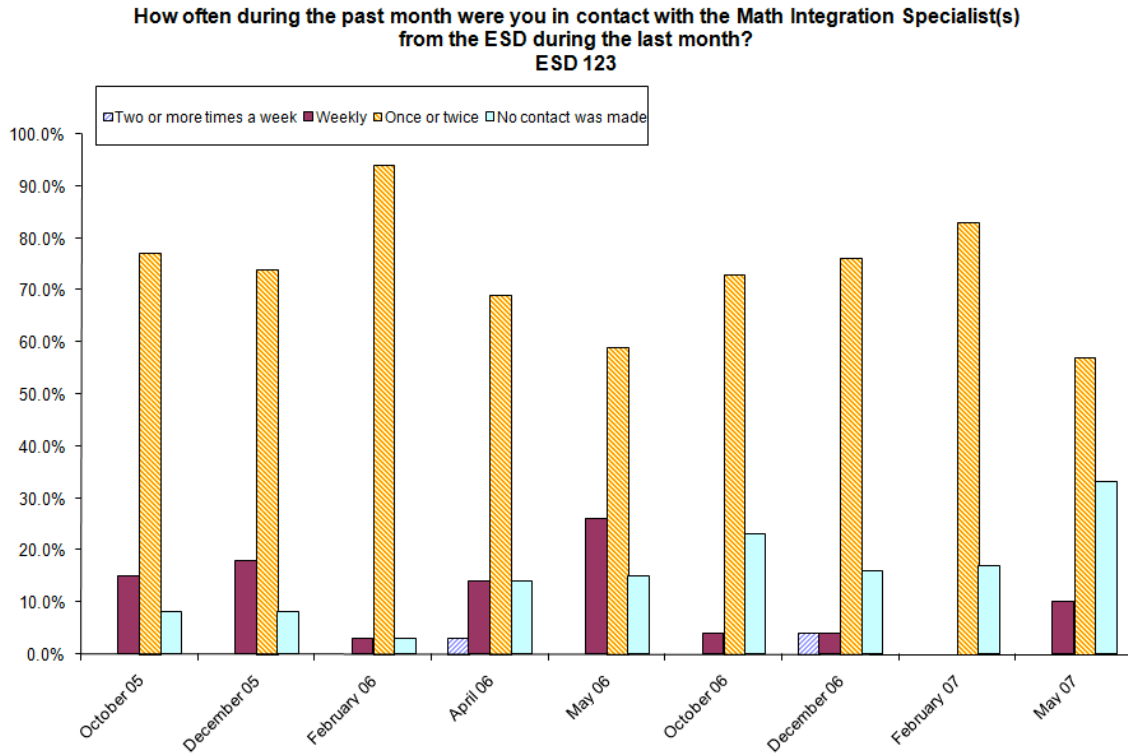
- Could never go back the old way. The technology has brought math to life - now possible to entertain the students while they are learning.

May - 07:

- The best thing that I have experienced in this profession - it totally elevated my teaching to the next level.
- I was already using best practices and technology. The benefit has been in having the time to collaborate with colleagues.

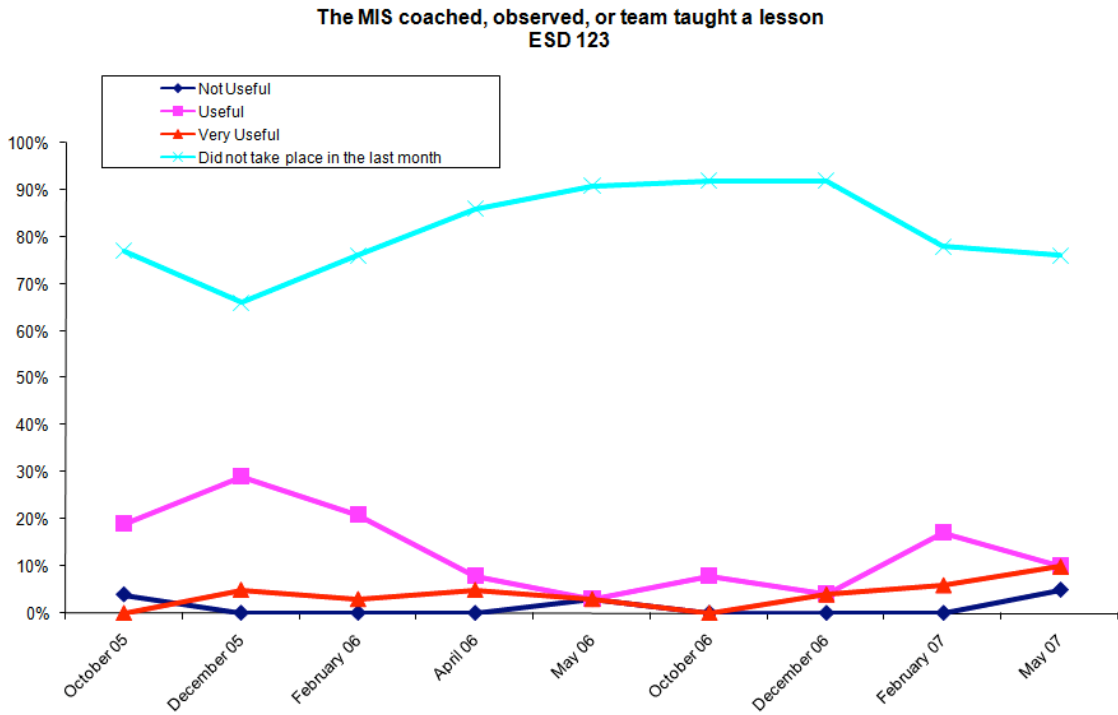
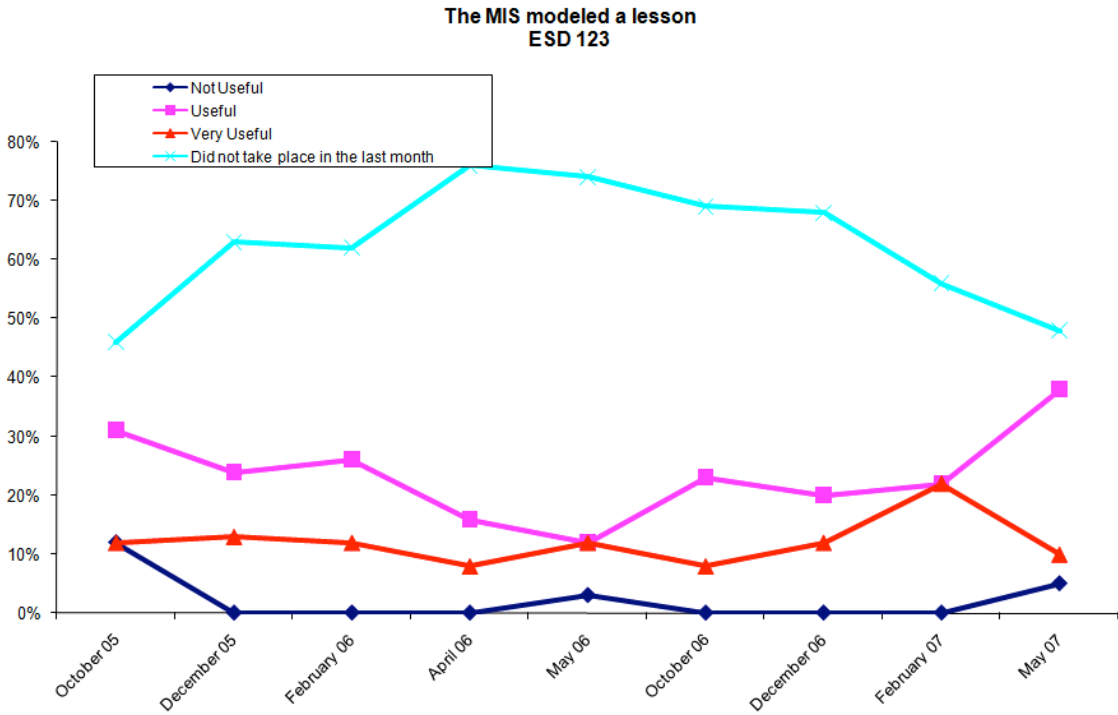
Item 16:

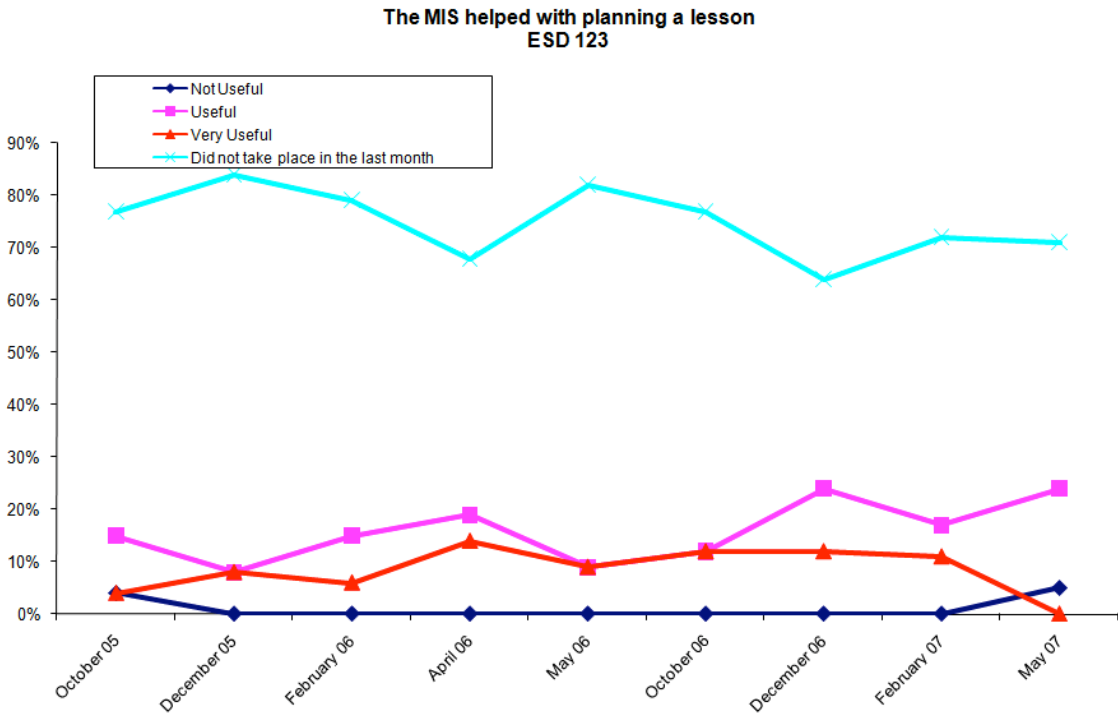
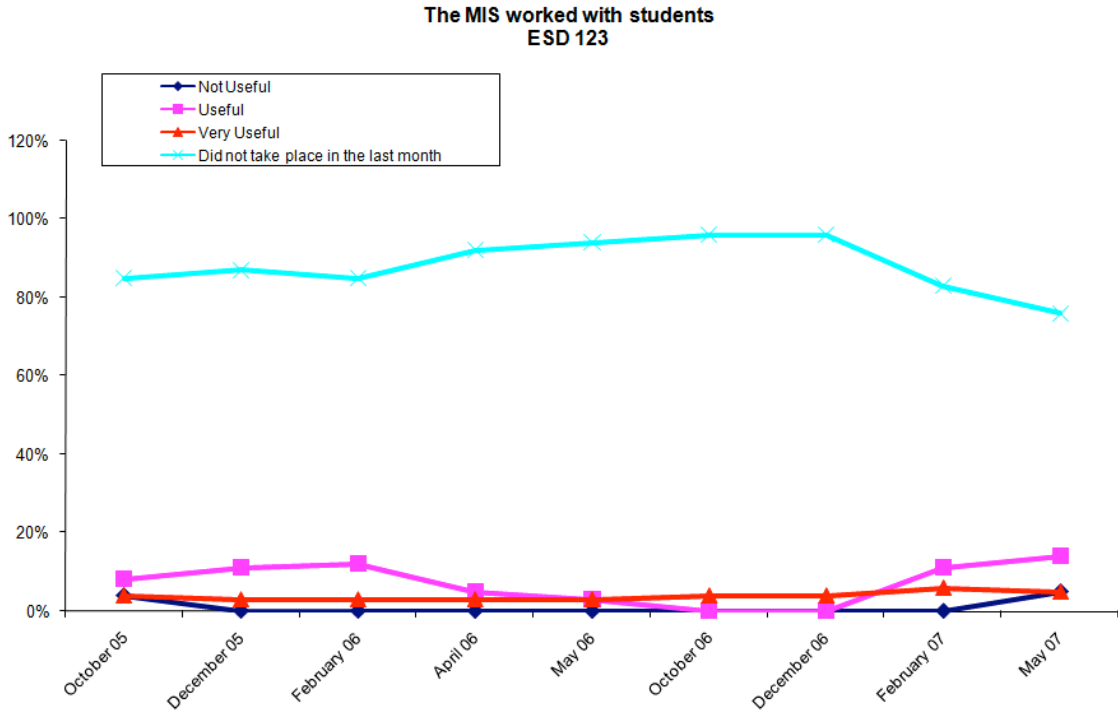
How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?



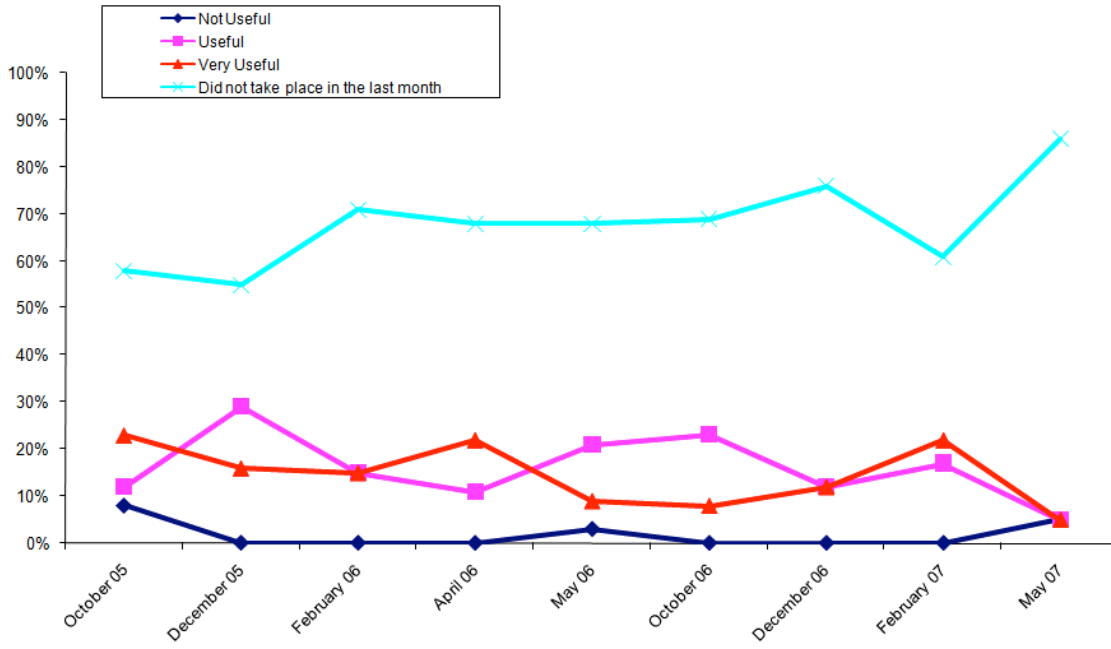
Item 17:

Please evaluate the following MIS activities over the last month.

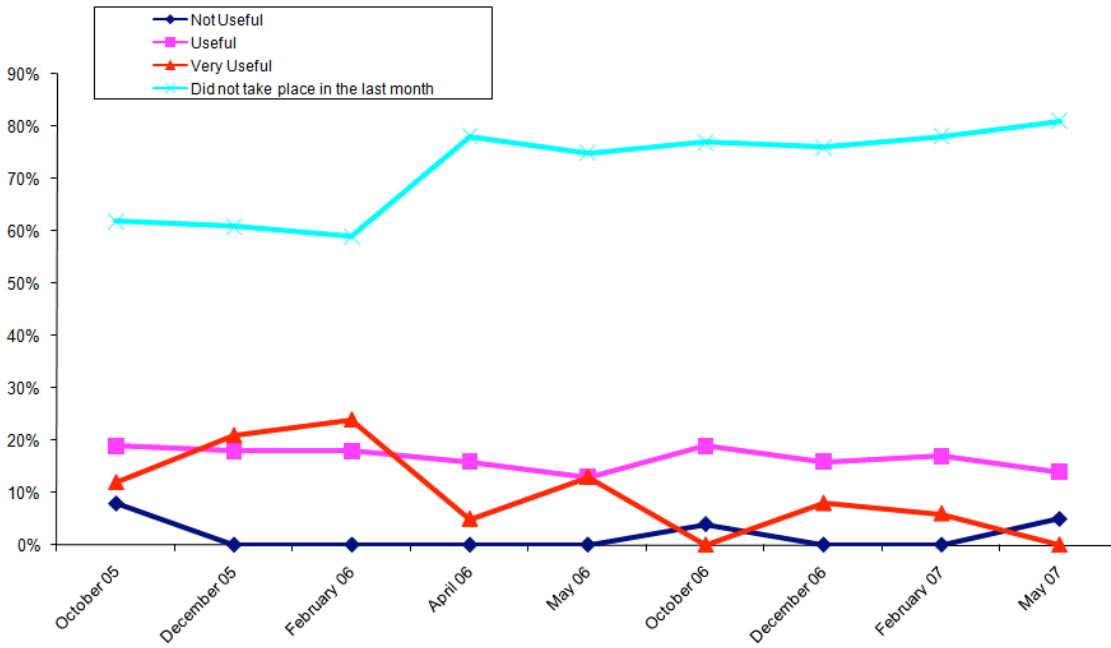




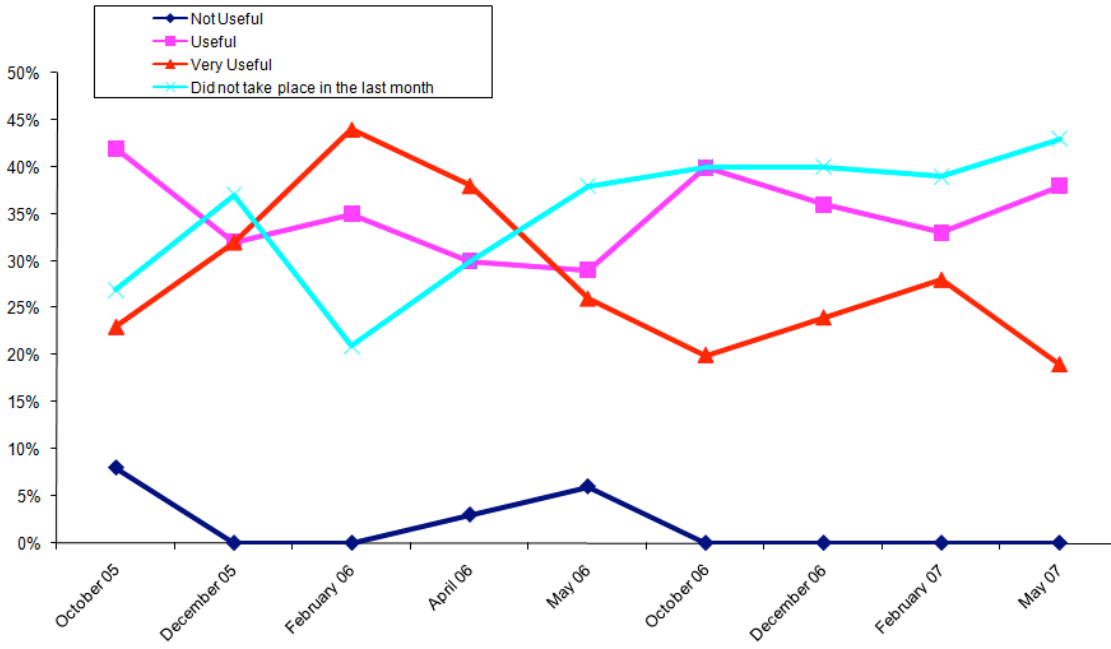
The MIS helped with schedules, logistics, or administrative issues
ESD 123



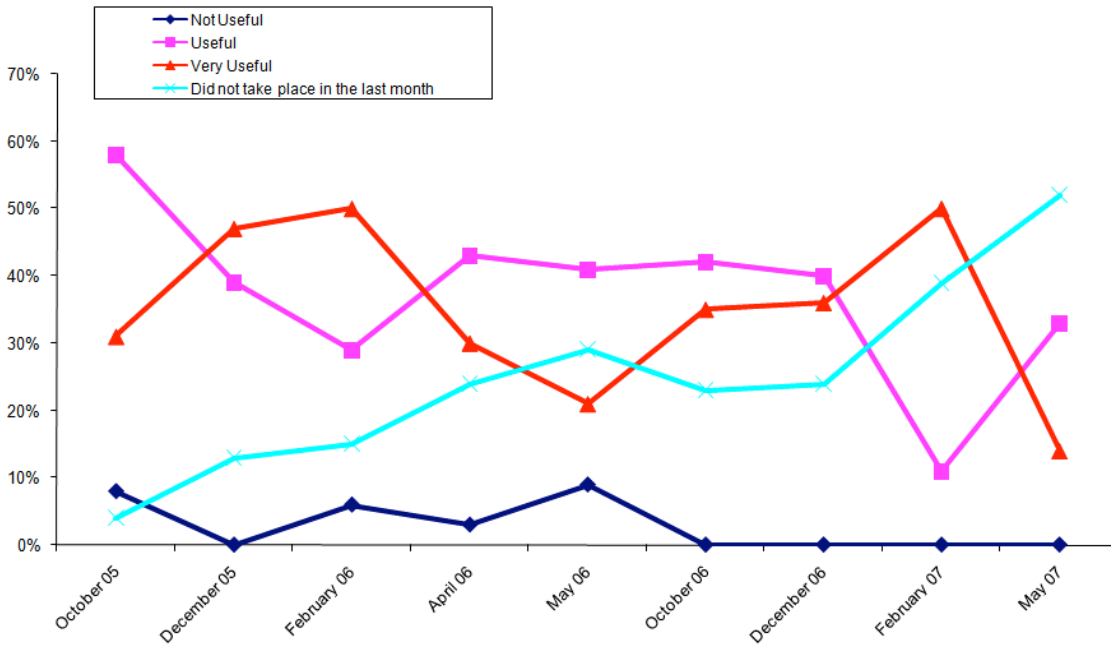
The MIS helped with technology
ESD 123



**The MIS provided instructional resources
ESD 123**



**The MIS facilitated a Professional Learning Community meeting
ESD 123**



Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

Comments:October - 05:

- Coming up with what need to focus on for the year
- The focus of your PLF was to review some aspects of best practices.
- Our first meeting consisted of identifying expectations and what we would like to learn in the next few months. Our group decided to focus on math instruction strategies that is students based.
- We are currently focusing on effective grouping strategies as well as using differentiated instructional strategies.
- Curriculum and Assessment development and alignment.
- The focus for our last PLC meeting was effort and achievement from students. It was a discussion and article review.
- The last meeting was focused on reading and dissecting our district's WASL scores. It was also used to introduce Moodle and how to use it. There was a lesson taught, but I did not find it useful.
- The focus is based on group needs and concerns.
- WE are focusing on using common assessments in our math department.
- Getting technology to the people and finding a way to help them use it successfully with students.
- We created a list of attributes of a learning community. We established needs to be productive group members.
- Motivation
- Our focus was to learn how to work together as a group. We started discussing the things we wanted to focus on this year.
- Right now we're setting goals, and getting started on using the technology.
- There is no focus and they are an extreme waste of time.
- Lesson was modeled and discussion took place about it. Read an article and discussed.
- Seeing ground rules. Deciding on priorities and common goals.
- Who is the MIS? My answers to the previous questions might be different if I knew. The focus of our PLC meetings has been on collaborating and doing projects that will help our students. Manipulatives, checking WASL numbers, etc.
- To gain support from other teachers when needed and to support other teachers when needed. We use our PLC for a broad variety of topics, including lessons, observations, second opinions, and suggestions for management issues.
- We are doing a book study.
- We are currently working with Classroom Discourse and Common Assessments
- We focused on how we/students learn and how we can conduct PLC meetings in order to maximize effective instruction.
- Differentiated instruction and group norms

December - 05:

- Very High
- Our focus is to enhance our teaching and to learn and grow from each other
- Graphing calculator training with TI navigator on 12/8/05

- To get a sense of successful cooperative learning and how to effectively use it in the classroom
- Will take place in Jan
- We have begun a books study this month, which will be very insightful. We also had the opportunity to see a lesson, which helped me directly in my classroom.
- We are working together to implement differentiated instruction and affective grouping of students.
- Common grade level assessments.
- The focus has been development and implementation of effort and achievement student self evaluation charts/rubrics.
- The last PLC meeting was different than the others. I shared a couple of tech tips that took awhile and generated some good conversations about students. We then ended up sharing personal strategies, successes, frustrations, ideas and tech tips for most of the remainder of the meeting. I found that to be rewarding for a few reasons. One reason is that it's good to vent and to share moments you are proud of in your classroom. It's also rewarding to hear that others may have the same frustrations that you are having or that they have a solution or suggestion to help you. It's fun hearing success stories and it's challenging trying to think of ways to help students become better learners. I found this last meeting to be more rewarding than any of the others. I don't feel like we accomplished much, but I did feel good walking away from the group.
- Instruction: focus being on how to 'chunk' lessons for long term learning.
- We meet once a week to work on shared lessons
- Our focus is currently setting up peer observations and collaboration in math instruction, specifically the CMP program.
- We are still focusing on common assessments in the math classrooms.
- How can No Limit benefit us as teachers and what are we going to focus on during the year.
- I feel like we are still trying to figure out what we want to do. How CMP will help us in WASL testing.
- We are working on developing an action plan and looking to troubleshoot any problems with implementing CMP in our classrooms.
- Effort rubrics
- Last month we had a person come in to train us to use the smart board more effectively.
- Haven't had one since the beginning of the year.
- A waste of time. Who knows what the focus is. What do the MIS people at the ESD do? I would much rather meet with the other No Limit Participants (only at my school/or district) to meet in classrooms and go over lessons. Share strategies and ideas.
- We worked on aligning CMP books to the Item Specs for the WASL
- We had a trainer from Smart technologies come for a day and teach us what the smart board can do and how to more easily maneuver through the program.
- Raising Effort.
- Our focus is reading the book "Classroom Discussions" by Suzanne H. Chapin. We are learning about classroom talk.
- Classroom discourse
- Best practices. Student motivation influenced by their success in Math.
- We shared successes, struggles; planned future meetings; discussed/received resources
- Differentiated Instruction

- Used to integrate rich problems into our curriculum
- Cooperative learning and differentiated instruction.
- Student motivation
- We re-discussed the topics that we want to accomplish with the No Limit Grant and relocked at the area. We had seemed to be getting off task in the previous meeting but were able to see where we did that and how that would not happen about.

February - 06:

- We are now going to each focus on three of our students and focus on one strategy and how we see those students respond to the strategies
- Had a professional development day with Mary and Tami and they demonstrated several ideas and focuses in a lesson. We had some great conversation and planning take place at the all day training.
- Using differentiated instruction and provide writing opportunities in math
- Focus of the PLC was to integrate writing into math
- Last month we focused on student work and how we can help them
- We are focusing on differentiating our instruction. Right now the focus is on one high, one medium and one low student. We plan to look at student's evidence of learning through our differentiation.
- Common educational practices.
- During our PLC we focused on applying a variety of teaching strategies for teaching mathematics. Student mathematical evaluation of work-how students evaluate themselves through effort and achievement.
- The focus of the last PLC meeting was mostly on the WASL. This is the first year that I have taught 7th grade and had the WASL anxiety. My 7th grade teaching colleague and I asked that some time be spent discussing the WASL and how to best prepare our students to be successful. That was very helpful.
- The only one this past several months was the Regional meeting. There was a guest speaker and selecting a work session.
- The focus of our PLC meetings are student and teacher mathematical discourse, common assessments, and student work.
- Focusing on student discourse
- We have been troubleshooting the CMP lessons and how they correlate to the WASL.
- Did not happen
- We are interested in coming up with problems that help the students do well on the WASL. We are also trying to incorporate "rich" problems in our curriculum.
- Computer/calculator training, focus on math goals.
- There is no focus there. I have no idea what the MIS does all day at the ESD. We have only met a couple of times this year and the meetings are pointless with no clear objectives or focus. I would much rather spend time with our district technology specialist and other math teachers.
- We are doing a book study; we do math problems that we then take back to our classes.
- We are working on implementing best practices
- Collaborate to create curriculum that involves more hands on activities/projects that we can integrate in our classrooms.
- Student Involvement and Effort.

- We are concentrating on student talk. That is, we are focusing on the interactions students have with each other and with the teacher. The objective is to get all students to understand their thinking and the thinking of others in the class.
- Student Discourse
- Writing in mathematics
- They are a 2 part focus: 1) To learn about different ways to teach certain concepts and 2) Put together rich problems and change some of our currently curriculum to replace it with the rich problems.
- How to differentiate instruction in the mathematics classroom.
- Student effort

April - 06:

- Last meeting we discussed student work from various grade levels and it was interesting to listen to the comments from a different point of view
- Our Meetings center on solidifying our instructional strategies as they happen in our rooms and our district.
- Focusing on students work trying to understand thought process and see what things that can be changed to help student engagement.
- Was ill and did not attend
- We currently focus on differentiating our instruction to better meet the diverse learning needs of students.
- Questioning strategies and how are they helping students?
- Our PLC focuses on research articles and implementation of the practices from that research in our classrooms.
- The last PLC meeting was focused on the teachers in attendance at the meeting and their struggles and successes thus far in math for the school year. It is helpful to listen to others talk about their struggles because it helps me feel human. With the little experience I have it is a reminder that even the experienced teachers are experiencing some of the same things I am. On the flip side, it's helpful to hear strategies and ideas to help with some of the struggles I may be having.
- None this month.
- Participating in math 'games' that do not apply to in-the-classroom support.
- We had been focusing on aligning curriculum with GLE's; now we're focusing on student achievement. We plan to share student work at upcoming meetings to analyze how best to implement the CMP math program for individualized needs.
- The focus of our PLC meetings is on student discourse and student work.
- Student Discourse
- TO come together to find ways to teach our students better and to better prepare our students for the real world and standardized tests.
- Enriched problems and hands-on applications.
- Based around troubleshooting CMP and WASL preparation.
- We try to find "rich" problems to add to our current curriculum. Our goal is to have one for every chapter of each level.
- Not quite sure...
- Encouraging students to succeed in math

- We are doing a book study, working math problems together, sharing student work, and journal writing.
- We do math, which increases the base knowledge of some of our members. We discuss best practices. Our attempts at looking at using technology have been fraught with bugs.
- Student Achievement.
- The focus is on student talk moves. Increasing the way students can discuss with each other for understanding.
- Models of fractions
- Differentiated Instructions and WASL writing
- Work on classroom curriculum for at least the last meeting.
- Differentiated instruction and Math writing
- Discussion on good practices in the classroom across grade levels

May - 06:

- I was unable to attend last PLC because of a shortage of substitutes in our district
- Our PLC meets regularly during our early release times. The focus usually aligns curriculum issues and recently aligning part of curriculum to GLEs.
- Differentiated instruction and incorporating writing into the mathematics classroom
- PLC focus was on sharing what and how students are thinking when working specific problems
- We have discussed professional development, and have really looked hard at what type of teaching is needed in mathematics that fosters mathematical understanding.
- Preparing for No Limits meeting on the 18th of May.
- The focus of the last meeting was "next steps". It was our last, so we were discussing how we would like to use the No Limit money we've received for next year.
- Math strategies
- Best practices in math, planning future units
- We did not have PLC meetings.
- Using smart board lessons in our curriculum
- Planning curriculum, aligning with state standards.
- Discourse (Teacher and Student)
- Focusing on Share Fair
- We worked on preparing ourselves to teach better in the classroom using CMP. We also worked on ways to help our kids do better on the WASL and how to use the website.
- Putting in enriched problems into our current curriculum and supplementing for the WASL in our curriculum.
- We were getting prepared for the Share Fair and what to do next year since our district got the grant again.
- Motivation
- We have been trying to add a "rich" problem to every chapter of our curriculum.
- Sharing student work. Receiving a math lesson from the MIS
- Sharing student work, a book study, sometimes worked with math problems
- Best Practices
- Our focus has been to work on finding and implementing enriched problems into our curriculum.
- Student Achievement and Effort.

- Classroom discourse. Students used different talk moves to interact and understand each other.
- The PLC was student discourse
- Our PLC focus was on collaboration, sharing, reflection, and growing.
- Differentiated instruction
- Putting rich problems into the curriculum.
- Mathematical writing and differentiated instruction.
- Not sure

October - 06:

- Working across grade level to determine greatest needs of our students.
- Algebra content, what are the big ideas
- We are focused on differentiated instruction.
- Discussion focused on how better to serve the students who are struggling with math concepts.
- The focus of our first meeting this year was to map out our goals for the year. We discussed reflection strategies and ideas to improve student reflections.
- Engaging students
- Goal-setting, determining a focus for the year as a group
- To increase student achievement and academic performance
- To work as a team and develop interactive smart board lessons. To revamp current curriculum and to change the way of our teaching to reach more students.
- We are working towards connecting our classrooms via K-20 or doing classroom visits. Teaching mathematics in a CMP style and using technology in math instruction.
- We are trying to implement "rich problems" into our curriculum along with WASL modules.
- Haven't met yet to decide
- We are working on vertical teaming
- Increasing meaningful reflection; increasing communication; increasing collaboration and colleague classroom visits;
- Differentiated instruction
- Integrating rich problems into the curriculum
- Collaborative learning and differentiated instruction
- I just started this year and so far there has been only one. I couldn't tell you what the focus was. I think we were just discussing how things were going in our class, but then it digressed into someone's trip to China. I think they were trying to hook that to education, but I wasn't sure how that fit into anything we were discussing.
- To provide more options for educating students with hands-on activities and cooperative learning opportunities for kids
- We are still developing a focus for this year.
- Orient new teachers to resources available
- Just to meet everyone and get an idea of what to expect.

December - 06:

- Improving student performance across the three grade levels
- Differentiated instruction and mathematical discourse
- Out of town due to family matters, did not attend

- Our discussion focused on student reflection, the importance of students reflecting on their mathematics and their own mathematical thinking
- We focused on a previous session we had all recently attending hosted by Sandy Atkins. We also discussed a book that we are all currently reading. (The World Is Flat)
- Student Learning
- Ways to help students learn more about math
- Working on bringing hands-on projects, rigor and engagement to our entire department.
- We are discussing the book "the World is Flat" by Thomas Friedman. We are also working on catching PLC members up with the CMP program that the Middle School teachers use. Also, we have been discussing Best Practices and how teachers use united streaming videos in their classroom.
- We are adding "rich problems" to our curriculum so that students have problem-based activities along with traditional curriculum.
- We looked at teaching styles and methods
- Looking into Best Practices
- Collaboration, professional development, growing from where we are, gaining resources, visiting colleague classrooms
- Differentiated instruction
- Integrate rich problems into the curriculum
- Differentiated Instruction
- Differentiated instruction and assessment
- We read a book and discussed it. I am not sure that I liked the book, which means that I hated it. However, I did really enjoy the discussion.
- To provide other teaching methods
- Student discussion of mathematical concepts/ideas.
- To share with my peers the many learning styles that have worked for them so that I may be able to implement these strategies into my arsenal of tricks.

February - 07:

- Focus on placement of students in math enhancement for remediation of basic skills
- We can decide what the main focus will be and how the time will be most useful to the six of us
- The focus of our PLC is mathematical learning and instruction. The language of math and how communicating mathematically is important.
- We focused on the WASL and integrating writing into math.
- To narrow the focus of our curriculum and to embed the technology daily to our lessons. To work on implementing WASL problems and strategies for successfully answering WASL questions.
- We have been focusing on preparing for the WASL and looking at videos about mathematics instructional practices.
- Using the PUSH technique
- Continued learning about successful CMP instruction.
- Differentiated instruction
- Putting rich problems into our curriculum.
- Differentiated Instruction
- Differentiated Instruction and Assessment

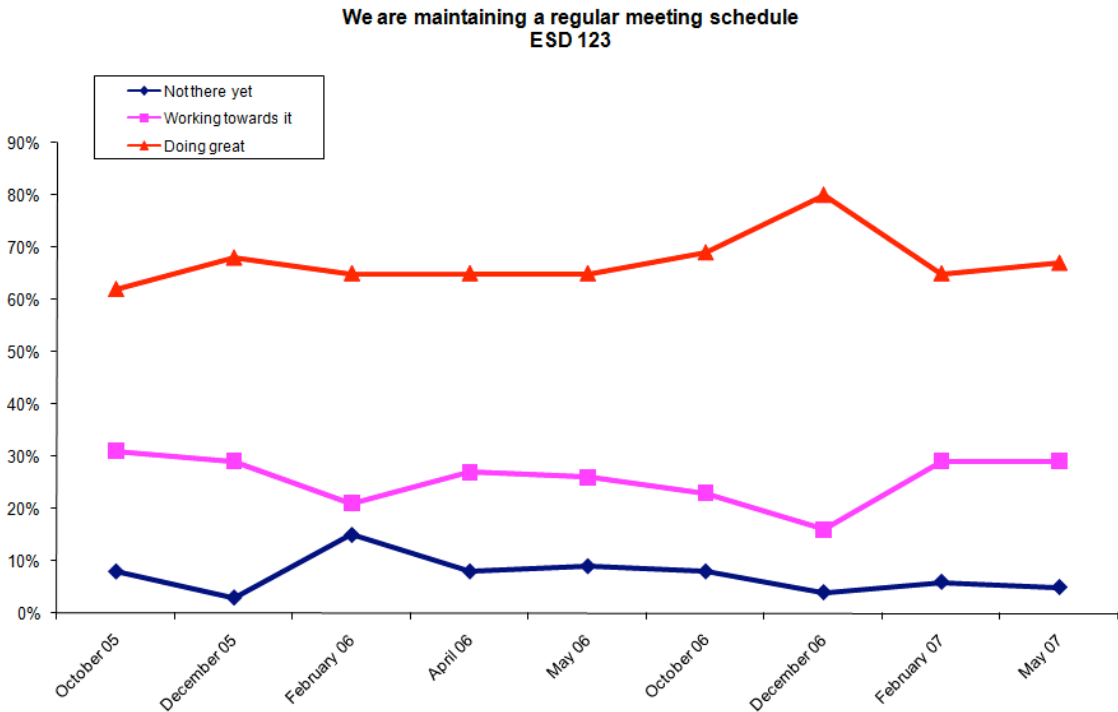
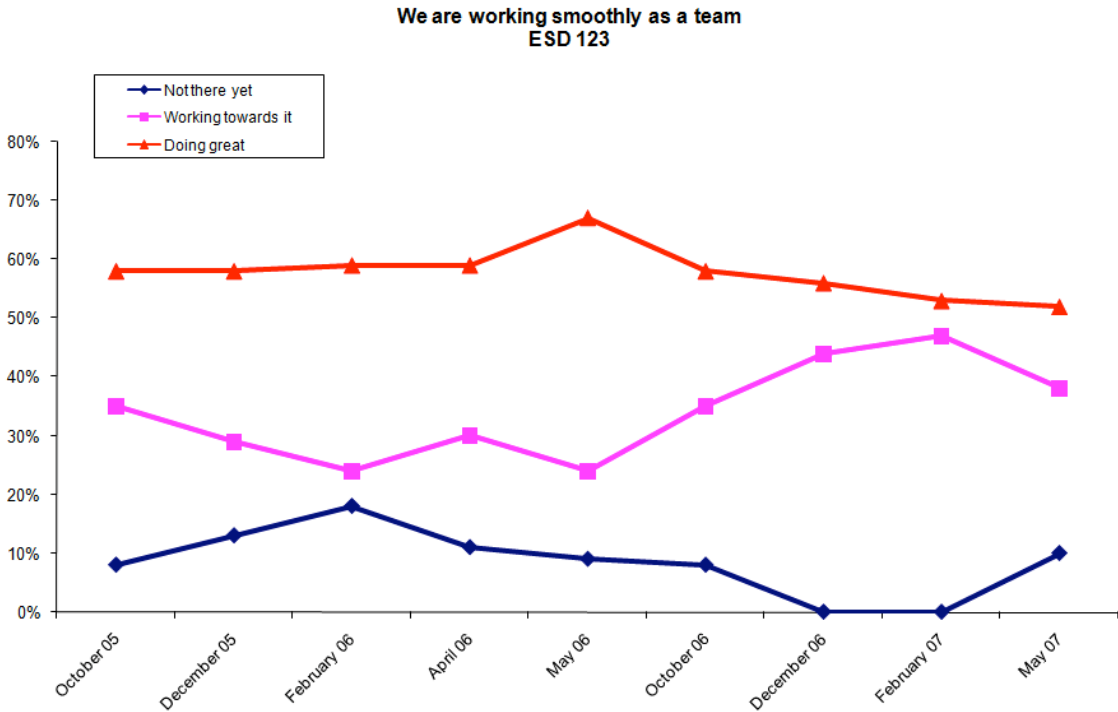
- Student discussion of mathematical thinking.
- Sharing resources and know-how

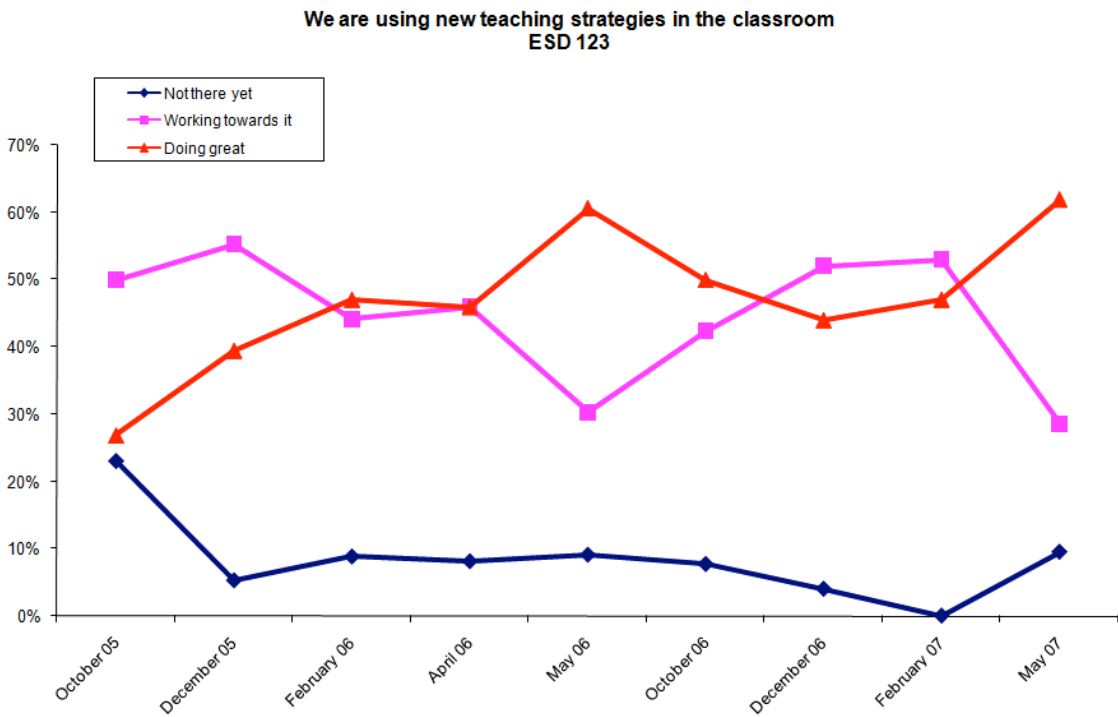
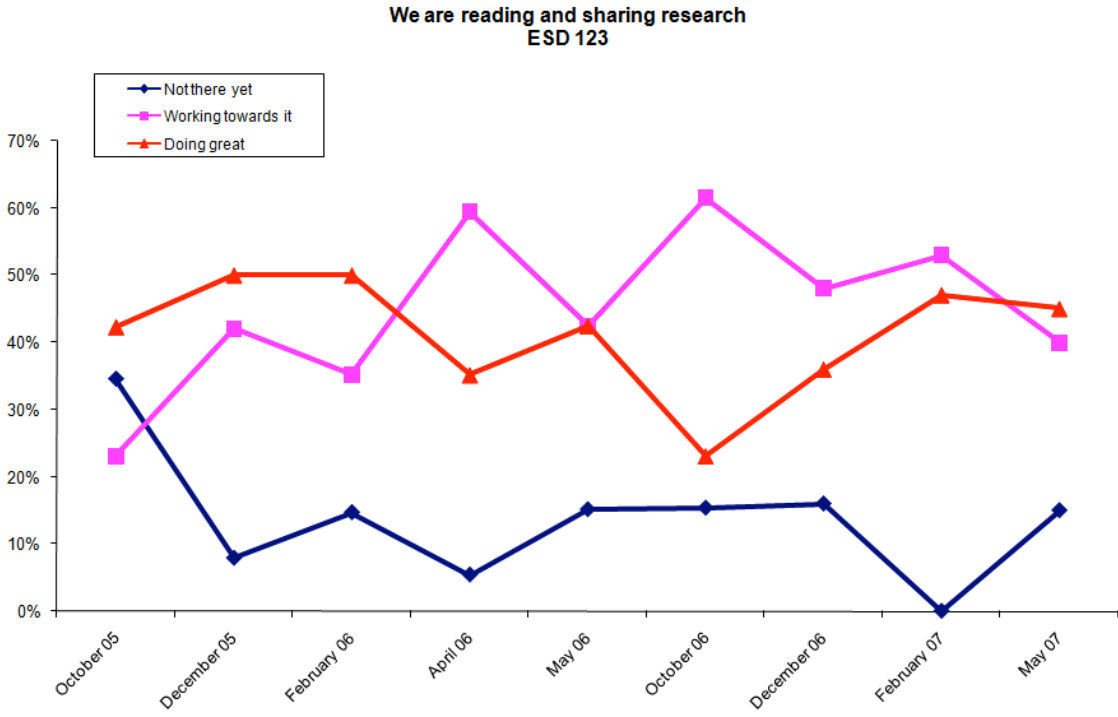
May - 07:

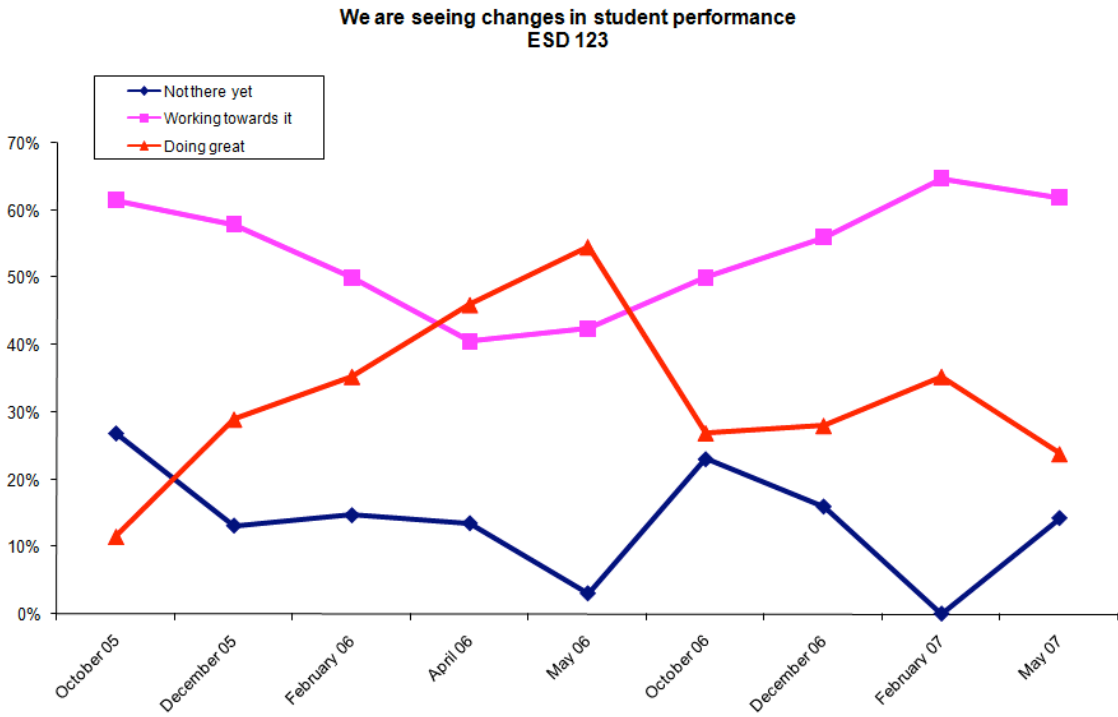
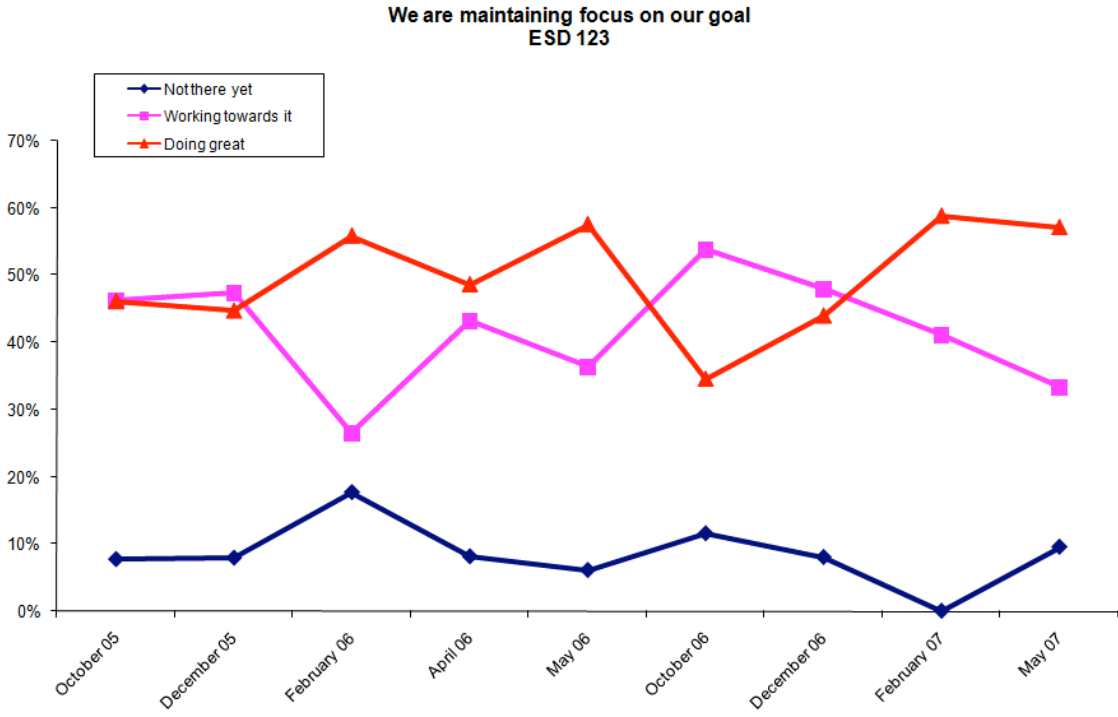
- Struggling students
- Developing spiral curriculum
- Our meetings were focused on the language of mathematics and the communication in the mathematical classroom.
- Best practices
- How to use the technology in the classroom and trying to better prepare our students for the WASL.
- To focus on the main topics for each chapter and cut out what was not needed. Implement modules into each chapter to give students a more in depth understanding. Use more visuals and manipulatives to engage and reach more students.
- WASL
- We worked together to make our lessons more meaningful. We incorporated problems to help students be successful with WASL problems.
- Using CMP materials
- We were rather unfocused. I still haven't been able to figure out why.
- Learning new pedagogy as per CMP; collaboration
- Differentiated instruction
- Integrate Rich problems into the curriculum.
- There was a focus? It was too fluid, I thought. The leaders depended too much on what we should bring. I thought that lacked direction. Plus one of the leaders was the WORST, most INEFFECTIVE teacher I had in Graduate School. It was hard to take her seriously
- Look at curriculum, teaching strategies, reflect on lessons, technology
- Student discussion of mathematical thinking
- Integration of CMP
- Discussion of connected math series and consistency between elementary and secondary.

Item 19:

Please evaluate the effectiveness of your PLC meetings.







Comments:
October - 05:

- Have not had enough time to evaluate some of the above comments

- What goals, what focus? I have no idea what the PLC consists of or what the purpose of the last meeting was. I would like to meet with other 6th grade teachers and go over curriculum.

December - 05:

- ESD contact came to our book study "Classroom Discussion" and shared her views, as well as how she knows the authors.
- It's easy for us to say we are using new strategies because we have started using CMP and you have no choice but to use new strategies. (That is a good thing!)

February - 06:

- Teachers have been attempting to be more focused in their questioning of students. In doing so, the students are getting better as well. Starts with the teachers.
- Should we be meeting more often?
- The student talk moves that we do are showing that others do understand others thinking and their own by what is said and written.
- We switched from differentiated instruction to effective writing and mathematics
- It's so bad our principal has cancelled our remaining meetings until he finds a "better" set up.

April - 06:

- Have shared chapters from books, did a book study, and have used "Talk Moves" in our classes. Have the "Talk Moves" posted on our desks or Document Cameras to constantly reinforce the strategies.
- As the year draws to a close we are winding down, but it is easy to look back over the year and see how the meetings became more meaningful as the group got to know each other better and became more comfortable. The meetings during the last half of the school year were more meaningful than those earlier in the year.

May - 06:

- Book study "Classroom Discussions" has changed the way I teach.
- We maintain a regular meeting schedule however no everyone gets to attend
- Still need more time to collaborate and implement.
- I have seen a huge change in our student performance by using student talk
- Yuck

October - 06:

- Regular meetings are scheduled; however, we do not always get substitute teachers in the classroom so we can attend
- Again, not sure I can really answer as this was my first meeting just a few nights ago.

December - 06:

- We are constantly changing our lesson plans to become more effective with our students.

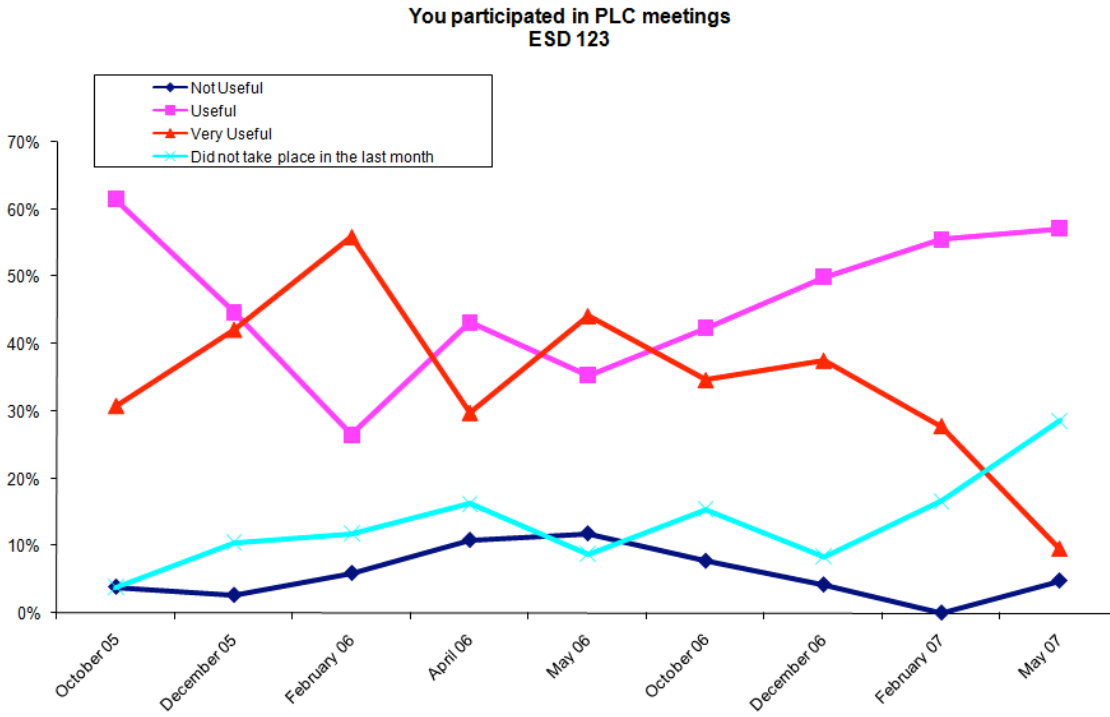
February - 07:

- Having a team of five is huge in making changes. You have 5 people willing to work together to change and grow together. It would never happen if you only had 1 or 2 from your department.

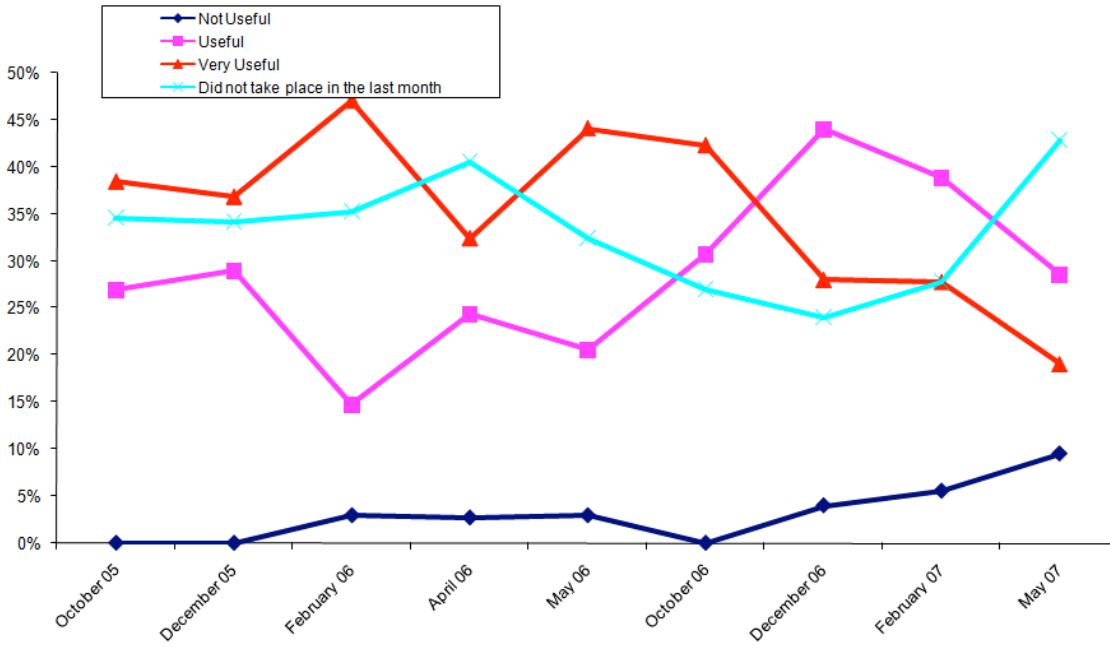
May - 07:

Item 20:

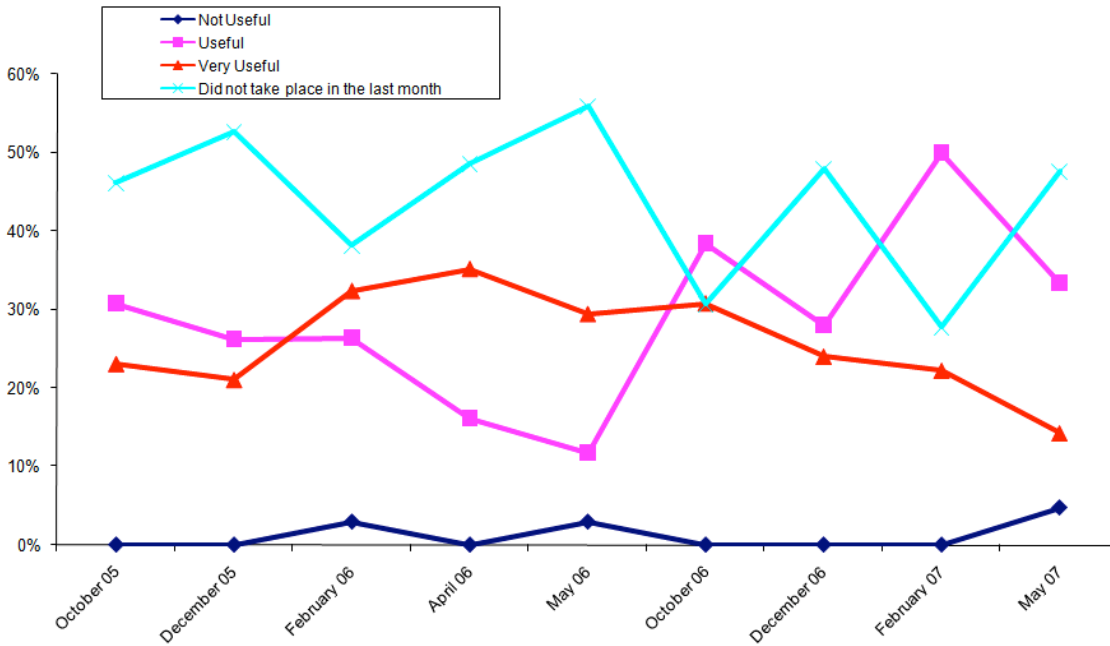
Please evaluate your PLC over the last month.

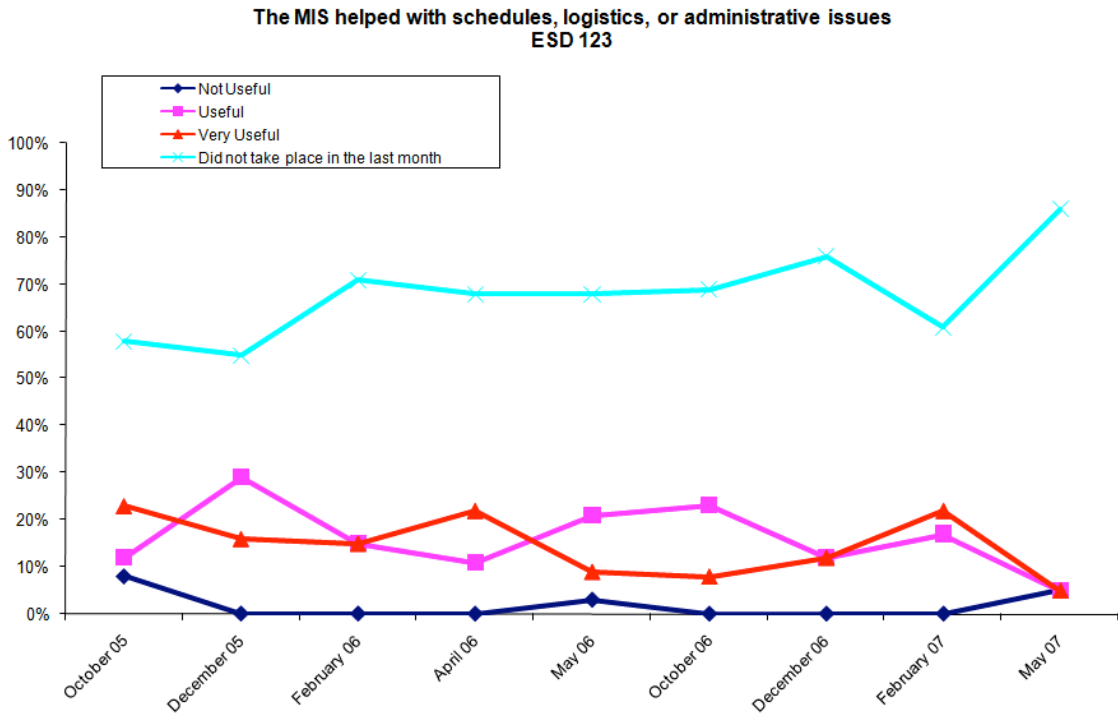
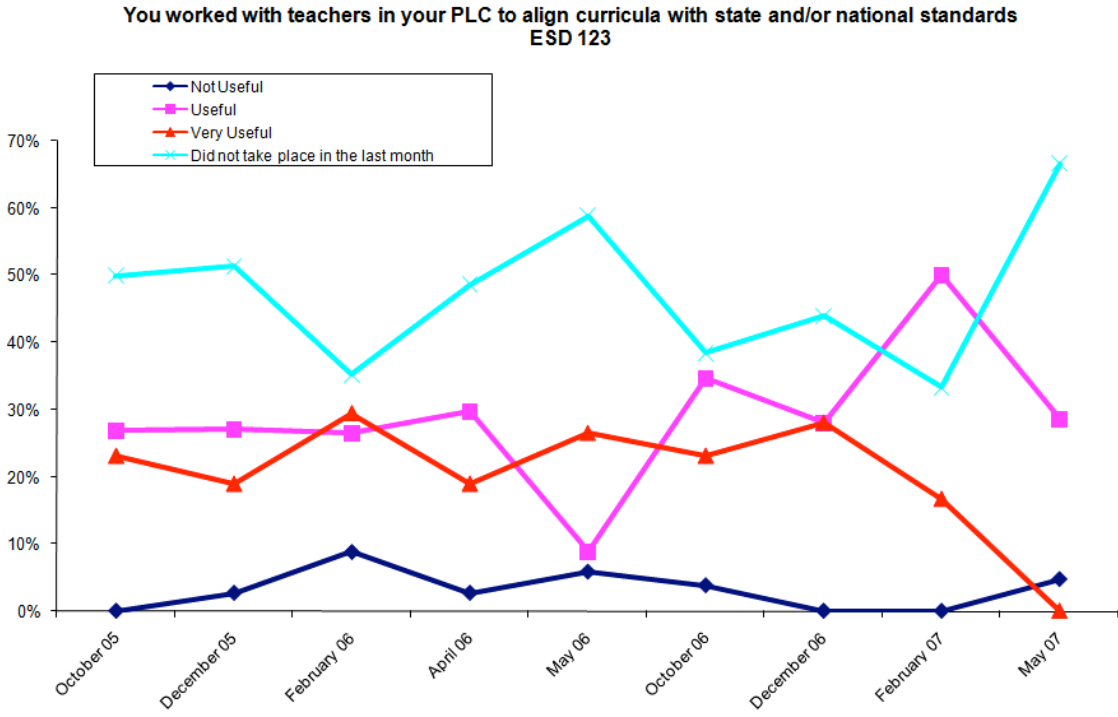


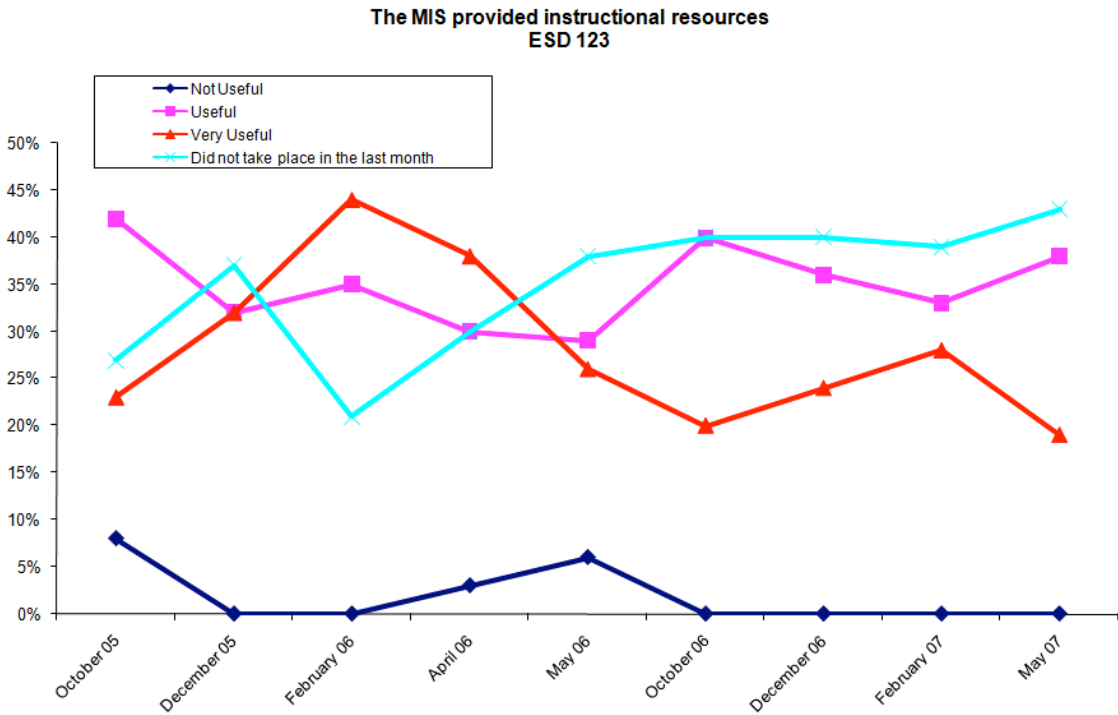
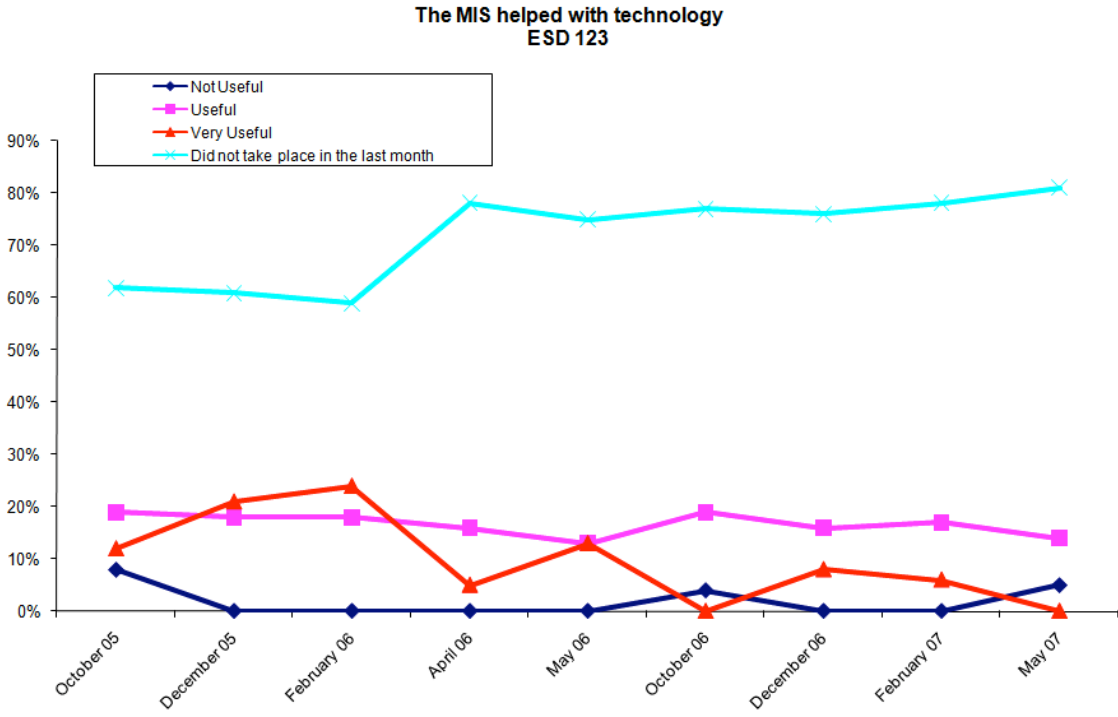
**You collaborated with other teachers in your PLC to plan or teach lessons
ESD 123**

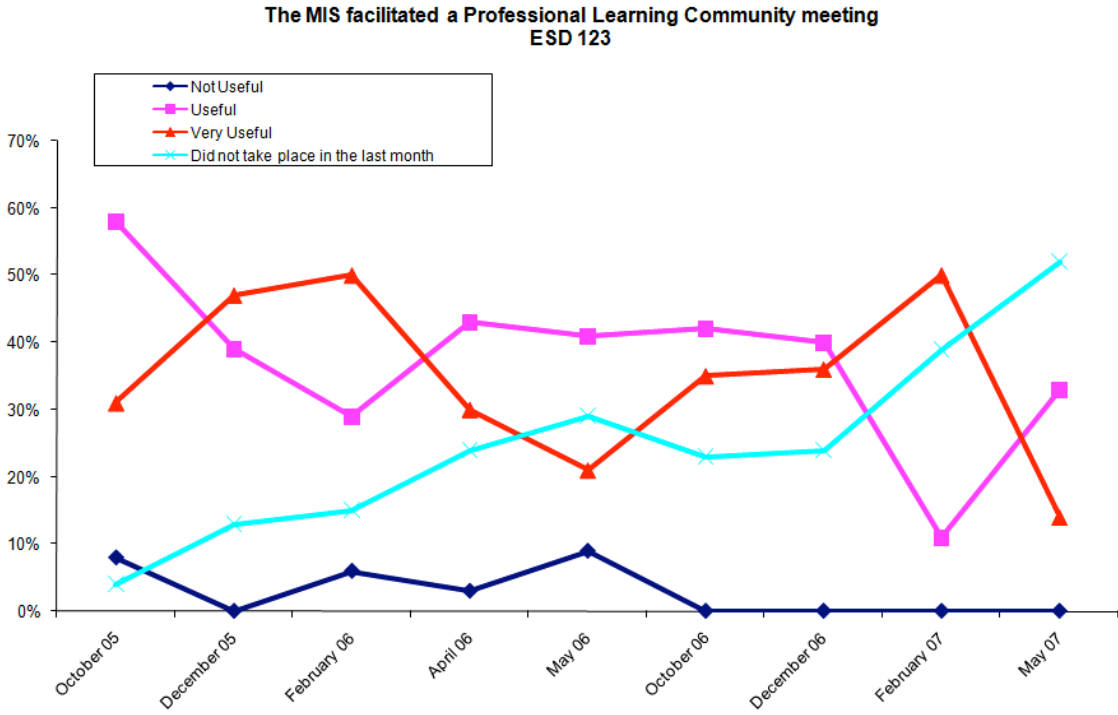


**You worked with teachers in your PLC to align curricula across grade levels
ESD 123**









Comments:

October - 05:

- We did not plan anything or discuss aligning any curricula at our PLC meeting. We did discuss team dynamics and what it takes to make everyone feel important with the PLC. That was helpful b/c it creates a supportive environment (hopefully)!

December - 05:

- None

February - 06:

- None

April - 06:

- The John Vanderwall seminar was a great thing to do!
- The alignment had already been done, so we didn't need to take that on.

May - 06:

- Again I was unable to attend last meeting as scheduled
- The only good thing to come out of the PLC meetings is the Vanderwahl presentation back in February.

October - 06:

- None

December - 06:

- None

February - 07:

- None

May - 07:

- Maternity leave during month of April

ESD 171

Year Five

North Central ESD 2005-2006

Year Five of No Limit! Report

Staff:

Math Integration Specialist: Ted Edwards

Part Time 210 days starting July 1, 2005 to June 30th, 2006

Math Integration Specialist: Mary Jane Ross

Part Time at 200 days starting July 1, 2005 to June 30th, 2006

Math Integration Specialist: Joyce Stevens

Half time at 129 days starting July 1, 2005 to June 30th, 2006

Math Integration Specialist: Brent Morrison

Half time at 40 days starting July 1, 2005 to June 30th, 2006

I. Training and professional development provided for teachers:

a. Title: NO LIMIT! Summer Training

Time: 3 days, 6 hours each day = 18 hours

9:00 am to 4:00 pm each day with 30 mins. for lunch!

Date/s: August 15th, 16th, 17th 2005

Content: Grant goals and expectations. Technology demonstration involving two different document cameras. Problem solving in the middle school classroom with and emphasis on communication was a big focus. Time was also dedicated to training all participants on the GLEs. Those with sufficient training already were given time to start aligning their curriculum to the GLEs.

Monday, August 15th {9:00 am to 4:00 pm}

- 9:00 - 9:30 Welcome, Registration and clock hours, name whip
- 9:30 - 11:00 No Limit grant overview, expectations and assessment
- 11:00 - 11:15 Video: Kate Popejoy, Western Washington University
- 11:15 - 12:00 WWU Pre-Survey, computer lab
- 12:00 - 1:00 Lunch
- 1:00 - 2:15 A tale of two teachers
- 2:15 - 2:45 Technology Hardware/Software ordering guidelines, resources and procedures
- 2:45 - 3:15 Goal setting using district data
- 3:15 - 4:00 Journaling and writing in math

Tuesday, August 16th {8:00 am to 3:00 pm}

- 8:00 - 8:30 Fun (Poker)
- 8:30 - 9:00 MIS Role (what we are and are not)
- 9:00 - 9:30 "8 Men in a Boat"

- 9:30 – 12:00 Problem Solving (Improving Communication Scores in the Middle Years)
- 12:00 – 1:00 Lunch
- 1:00 – 2:30 Problem Solving (Improving Communication Scores in the Middle Years)
- 2:30 – 3:00 Journaling and Writing in Math

Wednesday, August 17th {8:00 am to 2:30 pm}

- 8:00 – 8:30 People Hunt
- 8:30 – 9:30 GLE Document Structure
- 9:30 – 11:30 Practical Aspects of Deep Alignment
- 11:30 – 12:00 Lunch
- 12:00 – 12:30 Deep Alignment with Instructional Materials: Part I
- 12:30 – 1:30 Deep Alignment with Instructional Materials: Part II
- 1:30 – 1:45 Grant Overview Review
- 1:45 – 2:15 Journaling
- 2:15 - 2:30 Post-Survey

2. Title: NO LIMIT! Fall Regional Training

Time: 1 day = 7 hours

Date/s: October 5th, 2005

8:00 am to 3:00 pm with 60 minutes for lunch!

Content: Book study groups (on PLCs) and following discussions took up the first hour. After that, there were three breakout sessions offered before lunch and the same three offered after lunch. They were: Problem solving in the middle school classroom, powerpoint, and excel.

October 5th 2005

No Limit Fall Regional Training

Confluence Technology Center

8:00 – 9:00 Book Study Rotation Chapters 1 and 2 of PLCs at Work by DuFour & Eaker

9:00 – 10:00 Teacher Log

10:00 – 12:00 Problem Solving (Teaway), PowerPoint (Methow), Excel (Skykomish)

12:00 – 1:00 Lunch

1:00 – 3:00 Problem Solving (Teaway), PowerPoint (Methow), Excel (Skykomish)

5. Title: NO LIMIT! May Share Fair

Time: 1 day = 6 hours

9:00 a.m. to 4:00 p.m. with 60 mins. For lunch!

Date/s: May 18th, 2006

Content: This was a time for participants to summarize their progress towards the goals they set earlier in the year. Successes, as well as struggles, were shared, along with participants demonstrating their own fluency with technology. Time was also spent demonstrating manipulatives that can aid students in developing deep understanding of algebraic patterns and symbols, rather than superficial memorization of symbol manipulation. Teachers also had an on-

line discussion with ESD 123 and ESD 114 using e-coach. We will use this as a data analysis piece to adjust our program for next year. Time was also given to complete the teacher log.

May Share Fair May 18th, 2006

9:00 to 9:30	Welcome, Registration, Algebra Tiles Introduction
9:30 to 10:10	Wenatchee Presentation and Okanogan Presentations
10:10 to 10:40	Math Break (Finding Patterns with Algebra Tiles)
10:40 to 11:00	Moses Lake Presentation
11:00 to 12:00	On Line e-coach discussion with ESD 123 and ESD 114
12:00 to 1:00	Lunch (provided)
1:00 to 1:40	Bridgeport Presentation and G.C.D Presentations
1:40 to 2:00	Math Break (More Finding Patterns with Algebra Tiles)
2:00 to 2:20	Oroville Presentation
2:20 to 3:00	No Limit for Next Year
3:00 to 4:00	Teacher Log

II. Conferences attended by teachers:

- a. Northwest Math Conference (Portland, Or) – Attended by Moses Lake PLC
- b. OPSI Winter Conference (Seattle, WA) – Attended by Moses Lake PLC

III. Conferences attend by MIS's:

- Northwest Math Conference (Portland, Or) – Attended by Joyce Stevens and Ted Edwards
- OSPI Winter Conference (Seattle, WA) – Attended by Joyce Stevens, Ted Edwards, Mary Jane Ross and Ted Edwards
- PLC Summit (Scottsdale, AZ) – Attended by Joyce Stevens, Ted Edwards, Mary Jane Ross and Ted Edwards
- MIS Training (Snoqualmie, WA) – Attended by Joyce Stevens, Mary Jane Ross and Ted Edwards

IV. What cluster structures were in place in Year 5? Why were they structured in that way? Were they different from previous years? Why?

Since we were trying to focus on making PLCs out of our No Limit groups, we typically were in the classrooms 2 days a month, with the next day a ½ day PLC meeting, for a total of 2 ½ days per month of contact time. In some instances, if we were unable to meet for a ½ day during the month, we might meet a full day the next month. In general though, our philosophy was to make contact with out teachers every month (August included), be in their classrooms teaching their kids and give them time to collaborate each month.

Meetings started with a book study: Professional Learning Communities at Work. Then collaboration generally followed an agenda set by mostly the PLCs and sometimes the MIS. All purchases and keeping track of budget items were handled by the PLCs to save time on MIS due to budget tightening. PLCs would fill out a reflection sheet at the end of the meeting to journal their thoughts and activities.

I believe we spent much more time in classrooms and with teachers than in year 4.

V. Math curricula in use by NO LIMIT! teachers:

Bridgeport – 5th – Bridges, 6th-8th Connected Mathematics Project (CMP)

Oroville – 5th – Scott Foresman/Addison Wesley, 6th – 8th Connected Math Project published by Prentice Hall

Moses Lake – 6th – 8th Prentice Hall Course 1-3, and some use of CMP units

Grand Coulee Dam – 5th - Trailblazers, 6th-8th – CMP, 9th – Math Connections

Okanogan – 6th – 8th Grade: Second year in full adoption of Connected Math

Wenatchee – 6th – 8th – Glencoe Applications and Connections Course 1, 2 and 3, some use of CMP2.

VI. Technology purchased in year 5:

Since all of the groups were lacking document cameras, LCD projectors and laptops (with the exception of one PLC) all of them purchased these 3 items. That major purchase ate up all of the \$3000 allotted to each participant. The one exception was Okanogan. With 3 of the participants having been in the grant for at least two years already, those 3 struggled for uses for the money, even leaving money unspent by May. The 2 new participants bought their document cameras, LCD projectors and laptops.

VII. How were the choices made?

The technology choices were made by each of the participants either individually or as a group. Some bought different versions of document cameras, projectors and laptops as directed by their district level technology personnel.

VIII. Were teachers happy with there choices?

I would say that all teachers were happy with their choices. It's hard to go wrong with those items. There was only one issue with some one of the projectors acting weird, but I believe it was resolved.

IX. Was MIS happy with there choices?

Yes, we were happy with their purchases

X. Why or why not?

Again, these are basic tools for promoting constructivist teaching in mathematics. All classes could benefit from this technology, not just math. Some teachers found uses for the technology for their other non-math classes as well.

XI. Successes and challenges of Year 5:

SUCSESSES:

- Continuing to build relationships with the teachers and administrators in our region. This is primarily because of our attitude to going out to the schools in person on a regular basis. I see one very conservative group in particular that had their eyes opened by the regular visits of their MIS to their school.
- Getting the laptops, document cameras and projectors in every classroom.
- Seeing real work being done in some PLCs. There are a few that used their time very well and benefited from real collaboration.
- Teachers that get a lot out of our regional trainings, like our October technology training, or our May Share Fair.
- All of our teachers attended all of our meetings all of the time. Very rarely did a teacher ever miss a PLC meeting. Attendance was never even an issue

CHALLENGES:

- Budget. We were constrained in obtaining professional development for ourselves by money.
- Time. Going out to all of our districts at least once a month takes time, and doing this on top of other responsibilities to the steering committee, Math/Science partnership, attending trainings, making meetings, puts a real strain on all of our schedules. Without exception, all of us here worked on weekends, holidays, and vacations. As I write this, I am supposed to be on vacation, as is the other MIS in the office with me.
- PLCs that loose focus. I get frustrated with teachers that don't see the point of collaboration and therefore just do not participate fully in PLC meetings. It should be a productive time for them. I struggle with how to facilitate that time and make it more meaningful to them so that they are compelled to participate and make good use of all of our time.

Funding:

Our plans to deal with the reduction in funding are a bit length to cover fully here, but here it is in a nutshell. We are expanding our fee-for-service to include math coaching for districts. After MUCH work, we have landed enough big contracts to keep everybody more than employed for the next year. We have also made sure that none of us is fully dependent on No Limit funding, so when the funding disappears, the transition will be easier for all of us. Each of us will handle one to two PLCs only and continue to be out in their schools roughly each month.

XII. Additional comments:

I think that the success and challenges and funding pretty much covers it. However, I see all of us working more and more and doing it on less and less funding, and working on vacation or days off to cover. We will continue to do our best in the interest of the students in our districts. After all, they are why we are here.

Year Six

No Limit Year End 2006-07

Brent Morrison, NCESD

Training and professional development provided for teachers: amount of time, dates, and content

- In addition to the on-site visitations, we provided training on August 17-18, 10/13, 12/10. The sessions included:
 - Using released items
 - Use of graphing calculators
 - Classroom assessment FOR student learning
 - Developing Computational Fluency
 - Item writing
 - Reading and vocabulary in the math classroom
 - Classroom discourse

Conferences attended by teachers (please note if any presented at conferences)

Conferences attended by you (again, please note if you presented)

- OSPI Winter Conference
- TDG Conference in Portland

What PLC structures were in place in Year 6? Why were they structured in that way?

Were they different from previous years? Why?

- I only worked with Okanogan. We met as a PLC for half days one day per month due to limited sub availability.

Math curricula in use by NO LIMIT! teachers

- Okanogan uses CMP

Technology purchased in Year 6. How were the choices made? Were teachers happy with choices? Were you? Why or why not?

- Okanogan teachers purchased a variety of items---an LCD TV for displaying images from the document camera, graphing calculators and batteries, non-graphing calculators

Successes and challenges of Year 6

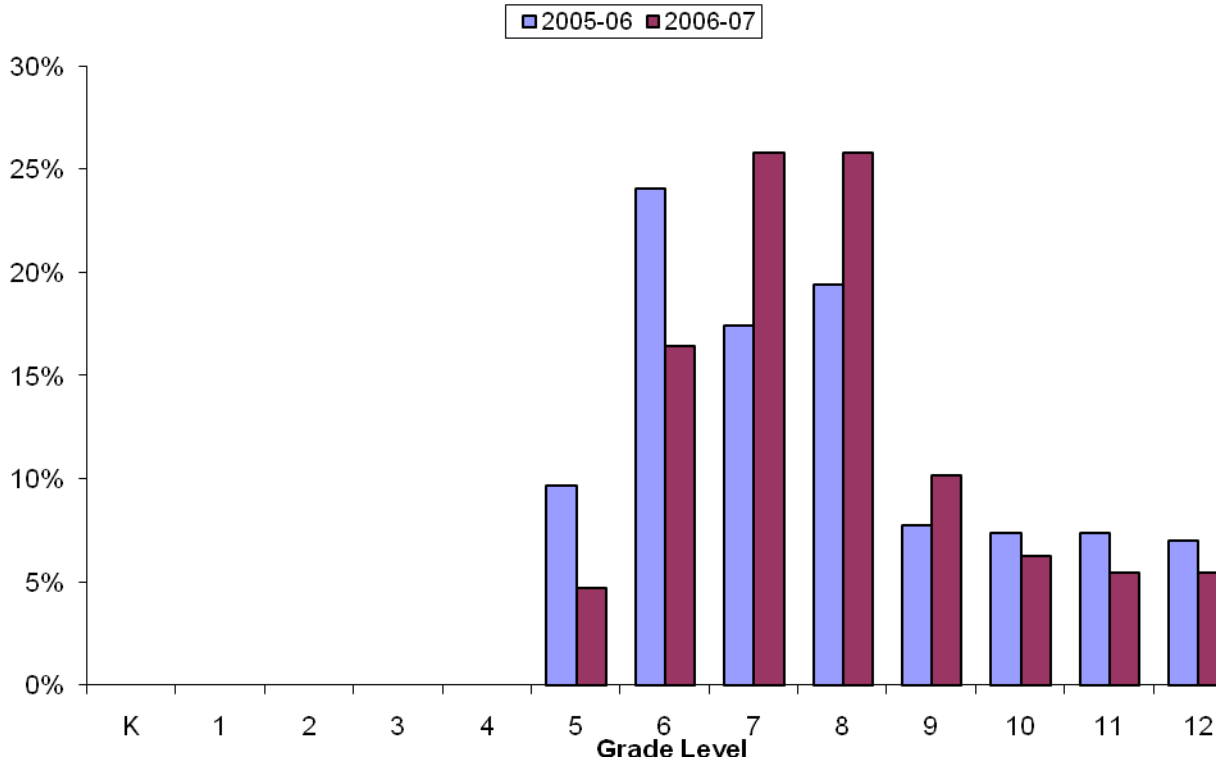
- Successes would have to include better understanding of WASL targets and writing items to assess those targets

**Log Report 2005-2007
ESD 171**

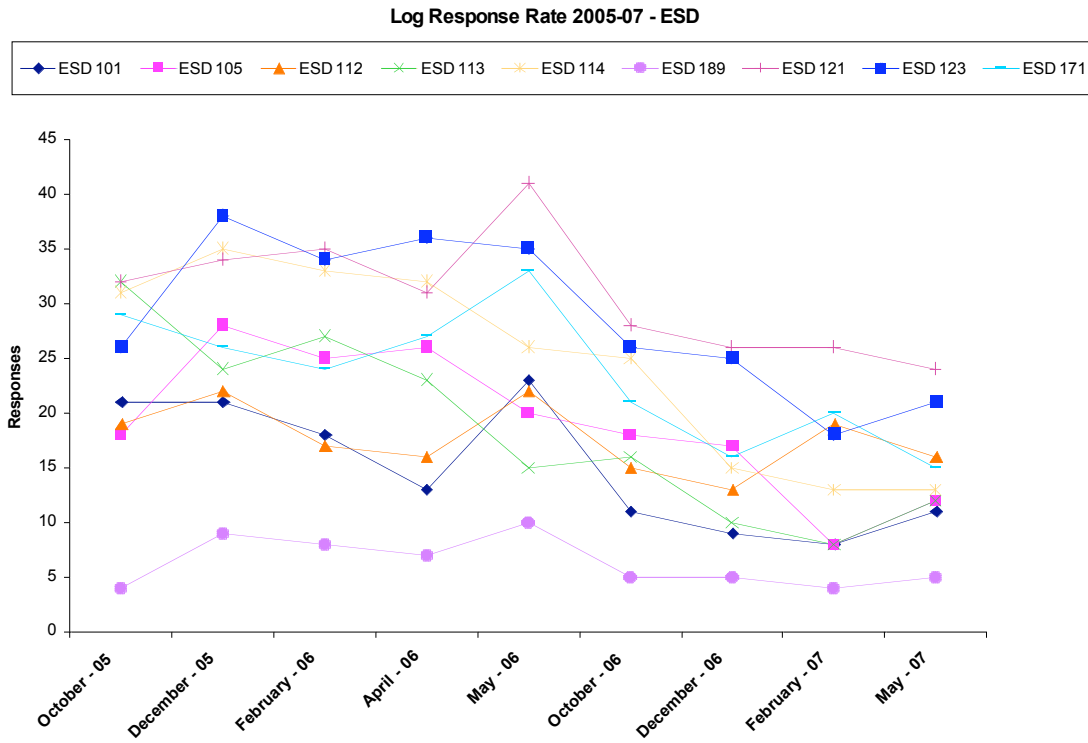
Item 6:

The grade levels you teach:

2005-07 Grade Level Participation - ESD 171

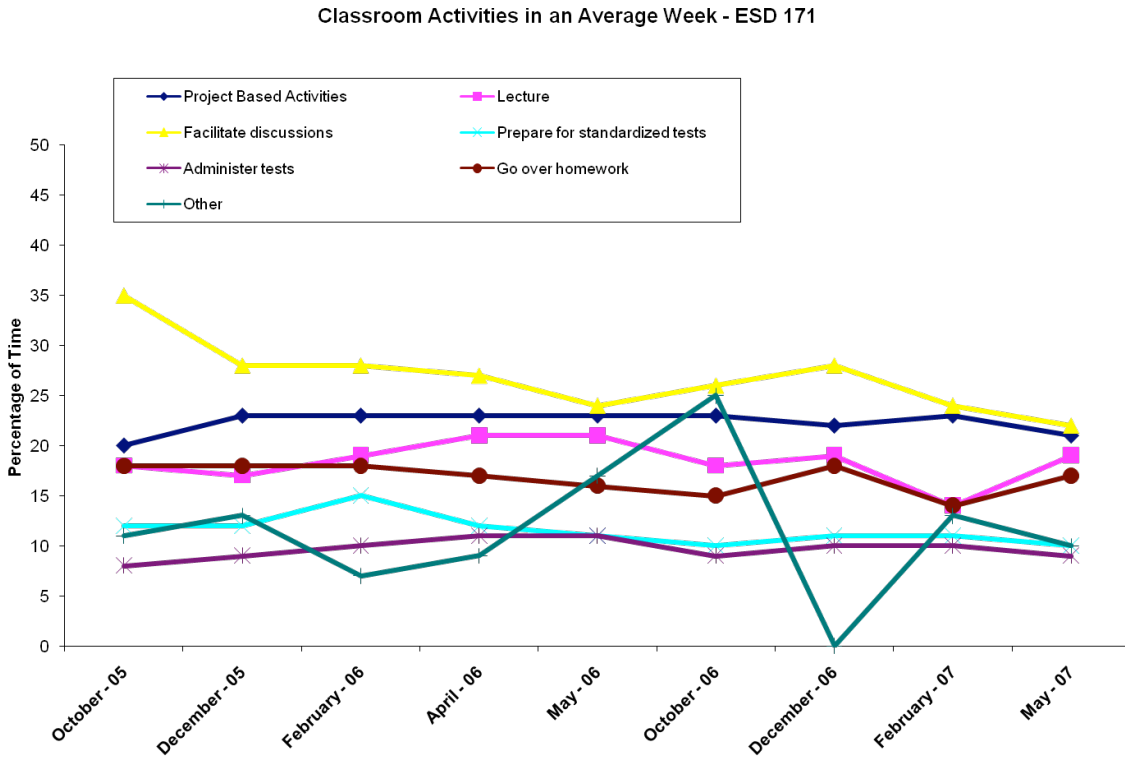


Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?



Other, please specify:

October - 05:

- Many of the projects I consider project based are through Connected Math.
- Problem Solving/Journaling
- Bookkeeping, answer questions, motivational for other time spent
- Being an elementary teacher, the proportions of these fluctuate a lot from week to week.
- Students interacting with the mathematics - group problem solving, math games, contests, etc. All of my teaching helps to prepare students for the standardized tests they will take.
- The curriculum I use embeds preparing students for standardized tests into the instruction. I really don't need to come up with additional practice very often.
- Re-teaching math number sense covering areas that students were not able to do, reviewing last year's concepts.
- Administrative activities

December - 05:

- Students working in partners or individually on solving problems
- Facilitating student collaboration/group work
- The other is daily review activities and patterning.
- Practicing Math Facts!, Entry Tasks- Reviewing concepts
- Paper work, assemblies, conferring with students, discipline problems, talking with parents, meetings

February - 06:

- As the WASL nears more time is devoted to preparation.
- Review and entry tasks.
- WASL practice
- Daily review is in the other category
- Writing
- The amount of time spent on project based activities and lecturing depends on the area of study... obviously take much longer and more group interaction such as finding area of an irregular object in math as oppose to practicing division
- Using technology, extension of concepts to other fields, etc.

April - 06:

- Letting students work on assignments in class.
- WASL Practice
- Writing
- Just socializing with students. Getting to know them and making them feel comfortable in my classroom.

May - 06:

- Connected math-spend too much time on correcting.
- Student to Student discussions; Cooperative Learning activities
- Review of concepts and preparing for a Unit test Number Corner (part of Bridges) and Math Facts
- Testing time is more this period because of giving the WASL and several district assessments

- Reviewing and applying
- As we wrap up the school year, I'm introducing mini-lessons on math concepts that aren't in the book, but will be beneficial for my students to know next year. We're focusing on vocabulary and computations like finding percents from decimals, lots of problem solving from booklets, etc.

October - 06:

- This year's class is very challenging with their inability to grasp concepts that require independent thinking. Projects are given, but I usually have to re-do them as a whole class.
- By project based I mean: Getting into groups and going through CMP investigations.

December - 06:

- We're starting fractions so we use a lot of manipulatives in determining equivalent fractions and even for adding and subtracting.

February - 07:

- Using technology to facilitate and promote student learning.
- I'm finding that I still have to go through and review steps from one concept to another. That's why it seems like I'm doing more "lecturing".

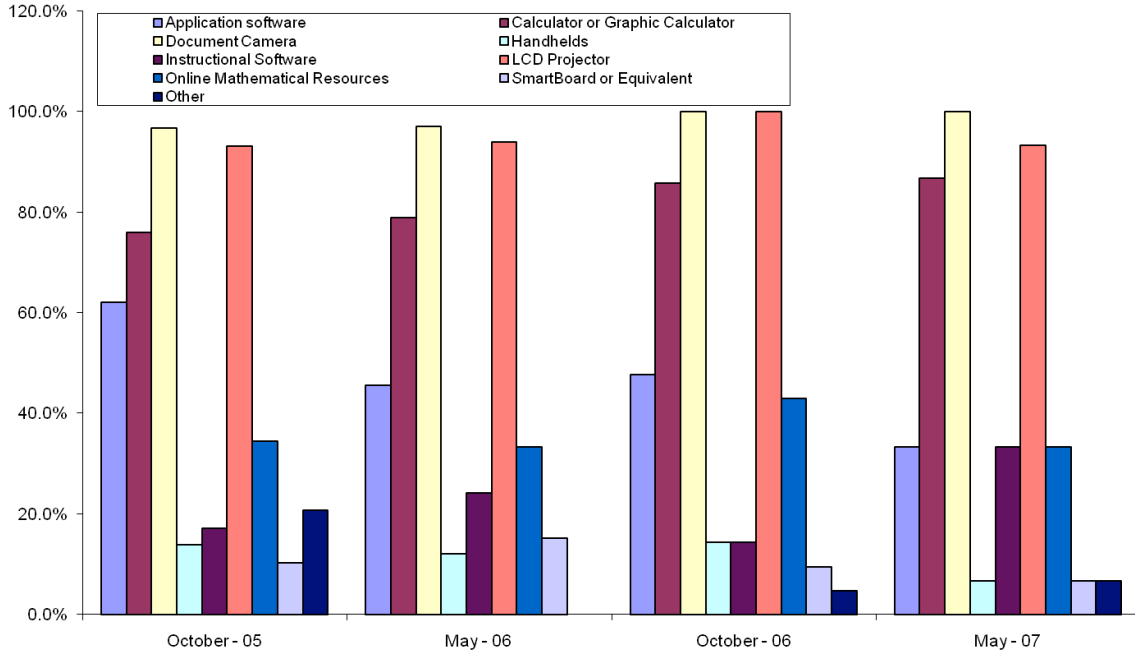
May - 07:

- Incorporating technology
- We're spending more time on basic fact drill and reviewing basic operations of addition, subtraction, multiplication and division this last quarter

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.

Type of technology available to participants
ESD 171



Other:

October - 05:

- Digital camera
- Laptop, 10 student computers
- Cps remotes
- Digital Camera
- Laptop that is used with the projector
- Accelerated Reader

December - 05:

- Digital camera,
- Laptop, 10 student computers
- Laptop that is used with the projector
- PLATO computer lab
- Overhead

February - 06:

- Cps remotes
- Digital camera, laptop computer

April - 06:

- Digital camera
- 10 desktop computers
- Cps remotes

May - 06:

October - 06:

- Digital camera

December - 06:

- Video camera

February - 07:

- Cps remotes

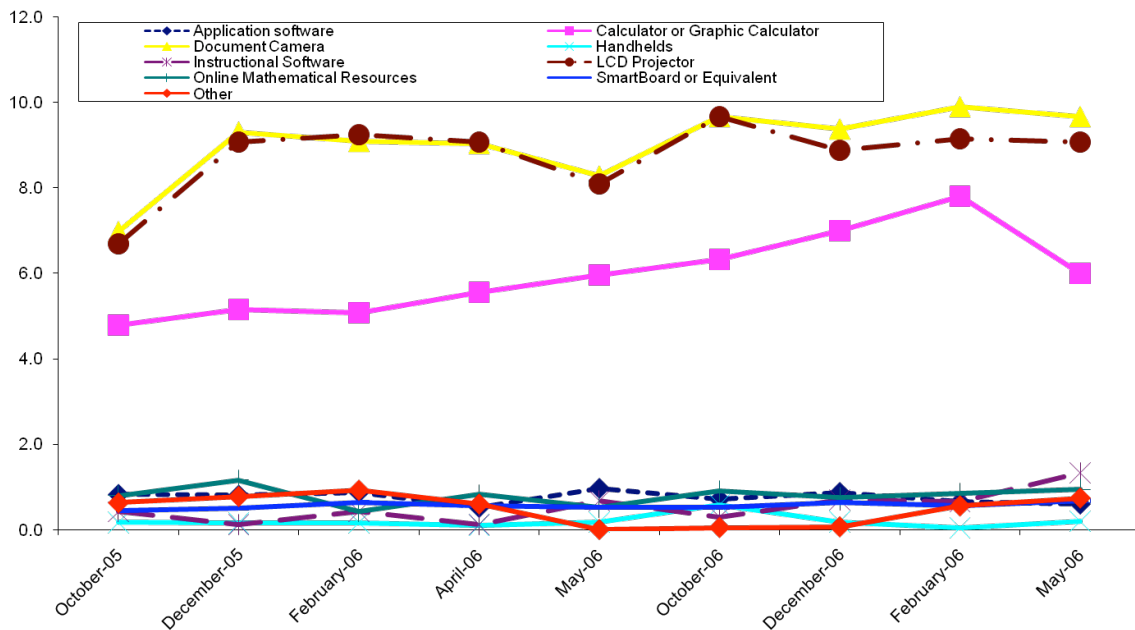
May - 07:

- Cps remotes

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.

Frequency of use of technology over the last ten lessons
ESD 171



Item 11:

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- Students present their work using the doc camera daily.
- Using calculator to find factors and multiples of numbers.
- I will put a warm-up problem under the document camera. When students are done I might ask a student to put theirs under the camera to show other students what they have as an answer.
- We show our work using the document camera and LCD projector.
- We have done at least 3 released WASL questions in various ways over the last couple of weeks. On the AVERVISON camera we have learned to grade with a rubric and create our own class rubrics. Later students have volunteered to share their responses on the document camera and have them graded. Almost every class period students share answers to questions on the document camera to show how they solved problems using different strategies that worked for them.
- Go Figure! Math Challenge at mathcounts.org
- Show factoring of multiples of 10 using the document camera. Calculators used extensively for multiples of 10 lesson. digital camera to document word problem posters
- Students shared work with document camera.
- Use document camera and LCD projector to share with classmates solutions to various problems.
- We have been using geoboards for a geometry unit. Daily, my students use the doc camera and projector to share their math knowledge.
- We use the document camera daily to display work and students use higher order thinking in adding to or taking away from the paper.
- Using the document camera to show explanations of the process they went through to answer a question
- My students use the document camera to share how they have solved problems and to show their thinking.
- Students used cps remotes to score student work and discuss the values of various scoring rubrics
- I gave an assessment on an algebraic problem that required a drawing as part of the solution. Then we used the document camera and projector for each person to share their solutions. I've also used technology for interpreting data from graph and charts in both science and social studies.
- Students in my target math class competed in a group problem solving contest and shared their responses using the document camera. Other groups were allowed to ask questions and/or challenge the answers presented.
- I use the document camera and LCD projector to show solutions to problems. We also demonstrate and discuss various solutions.
- We just received this technology so I haven't had a chance for students to use it very much.
- Used document camera to show ways to graph prices of items, cuts of brownies and graph linear and non linear equations, and illustrate solutions to 2 step equations.

- Each day during math, students use the document camera to share their homework or deskwork. They also model their examples showing their thinking strategies when problem solving.
- Sharing their work via document camera/projector on problem solving questions.
- We just got our document camera and projector. The students have started using the document camera to show their work to the class as they explain how they got their answer and to explain their thinking.
- They used their calculators to figure out higher powers, such as 8 to the 5th power.
- Explaining rounding rules, steps taken to solve a problem
- Students have been working with matrices, and entering them into the graphing calculator to computer squared matrices and cubic matrices.
- We use the document camera every day for students to share their work and thinking with the class.
- Explaining how they did a problem solving exercise

December - 05:

- My students recently completed a project. They asked a survey question and graphed the results. Many of them created graphs on computer.
- I have students come up and place work under document camera for others to see and to discuss the problem and why it is correct or not.
- We wrote response to a question and scored the results of each person's work using the document camera.
- Student's daily share their solutions on the document camera and we celebrate their successes. I have checked out computers and we have made graphs spreadsheets and prime factorization trees.
- Students created a spreadsheet in MS Excel to calculate units in the metric system.
- We used the document camera and projector to look at student work and learn how to better respond to and explain word problems.
- My students use the doc camera to share their problem solving processes.
- Use the projector to put student work up so that we can look and compare answers to reach higher order thinking among all students
- Explaining solutions using the document camera and LCD.
- Using graphing calculators to graph lines, make tables, and change window settings to test their conjectures.
- Students daily use document camera, smart board and audio system to present ideas and cps units to evaluate subjective materials
- Students were graphing ratios from a data table to a graph, so we used the document camera and projector to show their work and compare and contrast ideas
- Today, students shared their tables to explain to the rest of the class how they determined the equation that represented a given pattern.
- When we discuss how solutions were completed, student work is displayed under the document camera and projected for the entire class to see. This allows all students to participate in analyzing the method used and its effectiveness.
- Using the document camera to show student examples
- Students always use calculators to solve their daily work in Connected Math. As they do daily work, they share it on the Doc camera with classmates.

- Sixth graders were learning "mean" so they saw, using the document camera, how Legos could be restacked so that all stack were the same height without adding or taking Legos away.
- After completing WASL prompts, the students shared their work with the doc. camera and projector while the other students graded on a 4 point rubric the students created.
- Today my students used the document camera and projector to show their answers and how they got them to the other students.
- They used calculators for solving exponential form.
- The students use the document camera to present their work. They are more confident in writing and presenting.
- Graphing Calculators to graph equations & explore matrix operations.
- We use the document camera and projector every day to share our work and ideas.
- Showing and explaining how they did a problem solving activity
- Going over a symmetry worksheet, students showed answers using the document camera. I used the document camera to demonstrate radii, diameter, circumference, straight angle, right angle, parallel, and perpendicular

February - 06:

- Students share solutions daily using the doc camera.
- We share our papers.
- Students continually share work or mathematical ideas on the document camera. We have watched video streaming to help teach concepts in other ways.
- Used the document camera and LCD projector to display solutions to complex problems.
- Students showing the class different examples of graphs that they had done and explaining what the purpose of their graphs were.
- We have been working on basic fraction concepts and the students have been using fraction circles. They have used the doc camera to share their new understandings with the class. We do something like this with the camera several times a week.
- graphing calculators when looking at and solving equations
- Students using the document camera and LCD projector to explain the process that they went through to solve a problem.
- Students are able to quickly show how they came to an answer by putting their work under the document camera to share with the class.
- Students use document camera to discuss ways the applied math concepts to problems they created themselves
- We used the document camera and projector to problem solve story problems using inverse operations of multiplication and division
- Students shared their responses to problem solving exercises with the rest of the class and the class graded their work.
- Student work is displayed through the LCD projector and document camera. The class then discusses the work, noting various methods of solving problems, clear communication and accuracy.
- Showed student work or problems on document camera.
- In my pre-algebra class, we used graphing calculators to generate tables and graphs. We also used them to see how equations graph differently.
- Checked graphing calculators to find the intersection of two lines.

- They shared their answers to extended response questions using the doc. camera and LCD projector.
- Students worked together to solve a connected math investigation question. They then shared, discussed, and defended their work that was displayed on the white board using our document camera and projector.
- Using the Document camera to explain their income vs. expense graphs of Linear equations. Ex: Loss, Break-Even points, Profit.
- Used cubic centimeter blocks and the document camera when calculating the number of visible sides in a double row of stacked boxes.
- Graphing linear equations, comparison of scale,
- We use our document camera and LCD projector every day for math. I use it to present new material to the class. In addition, students present their work and solve problems using the document camera.
- Explaining a problem solving process

April - 06:

- Reviewing lesson and going over material
- Having students put own work under the camera to show other students what they did for the problem.
- Show how to build origami figures
- We often show student samples of Problem Solving activities and the variety of solutions which can be utilized.
- Using the document camera to share work.
- Students were completing a worksheet, placing decimal numbers on a number line. They had to approximate decimals to the hundredths to show some numbers between the increments marked with lines. As students completed the worksheet, they came up and put the paper under the document camera to show their thinking about placing the decimal numbers. Next, they drew lines the length of specific mixed numbers (whole numbers and decimal numbers) and shared using the document camera. There was no overhead for this lesson. The document camera was the perfect tool.
- Using web sites to see pi to the millionth place and using calculators to find area and circumference of circles along with surface area and volume of cylinders.
- They used projector and doc camera to share their math thinking in journals and problem solving
- Used document camera to perform algebraic tasks in front of the class
- Explaining the mathematical process they went through to solve a problem using the document camera and LCD projector.
- Students use the document camera & LCD projector to display and present their work and thought processes.
- Students used remotes to evaluate and correct communication skills of classmates.
- My students used the document-camera to display their investigation procedures and data collections for a math lab involving the determination of the most absorbent paper towel.
- We shared WASL Sample Test short answer and extended response answers as a class and looked at annotated anchor papers.
- My students have daily discourse about their solutions of higher-order math problems. They use the LCD projector and document camera to display their thinking and solution.

- Showing student work
- Students used calculators to find equivalent fractions.
- Showed examples of student work on WASL-type problems.
- While preparing for the WASL, they used the doc. camera and projector to share how they did the problems
- A student put their work under the document camera and verbally shared his problem solving strategy to a class problem.
- Using a calculator to solve their proportions in order to scale their houses down. Using the document camera to share their work and discuss it with the rest of the class.
- Use of document camera for problem solving.
- Used document camera and projector to share method of solving problems with other students
- We use the document camera and LCD projector every day to learn about new concepts and to share and discuss student work.
- Students presenting and explaining a problem solving exercise using the document camera and LCD projector

May - 06:

- Students share their work daily using the presenter.
- The students were able to demonstrate visually the difference in distance with two different modes of transportation using a grid of a city map.
- Going over assignments.
- I have gone to a web-site where games are played with mathematical concepts that the students can see on the overhead screen and can participate.
- Drawing the picture of a function machine that students saw a diagram of somewhere and wanted to share.
- Every day in my classroom students use the LCD and document camera to present strategies for solving problems and sharing new ideas about concepts we are learning. I use video streaming to introduce or solidify learning too.
- Creating word problems on the palm pilots and beaming them to each other to solve.
- Students showed 12 possible rectangles with a perimeter of 48; next they found the area of each rectangle; finally, they made observations of a pattern or change they saw as the width increased. In way of application, I asked which would give you the most area for a garden.
- Students use the document camera and presenter to present findings to the class. They use calculators to check solutions when evaluation equations.
- Today we did a problem activity that several possible routes to the correct answer. I had the students share in pairs how they had solved the problems.
- Use of document camera to go over homework
- Using the document camera and projector to explain the process they used to answer a question.
- Student constantly use the document camera to display and share their work.
- Students used spreadsheet a document camera to organize data to support a hypothesis about measurement accuracy
- After the students work on their problem solving booklets, individuals are invited up to show how they got their solutions by displaying them with the document-camera for the whole

class. Students make up a rubric for evaluating the presentations depending on the difficulty of the problems.

- Students created graphs for given situations and rationalized their graphs to the class.
- Showing their math thinking through document camera and LCD projector. Class discussion of various solutions.
- Showed their work to the class.
- We do group problem solving, and groups must share their ideas and results under the LCD/Doc Cam to the class.
- Tessellation Designs --discussion about angles and whether or not polygons tessellated
- When finding $I=prt$, and the project we did using imaginary finances
- Students showed work with area and perimeter on the doc camera.
- Used technology to compare sizes of similar figures. Document camera can zoom in and out and we can measure, compare and find scale factors.
- Every day students use the doc camera to share solutions to ace problems or other subject material.
- They shared their answers to extended response questions on the big screen
- Used Excel to design and create spreadsheet for computing ms baseball and softball batting averages and other statistics from the games
- Students demonstrated area and perimeter with tiles under document camera.
- The used geoboards and the doc camera to share how they discovered the formula for area of parallelograms and triangles.
- Handheld calculators. Haven't used my LCD projector or document camera for a month because I can't get Troxell to send me a bulb.
- Students used document camera and projector to share different ways of solving problems with their classmates
- We use our document camera and projector daily for Connected Math lessons. I use the camera to present and explain new concepts and the students share their work on the camera.
- Using the document camera and LCD projector to explain to the class how they solved a problem solving exercise.

October - 06:

- Sharing solutions to problems under the document camera which is projected through the LCD projector.
- Presentations using doc camera
- I would put an example of a WASL style prompt for the kids to look at under the document camera.
- Spreadsheet to assist with FOIL multiplications.
- Sharing different solutions to WASL type questions done in small groups using the document camera and projector.
- Students share their thinking with other students through the use of the document camera and projector.
- Presenting student work to the class. Showing the class reasoning and work to justify their answers.
- Kids use the doc camera daily to share journal entries, problem solving strategies
- WASL like Problems at the beginning of class

- Explaining the process they went through to solve a problem using the document camera, and projector.
- Used handhelds to evaluate other students' communication skills. Handhelds initiated discussions
- After working on a graphing project involving collecting data, determining the median, and graphing the information, they presented their results to the rest of the class. They were put into teams of two, so a lot of cooperation was needed to get all the tasks accomplished.
- Students shared their graphs of equations
- Show their work
- Using CMP2
- Showed work on doc camera
- How many cars lined up between the bridge and Safeway?
- Students use the document camera everyday to share student work on in class problems or to show homework.
- When they share their answers to extended response questions using the document camera and LCD projector.
- They are using graphing calculators in working with linear equations.
- Students showed their work on the document camera.

December - 06:

- LCD projector and document camera is used to display divergent solutions to problems. Discourse is encouraged to determine validity of mathematical thinking.
- We go over WASL style prompts and the problem will be given to them on the over head as well as in front of them. Students will write their answers and students will put their work under the document camera and other students will score the answer that is under the camera.
- We took paper and captured the mark where snowflakes fell, photographed the pages with the document camera and created a slide show to try to show randomness.
- Students practice higher level algebra problems in groups with a web site called www.mathcounts.org
- Used graphing calculators to look at equations involving 3 different speeds of cars.
- My students use the doc camera to share work and journal entries. I just got the video camera yesterday and have not had a chance to use it yet.
- Use document camera to explain work done in class
- Using document camera and projector to explain the process they went through to answer a question.
- We used cps to order criterion for good communication
- My students used the document camera/projector to show different equivalent fractions and fraction sentences. We also used it to show and explain outcomes for problem solving.
- Students proved answers sharing on the document camera
- We use the document camera and projector to help with discussions
- Use computers in the lab to find temperatures and then used that data to discuss reasons why temperatures may be what they were. Found trends in temperatures over a variety of regions, geographical areas, etc.
- Using graphing calculators to graph linear equations.
- My students, today, used computers and the internet for figuring out the cost (including tax) of buying clothes. They were limited to only \$50.

February - 07:

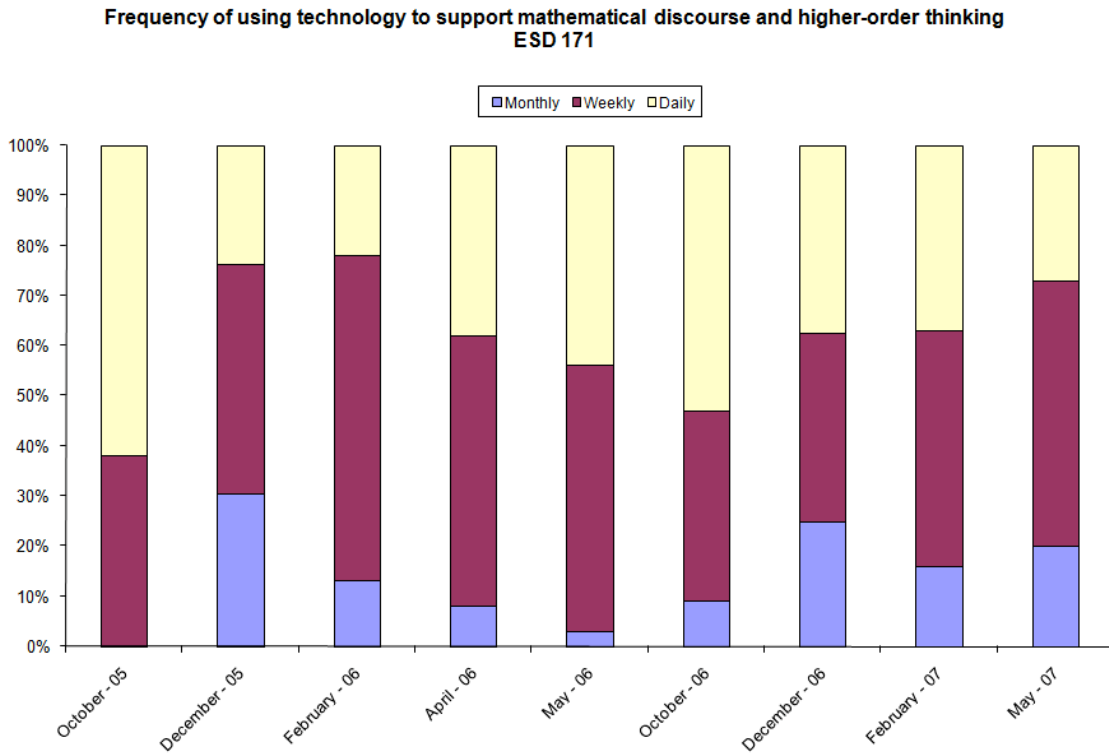
- Sharing solutions of complex problems involving higher order thinking skills, such as comparing unlike fractions in ratios.
- Shared work with doc camera
- Students will bring their work to put under the camera to show students an answer.
- We were in the science lab and have data to graph
- Students share work on the document camera on how to solve related story problems or different solutions to the same problems.
- Used document camera/projector to share problem-solving strategies with the class.
- Student example problems being show on the doc camera.
- My students use the doc camera and projector to share journal entries, problem solvers, and their thinking with the class.
- Use graphing calculators to graph equations, etc.
- Presenting problems that they have done using the document camera and projector.
- Students synthesized problems on the board
- We used our daily oral language scores to find the means by using calculators, and then converted them to fractions, decimals and percents using the calculators.
- We used an online pantomime activity to discuss area and perimeter.
- Sharing work under document camera
- Geometry class--trig functions
- Students used the doc cameral and presenter to show the Special Number projects.
- Used a spreadsheet to investigate the relationships between area and perimeter of a rectangle.
- Today I had students find an item on the internet which was on sale. They then had to calculate how much the sale price would be.

May - 07:

- Display solution to problems under document camera which initiates students discourse.
- Students share work using doc camera.
- Being able to explain under the document camera about an assignment while showing what they did on their own.
- We recently researched statistical information in which they answered some questions about and then found the mean, median, and mode of that information.
- Online math challenge to promote higher-order thinking.
- In the last two months the most that we have done has been scoring student WASL practice on the document camera and projector.
- Kids use the doc camera to share problem solving solutions and to share journal entries
- Students use the document camera and projector to explain the process they went through to solve a problem.
- Used document camera to demonstrate shrinking and stretching
- We worked on geometric shapes and finding area, students presented their projects to the class using the document-camera and projector and explained their reasoning. They also presented challenge problems for other students to solve
- Used "paper pool" applet from illuminations site to discuss patterning and common factors.
- Show student work.
- Generate random numbers, counted and graphed them using Excel.

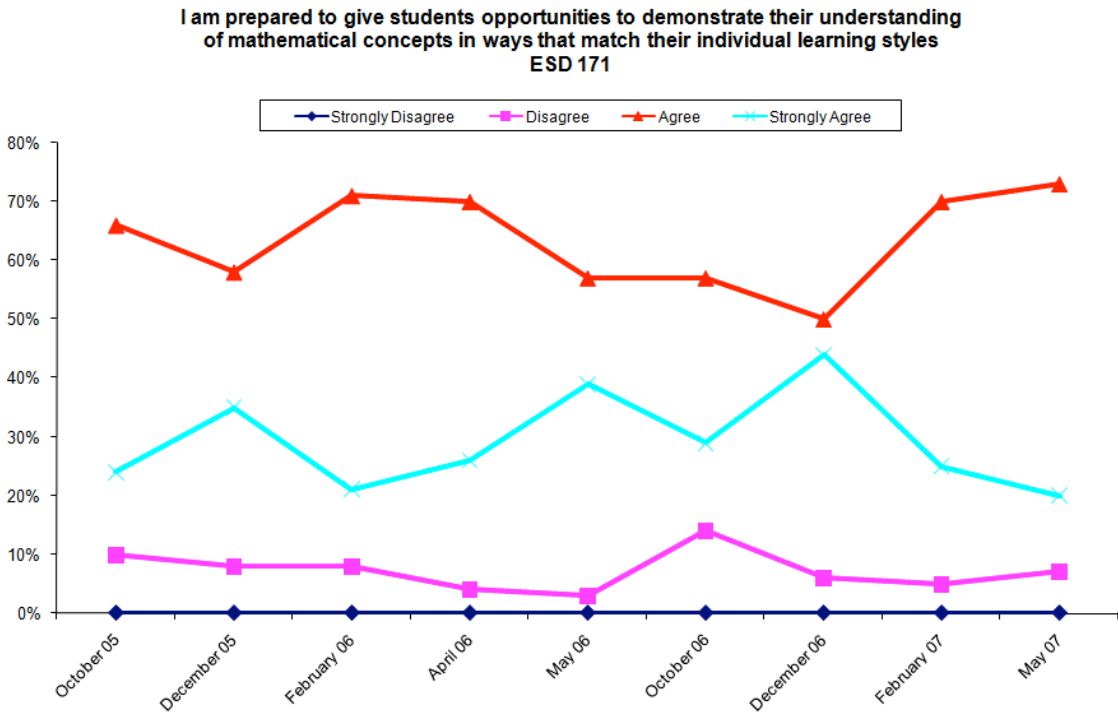
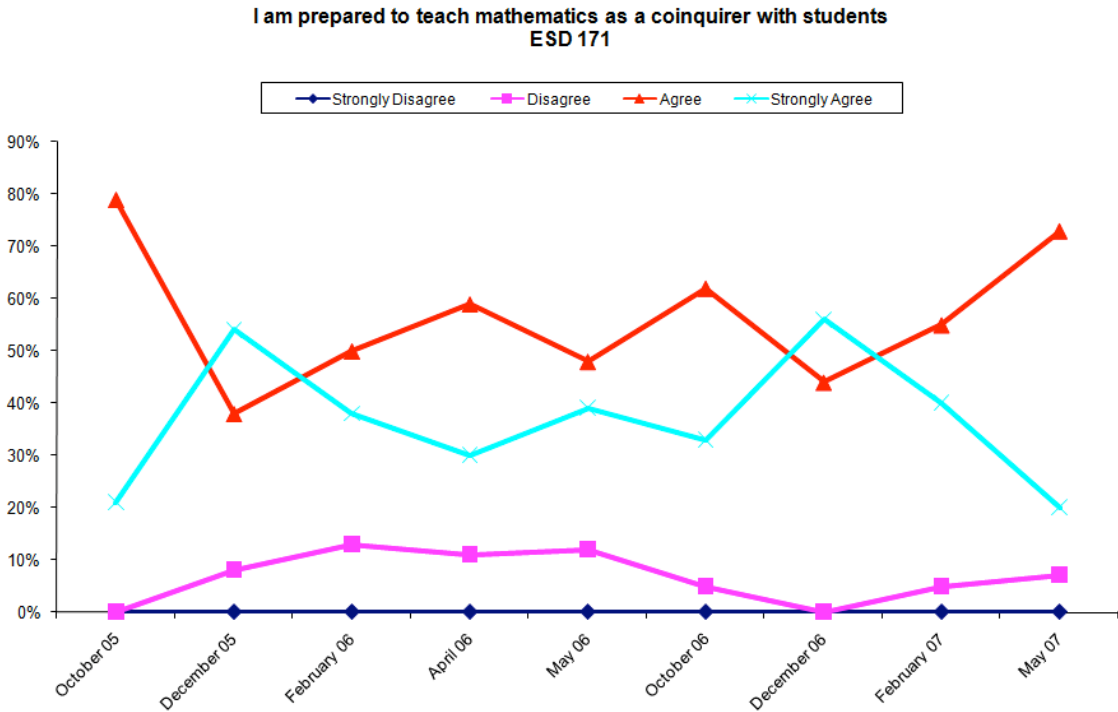
- We had students share work from critical thinking questions.
- Graphing exponential plans on the graphing calculator.

How often does something like this occur in your classroom?

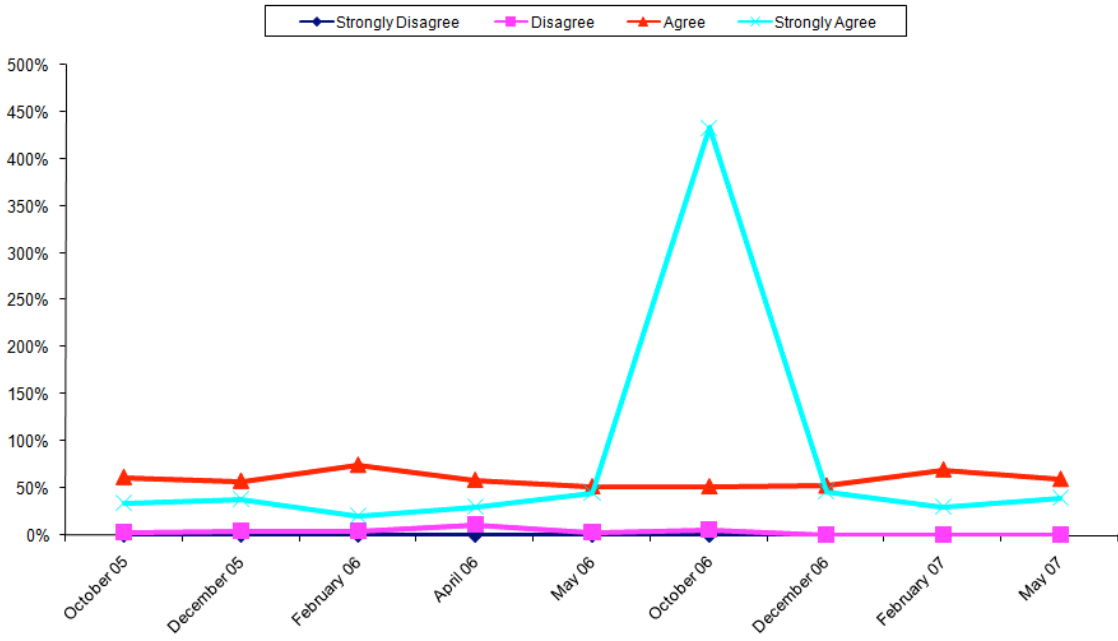


Item 13:

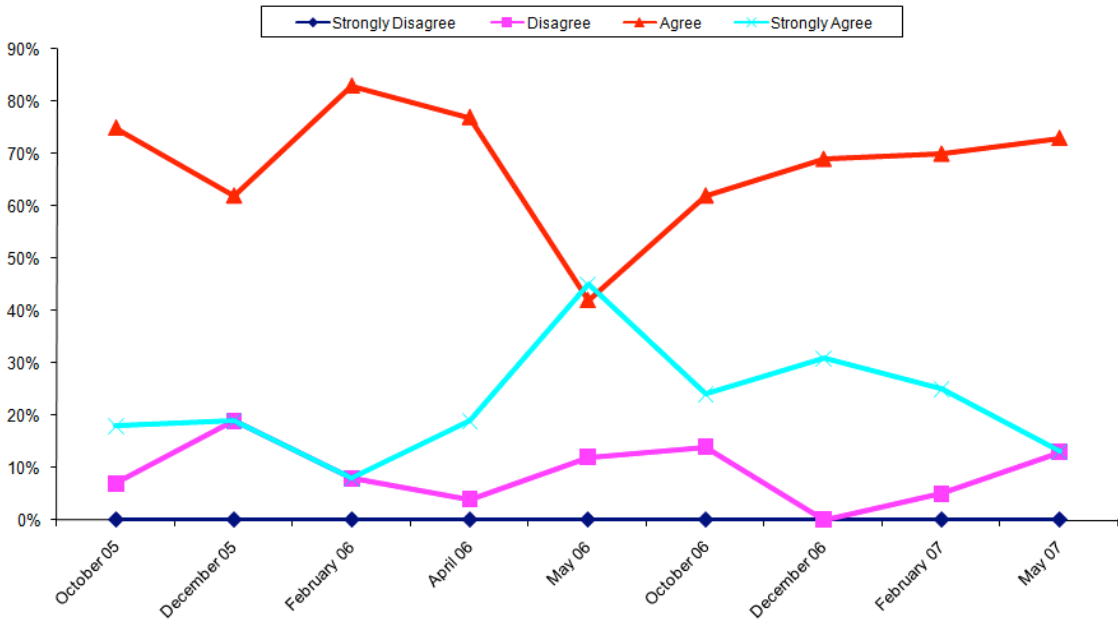
Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.



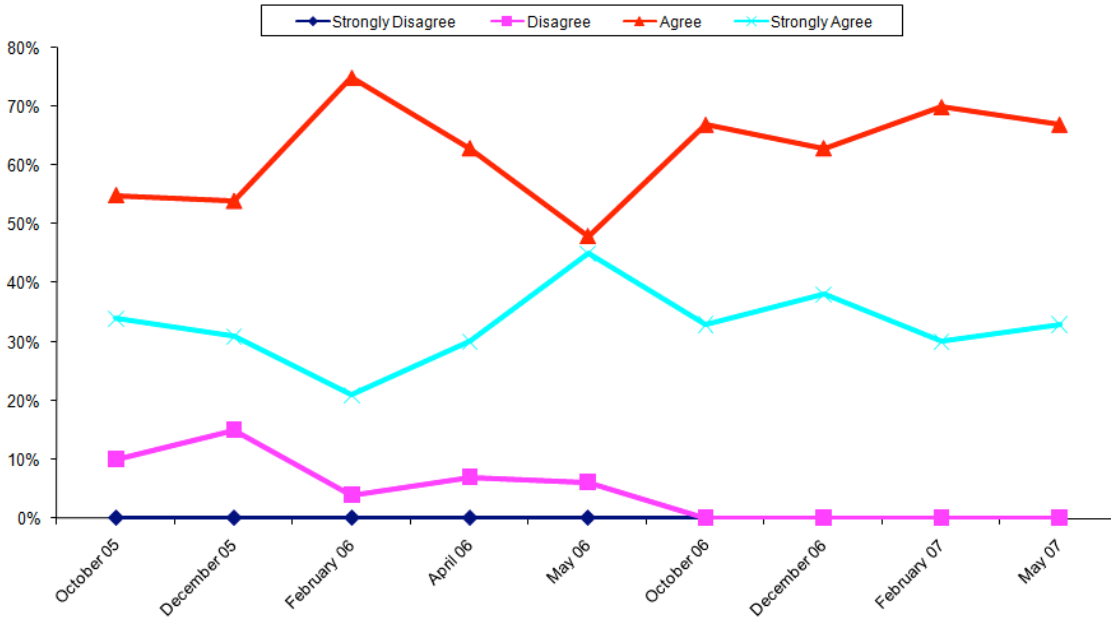
**I am prepared to use cooperative learning approaches
ESD 171**



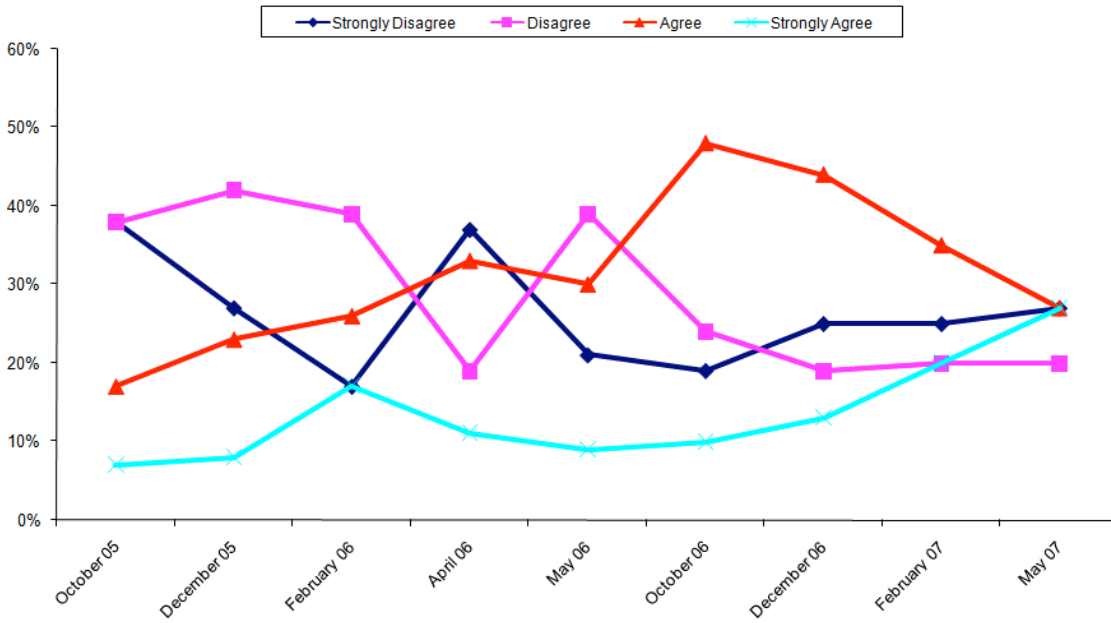
**I am prepared to implement a variety of mathematical teaching strategies
that incorporate problem/project based learning
ESD 171**



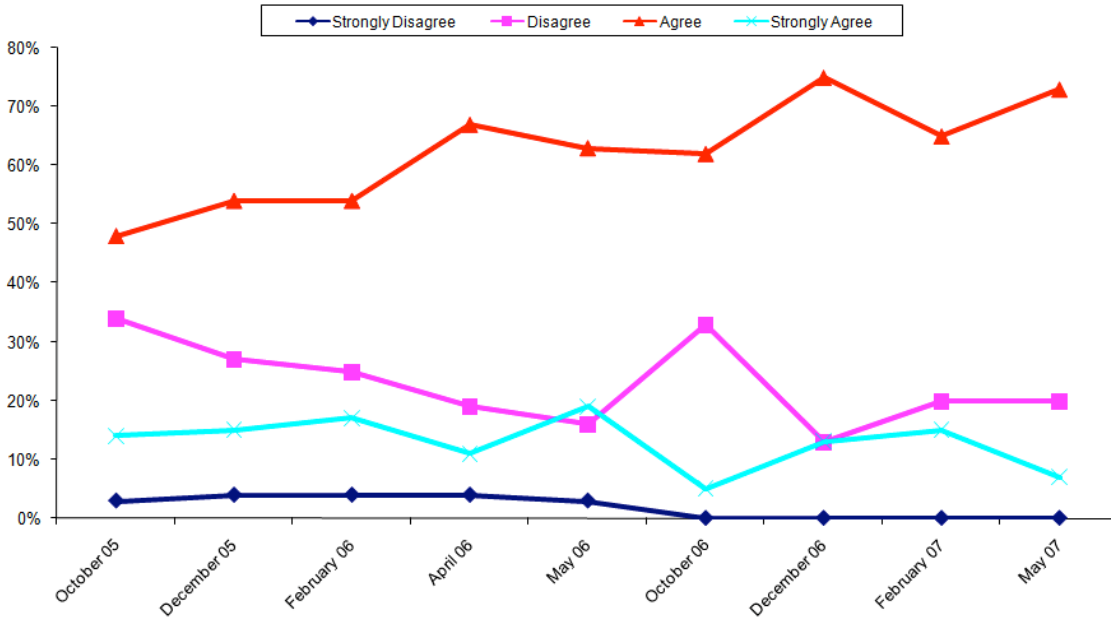
**I am prepared to involve students in hands-on, concrete mathematical experiences
ESD 171**



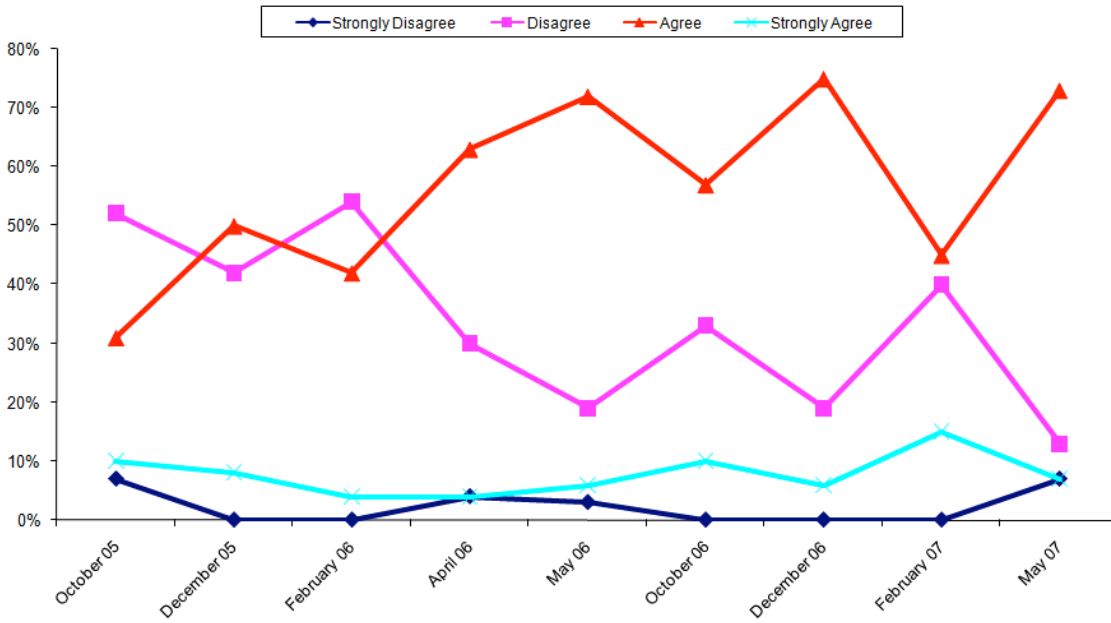
**I am prepared to teach mathematics lessons that include the use of graphing calculators
ESD 171**



**I am prepared to locate online resources in support of mathematics learning
ESD 171**



**I am prepared to integrate computer-based activities
in support of mathematics learning
ESD 171**



Comments:

October - 05:

- I am interested in learning more about computer-based projects for my students. I don't want my computers to be used as drill and practice.
- Some of the computers in my room are not able to use.
- Would like to take time to research more computer use in Mathematics
- I am anxious to use technology more effectively in my classroom-plan to use Excel with my students during the next few weeks. Our unit project involves graphing. Learned how to use Excel during our last grant session!!! Super!!
- I have not had much experience incorporating computers into instruction.

December - 05:

- I WOULD LIKE TO BE ABLE TO INTEGRATE COMPUTER-BASED ACTIVITIES MORE REGULARLY-I FEEL A TIME CRUNCH TO COVER THE INVESTIGATIONS IN OUR TEXT.

February - 06:

- I only have two student computers in my room so that makes it difficult (unless somebody shows me how to do it). I have never used graphing calculators at 5th grade and I'm not sure that they are necessary with our curriculum.
- I've really never taken the time to sit down at the computer to search out computer-based activities for math. I have done scavenger hunts with Social Studies and reading projects, however.
- Don't have any student computers, just mine.

April - 06:

- This continues to be a struggle for me.
- My knowledge base grows each year!
- I'd really like to learn how to integrate computer based activities for math in my classroom. I do have a laptop, but use it mostly for data recording.

May - 06:

- I need more courses in differentiated instruction and using computers more effectively to support learning.
- I don't use graphing calculators in 5th grade. Because I only have one working computer in the room I also don't use software. I would like to have training on how to integrate tech in a one-computer classroom.
- I just recently started using the computer, so I haven't had much opportunity to search out different websites to use with the class.

October - 06:

- I teach 5th grade so I don't believe there is an application for graphing calculators. Computer based projects are tough because I only have 3 computers in my room. I would like some instruction on how to utilize the ones that I have.

December - 06:

- I don't have graphing calculators and am not sure they meet the need of WASL preparation.
- Graphing calculators aren't used in our 5th grade curriculum

February - 07:

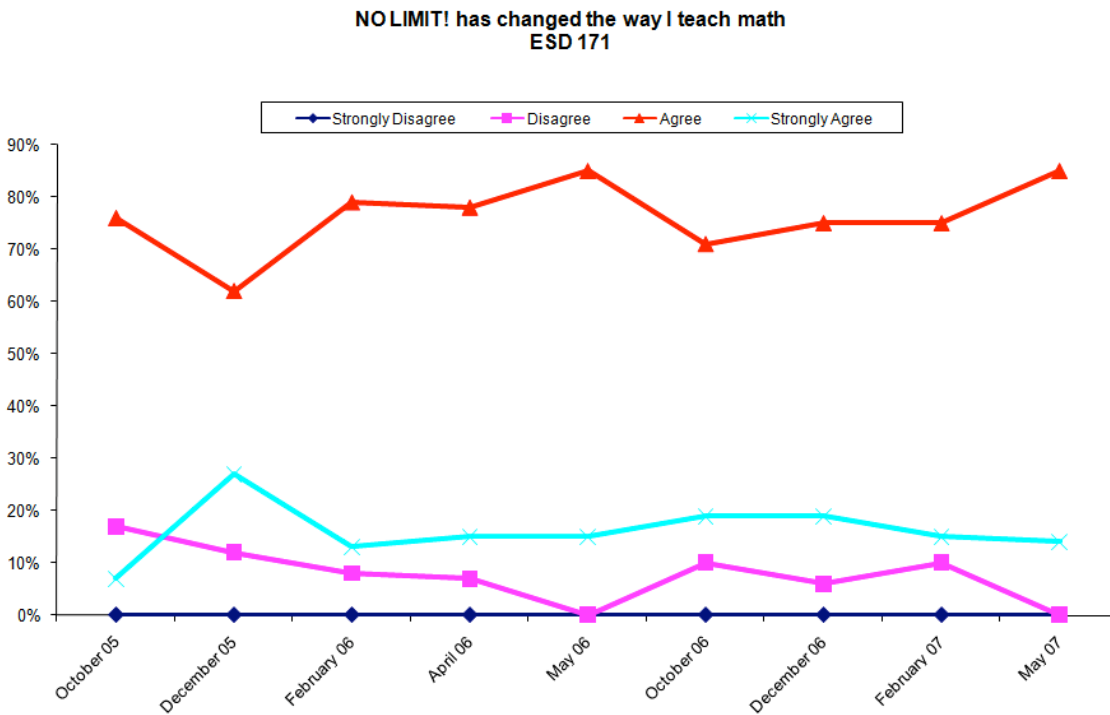
- I need more training in the area of technology-hoped our PLC meetings would address this area. They do not.
- I have only a couple computers in my room and limited access to a computer lab. I also do not use graphing calculators because they do not fit with 5th grade curriculum.
- I'm not sure how to go about using the computer for math when I only have 3 in my classroom with 21 students. I'd really like to learn how to set up sites and incorporate it as part of the students' enrichment learning.

May - 07:

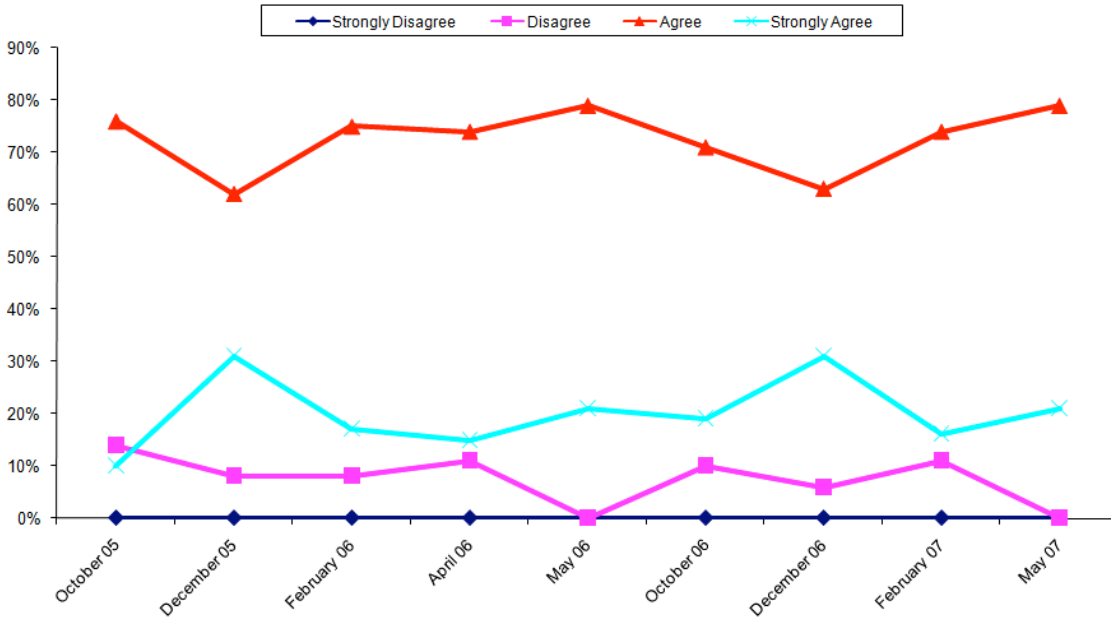
- I was looking forward to more training in these areas.
- We don't use graphing calculators in the 5th grade.

Item 14:

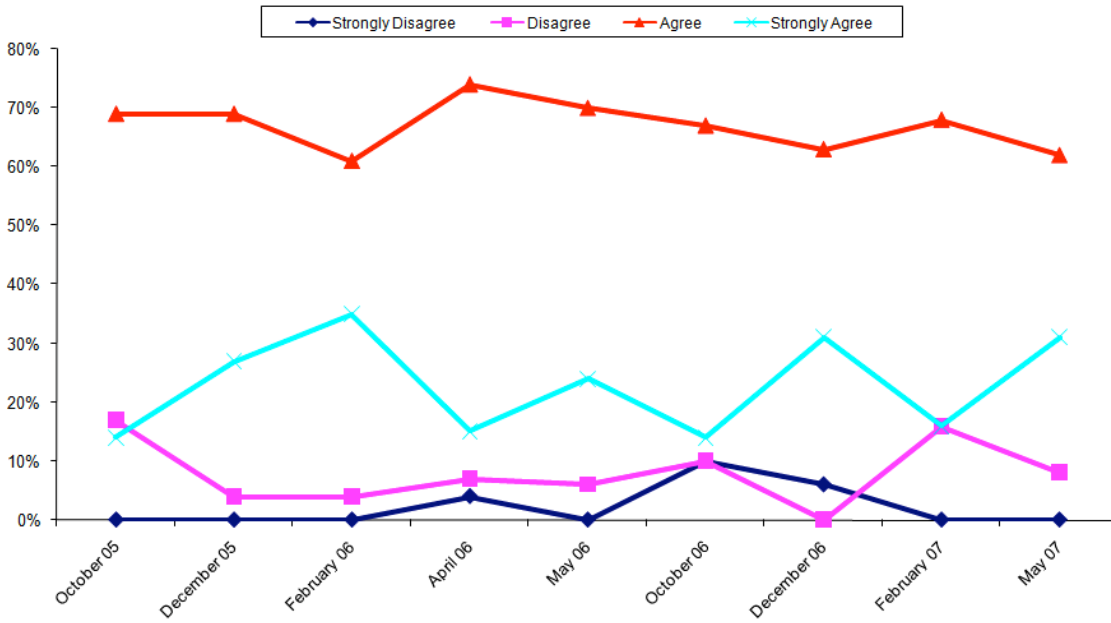
Please tell us how NO LIMIT! has impacted your classroom. We are interested in your frank responses.

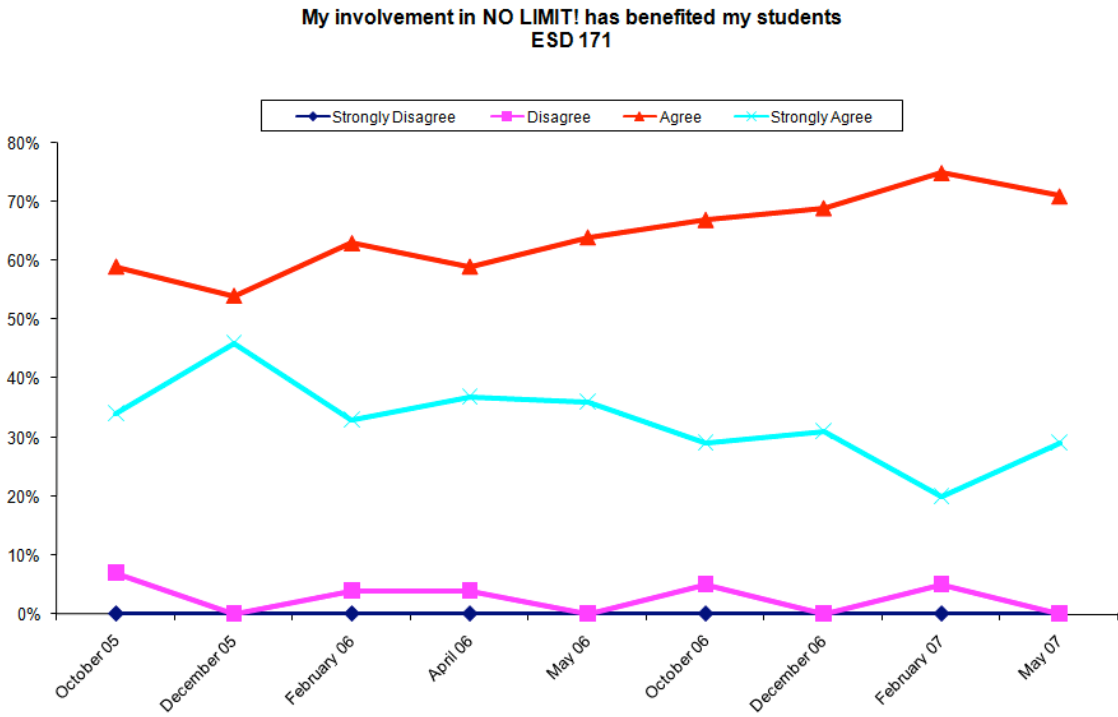
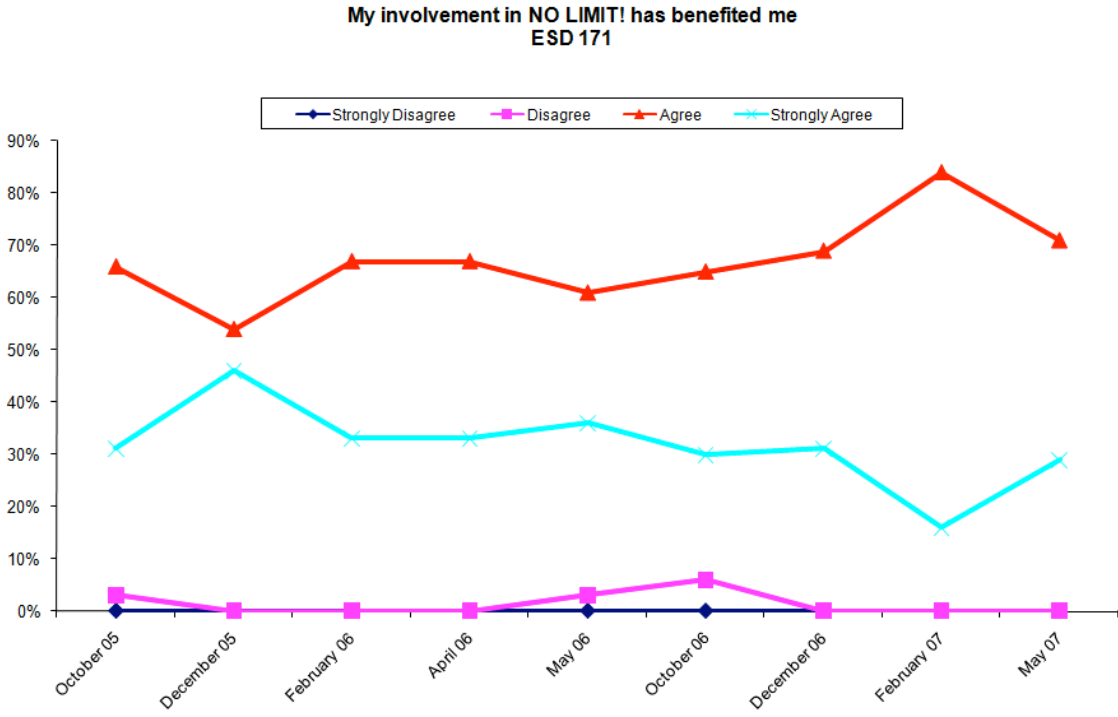


**NO LIMIT! has changed how my students learn math
ESD 171**



**I feel more comfortable using technology to teach math
ESD 171**





Comments:October - 05:

- The doc camera has certainly changed my teaching and student learning. It is amazing to see the change in student work and participation when they know their work will be shared with all to see. It really enables the students to learn more from each other and from each lesson presented.
- The doc camera has made a huge difference in my classroom. It is an excellent resource to encourage discourse between students.
- I just received the hardware and still don't have it set up. Should happen in the next few weeks.
- We just received our technology, but I expect it will significantly change the way I teach math and therefore benefit my students.
- No radical changes in the way I teach math. Throughout the school year I want to make continuous improvements in my teaching methods and student learning. I've been using a computer and projector for several years, but the new document camera really makes a difference.

December - 05:

- I am finding new ways to use my projector-the students really enjoy presenting. They are learning so much from each other and are developing confidence in their mathematical skills.
- Our district has contracted with a math consultant that has been teaching us constructivist approaches for the past two years. No limit has supported what I have learned from her.
- I really like using the document camera and projector...it has really improved student interest and attention to details
- I feel the use of the technology purchased with the NO LIMIT grant has been beneficial, yet I feel I am not using those tools to their full potential.

February - 06:

- I would like more training using my new technology. I know I am not using it to its fullest potential.
- I was ill in Dec/Jan
- I feel a whole lot more confident using technology and equipment in my classroom now, than when I first started. My goal is to be able to content my laptop and do lessons from it soon. I would really like help in finds sites that you can use for different skills both teacher directed and student directed.
- The alignment of curricula occurred between myself and the 6th grade math teacher. The sixth grade teacher isn't formally in our PLC, but has been invited to participate in our activities.
- I still cannot get my computer and LCD projector to work together.

April - 06:

- The new technology we received even though we didn't get much of any training for it.

May - 06:

- My No Limit training along with a district math coach has made my teaching more hands on and more about the conceptual understanding than on the algorithm.

- This is based on the fact of the initial involvement. The equipment and beginning training were very beneficial to my students and I and continue to do so, but I have not had any additional training since the fall.
- LCD projector and doc camera have allowed my students to become more active participants in my classroom.
- The use of the document camera has increased student confidence when explaining their approach to a problem.

October - 06:

- I am basing this input on basically last year's class. I know that there is always hope for this year, but probably not at the speed as last year.

December - 06:

- I love it when I can have the math specialists come into my room to model lessons for me and show another way of approach to a problem.
- The last information concerning test item specification will help align the curriculum.
- The tech piece has been extremely beneficial to my students and their mathematical discourse.

February - 07:

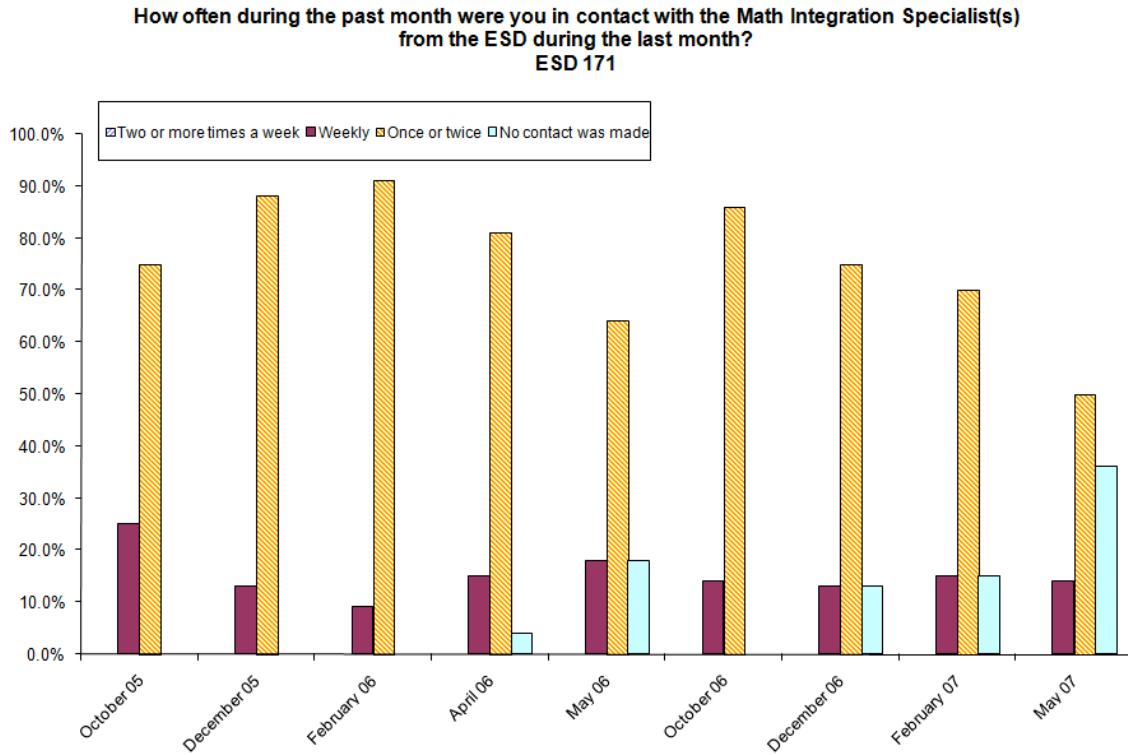
- The technology has changed my methods.

May - 07:

- I appreciated learning how to incorporate technology into my lessons and having the finances to purchase equipment. I certainly think I have gone more away from direct instruction and more to active participation in with manipulatives, project based problems, etc than I would have if I hadn't been involved in the grant.
- I haven't been involved in NO LIMIT really this year

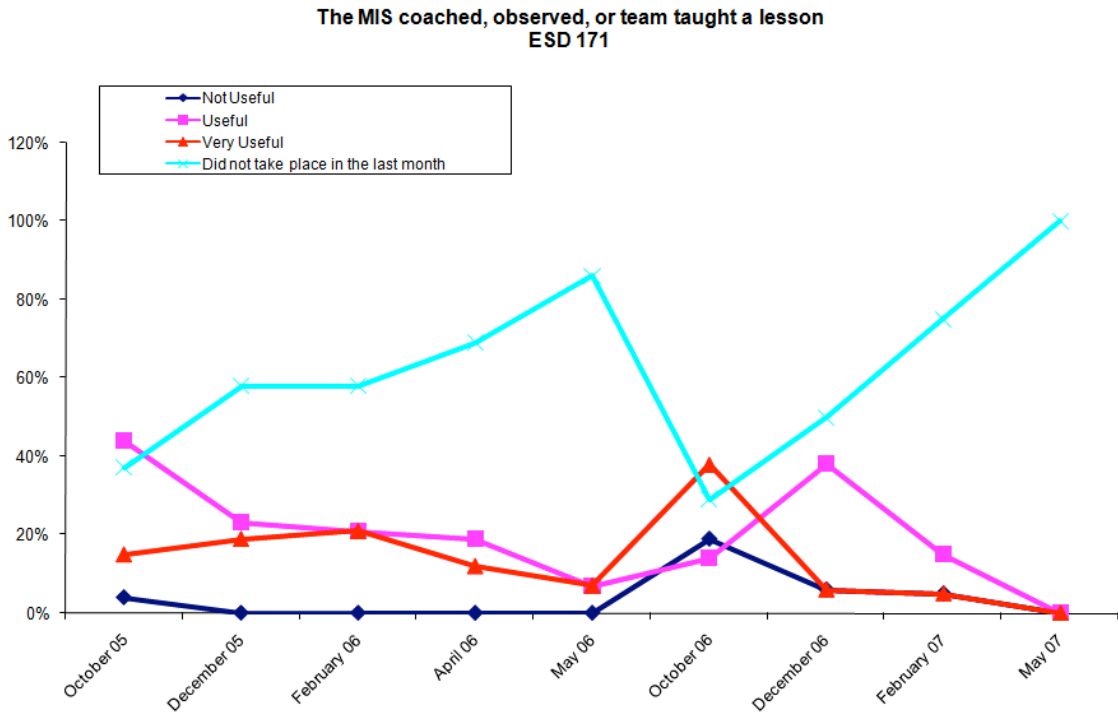
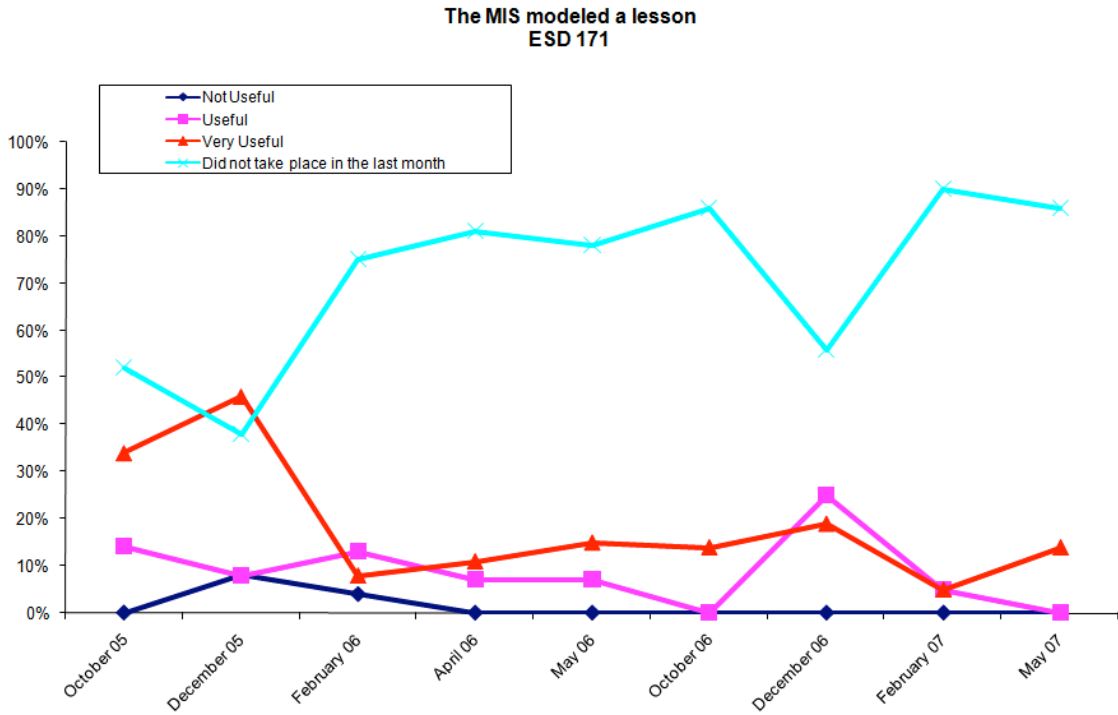
Item 16:

How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?

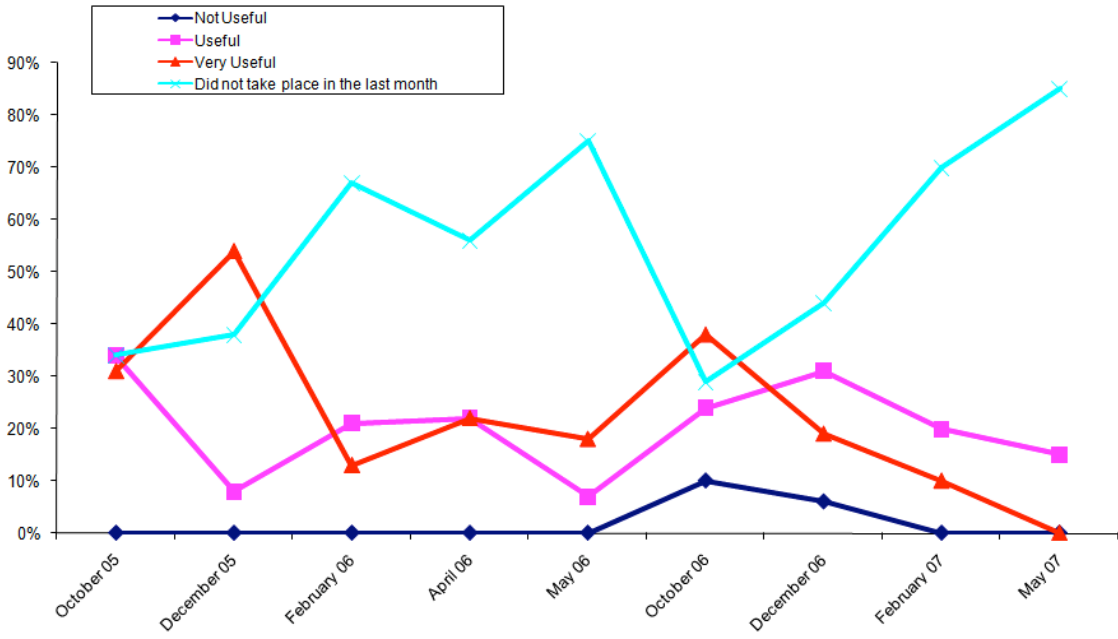


Item 17:

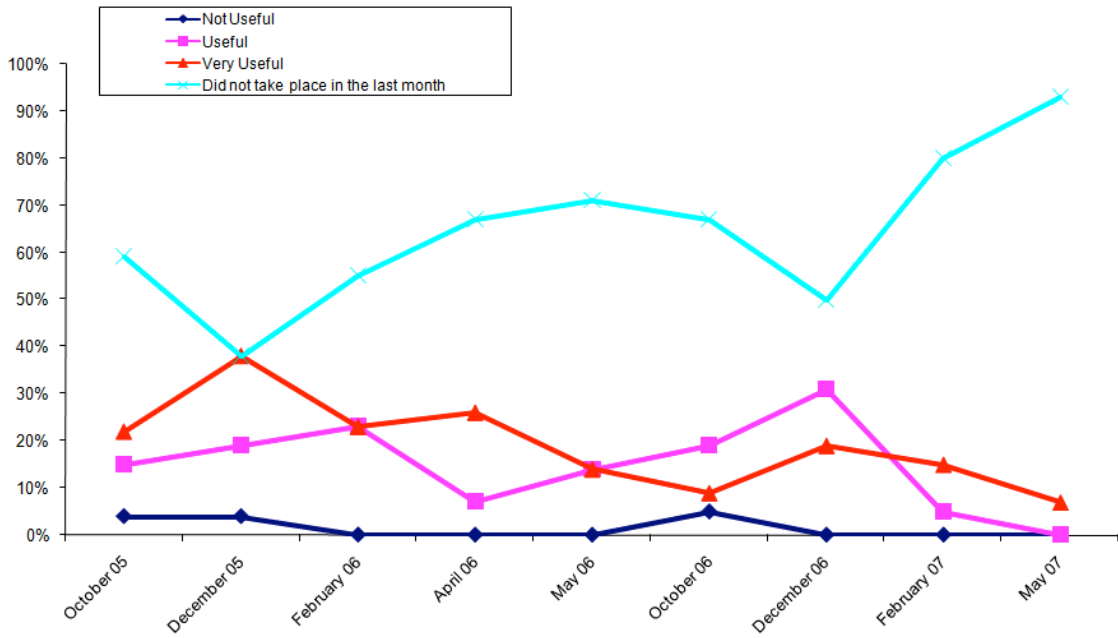
Please evaluate the following MIS activities over the last month.



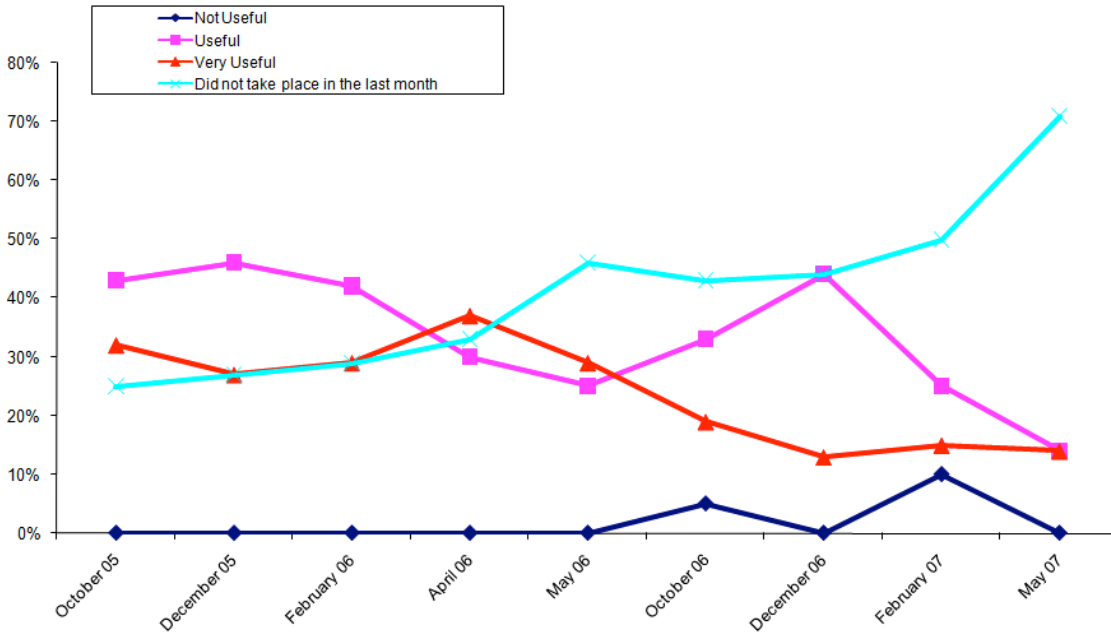
The MIS worked with students
ESD 171



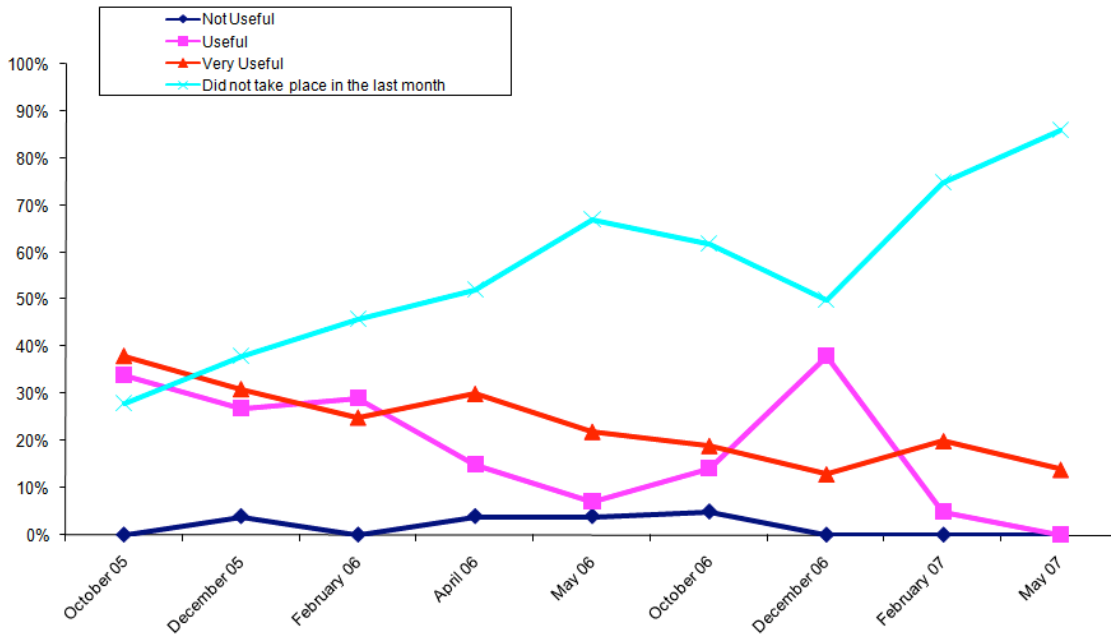
The MIS helped with planning a lesson
ESD 171



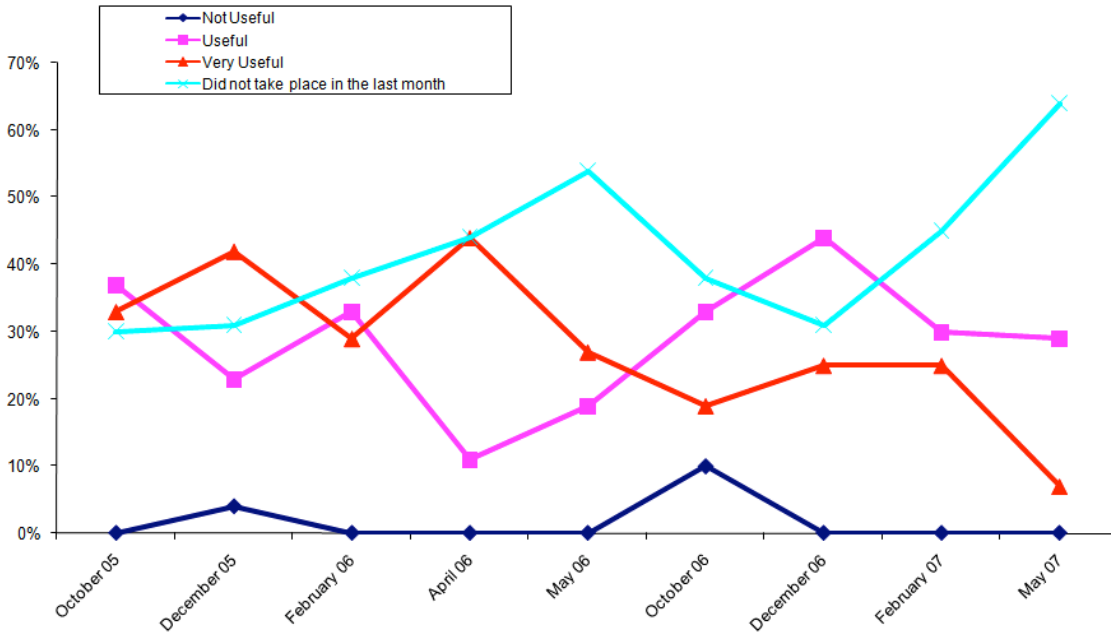
The MIS helped with schedules, logistics, or administrative issues
ESD 171



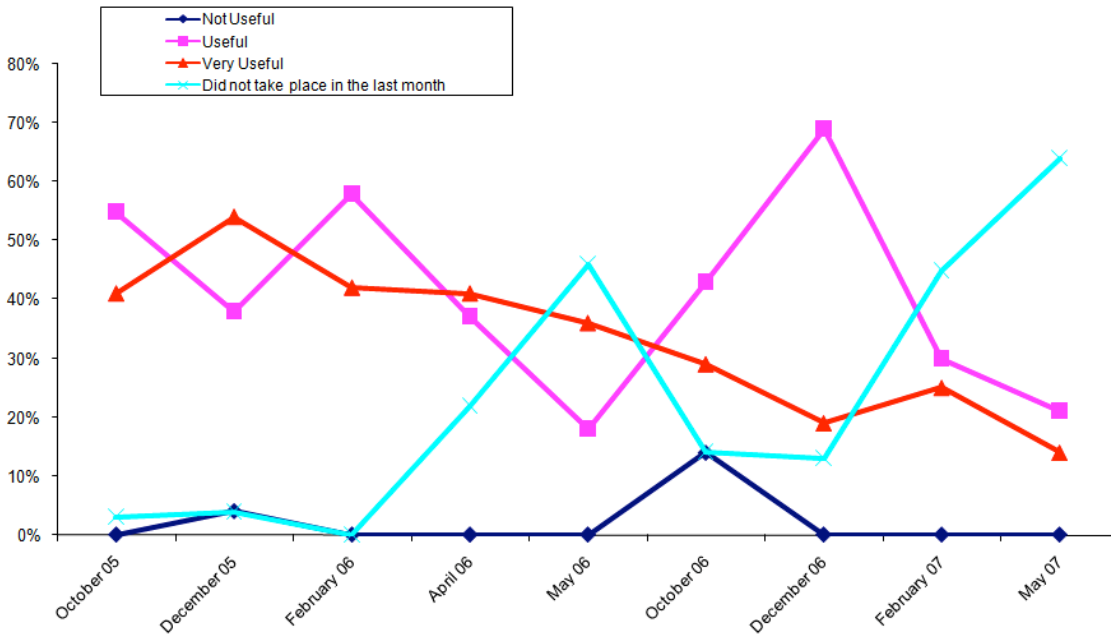
The MIS helped with technology
ESD 171



**The MIS provided instructional resources
ESD 171**



**The MIS facilitated a Professional Learning Community meeting
ESD 171**



Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

Comments:

October - 05:

- The focus of our PLC is to provide activates so our 6-8th grade students will score higher on a WASL communication piece. We have shared strategies and problems. During our next meeting, we will share scored student work.
- Discussion on the book that we are reading. Learning to use excel in the classroom and do PowerPoint presentations.
- Book study activities and then we discussed ways that students can show communication with problem solving.
- We worked on assessing students work.
- We have tried to focus on common goals and discuss why PLC are effective and share productive lessons taught recently.
- The focus did not seem to have much to do with actual math instruction in our classrooms. Our MIS had an agenda of items he wanted us to accomplish. Hopefully, we will become more centered on our technology integration and implementation.
- Learning Math vocabulary and application in class or in problem solving
- We have been reading the text and having discussions following each chapter. Our goal is to improve communication scores. We have been working together as a team to provide problem solving opportunities for all students. We will then compare work across grade levels and score problems.
- Our focus was to get everyone to give the same type of problem cross grade levels and then pick apart group responses to see where the students are in terms of understanding.
- Our meeting was mainly administrative issues.
- Last time we met we worked on looking at student work. It was a fantastic time well spent.
- Working together with teachers from our school that are involved in no limit.
- The goal of our PLC is vocabulary development. We spent our PLC meeting organizing vocabulary from the Test Specifications for grades 3 through 8.
- The focus so far is to discuss the value of PLC'S
- We start by discussing our assigned reading and then discuss things that have been tried in classrooms as to successes or failures. Then we usually look at and critique student work from the lessons presented with the MIS.
- We are planning what should take place at our all day in-service coming up on the 4th.
- Determining how No Limit can increase math standardized test scores for our students
- Our focus was on scoring student work. We would like to complete common problem solving assignments and then score them as a team to develop a common scoring rubric.
- We're discussing solving problems by restating, explaining, illustrating and answering questions.
- We are trying to get collaborative time and plan out the implementation of CMP.
- Learning about PLCs, why PLC's and how to evaluate student work.
- It is to get everyone on board and headed in the same direction.
- Problem solving set goals for the year for our grade level, purpose and organization of a PLC
- Communication
- We are focusing on increasing our scores in problem solving and communications in math.

December - 05:

- We discussed two chapters in our PLC text.
- Working on our yearly goal of problem solving and communication
- As a group we worked on what we were going to implement in our CMP curriculum to account for the algebraic sense that is not covered. We brainstormed and came up with ideas that will work for us at the 6th grade level. We also talked about the plan for May Fair Share. We did a book study and discussed the book.
- Coordinating the math curriculum within the Middle School and with the High School.
- We discuss a book on PLCs and define our goals, such as curriculum alignment, and share our strategies that have been successful.
- The focus has been on evaluating student work from the various grade levels.
- The focus on our next meeting is going to be on student work and what we are doing individually to prepare the students in our classes.
- The last meeting was only administrative to set agenda for the rest of the year.
- Looking at student work
- Book Study and we discussed the gaps in our curriculum and how we can supplement the fill those gaps.
- I was not able to attend my PLC meeting. The focus was suppose to be on our goal and looking at student work for a specific problem across grade levels to find patterns and misconceptions that we could try to correct or adjust instruction.
- We are trying to improve student communication skills in reference to math
- We spend time evaluating data from pre and post tests on our SMART mini goals and collaborating between grade levels on areas that need to be focused on. We're also discussing chapters from the Professional Learning Communities book.
- Mostly setting up meeting times, some discussion about action plans we have developed as a result of No Limit.
- Book Study.
- We discuss the book we read. We discuss what we're doing in our classroom, what's working and what isn't. We try to incorporate No Limits into our district's steps toward prioritizing GLEs and teaching to them.
- We have been trying to see how to increase our communication scores on the WASL. Also, we have been looking at our curriculum 6-10 and seeing where the holes are in relation to the GLEs.
- Correcting student work as a team and deciding on rubrics and standards. Book study. Planning for our May presentation.
- To get everyone on board and headed in the same direction with the same goals.
- Scoring WASL release items given to students prior to the meeting. Discussing the GLE's. Discuss chapters from our book Professional Learning Communities at Work.
- Communication and integrating standardized test practice into the classroom curriculum, rather than having it be a separate focus.
- We are focusing on improving our problem solving and communication scores.
- Going over problem solving rubric, and planning problem solving activities
- We discussed the importance of vocabulary & Bev (our Middle School Improvement facilitator did the training). We also practice scored a WASL like prompt and discussed the possible variables of scoring.

February - 06:

- The focus of our meeting is to discuss the PLC book and to collaborate/share ideas across grade levels.
- Analyzing data and future direction.
- The main discussion was about our PLC chapters, integration of WASL prompts and our May share fair ideas.
- Evaluating data to improve student achievement.
- Focusing on the goals that we had set for the year and discussing the PLC book chapters.
- We met for a day and we had a book discussion for an hour. Then the middle school teachers created a number sense unit while I worked with 5th grade GLE's and their use in my classroom.
- Looking at student work
- It is different each time, our focus is on whatever we feel that we need to spend time going over.
- Our PLC meeting held Jan. 20 was focused on planning our CMP lessons for each grade level 6 through 8.
- Our PLC has been strongly involved in curriculum alignment and teaching strategies
- The focus was on our chapters 6 and 7 reading from Professional Learning Communities at Work. We discussed our mini-goals for our Math team, but didn't have any results to go over yet, since the assessment was scheduled for Feb. 6. We also just shared things that might work at all grade levels.
- Book study - sharing of resources - team work designing and planning for instruction
- Our PLC has been doing a book study which takes up about one-fourth of our time together. This study facilitates needed discussion within our team. The balance of the time is spent in developing common classroom assessment to help up drive our curriculum.
- Book study. Discussion on Fair Share.
- Discuss the PLC book, discuss district wide, school wide and grade level math goals with the ultimate desired outcome, passing the math WASL.
- We have been focusing on improving student communication on extended response questions.
- Preparing for our No Limit Presentation in May. Discussing how to present our data. Dealing with the technology involved in that.
- Gathered practice WASL scores and put them on spread sheet. Deciding how to use the spread sheet for the presentation in May.
- Improving Communication
- We are focused on improving problem solving and communication scores.
- We have been going over

April - 06:

- We focused on the issues of staff development and what it is to us. We discussed that it isn't always the best way to learn and then we aren't given opportunities to test the new learning we had just been through. We don't have enough collaboration time that is actually useful to us.
- This previous month we have made concerted efforts to revise our standards which we judge our students with for entry into 5 different levels of middle school math. We also

worked on getting our samples of student work together and collection of data for our upcoming May Fair Share.

- We continue to focus on evaluating student work to find strengths and weaknesses.
- We are working to have comprehension of mathematics vocabulary and application of the terms to successfully think about math situations and computation.
- Finished discussing the book used in the book study and discussed the May share fair and what we needed to do.
- Focus was on planning our sharing presentation and reviewing the year. We also studied 2 chapters of book.
- The book review.
- The focus of our meetings is to work on our goal of improving student performance by increasing vocabulary. We also take time to discuss things that work well, things that need improving, and work together to provide suggestions/solutions. We also are able to take some time to plan for implementing new curriculum as a team.
- The focus was on implementation and the value of such a community
- The last meeting we discussed our book chapters and discussed preparation for the Share Time coming up in May.
- Primarily setting dates and discussion upcoming commitments
- Book study of Professional Learning Communities, developing aligned assessments (with state GLE's), aligning curriculum and planning our Fair Share presentation.
- May Fair Share
- Discuss book, areas of concern in our classroom instruction.
- We have been looking at our curriculum to see how it fits with the GLE's. Also, we have looked at how we can improve our student's communication scores.
- Getting ready for the May fair share and discussing and grading student work
- We are focusing on the May Fair Share.
- Presently working on power point presentation for the May meeting.
- Preparation for May Fair Share, Book review, Increasing the level of communication
- We have spent the year trying to improve our WASL problem solving and communication scores.
- Going over and discussing student work. Planning what curriculum we will cover for the remainder of the year and planning for next year.

May - 06:

- Problem solving and communication
- Our PLC has focused on research articles and implementing the best practices from the research in our classroom.
- May Fair Share which I was unable to attend.
- Planning what we will teach in our district.
- We focused on getting our data together about our progress for our group's goal this year and putting together our Share Fair presentation.
- Increasing students' algebraic sense - taking sample work and scoring as a team.
- Our PLC had a focus on Mathematics Vocabulary.
- Mostly book study and then some scoring of student papers.
- During the monthly meetings, the focus was mostly procedural concerning times, dates, info from OSPI etc. At the all day meetings the focus was on the other school creating and

aligning assessments. I usually worked on something that affected my classroom, since I work at a different school.

- Improvement of student learning
- Collaboration time to discuss our new curriculum.
- Our last meeting was spent putting together our presentation.
- The focus at this point is how to make the time to continue the process
- Book study and team designed projects
- Book study and assessment development.
- On task
- Planning for the share fair
- Last meeting we prepared for the share fair and discussed our plc book.
- We have been focusing on how to increase our students' communication scores on WASL extended response questions.
- Preparing for May Share Fair.
- On how we can better align our math throughout grade levels (6-8)
- Our last couple of meeting were mostly to get ready for the Share Fair.
- Increasing Communication skills by our students in Mathematics.
- We were focused on improving our WASL scores in the areas of problem solving and communication.
- Lately we've sent a lot of time going over and comparing student work. This month we mainly worked on our Fair Share power point presentation.

October - 06:

- Increasing discourse in the classroom. Book study.
- We revised our SIP goals
- We talked about the technology that we were going to purchase. We talked about the planning of our next PLC group. We talked about some of the issues with the upper grades.
- Went over the new book and how our district's math curriculum is set up.
- We focused on our goals this year a learning community and looked at our performances on the WASL. We looked specifically at the content areas we both failed and achieved well in.
- Our focus is helping students achieve through the use of journaling.
- The last meeting was more focused on assessment. We looked at trends between our school and 2 other schools with the same demographics as us.
- We discussed schedules. We also talked about technology that was available and that was beneficial
- Connecting mathematics ideas
- Discussion on curriculum alignment for 6th through high school.
- We are reading and discussing a book...I can't think of the name right now. We also talked about the time factor of math in our scheduling and ways to create time whenever possible.
- Business details
- The meeting may have taken place, but I was coaching so didn't attend
- I don't know
- Haven't had one yet this year.
- All meeting plc in nature have been focused on providing remedial help, such as after school math club, to help those at risk.
- We focused on alternatives to the WASL. I think it is called CAA alternatives.

December - 06:

- Purchase of technology and book study.
- We worked on writing some WASL style test questions out of our current math curriculum with Connected Math. It is a difficult task and requires a lot more time than we had. I am glad we got to do it.
- Student discourse.
- Book Study!
- Book study and tech discussion
- Rewriting our unit tests to mirror the WASL.
- Discussion of upcoming events and the use of no limit funds. Also book study.
- We were going to discuss new GLEs and WASL information, but I'd already heard it at a meeting I'd attended the week before.
- Lately we have been working on the SIP on Math

February - 07:

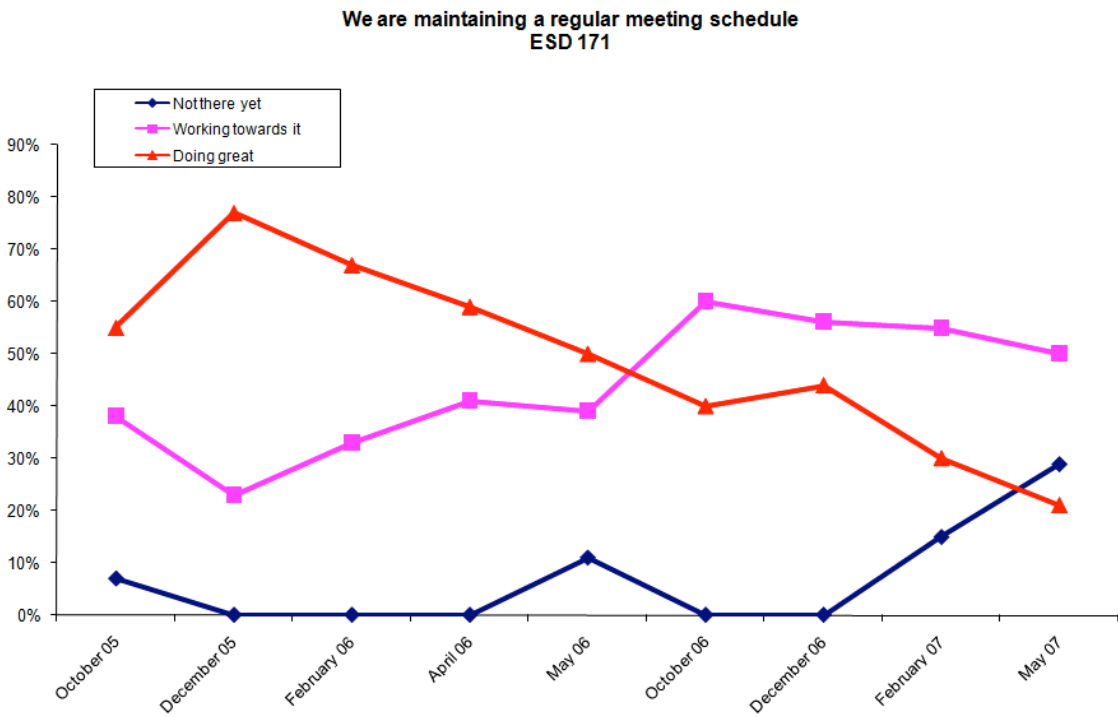
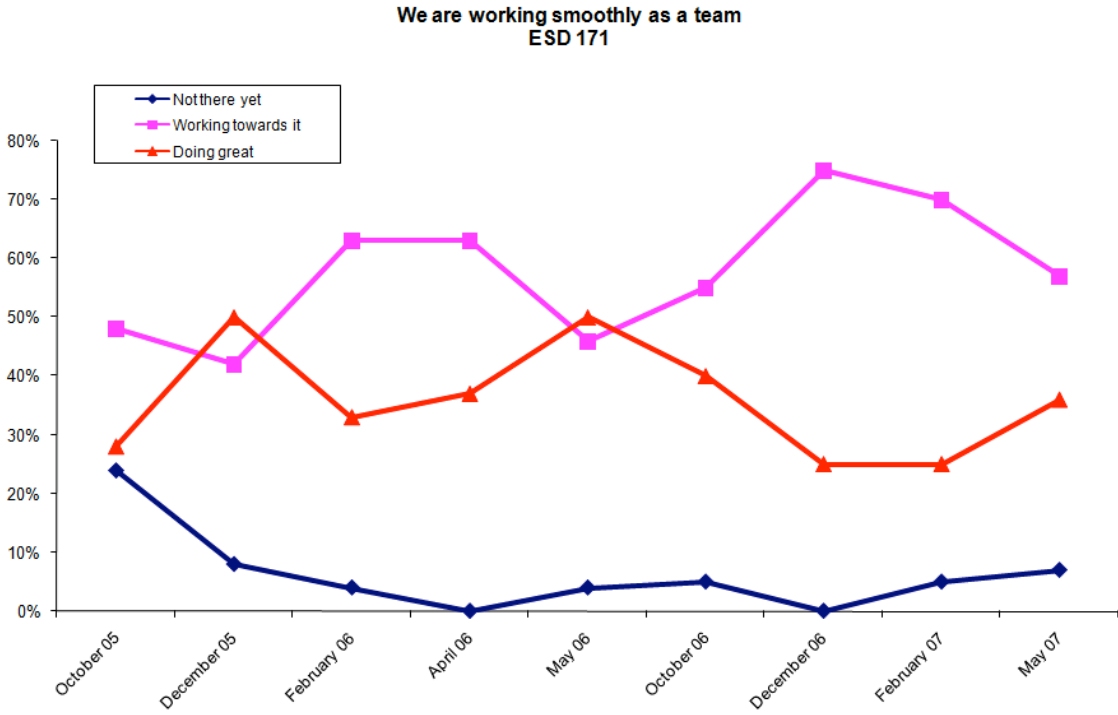
- We all had given a WASL style prompt and then as a group we scored them and talked about what students are missing.
- We focused on a book study and sharing complementary lessons.
- Not sure anymore - apparently there has been a shift in who is involved with our district.
- Book study and working on school goals.
- Our PLC did not meet this month because the middle school teachers had coaching responsibilities.
- The last meeting we scored papers and discussed how accurately we did them.
- Mostly logistics
- Content alignment with state standards
- Discourse among students, SIPS goals
- Haven't had one lately.
- To complete our School improvement plan

May - 07:

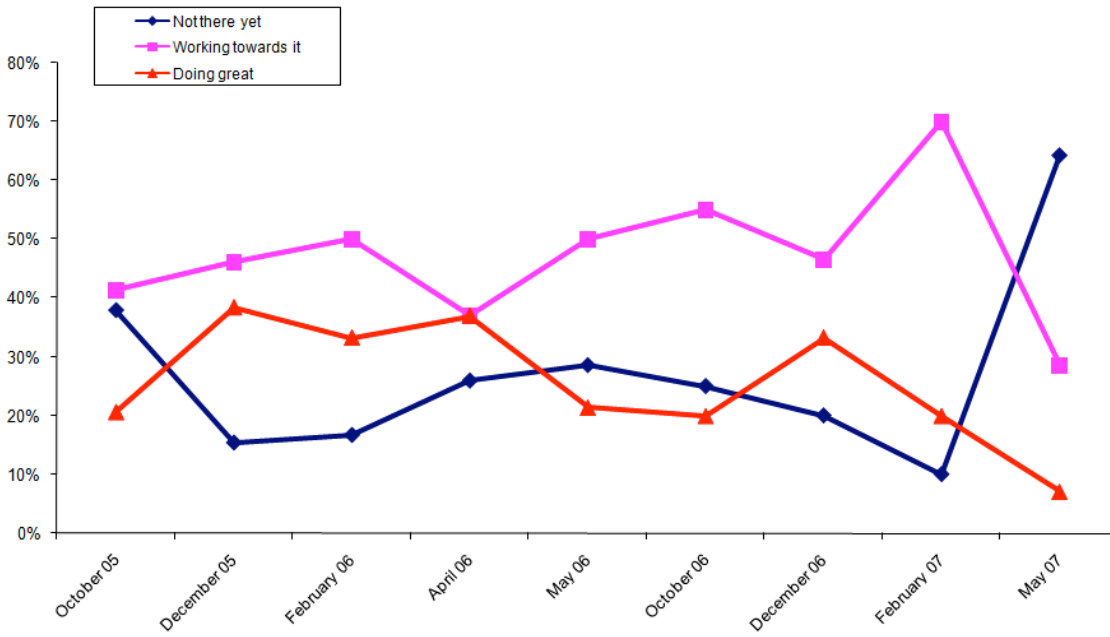
- Issues with new curriculum and how to assist students in being successful. Also, how to streamline so that students received instruction on as many of the GLE's as possible.
- Not sure
- WASL changes in the Legislature.
- Did not happen last month
- They fell apart.
- Book study and conversation on student discourse.
- They seemed to be more administrative than focused on student learning.
- Discussing curriculum and working on collection of evidence problems.
- Coordination of curriculum
- We didn't meet because of testing and schedule conflicts, but we also lost some of our enthusiasm because we knew the Grant was ending
- Times and logistics
- Haven't had any recently.
- To improve WASL scores

Item 19:

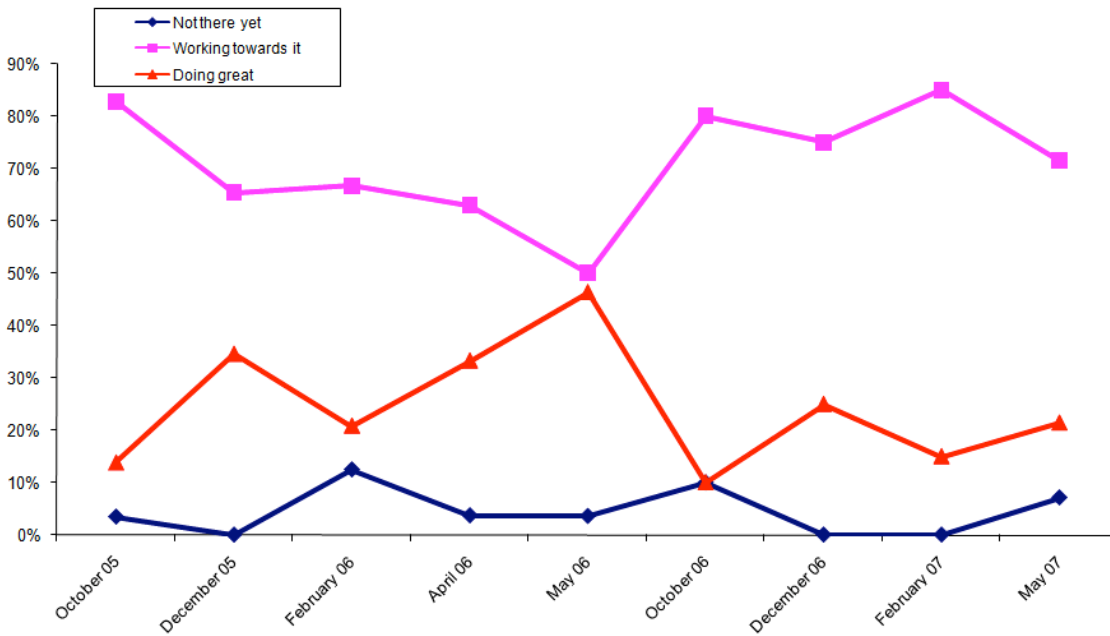
Please evaluate the effectiveness of your PLC meetings.



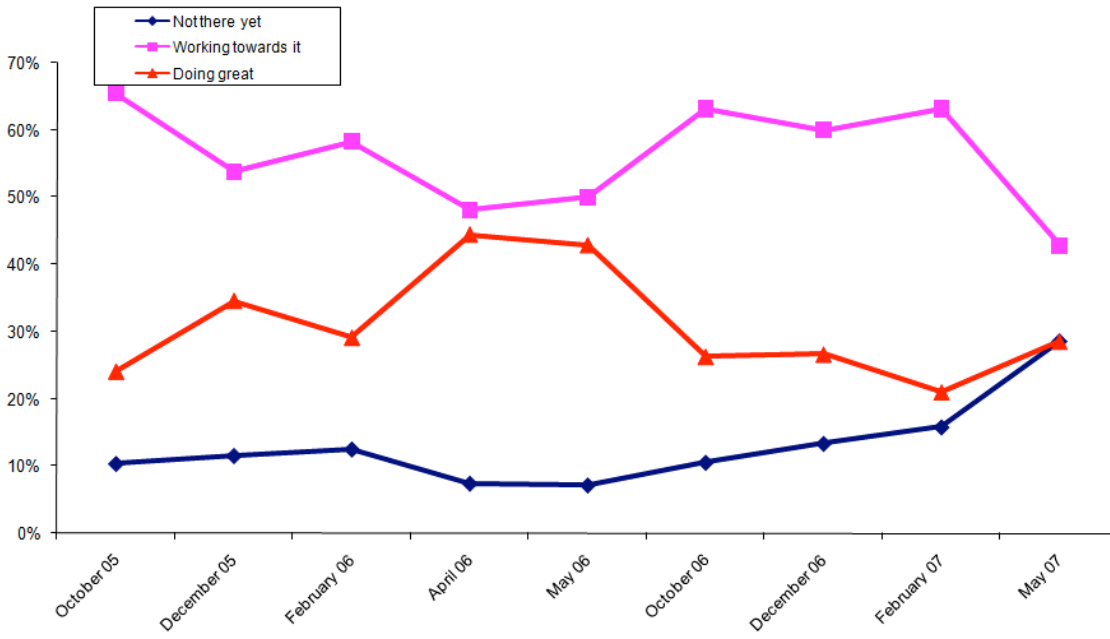
**We are reading and sharing research
ESD 171**



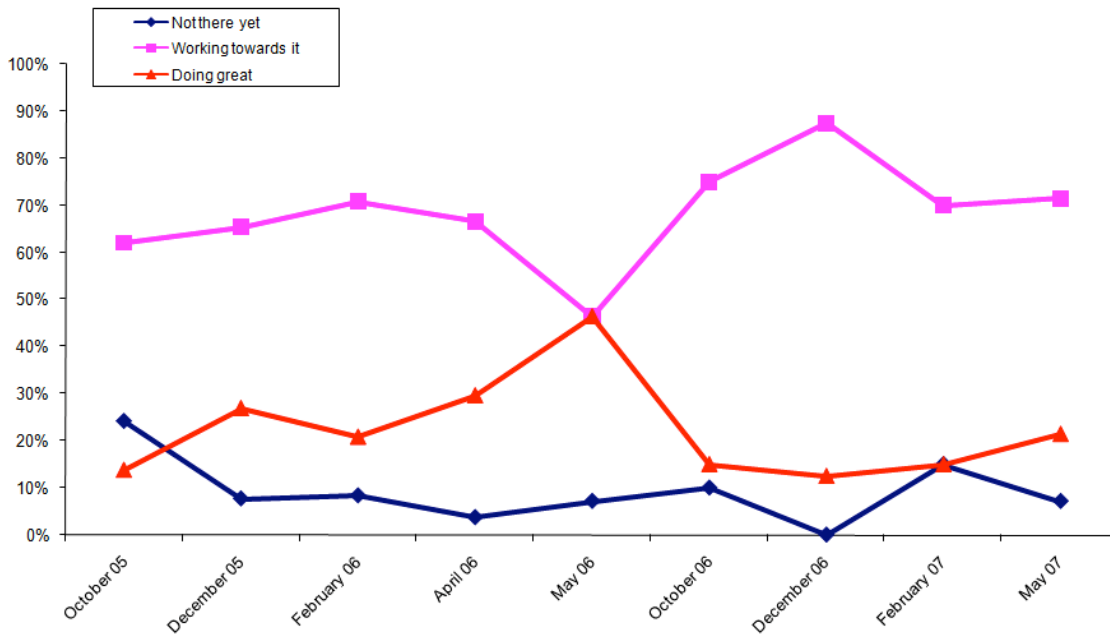
**We are using new teaching strategies in the classroom
ESD 171**



**We are maintaining focus on our goal
ESD 171**



**We are seeing changes in student performance
ESD 171**



Comments:

October - 05:

- This is my second year at CMMS. It is wonderful to be surrounded with experts in the field. Our entire team works together very well. It is great to be part of such a caring team in such a supportive atmosphere.
- This is my second year in middle school, and I have a LOT to learn. My team has been a great resource and support for me. They have contributed to my success and sanity!
- I have only seen one of the members at the most recent No Limit day with everybody! We have never met as a group with everyone there.

December - 05:

- We would like to spend more time on WASL prep and are deciding on common graphic organizers and format.
- No problems that I know of.
- We all agree that the document camera has increased the participation and confidence level of the students.

February - 06:

- It would be beneficial to meet more times on our own to accomplish our goal.
- Student writing and participation continues to improve.

April - 06:

- I am involved in the Math Data Team for our school, so we spend time discussing progress and performance based on the Power Standards, mini-goals, pre/post tests for those goals for our different levels. Things that we talk about in our Grant meetings are useful in helping us set and obtain goals of improvement for our math classes.

May - 06:

- The meetings were usually good except that one teacher used them as a personal soapbox to talk at length about his views on the WASL, new curriculum, etc. This got to be very tedious since the other teachers had to work with him. There was little productive advantage to his opinions.

October - 06:

- I teach at a different building and grade level from the others so it is tough to work together.
- We are making a lot of progress in our Data Teams at school which meets every other Wednesday to discuss progress of power standards and areas of concern in the curriculum.

December - 06:

February - 07:

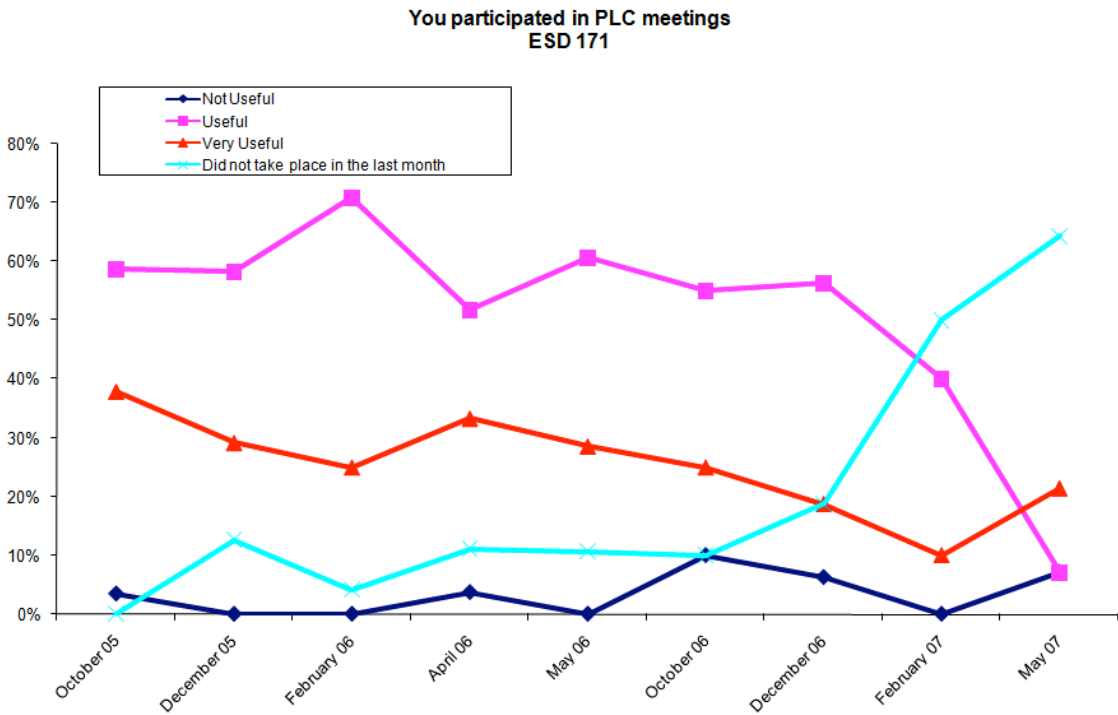
- Our goal is our SIP goal-not addressed by PLC meetings.
- I am at a different school and grade level so it is difficult for me to fit into this group.

May - 07:

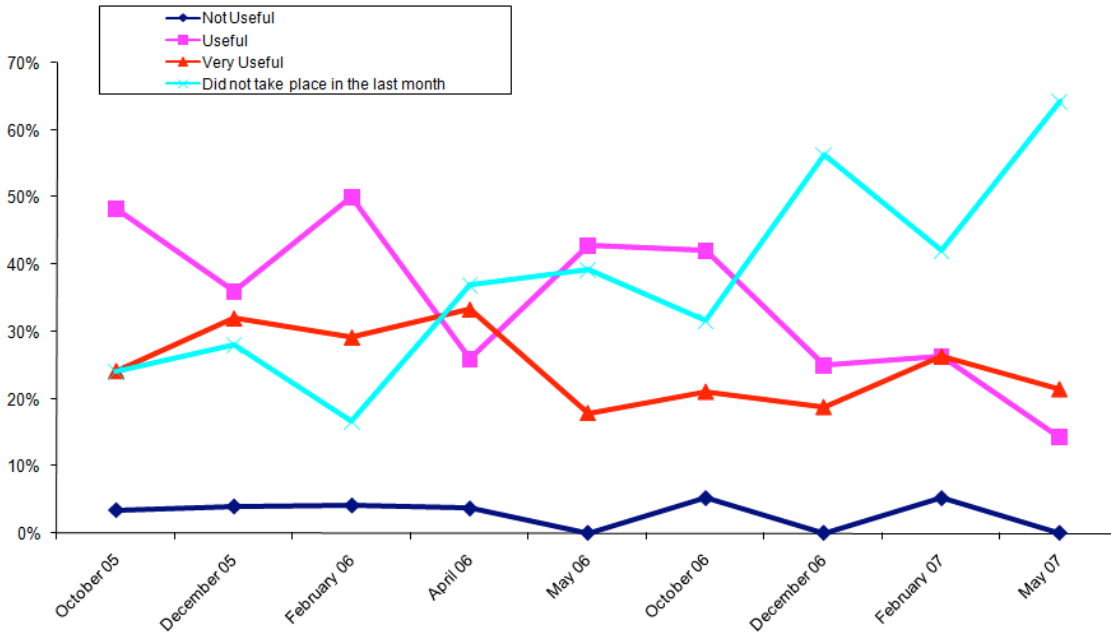
- We collaborated more last year. I don't think we really understood our goal or even had one this year.
- Since I am in a different building it was difficult for us to meet together and I felt I was never part of the team.

Item 20:

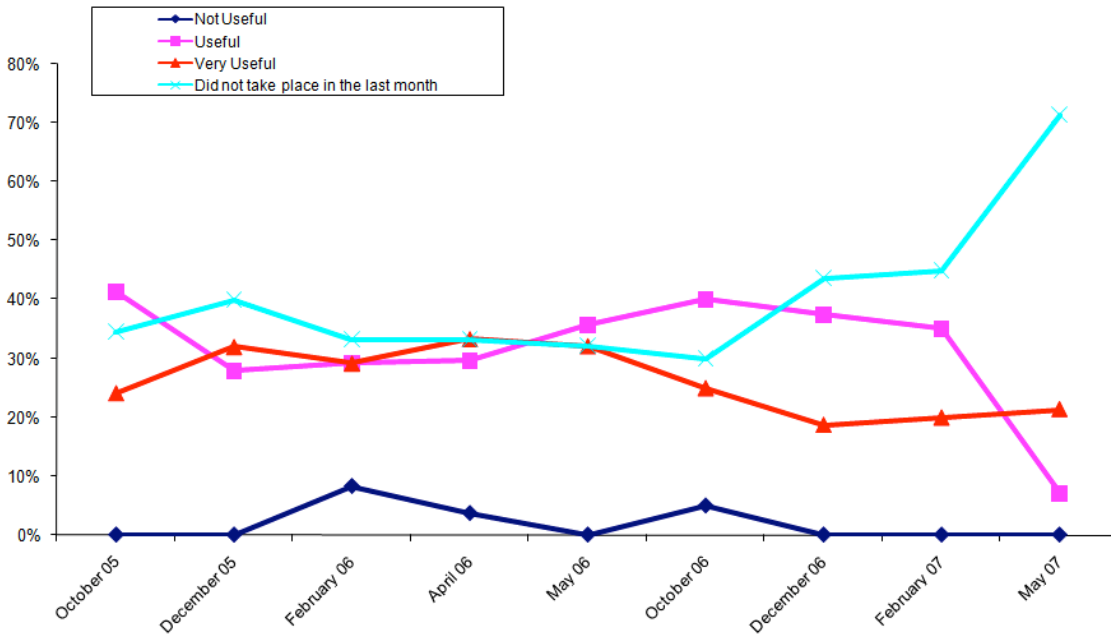
Please evaluate your PLC over the last month.



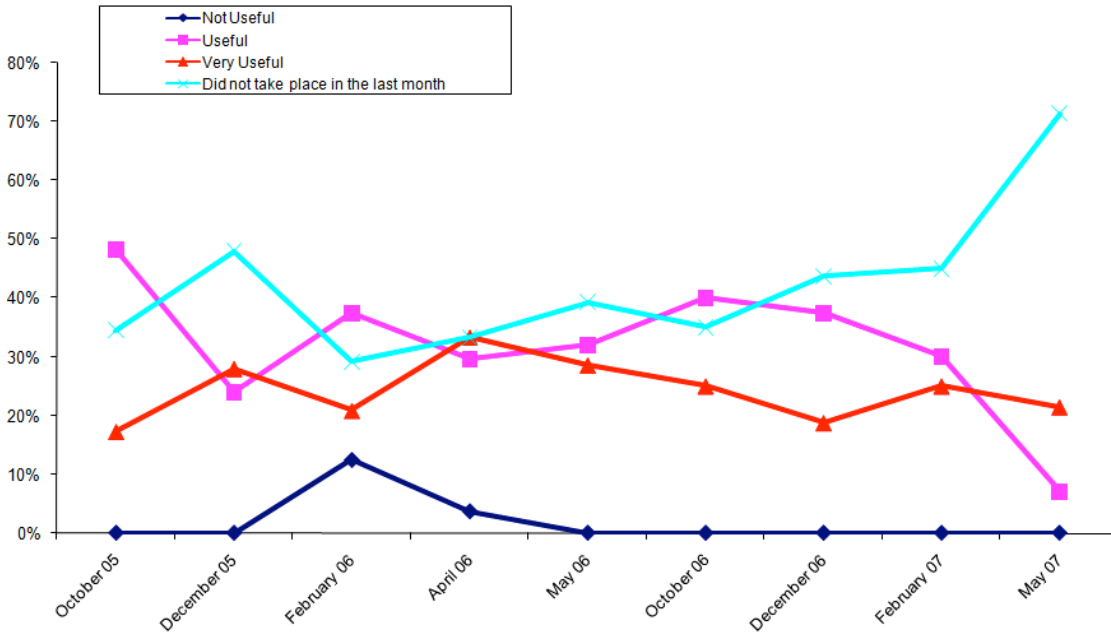
**You collaborated with other teachers in your PLC to plan or teach lessons
ESD 171**



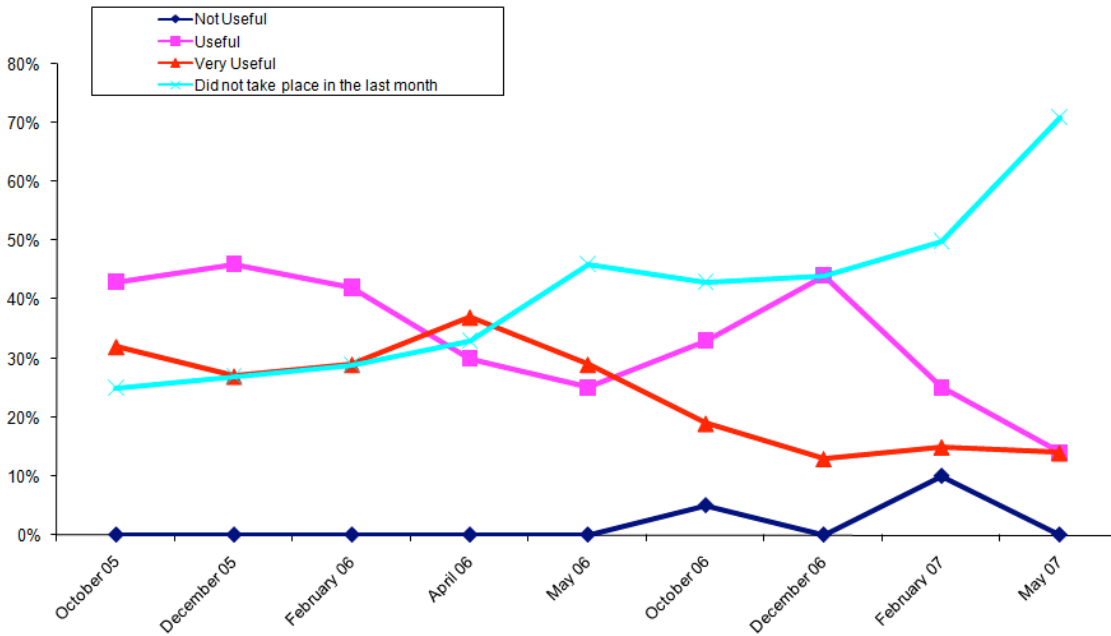
**You worked with teachers in your PLC to align curricula across grade levels
ESD 171**



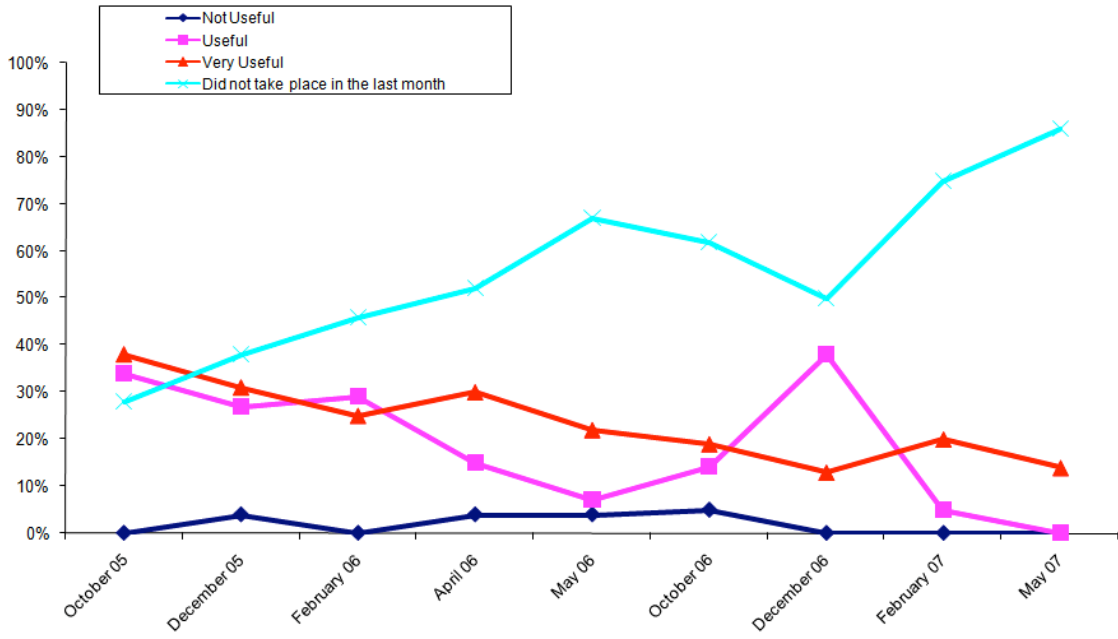
**You worked with teachers in your PLC to align curricula with state and/or national standards
ESD 171**



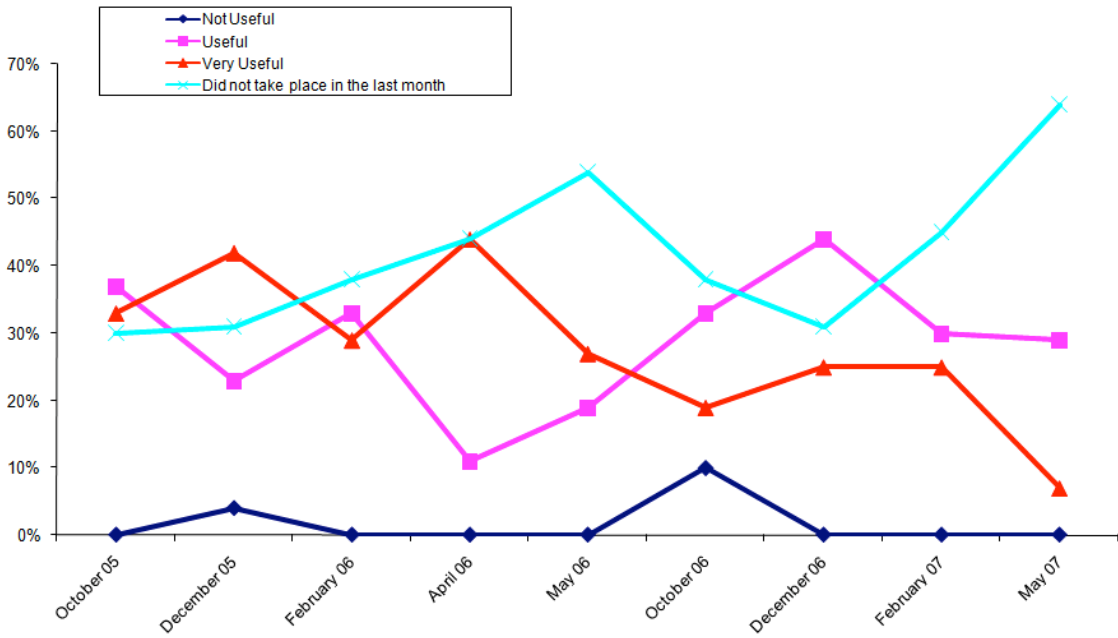
**The MIS helped with schedules, logistics, or administrative issues
ESD 171**

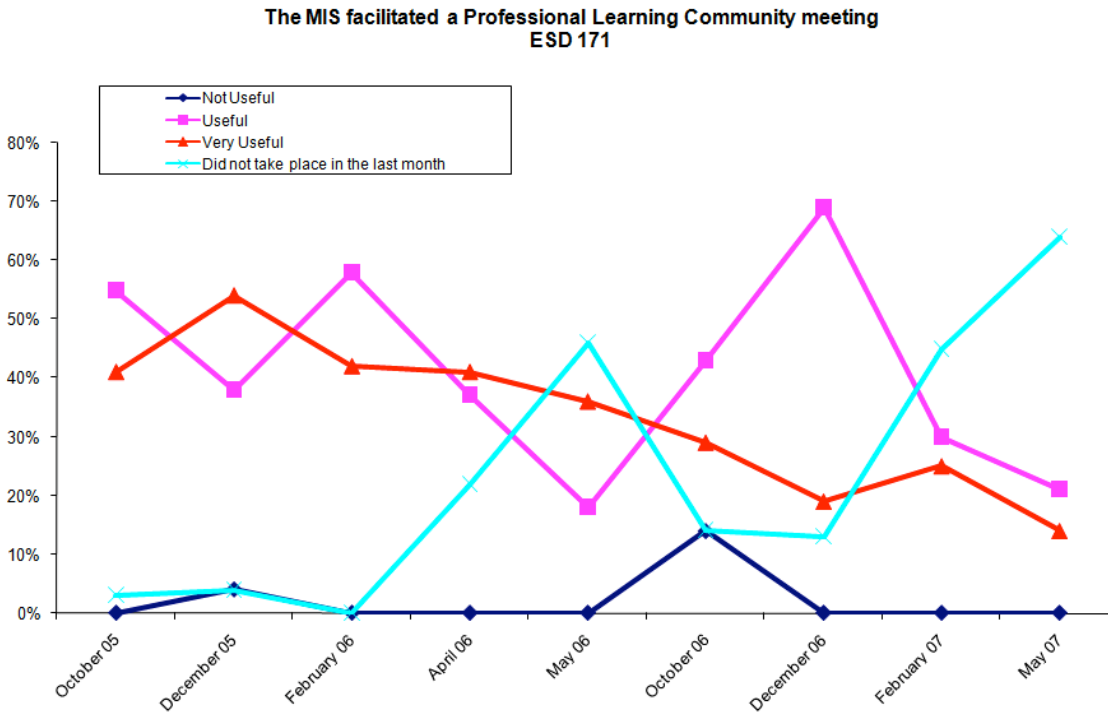


The MIS helped with technology
ESD 171



The MIS provided instructional resources
ESD 171





Comments:

October - 05:

- Would like to do deeper curriculum alignment-work with the GLE document more. I am sure that will come in the future-all takes time! Thank you for allowing me to be part of this grant!
- I am glad to be part of this grant! Thank you!
- The other teachers in my PLC teach at a middle school and I teach at an elementary school! It's hard to work together when we aren't in the same building.

December - 05:

- Thank you once again for the opportunity to participate in the very worthwhile project! Lynn Monahan
- This is a process that probable should be ongoing.
- I was unable to attend the November meeting due to a Doctor's appointment out of town.
- Since I am the only teacher in my building (the others are at a middle school) it is difficult for us to get together.
- My group had a PLC meeting but I was not able to attend.
- We're really finding areas of foundational teaching that is either skipped or not reached during a year. It's good to be able to talk to the 6th, 7th, and 8th grade math teachers to see what areas we need to pick up at the 5th grade level. We are in the second year of our Math Trailblazers, so we are seeing a big difference in skill building especially in the area of fractions which will help the upper grades.

February - 06:

April - 06:

- I teach at a different school and a different grade level than the other members so it is difficult for us to work together.

May - 06:

- Would like to see more cross grade level alignment.
- Again, I teach at a different school and grade level than the others. I felt like the work they were doing was only affecting their school.
- We have been given early dismissal time on Wednesday to work in our Math Data teams which involves all the levels and paraprofessionals. This has been a great time to look at what is being accomplished at each level and set goals and assessment objectives with input from the whole group.

October - 06:

- Again, I work in a different building and grade level.
- We looked at the OSPI math modules and how they could be incorporated into a class to help students who didn't pass the WASL the first time, be successful on their 2nd attempt.

December - 06:

- None

February - 07:

- I would like to accomplish more during our PLC meetings. Our district math coach will shadow our facilitator this month. Perhaps this will help.
- Again, I am in a different building.

May - 07:

- Again, I'm in a different building and we were all giving the WASL so we did not meet this month.

Networked Learning Community (NLC)

Year Five

Training and Professional Development for Ken Bakken

Date	Schools	Time	Content
July 11, 12, 13	Grandview	8:30-4:00	Expectations of grant and NLC model, equipment purchases, team planning, and introduced eCoach as a tool that would be used to document project. The team reviewed data to determine the direction that the team wanted to increase student improvement. They wrote a team narrative describing what they hope to accomplish. Each member started creating a Web Resource List to use with their students.
August 4,5,6	Mt. Baker	8:30-4:00	Expectations of grant and NLC model, equipment purchases, team planning, and introduced eCoach as a tool that would be used to document project. The team reviewed data to determine the direction that the team wanted to increase student improvement. They wrote a team narrative describing what they hope to accomplish. Each member started creating a Web Resource List to use with their students.
September			
13	Grandview	Online 1-4	Developed a website for the team to archive data for the team project and invited the team members to co-author the activity.
14	Mt. Baker	Online 10-11:30	Developed a website for the team to archive data for the team project and invited the team members to co-author the activity.
20	Nooksack	Online 1-3	Created accounts for the Nooksack team.
30	Grandview	10-3 & 4-8:30	Met with Grandview team- Worked on aligning WRL to state standards, introduced the teachers to the archive site for their documentation, and

			introduced the teachers to expectations of the activity that they are developing.
Weekly	All schools	3-4 hours/week	Reviewed and/or made comments participants' work on eCoach not specifically noted above.
October			
1	Grandview	7-12	Travel from Grandview
7	Mt. Baker	2:30-5:30	Team reviewed their decision to work on the probability strand. They decided to expand their initial plan of working strictly on probability to also include statistics. The team finished the team narrative.
15	Mt. Baker	Follow up to 10-7 meeting. 1-4 online	I created a document (Activities & Resources Supporting GLE's) that Mt. Baker team requested. Teachers will focus on the vocabulary to facilitate the transition of students from each grade level 7-10. Teachers will add activities and resources to the table. This will enable the teachers to view the resources and activities 7-10.
17	Nooksack	8-11	Met the Nooksack team for the first time. Reviewed grant expectations, equipment purchases, team planning, and introduced eCoach as a tool that would be used to document lessons developed for this project. Fill follow up with the Nooksack team later this month since the network went down. Will cover WRL at that meeting.
19	Nooksack/Grandview	1-4	eCoach- Created 6 th and 7 th grade CMP website to archive lessons. Made comments in the Team Discussion Board for Grandview.
20	Mt. Baker/Grandview	10-3	Made eCoach comments on all of the WRL's for Mt. Baker and Grandview.
27	Grandview	2-4	Reviewed Carolyn and Gerene's WRL
30	Grandview	1-4	Prepared documents for the November 1 training and uploaded them to eCoach.
31		10-3	Travel to Grandview

Weekly	All schools	3-4 hours/week	Reviewed and/or made comments participants' work on eCoach not specifically noted above.
November			
1	Grandview	9-4	Training: Focused on Individual Projects for the No Limit Training Course Model
2		8-1	Travel from Grandview
4	WWU	9-12	Video Conference
6	Grandview and Mt. Baker	12-3	Reviewed and made eCoach comments on teacher activities.
7	Nooksack	10-12 2:30-4:30	Reviewed and made eCoach comments on teacher activities. eCoach training-WRL
10	Mt. Baker	8-2:30	Worked with junior high analyzing a data carousel in the morning and the entire No Limit team in the afternoon with the start of the probability activities that each teacher is developing.
15	Online eCoach	1-5	Researched sites for Second Language Learners
16	eCoach	9-3	Created a WRL for Second Language Learners; Asked Julie, Jo, and Helen to co-author WRL. Started the Networked Learning Community page for the OSPI presentation.
20	eCoach	11-1	Made eCoach comments on Nooksack WRLs and added to Grandview discussion board.
21	eCoach	11-12	Made eCoach comments on Mt. Baker Activities
26	eCoach	10-11PM	Made eCoach comments on Mt. Baker Activities
27	eCoach	3-4	Made eCoach comments on Mt. Baker Activities
28	eCoach	10-1	Made eCoach comments on Mt. Baker Activities
Weekly	All schools	3-4 hours/week	Reviewed and/or made comments participants' work on eCoach not specifically noted above.
December			
1	eCoach Nooksack	3-5	Made eCoach comments Joyce P.'s activity and WRL

	Mt. Baker	11-12	Discussed Neal S.'s activity and WRL at MB
6	Grandview	9-3	Training with Grandview. Worked with teachers on completing their activities. Discussed presentations at the OSPI Winter Conference.
9	eCoach Grandview	1-3	Made eCoach comments on Jaime M's activity.
10	eCoach Grandview	2-6	Made eCoach comments on Gerene B's activity.
12	eCoach Grandview	10-2 and 9-10:30	Made eCoach comments on Carolyn H's activity.
13			
14	Mt. Baker	8-3	Training with Mt. Baker. Worked with teachers on completing their activities.
21	Grandview/ Mt. Baker	10-11:30	Registered participants for NCCE.
22	Grandview	10:30-12	Edited Jaime's files for his project.
Weekly	All schools	4-6 hours/week	Reviewed and/or made comments participants' work on eCoach.
January			
3	Mt. Baker	12-4	Edited Neal Pat's files for their activities.
3	Grandview/ Mt. Baker	4-5	Planning for the OSPI Winter conference.
4	Mt. Baker	10-3	Edited Kim, Rodd, and Rick's activities for his project.
9	Nooksack	10-4	Preparing an activity for the Nooksack Training
11	Nooksack	7:30-9:30, 11-12	Nooksack Training, Follow up to training
13	Mt. Baker	2:30-3:30	Discussed NCCE Presentation with Neal and Rodd
17	Grandview	9-10	Prepared for OSPI presentation with HT teachers
18	Grandview	2-5	OSPI preparation and presentation
19	NLC NCCE Activity	2-4	Created a Custom Builder Activity for the NCCE presentation
23	Mt. Baker	11-12 & 2:30-3:30	Discussed NCCE Presentation with David and Neal
24	Mt. Baker	1:30-2	Discussed NCCE Presentation with Rodd
25	Grandview	10-4	Prepared for Grandview Feb 1 training. Made Activity and WRL

26	Nooksack	9-12	Made comments on all of the Nooksack projects.
31	Mt. Baker	2-3	Discussed presentations with Rodd and Neal.
Weekly	All schools	4-6 hours/week	Reviewed and/or made comments participants' work on eCoach.
February			
1	Grandview	9:30-4:30	Training on applying Excel; algebra and numbers sense activity; worked on NCCE presentations
2	Grandview and Mt. Baker	1-3	Worked on NCCE activity page
8	Grandview and Mt. Baker	9:30-4:30	Final details completed on NCCE activity page. Participated in our workshop with our teachers.
9	NCCE	9-4	NCCE workshops and presentations
14	Grandview and Mt. Baker, Nooksack	3-4	Follow-up communication for February teacher log.
16	Grandview and Mt. Baker, Nooksack	3-4	Follow-up communication for February teacher log. Thank you note for 100% completion.
19	Grandview	1-4	Initial planning for March 1 training. Learned how to create a blog. Teachers will create a blog to reflect upon the activity that they created.
22	Grandview	1-4	Planned March 1 st training.
23	Nooksack	12-2	Reviewed Nooksack Activities.
	Mt. Baker	2-3	Reviewed MB activities. Helped Neal with document camera problem.
24	Grandview and Mt. Baker, Nooksack	10-12	Learned how to use the Game Plan eCoach tool and collaborated with Barbara about its use.
25	Grandview	12-2	Started a Game Plan called Grandview Feedback Loop.
27	WWU	1	MIS survey
Weekly	All schools	3-4 hours/week	Reviewed and/or made comments participants' work on eCoach.
March			
1	Grandview	9:30-4:30	Taught teachers how to use the Blog and Planning Tool in eCoach. Discussed ELL strategies.

2	Mt. Baker	2:30-3:30	Discussed the feedback loop with Rodd.
6	Grandview and Mt. Baker	10-3	Worked on the feedback loop activity. Will have teachers create the feedback loop using a blog.
8	Grandview	11-3	Made Feedback Loop Task #1 in the Grandview Training Course.
15	Mt. Baker	1-2	Met with Rodd to determine what dates would work best for team training. Also, processed paperwork to order Neal's computer.
16	Grandview	10-1	Made Feedback Loop Task #2 in the Grandview Training Course.
17	Grandview	11-3	Made Feedback Loop Task #2, #3, and #4 in the Grandview Training Course.
20	Mt. Baker	9-11:30	Created a Custom activity for the MB feedback loop. Also, started the blog example for the Mt. Baker feedback loop.
22	Nooksack	9:30- 11	Created a Custom activity for the Nooksack feedback loop. Also, started the blog example for the Nooksack feedback loop.
23	Grandview	9:30- 10:30	Reviewed and made comments on Grandview blogs.
27	Mt. Baker	9-10	Prepared for MB training on Wednesday.
Weekly	All schools	3-4 hours/week	Reviewed and/or made comments participants' work on eCoach.
April			
3	Mt. Baker	12-2	Met with Kim F. and made requisitions for equipment purchases.
4	Mt. Baker, Grandview	1-2	Looked at Mt. Baker and Grandview blogs
5	Mt. Baker	10-12	Faxed orders for MB. Reviewed Flickr site to see how we could use it in next year's project.
17	Mt. Baker, Grandview	1-2	Looked at Mt. Baker and Grandview blogs to see what progress had been made.
18	Mt. Baker	2-3	Helped teachers with equipment orders
23	Mt. Baker, Grandview	11-12	Looked at Mt. Baker and Grandview

			blogs to see what progress had been made.
Weekly	All schools	4-6 hours/week	Reviewed and/or made comments participants' work on eCoach.
May			
28	Mt. Baker, Grandview		Looked at Mt. Baker and Grandview blogs to see what progress had been made on Feedback Loops.
June			
4	Grandview	10-12	Began planning for Grandview summer training
5	Grandview and Mt. Baker	1-4	Learned how to use the new Custom Builder in eCoach.
6	Grandview	10-12	Planning Grandview Summer Training
7	Grandview	1-4	Planning Grandview Summer Training
8	Grandview	3-4	Planning Grandview Summer Training
9	Grandview	2-4	Planning Grandview Summer Training
10	Grandview	10-12	Finalized Grandview Summer Agenda
11	Grandview	7:30pm-9:30	Collaborated with Julie and Jo about the two day workshop
12	Grandview	8:30-4	Summer Workshop- Focused on selection of team project and learning the new Custom Builder in eCoach
13	Grandview	8:30-4	Summer Workshop- Defined group project, created Individual Learning Plans for September, and built the frame work for the feedback loop for the upcoming school year.
14	Grandview	2-4 and 8-9	Follow-up on eCoach projects that were started at the training
15	Grandview	9-11	Follow-up on eCoach projects that were started at the training
Weekly	All schools	2-3 hours/week	Reviewed and/or made comments participants' work on eCoach.

Conferences/Workshops

Date	Conference or Workshop	Content
October 12	MIS meeting in Vancouver	Discussed direction of the PLCs. Learned new protocols to use with our teams.
Jan.19-20	OSPI Winter Conference	Presented with David- NLC online project
	OSPI Winter Conference	Helen A., Jaime M., Julie W., and Gerene B. attended as participants.
March 16-18	NCCE	Presented with David- NLC online project
	NCCE	Neal S., Kim F., Helen A., Jaime M., Jo H., and Gerene B. attended as participants.

Equipment Purchases

School	Equipment	Who Chose
Mt. Baker		
	Notebooks	Teachers
	Document Camera	Teachers
	Student Computers	Teachers
	LCD Projectors	Teachers
Grandview	Notebooks	New teachers to project
	Document cameras	New teachers to project
	Projectors	New teachers to project
Nooksack	Notebooks	Teachers
	Document cameras	Teachers
	Smart Boards	Teachers
	Printers	Teachers

Math Curricula

School	Curriculum
Mt. Baker	MathThematics-McDougal Littell
Nooksack	Connected Mathematics, Carnegie Algebra
Grandview	Investigations- Scott Foresman

Successes/Failures

- Teachers finished student activities and aligned activities to GLE's.
- Some teachers finally saw the value in creating activities in eCoach. This happened for those teachers who were willing to give their students the charge of taking control of their own learning. Students were allowed to go in their own directions within a specific activity. This was possible since all of the activity directions were detailed in the eCoach activity.
- Mt. Baker and Grandview established a feedback loop and published it in a blog to their team; however, they were not as reflective as I had hoped. Introducing the blog was too much for the teachers in the spring.

- Teachers did not do as much work on activities between trainings as we had hoped.
- Time for teachers is in short supply.
- NLC had 5 teachers present a successful workshop at the OSPI Winter Conference
- NLC had eight teachers present a successful 3 hour workshop at the NCCE in Portland; three teachers brought a total of 7 students present their projects.

Year Six

Training and Professional Development for Ken Bakken

Date	Schools	Time	Content
June			
4	Grandview	10-12	Began planning for Grandview summer training
5	Grandview and Mt. Baker	1-5	Learned how to use the new Custom Builder in eCoach.
6	Grandview	10-12, 2-4	Preparing for training on eCoach; first draft agenda
7	Grandview	1-4	Planning Grandview Summer Training
8	Grandview	1-3, 8-9	Preparing for training on eCoach
9	Grandview	8:30- 12, 2-4, and 7:30-9	More planning
10	Grandview	10-12, 7-10	Finalized Grandview Summer Agenda
11	Grandview	7:30pm-9:30	Collaborated with Julie and Jo about the two day workshop
12	Grandview	8:30-4:00	Summer Workshop- Focused on selection of team project and learning the new Custom Builder in eCoach. The team reviewed data to determine the direction that the team wanted to increase student improvement. Also, they created a custom project called Studio Sixty in which they documented all of the brainstorming ideas. They plan to focus on student discourse. They plan to document student discourse by video taping and producing a DVD or streaming video clip. The product will be decided later in the year. They wrote a team narrative describing what they hope to accomplish which is located in the custom project.
13	Grandview	8:30-4:00	Summer Workshop- Defined group project, created Individual Learning Plans for September, and built the framework for the feedback loop for the upcoming school year.
14	Grandview	1-4	Cleaning up the Grandview brainstorming project; creating the links.

15	Grandview	10-11	Checked for any updates on Grandview project.
August			
4	Mt. Baker	10-11	Began planning for Mt. Baker training
5	Mt. Baker	9-10	Checked eCoach for any messages and continued planning for Mt. Baker training
10	Mt. Baker	10-11	Met with Pat B to discuss agenda ideas.
11	Mt. Baker	1-4	Prep for Mt. Baker training.
14	Mt. Baker	12-2	Prep for Mt. Baker training.
20	Mt. Baker	12-3	Prep for Mt. Baker training.
21	Mt. Baker	9-11	Prep for Mt. Baker training.
22	Mt. Baker	3-5, 7-8	Prep for Mt. Baker training.
23	Mt. Baker	1:00 –3:30	Expectations of grant and NLC model, equipment purchases, team planning, and introduced eCoach as a tool that would be used to document project. Brainstormed project ideas with team that Pat and I discussed earlier in the month.
24		8:30-11:30	The team began a discussion on the possibility of lesson study, but determined that there would not be the time available to do a true lesson study. The team wants to focus on observing student discourse in the classroom. Introduced the new Custom Builder in eCoach.
25		8:30-2:30	They plan to observe each other's students during a lesson focusing on student engagement. Also, they want to learn about best practices using Excel, graphing calculators, Vernier software, Winplot, Geometer's sketchpad, and virtual manipulatives. They wrote a team narrative describing what they hope to accomplish. Wrote ILP's for September.
27	Mt. Baker	8-9	Cleaning up the Mt. Baker brainstorming project; creating the links.
28	Mt. Baker	2-4	Cleaning up the Mt. Baker brainstorming project; creating the links.
September			
1	Grandview and Mt. Baker	Online 7-10:30	Continued to work on Grandview's and Mt. Baker's custom team projects
10	Grandview and Mt. Baker	3-4	Checked on progress of Grandview and Mt. Baker's projects.
14	Grandview and Mt. Baker	5-6	Checked on progress of Grandview and Mt. Baker's projects.

15	Grandview and Mt. Baker	1-2	Checked on progress of Grandview and Mt. Baker's projects.
16	Grandview and Mt. Baker	7-8	Checked on progress of Grandview and Mt. Baker's projects.
19	Grandview and Mt. Baker	1:30-2	Checked on progress of Grandview and Mt. Baker's projects.
20	Grandview and Mt. Baker	2-4	Checked on progress of Grandview and Mt. Baker's projects.
25	Mt. Baker	10-12, 3-4, 7-8	Prepared for Mt. Baker training. Gathered materials for discussion of student observations. Worked with Neal for his presentation on LoggerPro.
27	Mt. Baker	2:30-6	Mt. Baker training; focused on LoggerPro software and discussed articles brought by Jack F. on student observations.
28	Mt. Baker	9-10	Follow up on needs of Mt. Baker team regarding equipment purchases.
29	Grandview	2-3:30	Began agenda for Grandview training.
October			
2	Grandview	8-9	Grandview agenda prep;
3	Grandview	5-6	Grandview agenda and Magic Square activity for 5 th grade use. Will demonstrate at training
4	Grandview	3-5	Refined Magic Square project
5	Grandview	5-10	Travel to Grandview
	Grandview	10-3	Team refocused on team project; defined roles in project
	Grandview	4-8	Travel Home
6	Grandview	9-10	Edited Grandview Studio 60 project
25	Mt. Baker	3-6	Refined student observation tools that will be used by team members, worked on ILP's, and Neal demonstrated LoggerPro using video images.
30	Mt. Baker	1-3	Searched out best prices for graphing calculators.
November			
1	Mt. Baker	4-5:30	Made comments on Mt. Baker ILP's.
2	PD	8-1	Attended the Tech Forum Conference in Bellevue.
5	Grandview	7:45-8:30	Made comments on Grandview ILP's
6	Grandview	10-11	Made comments on Grandview ILP's
7	Mt. Baker	5:30-6	Checked on Mt. Baker team project
8	Grandview	5-5:30	Checked on Grandview team project
10	Mt. Baker and	8-9	Reviewed team projects online

	Grandview		
14	Mt. Baker and Grandview	5-6	Reviewed team projects online
15	Grandview	2:30-3:30	Reviewed team projects online
16	Mt. Baker and Grandview	9-10	Reviewed team projects online
17	Mt. Baker	9-10	Began prep for MB training
21	Mt. Baker	2-10:30	Prepping for MB training
24	Mt. Baker and Grandview	8-9	Reviewed team projects online
27	Mt. Baker	7-8	Prepping for MB training
29	Mt. Baker		Training postponed due to weather
December			
1	MIS Video Conference	9-11	Monthly Video Conference
2	Grandview		Begin prep for Grandview training
4	Grandview	9-10	Grandview Training Prep
	Mt. Baker	2:30-3:30	Met with Pat to reschedule training at MB
5	Grandview	2-5, 6-10	Prep for Grandview
6	Grandview	10-3	Training at Grandview
7	Grandview	8-9:30	Meet with Grandview Curriculum Director
8	Grandview	11-12:30	Submitted edits to Grandview project
9	Mt. Baker and Grandview	1-2	Reviewed team projects online
11	Grandview	2-3	Reviewed team project online
12	Mt. Baker	6-7:30	Reviewed team project online
13	Mt. Baker and Grandview	7:30-8	Updated log
14	Mt. Baker and Grandview	8:30-9:30	Checked for project updates
15	Mt. Baker	11:15-12	Reviewed team projects online
17	Grandview	9:30-10:30	Reviewed Math Conversations Project
20	Mt. Baker and Grandview	3-4	Reviewed ILP's for December
January			
2	Grandview	3-4	Reviewed team member's ILP and updated the team page for January.
12	Mt. Baker	1-2	Checked ILP's and Project work
13	Grandview	9-10	Checked ILP's and Project work
18	Mt. Baker	1-3	Started prep for Mt. Baker
19	Mt. Baker and Grandview	9-5	Learning new universal builder- Made a new project for a sample.
20	Mt. Baker	1:30-6	Learning new universal builder
22	Mt. Baker	9:30-1	Prep for training- Converted Excel activity to

			new universal builder
22	Mt. Baker	3-6	Training at MB. Team worked on observation plan. Team worked on a teacher web page and eCoach activity.
23	Mt. Baker and Grandview	2-5, 6-8	Made new sample for Grandview and Mt. Baker using Universal Builder.
24	Grandview	9:30-10:30	Started prep for Grandview.
25	Mt. Baker	6-8	Made comments on ILP's for MB team
February			
1	Grandview	12-3	Started prep for Monday's training
2			Worked on Universal Builder examples
3	Grandview	3:30-4:30	Finalized the training agenda.
4	Grandview	11:30-12:30, 5-8	Made comments on ILP's for Grandview. Prep for tomorrow's training. Updated Grandview Team Page.
5	Grandview	10-3, 7-9	Provided training using the new Universal Builder
6	Grandview	12-3	Did follow-up work on MC at HT.
22	Mt. Baker	10-11, 1-3	Started preparation for MB training session on Mon.
23	Mt. Baker	1-4	Worked on MB training, prepared a report for team on funds available for equipment remaining.
25	Mt. Baker	2-4	Edited MB Student Observation web page using new UB
26	Mt. Baker	3-6	Training session w/Mt. Baker. Worked on MB Student Observation Project
March			
1	Mt. Baker	10-11:30	Worked on follow-up ideas on the MB Student Observation web page
2	Mt. Baker and Grandview	9-10:30	Attended statewide MIS video conference at WWU
	Mt. Baker	2:30-3:30	Discussed MB Student Observation web page w/MBJHS principal
5	Grandview and Mt. Baker	10-1, 2:30-3:30	Updated tasks that need to be completed for both teams. Helped edit the Grandview team's MC at HT web page.
6	Mt. Baker	2-4	Read information on Teacher Development Group literature on student discourse. Made a table to use tomorrow for Kim's class.
7	Mt. Baker	11-1:30, 4-5:30	Observed Kim's class. Followed up with Kim on how to complete her section of MB

			Student Observation web page. Wrote up my observations and uploaded them to the site.
8	Mt. Baker and Grandview	1-3	Looked for software to convert mov files to MPEG-4
9	Mt. Baker and Grandview	9-10	Looked for software to convert mov files to MPEG-4
11	Mt. Baker and Grandview	1-3	Worked with iPod Movie Maker to see how to convert files.
12	Grandview	3-4:30	Outlined tasks for MC project for teachers
14	Mt. Baker	10-12	Reviewed equipment budget- called vendors
	Grandview	3-5	Edited the MC project based on teacher comments
15	Mt. Baker	2-4	Met with teachers about equipment purchases
16	Mt. Baker	10-12	Made requisitions for equipment and delivered to MBSD
17	Mt. Baker and Grandview	10-3	Made tip for using iPod Movie Maker
22	Mt. Baker	8-10, 1-3	Observed Neal's class, wrote observation notes, and uploaded into eCoach.
22	Grandview	12:30-1	Looked at comments on MC
23	Mt. Baker	11-1:00, 2:30-4:00	Observed Jack's class, wrote observation notes, and uploaded into eCoach.
	Grandview	4:00-4:45	Made the edits to the MC project; sent out project tasks for next week.
24	Mt. Baker	11-12	Made templates for observation tool developed by TDG.
26	Grandview and Mt. Baker	2-3	Checked the MC project and MB projects.
27	Mt. Baker	8-9:30, 11:30- 2	Observed Rick's Integrated 2 class; wrote observation notes and uploaded them to the site.
30	Mt. Baker	11-12:30	Observed Pat's Integrated 3 class
31	Mt. Baker	10:30-12	Wrote observation notes for Pat's class
April			
2	Grandview	11-12, 6-7:30	Edited the MC project.
3	Grandview	9:30-10:30	Edited the MC project.
4	Grandview	4-5	Edited the MC project.
6	Grandview	2:30-4:30	Edited the MC project.
7	Grandview	8:30-10	Edited the MC project.
8	Grandview		Reviewed edits in Planning notes and made revisions to the project accordingly.
9	Grandview		Prepared for Grandview training.
11	Grandview	9-3	Team focused on completing Math Conversations at HT. Made choices for the

			final video clips.
13	Grandview	3-5	Edited the video clips to insert into eCoach.
21	Mt. Baker	8:30-10:30	Prep for MB training
22	Mt. Baker	12-2	Reviewed team project
23	Mt. Baker	3-6	MB training; edited team project
24	Mt. Baker	2:30 - 4	Reviewed team work on project
26	Mt. Baker	10-12	Researched software MathType software; wrote requisition
27	Grandview	2:30-4:30	Edited the Reflection category of the MC project
28			
29			
30			
May			
6	Mt. Baker	10-11:30	Researched information of ordering MathType for MB. Made requisition.
9	Mt. Baker	9-10	Follow up on requisition for MathType licensing agreement.
11	Mt. Baker	10-11	Communicated with Design Science about the PO that was sent.
14	Mt. Baker	10-11	Communicated with Pat about the emulator software the team wanted. After reviewing the information, they decided to order the SmartView 2.0 Emulator software from TI. Made out the requisition for the software and calculators.
16	Mt. Baker		Placed order for the software; communicated with MB about submitting order for calculators.
17	Mt. Baker	3:30-5:30	Worked with Neal on his part of the MB project.
19	Mt. Baker	10-12:30	Finished editing the Mt. Baker Student Observations site
20	Mt. Baker and Grandview	10-12	Updated year 6 report
21	Mt. Baker and Grandview		Updated year 6 report
June			
2	Mt. Baker and Grandview	2-4	Updated year 6 report
4	Mt. Baker and Grandview	1-4	Finished year 6 report

Conferences/Workshops

Date	Conference or Workshop	Content
October 19-21	NWMC- Victoria, BC	Two Mt. Baker teachers went to this conference. Their fees were supported by the No Limit grant and school district matching funds.
November 2	TECH Forum - "Insight and Innovations for Technology Leaders"	Attended this conference
June 24-27	NECC in Atlanta	Attended this conference

Equipment Purchases

School	Equipment	Who Chose
Mt. Baker		
	Document Cameras	Teachers
	Vernier Probes	Teachers
	1 LCD projector	
	Graphing Calculators	Teachers
	copies SmartView 2.0 Emulator Software	Teachers
	MathType text editor software	Teachers
	Replacement lamps for projectors	Teachers
	1 Notebook computer	Teachers
Grandview	1 Notebook computer	Teachers
	Digital cam corders	Teachers
	Mini DVD tapes and discs	Teachers
	Firewall cable	Teachers
	Memory upgrades	Teachers
	Microphones	Teachers
	DVD/LRW Drive upgrade	Teachers

Math Curricula

School	Curriculum
Mt. Baker	MathThematics-McDougal Littell
Grandview	Investigations- Scott Foresman

Successes/Need for Improvement

Successes

- Both schools finished the team projects that were started in September. The links below will give you insight into both projects.
- Mt. Baker teachers worked on a project called Mt. Baker Student Observation Project (<http://my-ecoach.com/project.php?id=9671>) The following is an overview of the project: *This project focuses on how well students are engaged in math lessons. Teachers observed lessons to see if the lesson that was being taught was engaging students and really meeting the objectives of the lesson.*

By clicking on each teacher's name to the left you will be able to look at the four steps in the process:

- *Lesson Plan*
 - *GLE Lesson Alignment*
 - *Observation Team & Pre-Observation Form*
 - *Lesson Observations*
 - *Lesson Reflection*
- Grandview teachers worked on a project called Math Conversations at Harriet Thompson (<http://my-ecoach.com/project.php?id=9662>) The following is an overview of the project: *Student learning is more meaningful as a result of engaging conversations. Our focus is on mathematical discourse. Students set goals to improve group conversations as a result of their video clip reflections. This project will continue to be a "Work in Progress" even into the next school year.*
 - Grandview teachers found the improvements to eCoach valuable. The new Universal Builder is much less restrictive and much more flexible.
 - Grandview teachers plan to use their activity next year even though the grant is ending.
 - Two teachers from Mt. Baker and three from Grandview attended the NWMC in Victoria; teachers came back with great ideas to implement in their classrooms.
 - Teacher follow up between training sessions was better than last year, but still needs to be improved.

Need for Improvement

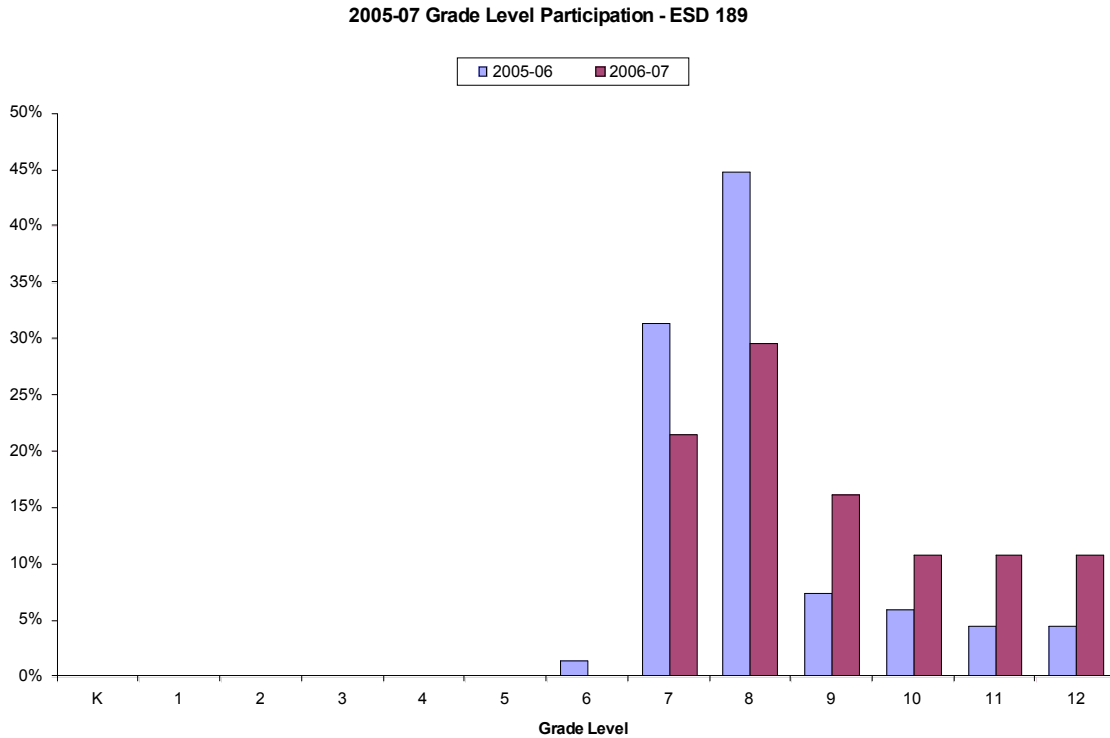
- Teachers' time is still in short supply.
- Most Mt. Baker teachers did not see the value of documenting their work on eCoach.
- The debriefing process for the Mt. Baker project needs to be improved. There were only written observations. Face-to-face debriefings would have been valuable. Once again, time, schedules, and desire for most participants were factors.
- In the past I have found that when teachers were under a deadline to present at a conference, they tended to work harder. There was a lack of pressure this year since there was *a lack of funding* available for conferences for the teachers to present.

Log Report 2005-2007 Network Learning Community

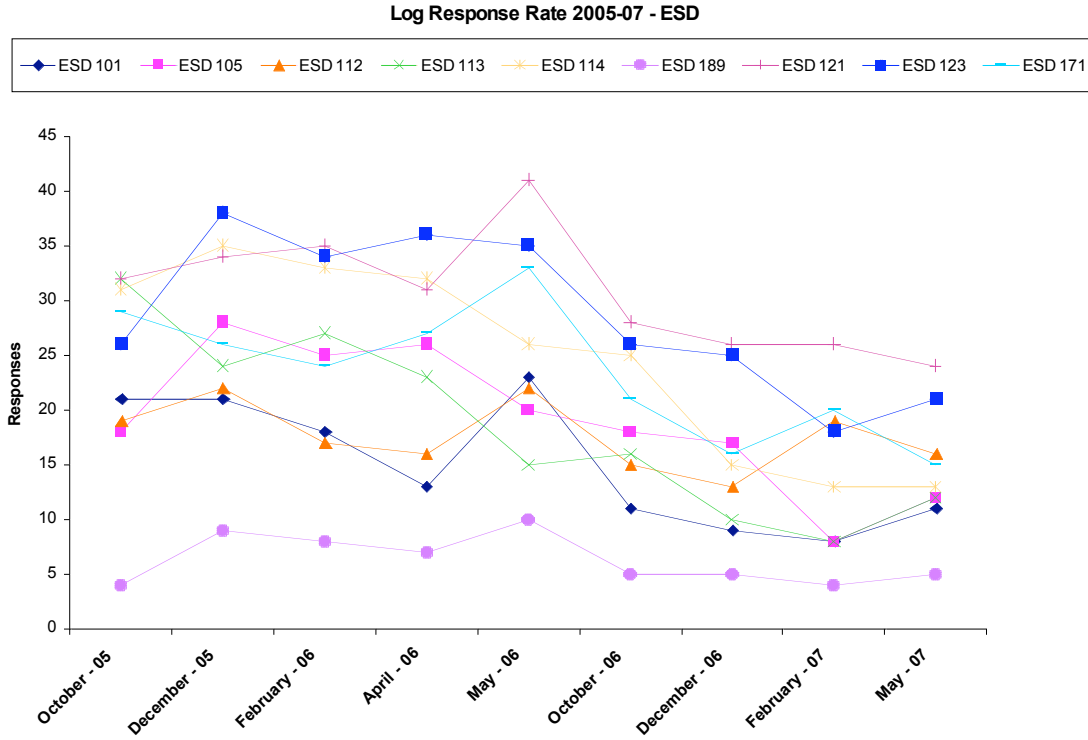
Please note: the following graphs all denote ESD 189. However, this is in error. They **should** say 'Network Learning Community'. ESD 189 dropped out of the NO LIMIT! project after Year Four.

Item 6:

The grade levels you teach:

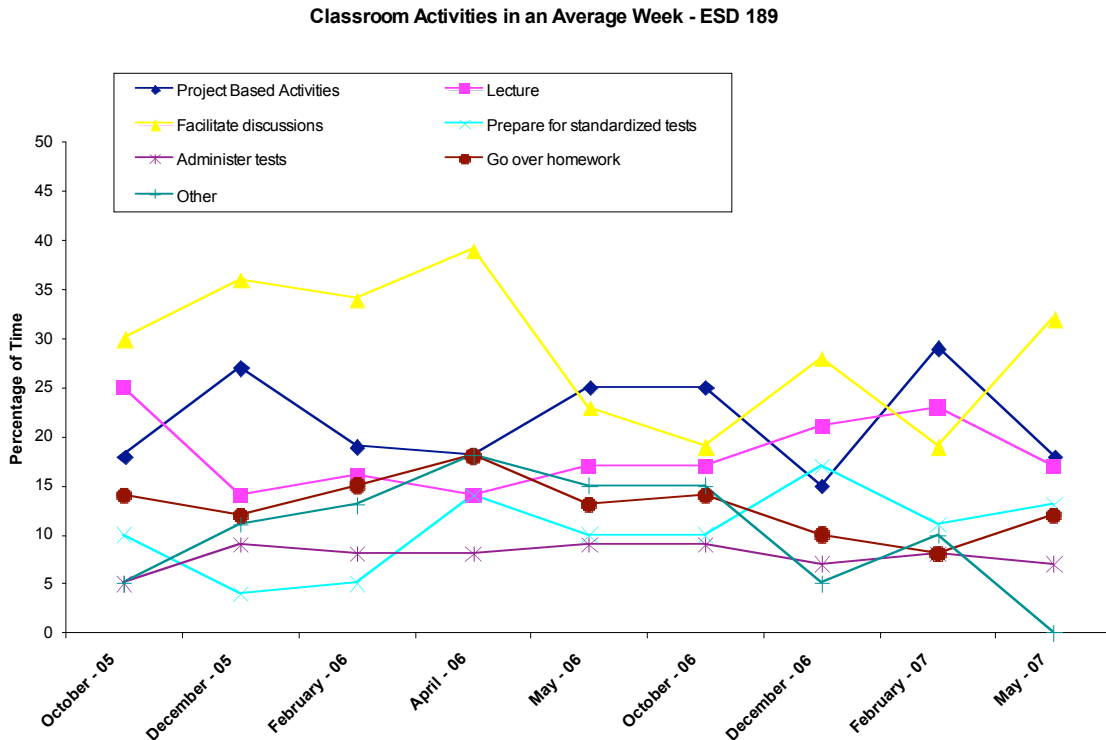


Log Response Rate:



Item 8:

In an average week, how do you divide your time among the following activities?



Other, please specify:

October - 05:

- I have two "regular" 7th grade math classes and one math lab class. The regular classes meet 46 minutes each day. The math lab class is 7th every other day, and eighth on the other days.

December - 05:

- Since attending the summer institutes in science (NCOSP) at Western, I have taught both math and science using a hands-on/inquiry method.
- In my resource room, most math kids get one-on-one math instruction and work at their own pace. Inclusion math kids get differentiated math curriculum.
- Computer based algebra program
- Other includes time on daily timed practice, roll assignments (i.e. quick problem solving) and other business.

February - 06:

- Reviewing or testing basic skills on a daily basis (flash cards, paper and pencil warm-ups)
- Computer program
- Other--variety of "roll" assignments/problem solving activities

April - 06:

- Class interruptions for students to do other things; conferences so don't have the students for a full class period; "roll" assignment and discussion
- We also go over vocabulary and problem solving process

May - 06:

- Using manipulatives to build structures and discuss surface area and volume
- Computer and work time
- Other interruptions and "moments" that take away from math time

October - 06:

- Discussing subject matter, having student led instruction
- I teach math lab. We do not have homework or tests.

December - 06:

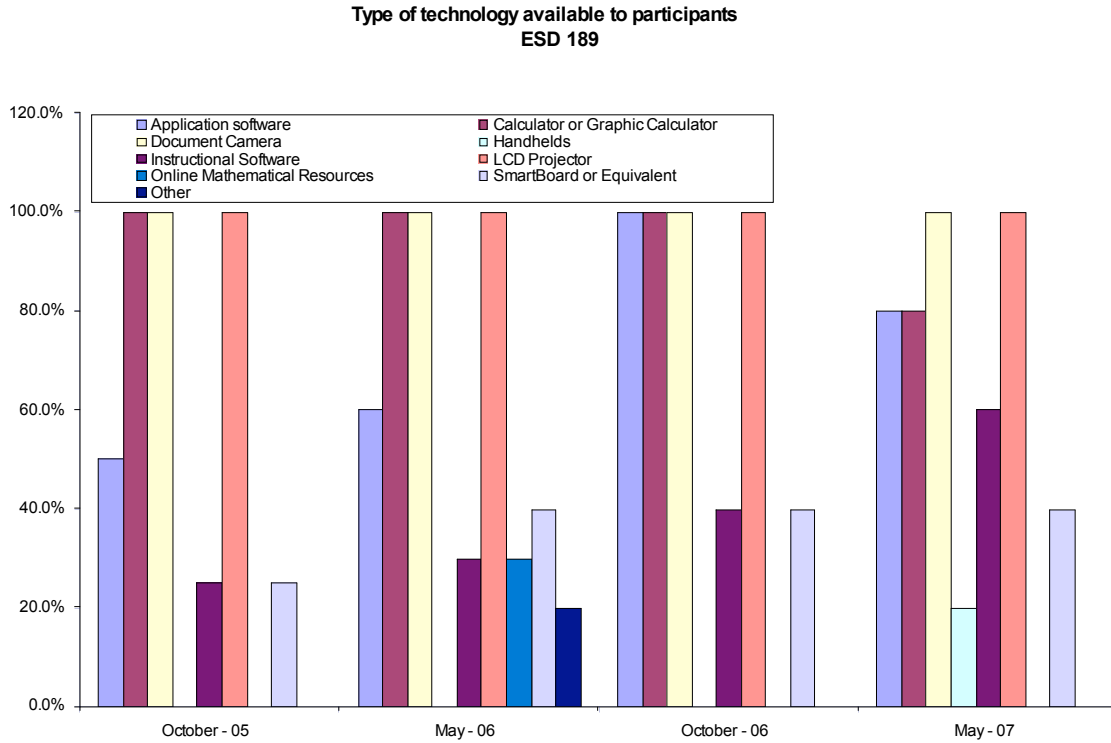
February - 07:

- This unit has a mystery story that goes along with the math, so we have spent time reading the story.

May - 07:

Item 9:

Please indicate the kinds of technology available to your classroom. Check all that apply.



Other:

October - 05:

December - 05:

- Student laptops

February - 06:

- Laptops for student use

April - 06:

- Laptop computers

May - 06:

- Vernier sensors
- Laptop computers

October - 06:

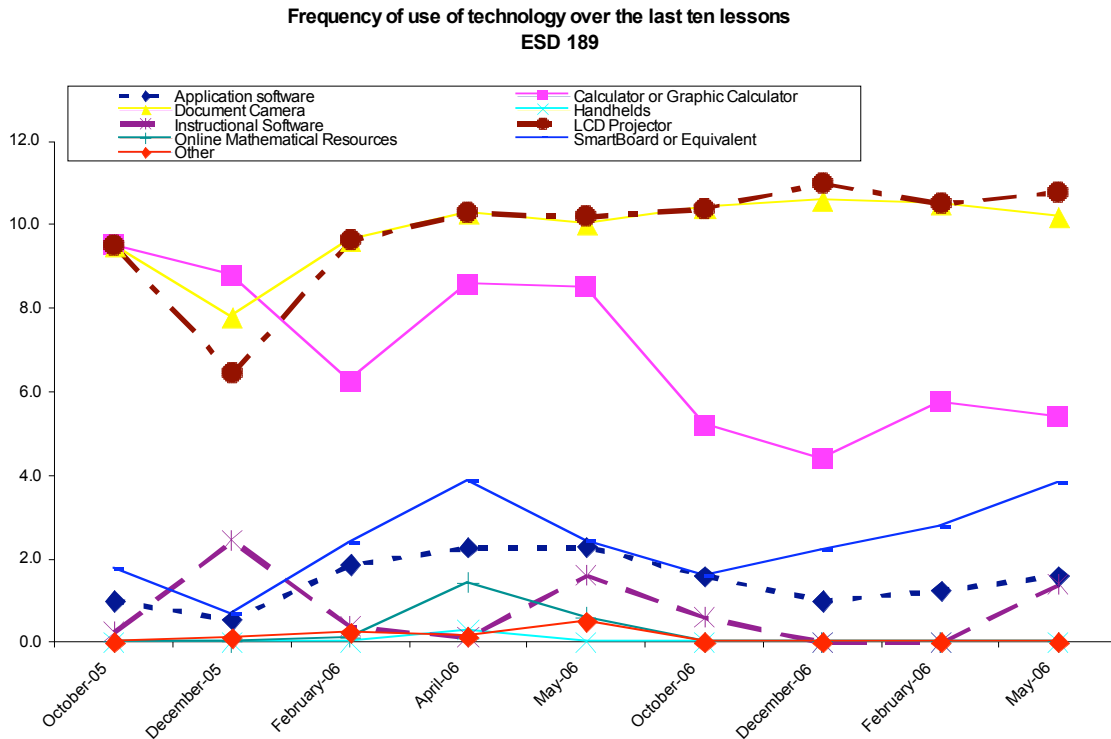
December - 06:

February - 07:

May - 07:

Item 10:

Please indicate how many times your students used this technology in your mathematics class over the last ten lessons.



Item 11:

Give an example, within the last two months, when your students used technology to support mathematical discourse and higher-order thinking skills.

October - 05:

- Students bring their work up to the document camera and share their thought process. Often we will work through a problem together on the document camera using manipulatives.
- We used the document camera to show student's strategies in solving problems. Specifically, we were working on drawing diagrams to help solve problems. The student would share their work with the class and we would comment on the different approaches to the same problem.
- Presenting a problem to the class and answering student and teacher questions about how they arrived at their answer, justifying said answer, and ramifications of changes in the problem.

- Presentation of graphs to the whole class for evaluation. Use of ActivBoard to demonstrate a particular writing process for math.

December - 05:

- We have the Carnegie Cognitive Tutor Program here in the 8th grade, so my students use that and our handheld calculators almost everyday.
- We recently used the APPS (applications) PRB (probability) buttons of our graphing calculators to create and spin spinners to compare theoretical outcomes and empirical outcomes.
- The inclusion students learned how to use graphic calculators. One IEP student uses drill and practice software to master multiplication facts.
- Presenting and discussing their work with document camera and projector.
- Having students show their solutions with the document camera and present their results to the class.
- We use the projector and the document camera everyday to analyze and talk about math. Student work is displayed and students discuss solutions that work and solutions that do not work. We then discuss how we can improve our answers and solutions that work.
- Students often use the document camera to project their own work and then the class discusses the material.
- Using the ActivBoard to create, explain, and analyze graphs and charts

February - 06:

- We used the document camera and projector to do an activity on scale factor and enlarging or shrinking a figure. We discussed what changes are happening with the area, perimeter and other dimensions of the figure.
- Students use the projector and the document camera during class presentations.
- We explored linear and non-linear equations and their graphs first without the graphing calculator and then with the calculator to see how the graph changes depending on the coefficient and/or constant.
- Last week the kids took turns projecting on the document camera their calculations of a practice test to help each other prepare for the test.
- Present their answers to the class under the document camera and explain their process
- Used Geometers Sketchpad to explore the relationships in the equilateral triangle and the altitudes and there intersections.
- Daily- we use the technology to share mathematical thinking and ideas.
- Discussing congruence and similarity of figures. Demonstration on ActivBoard with students doing work. Did project involving cut and paste (the real stuff!) with same concept

April - 06:

- We often use the document camera to show examples of student work that also has the students excited to present because they get to use the camera. In addition, we have been working with 3-d figures in geometry and the document camera helps the whole class see and better understand the shapes.
- Used document camera and LCD projector to present their problem solutions to the class.

- In one of my classes, the students are grouped by threes and are teaching a series of lessons since they have seen me teach all year. They make heavy use of the document camera and projector to present their warm-up, notes, examples, and follow up problems.
- Sharing answers to questions and solutions with one another
- They are attempting to adapt a form of reciprocal teaching to our math and they used the document camera to present group work
- On a daily basis the students use the document camera to share work and discuss mathematical solutions.
- We used the Smartboard to draw enlarged or shrunken sized shapes to learn about scale factor.

May - 06:

- We have been using geo. Sketchpad to work on transformations, and the document camera to illustrate surface area of three d objects.
- The students solve algebra problems on the computer and they use the LCD projector and the document camera to project the problem on a screen to explain their thinking to the whole class.
- We used calculators to find area, surface area, and volume of various shapes. We used a document camera and projector to share our work.
- My advanced class is doing a unit of quadratic equations, so we have used the graphing calculator extensively to graph parabolas then show the table of values that correlate to the graph, find minimum or maximum and x-axis intercepts. Most of our applications use the formula for gravity and a given velocity, but some of the equations are of jumps and dives and profit.
- Students explain to class how they solved particular problems
- Give presentations on mathematical concepts
- We used Vernier sensors to collect data on how strong students' grips were. Then we used the data to find maximum, minimum, mean, median, and mode. Students created box-and-whisker graphs and histograms/bar graphs.
- We have been using the smart board to do homework problems
- Used document camera and projector to demonstrate and explain in writing their understanding of the Pythagorean Theorem.
- When working with symmetry, the use of Geometer's sketchpad to demonstrate how rotational, reflect ional and translational symmetry work.

October - 06:

- My students used Geometers Sketchpad to connect the midpoints of any quadrilateral to discover and prove the inner quad is a parallelogram with an area one-half the original.
- My students used the document camera yesterday to present their solutions to the story problem assignment.
- Used the document camera and projector to show how commutative and associative properties were alike and different.
- To share their work on the doc. camera and projector.
- Use of the document camera to express and explain their ideas

December - 06:

- A textbook assignment was to make three scatter plots from a table of data. I took my class to the Computer Lab to do the spreadsheet and scatter plots on Excel. Then we hand drew fitted lines discussed positive, negative, "no" correlation and made predictions.
- Used the document camera to share solutions with the class on an open-ended problem solving activity.
- Students used the document camera to show how changing what an equation is equal to makes a change in the value of the variable.
- Demo solutions to problems

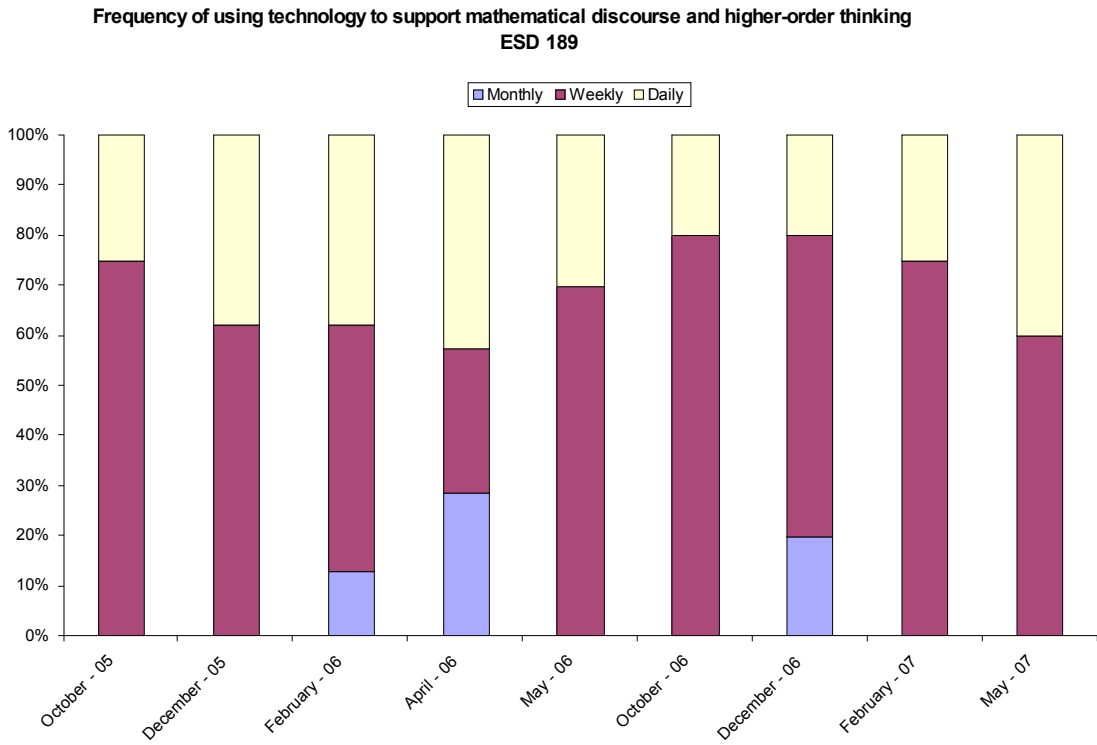
February - 07:

- After learning how to find enough (x, y) points to graph an equation by hand on graph paper, we used the graphing calculators to graph equations and discuss if they were linear or nonlinear. Slope was the next thing we explored and then slope as rate of speed if the graph is distance over time.
- Student will discuss there solution using the document camera. This is very helpful in teaching problem solving strategies
- Explaining how they understood the problem and show class.

May - 07:

- Using graphing calculators they graphed two linear equations and using "trace" and "zoom" they located the intersection to find the "common" solution.
- Used a program on graphing (green globs) to help practice graphing linear equations.
- Thought-provoking questions on the document camera, then students discussed their answers/opinions
- Showing and explaining their answers under the document camera.

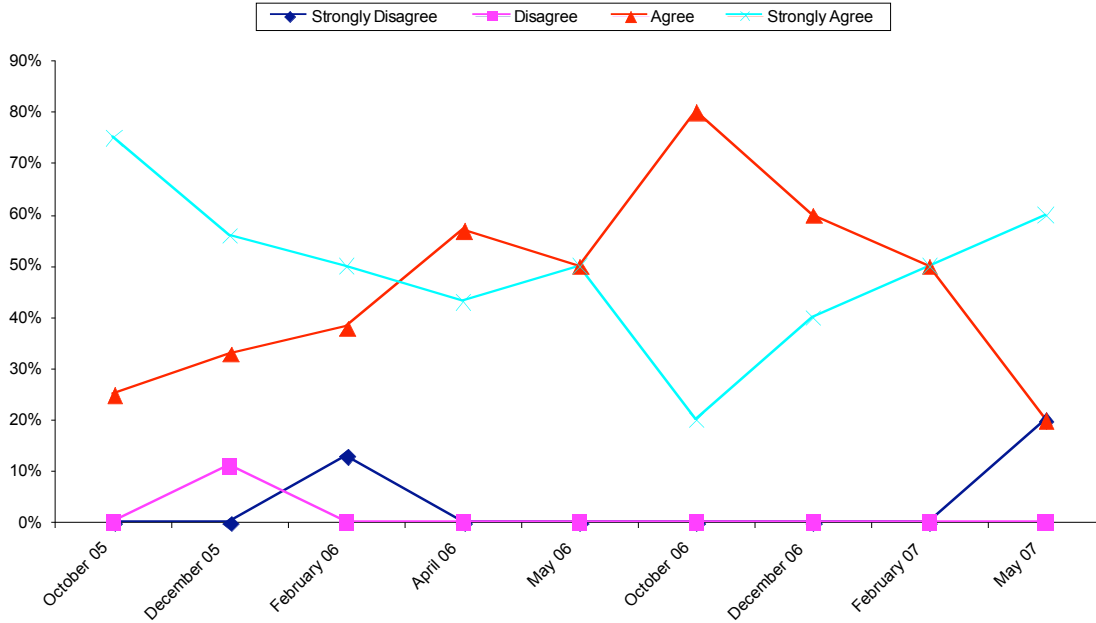
How often does something like this occur in your classroom?



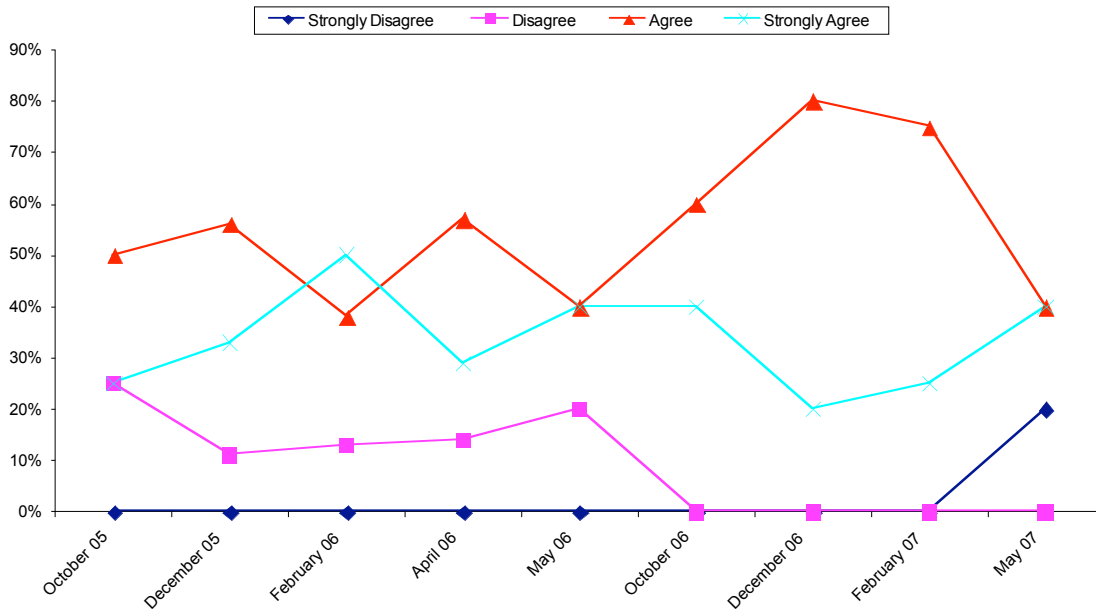
Item 13:

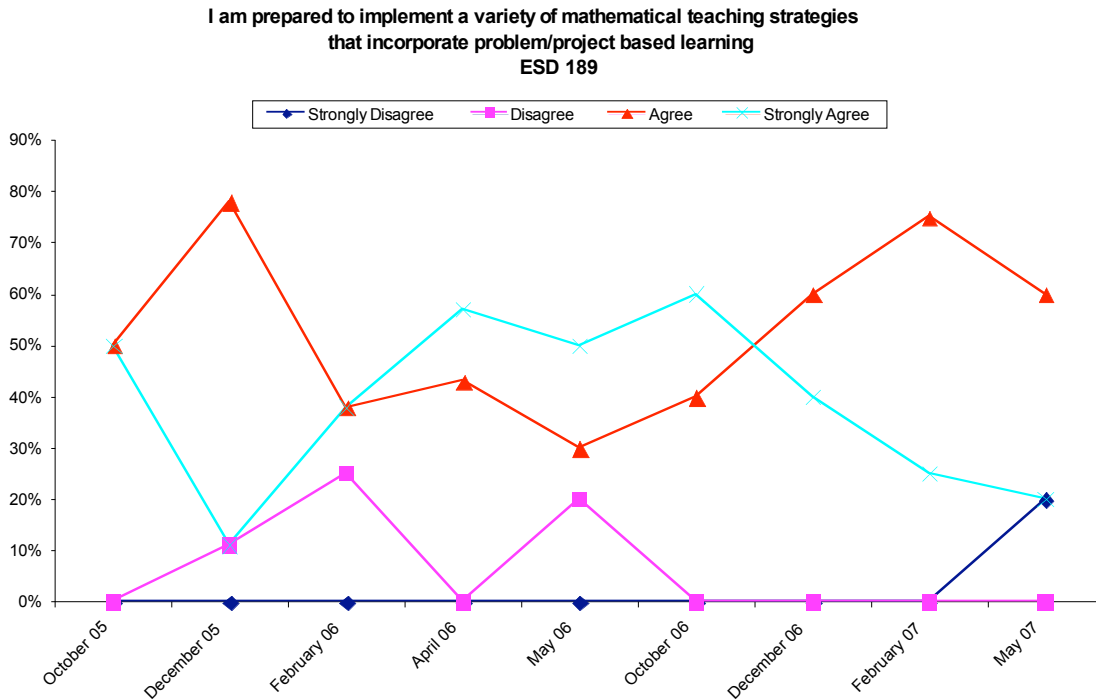
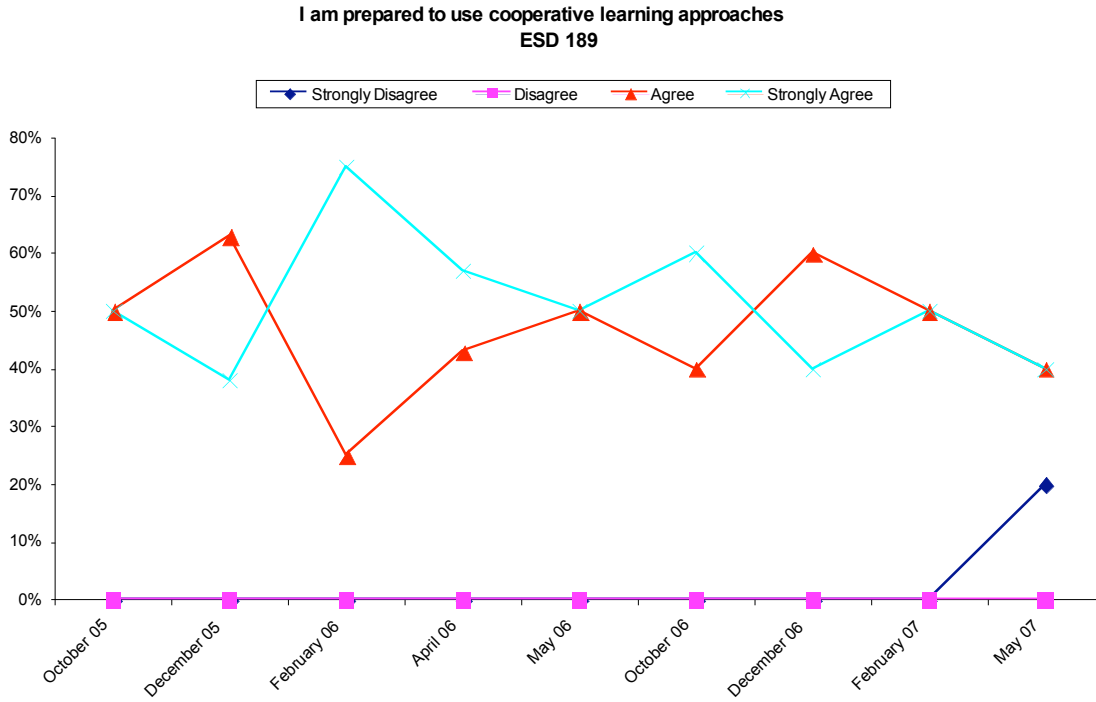
Please tell us how you are prepared to teach mathematics. We are interested in your frank responses.

**I am prepared to teach mathematics as a coinquirer with students
ESD 189**

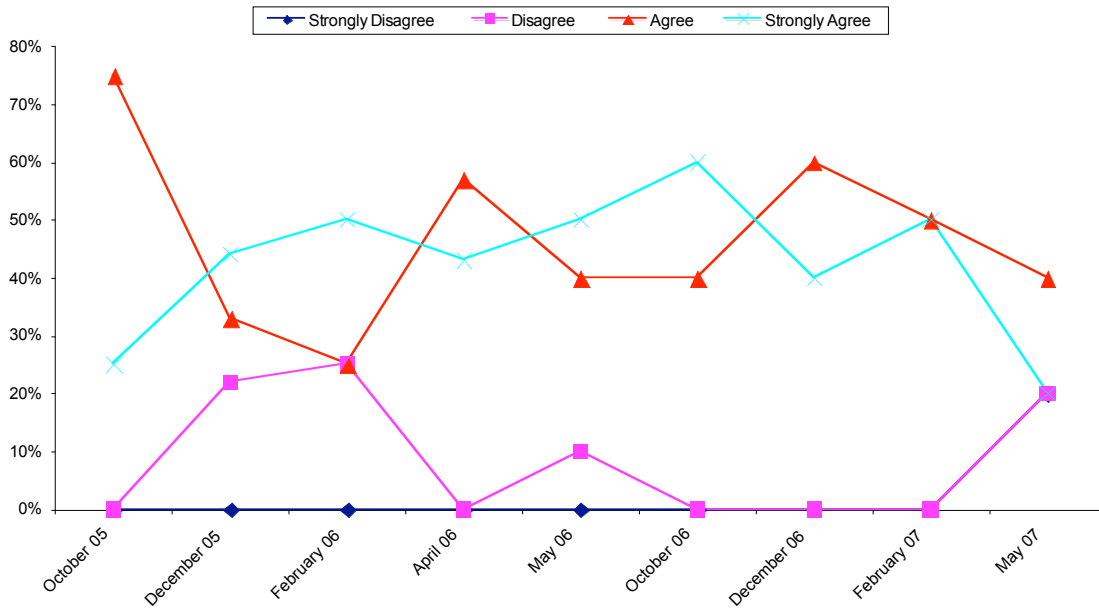


**I am prepared to give students opportunities to demonstrate their understanding of mathematical concepts in ways that match their individual learning styles
ESD 189**

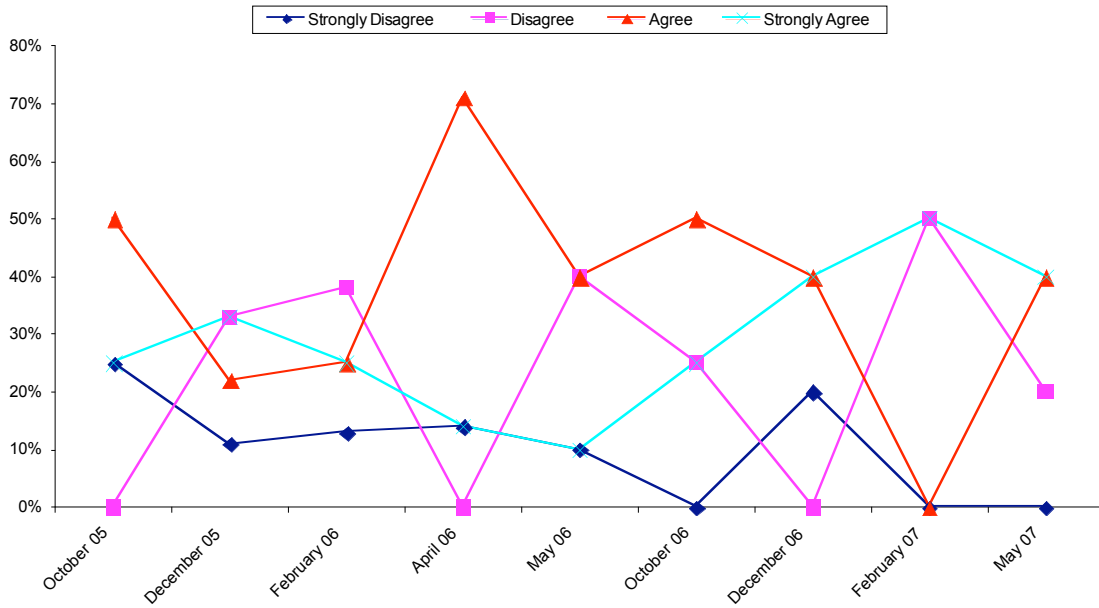




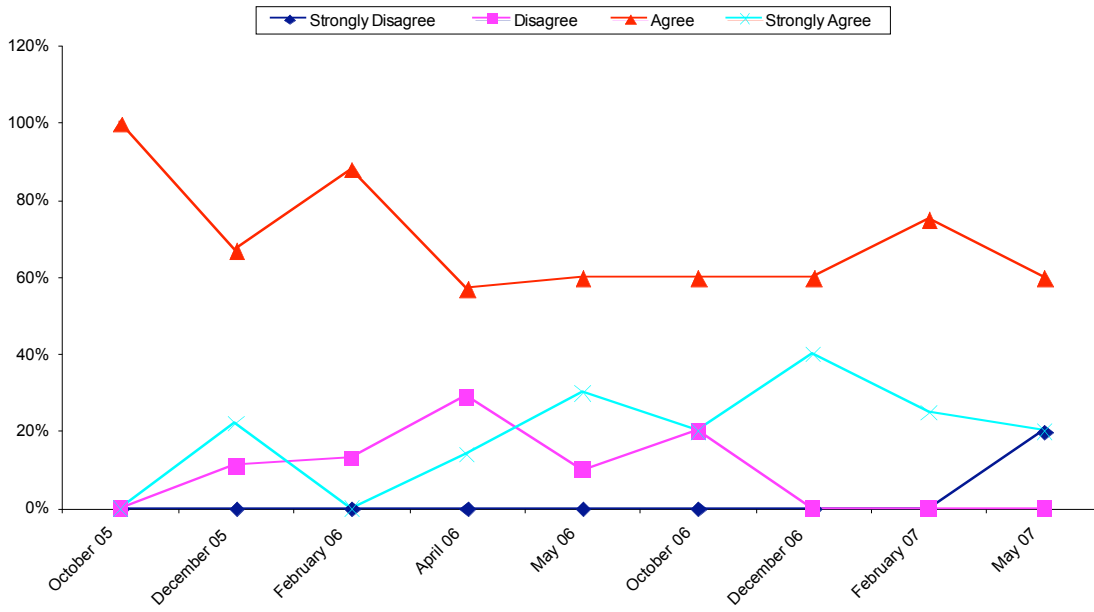
I am prepared to involve students in hands-on, concrete mathematical experiences
ESD 189



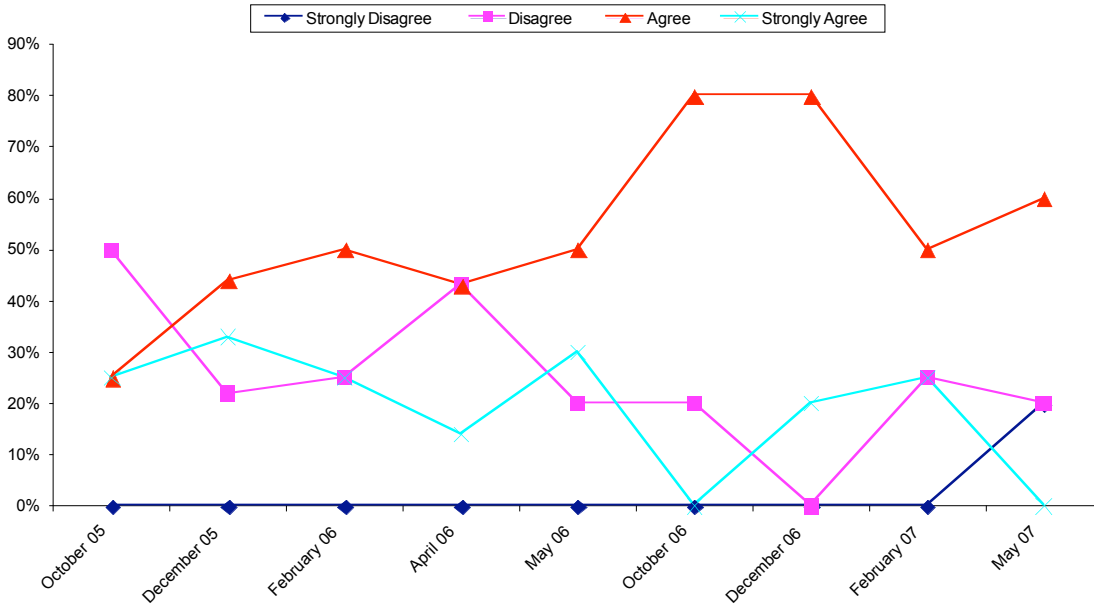
I am prepared to teach mathematics lessons that include the use of graphing calculators
ESD 189



I am prepared to locate online resources in support of mathematics learning
ESD 189



I am prepared to integrate computer-based activities
in support of mathematics learning
ESD 189



Comments:

October - 05:

- The issue is time. It takes time to find resources and computer activities to implement in class.
- I was a participant in the NO LIMIT for learning disabled students over the past two years and have had all the training through that project.

December - 05:

- We do not have graphing calculators and I have not used them in a while.
- There is not a computer lab where we could go as a class to use the sources online.

February - 06:

April - 06:

- Given the time to prepare the actual lessons, most of the above is possible. The size of classes (over 30) is a limiting factor.
- I would do more computer-based things if I had some guidance and input from another colleague who has done it.

May - 06:

- My classroom activities have become much more technology and project oriented over the years of my involvement with No Limit.

October - 06:

December - 06:

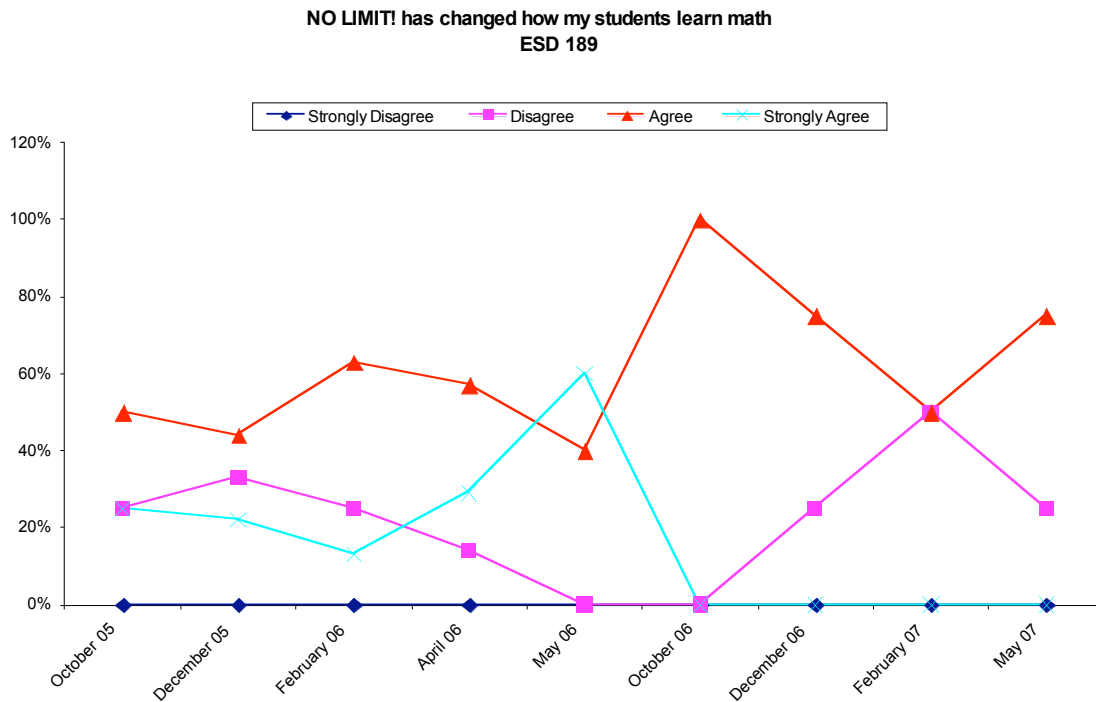
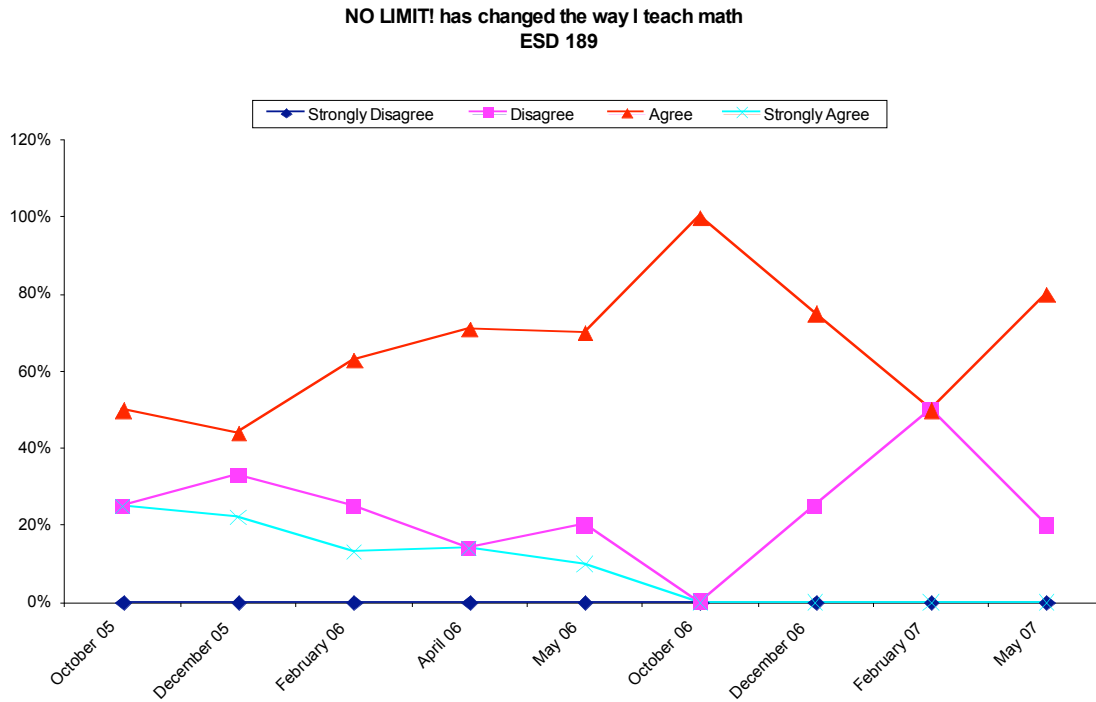
February - 07:

- We recently explored savings with interest over a long period of time using computer spreadsheets and graphs.

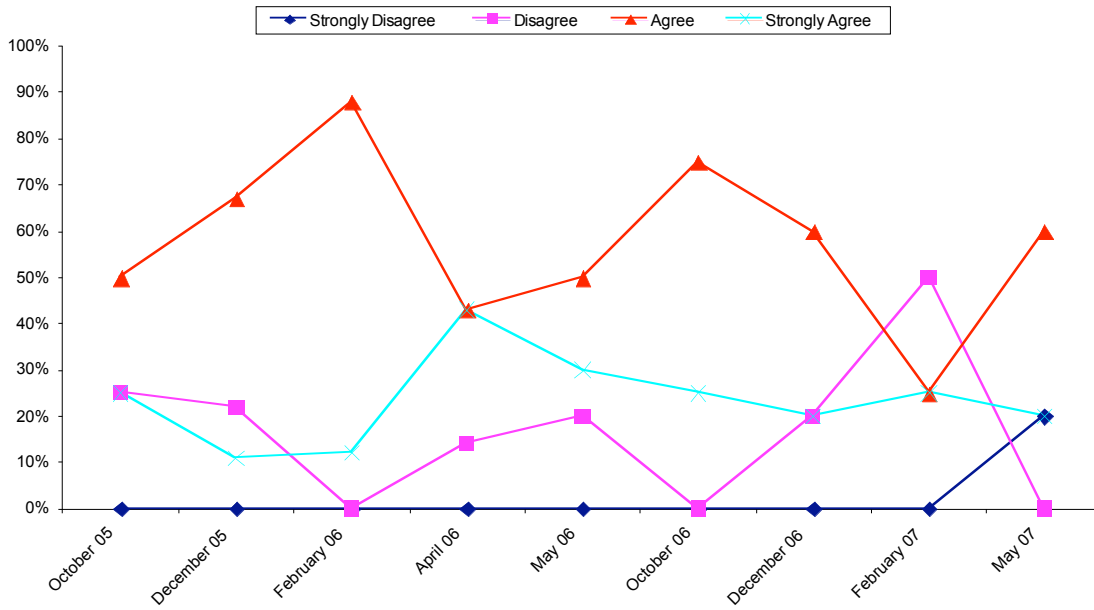
May - 07:

Item 14:

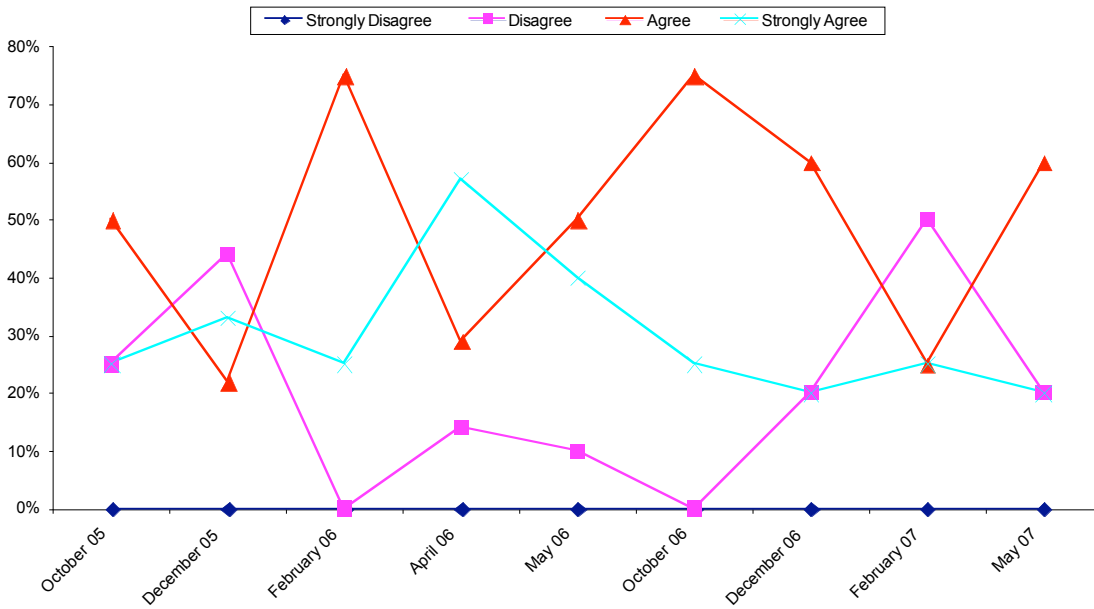
Please tell us how NO LIMIT! has impacted your classroom. We are interested in your frank responses.

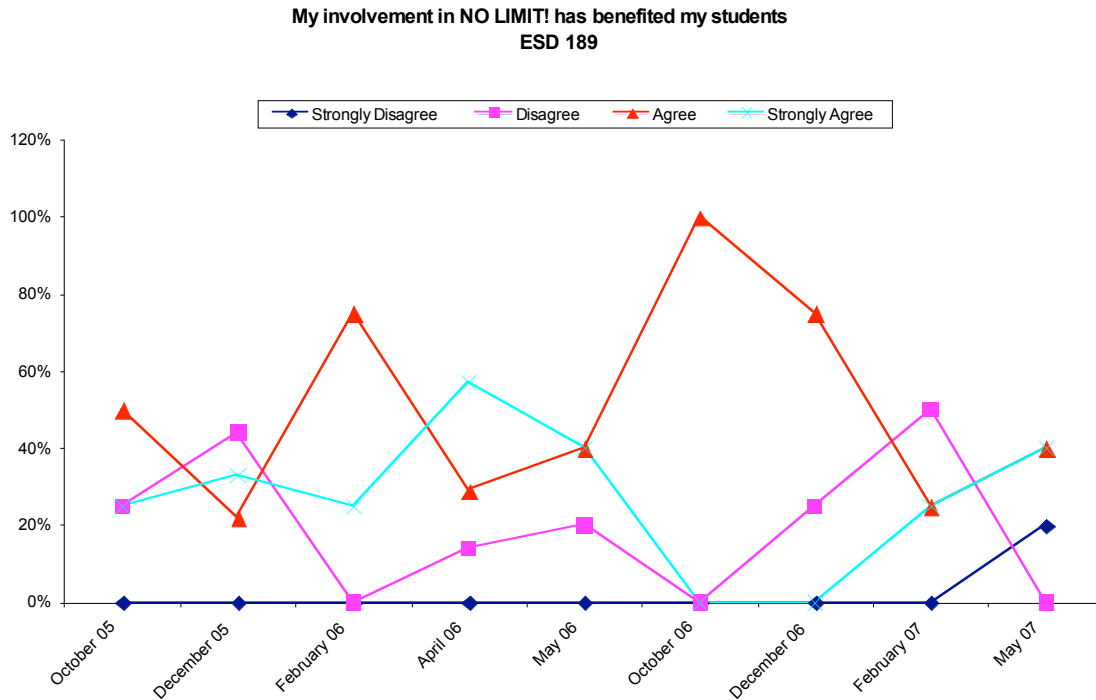


I feel more comfortable using technology to teach math
ESD 189



My involvement in NO LIMIT! has benefited me
ESD 189



Comments:October - 05:

- The use of the document camera has been a huge benefit. It allows me to have students share their work with the class in a time efficient manner. In addition, it helps displaying information in chart, graph, and visual form with out making costly overheads. It has been a real time saver for me and I cannot imagine being without one now.
- Please note, this is NOT because of the current participation in No Limits. It is from the exceptional training in the past two years of the other grant round.

December - 05:

- I have not received any of the equipment promised through the no limits grant - yet. I already taught using inquiry and the cognitive tutor was already in place.
- It is still early in the process for the grant to reach the resource room.
- Using the technology, especially the document camera, has greatly benefited my teaching. It facilitates student-centered discussions of problem solving techniques and strategies.
- This comes from my original participation in a NO LIMITS grant with CWU SETC/Ann Black. This particular grant so far has added nothing, and in fact I have lost ground due to the fact I have to participate in this grant and be away from my classes.

February - 06:

- Although I have a SmartBoard now, everything else I already in (older document camera though) I still do not have a long enough cord to hook it to my computer, so not much has changed yet.

- The use of the document camera has been a huge advantage to my students in showing student generated work and facilitating discussion on the problem solving process.
- Unfortunately, my reference to NO LIMIT is to the grant with which I was involved 2003-2005 at CWU. This particular grant has added little.

April - 06:

- What tech. we have existed before the grant. We will be purchasing more before the year's end, and that will benefit. The trips to Renton have been a waste of time.
- I was part of a NO LIMIT grant for LD students that prepared me for using technology to a much greater degree than this one.

May - 06:

- We already had the technology in place that was recommended. I did gain some good ideas from fellow teachers attending the workshops, but I am not sure if it benefited my students enough to offset the missed class time as well as the time demands No Limits took away from time that could be spent in a more direct way to my students.
- I began this project with the knowledge and skills obtained through a previous NO LIMIT's project through CWU, SETC.

October - 06:

- This is my first year teaching

December - 06:

- I am a new teacher and I have had limited No Limit training.

February - 07:

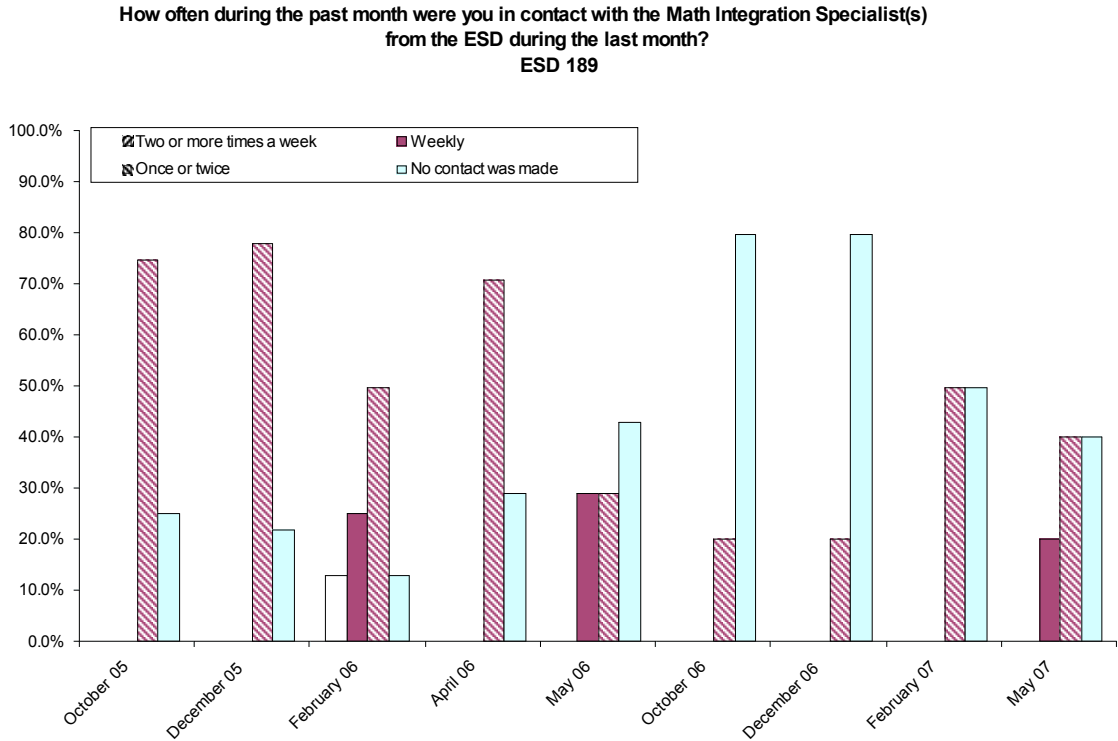
- I am new to the program and feel as though I am technologically capable. I would like to be trained in something new like the software we have or the smart slates.

May - 07:

- I am a new addition to the math team at my school. Being a first year math teacher my methods have not been changed by No Limits, but I do enjoy the technology that was provided and I have been helped by our site visitor.

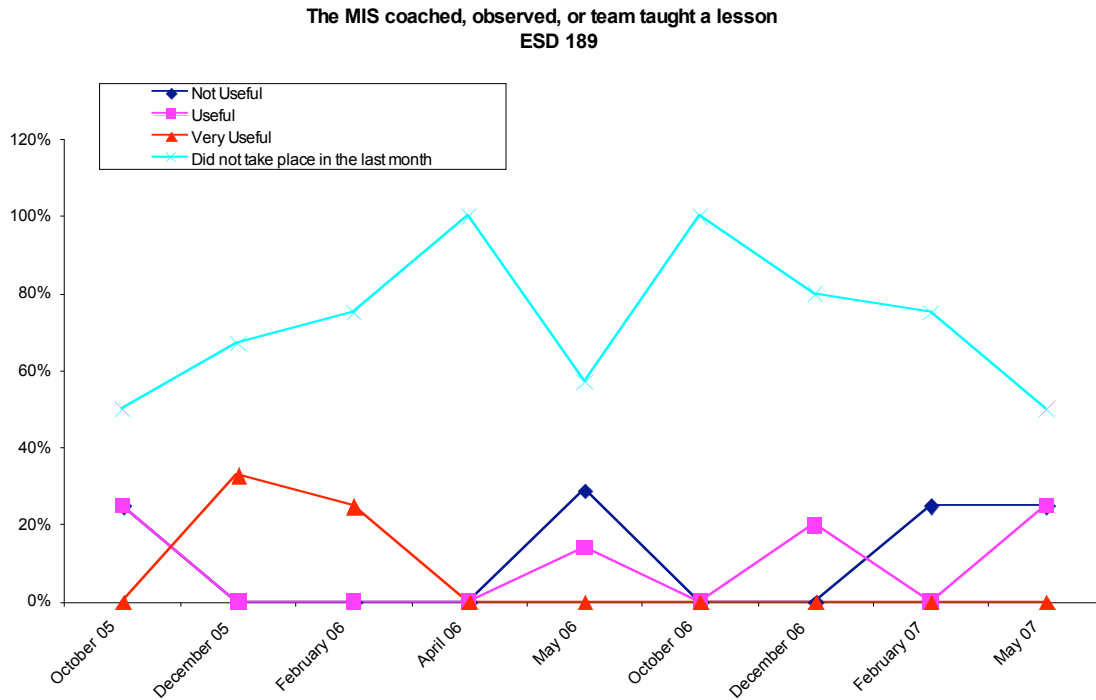
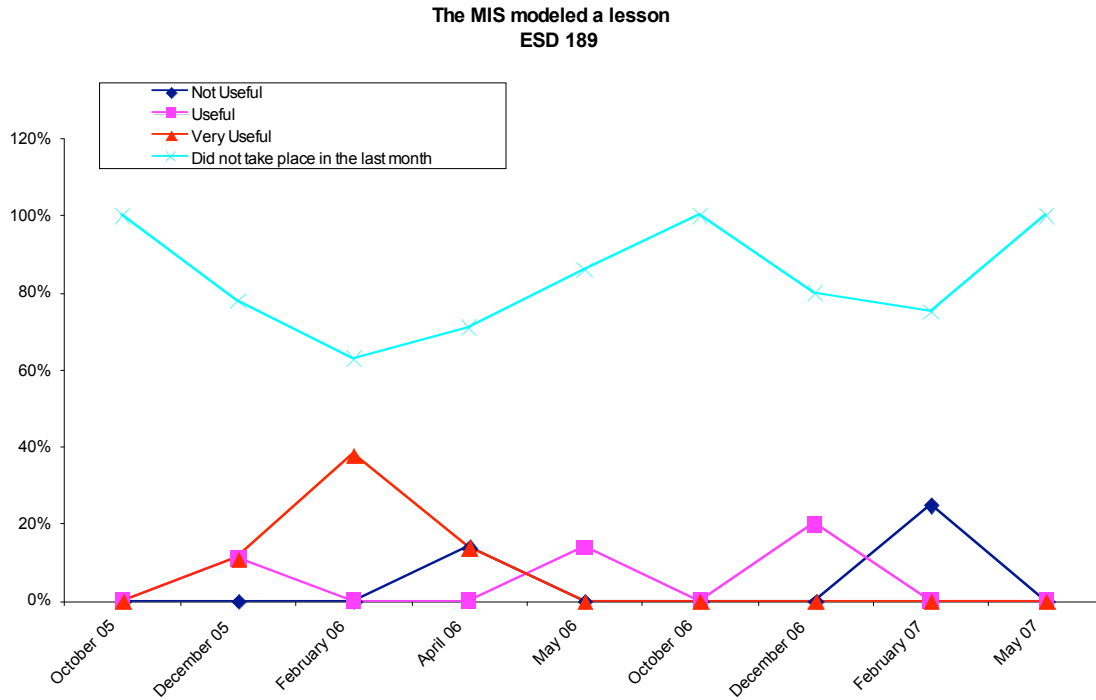
Item 16:

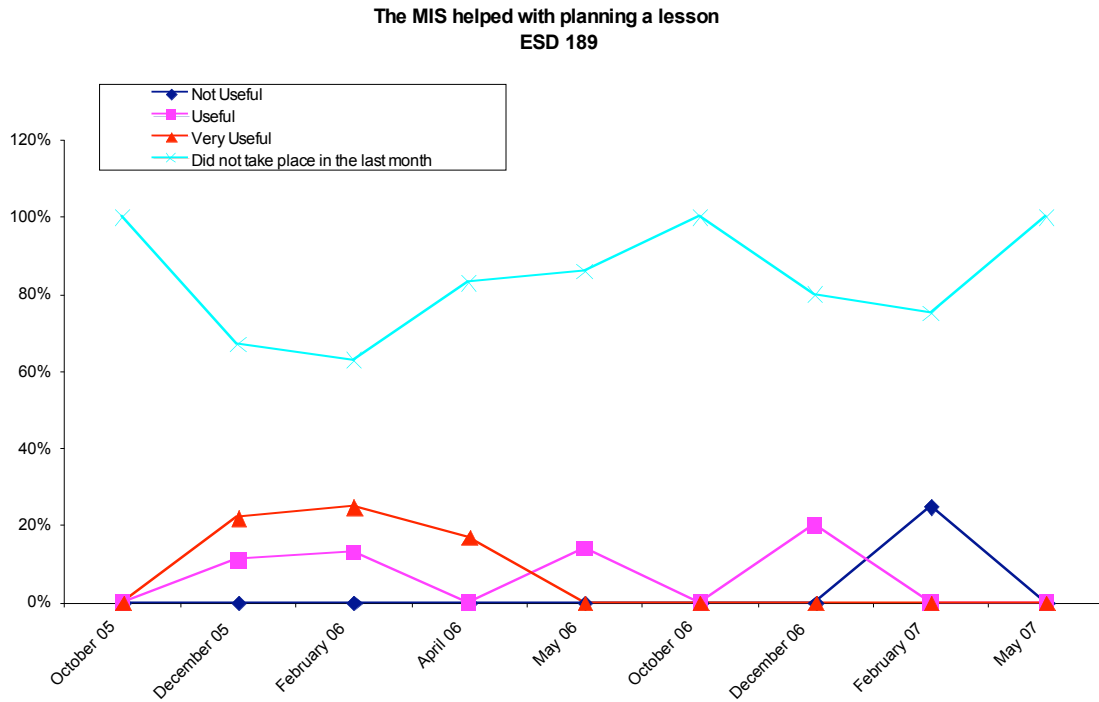
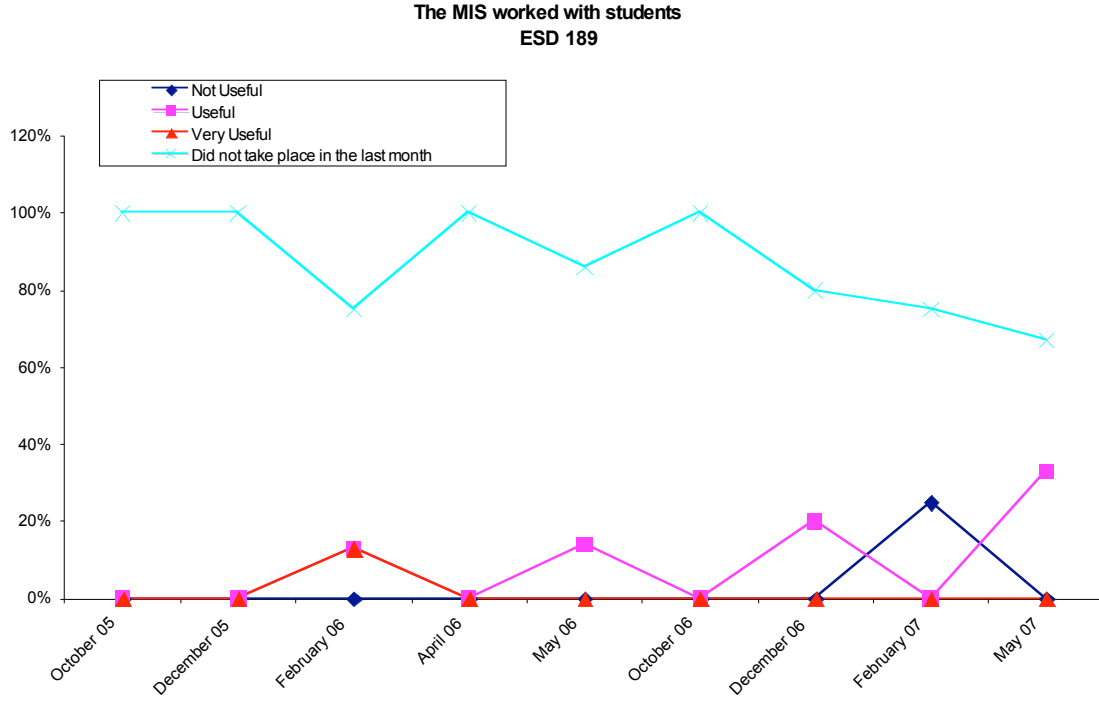
How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?



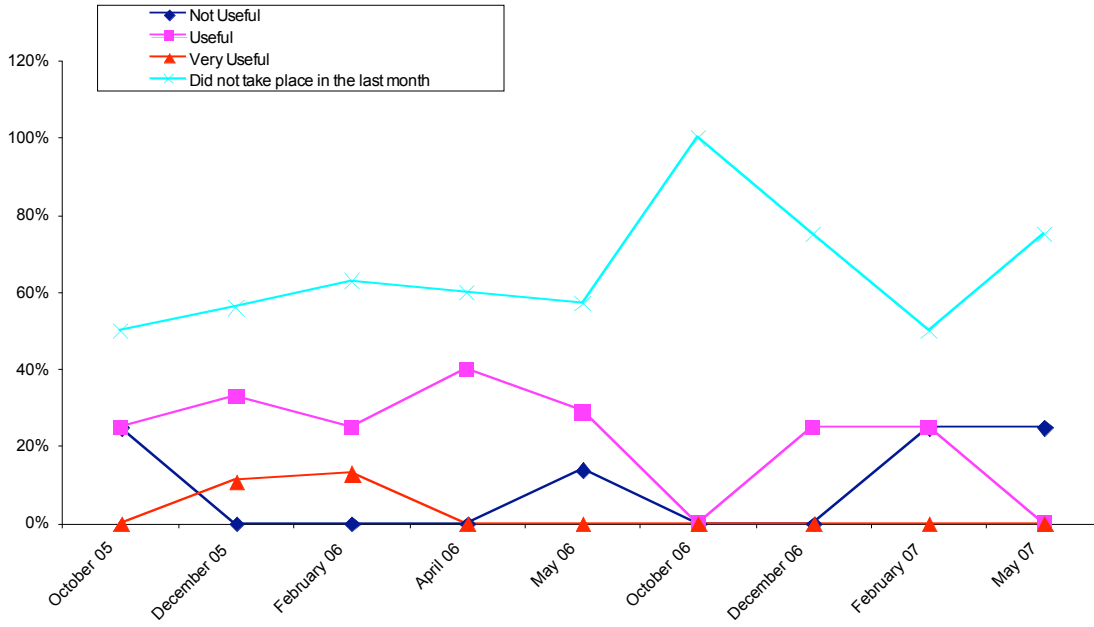
Item 17:

Please evaluate the following MIS activities over the last month.

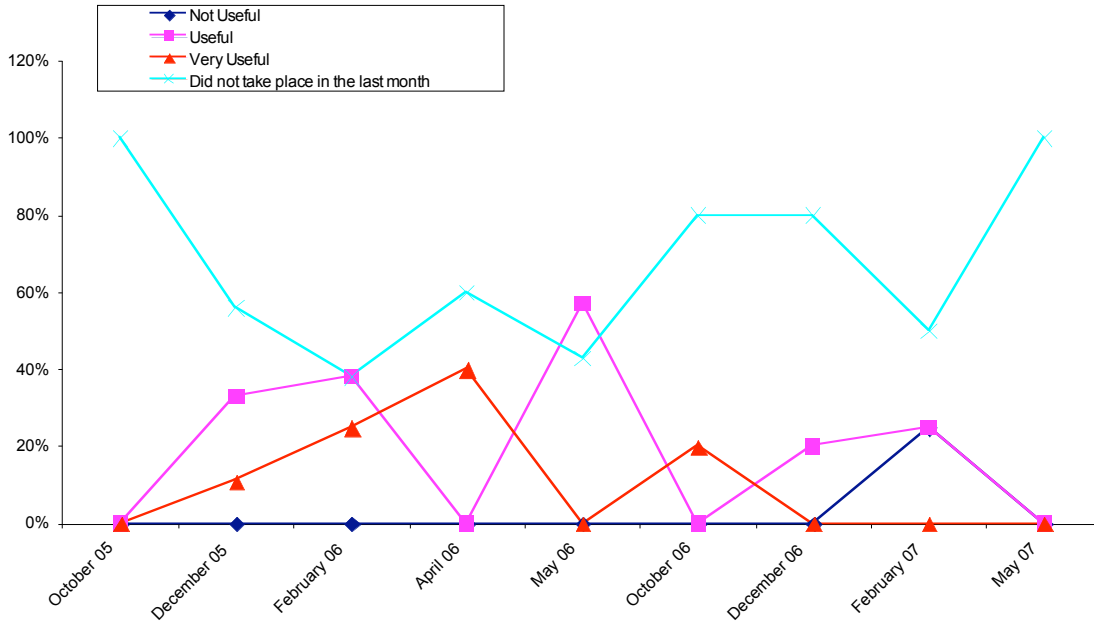




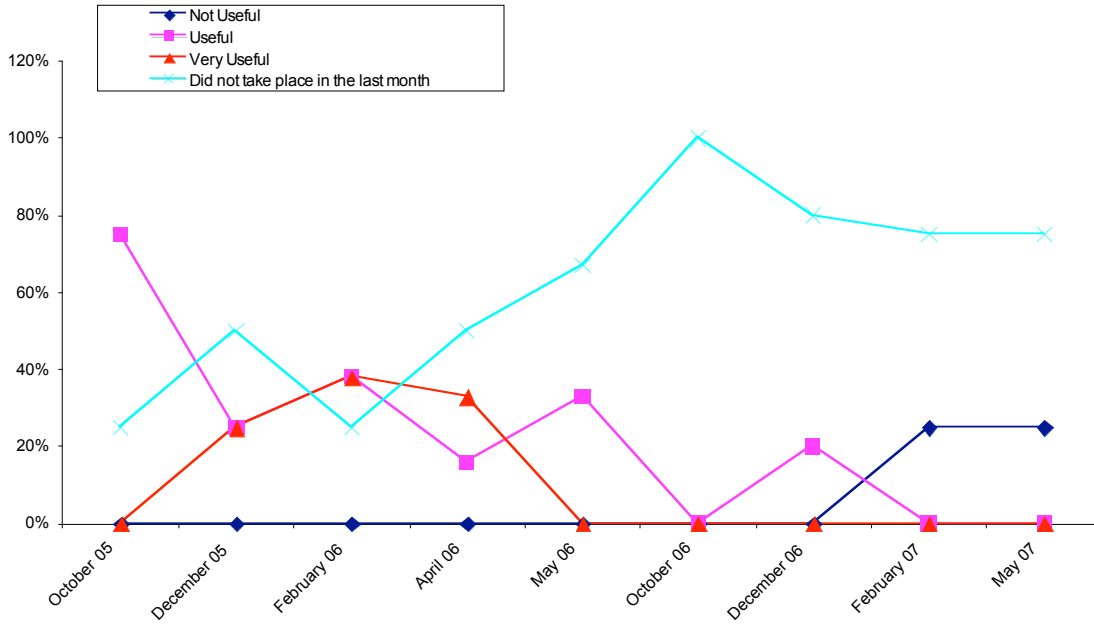
The MIS helped with schedules, logistics, or administrative issues
ESD 189



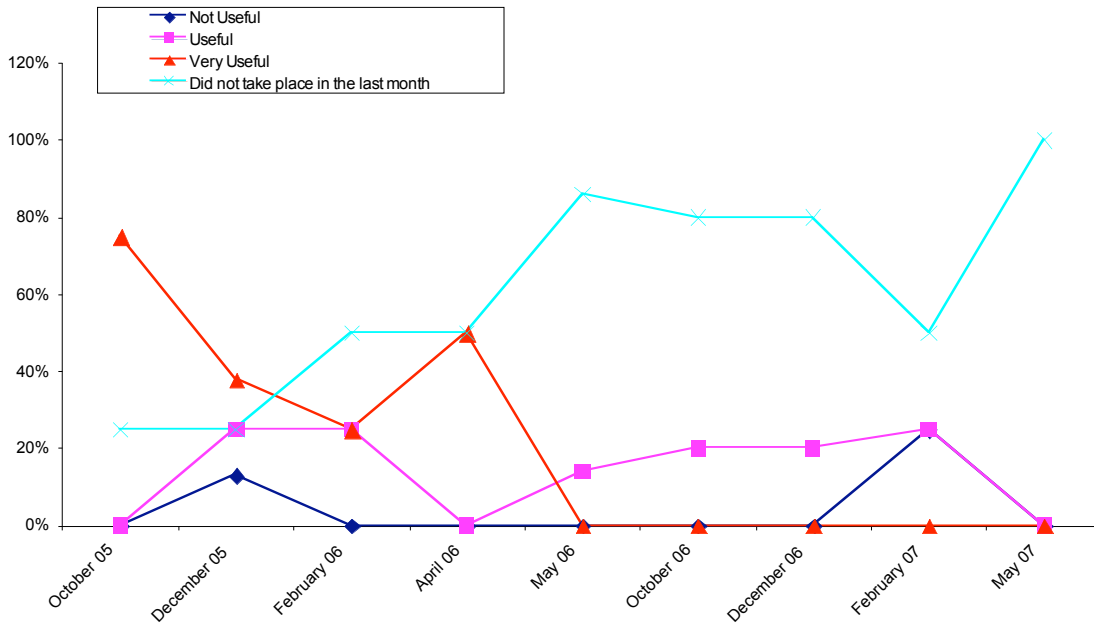
The MIS helped with technology
ESD 189



The MIS provided instructional resources
ESD 189



The MIS facilitated a Professional Learning Community meeting
ESD 189



Item 18:

Describe the focus of your Professional Learning Community (PLC) meetings.

October - 05:

- We have decided to use the Robert Marzano ideas. We are incorporating that into our meetings. We have also been discussing what technology could improve our instruction.
- We are working on improving the instruction of probability in grades 7-10. I am currently developing lessons with another teacher at my level to help the students with the concept of expected value. We will share that lesson on the eCoach website in the near future.
- In this moment, the meetings are involved primarily with a math lab (math support) class that is new to our school and with discussions about which technology to order, since we all have laptops, document cameras and projectors.
- Our meetings have centered on the following issues: equipment purchases, making the math lab work for all of curriculum, project design, and us.

December - 05:

- Bi-weekly meetings focus on increasing student achievement and growing as a community of adult learners. Overall improving math instruction as a building (We work with Linda Forman from Teacher's Development Group from Oregon.)
- Improving lesson plans by using a lesson planning tool
- Looking at student work Observing lessons around various protocols
- We have been focusing on how we want to spend our money for technology. We were lucky to have a document camera and projector so we have spent a good deal of time researching the best way to help our students with technology.
- Planning around the student needs for math learning. Continuing to "tweak" our roadmap of learning for the year.

February - 06:

- We are discussing ways to use our Math Lab class to most benefit our students and we are working towards spending our grant money to buy technology for our classrooms.
- We planned as a group how to improve probability instruction grades 7 through 9.
- Lately the focus has been using the GLEs when trying to decide as a group how to differentiate for different skill levels.
- Using the web based resources
- Working on a coordinated approach to teaching statistics from grades 7-10.
- This past meeting was focused on our next concept lesson for our seventh graders, and on making our math lab more efficient.

April - 06:

- We often discuss ways to better engage our students and plan our lessons to match the state standards. We are still working on getting our technology so much of our discussions are centered on that.
- Never saw the MIS.
- Each of us developed a probability lesson or activity that lasted two or more days to give students a deeper understanding of the topic. We used each other's lessons when applicable.
- Primarily focus on our math lab classes

- How to be more effective with our teaching...and of course, WASL, WASL, WASL. We tend not to talk about how students need differentiated learning, but focus on what else needs to be covered for the WASL.
- We are trying to integrate the Mazano teaching strategies as well developing a road map as a district

May - 06:

- Most of the year it has been focused on making our math lab work best for our students. We have been talking about the best lessons and technologies to use to help the students better understand the math concepts we are teaching in that class.
- Lately, the focus has been on evaluating student learning.
- Our focus was ordering equipment and what we had to do to prepare for the next No Limits meeting.
- Increase student understanding of Probability
- Lesson planning/assessment
- Generally revolve around our "math labs"
- Getting the management issues, curriculum, etc. up and running for math lab classes of over 30 students each.

October - 06:

- The two most recent meetings have been for us to receive training on Vernier's Logger Pro software and probes.
- The last meeting we went over how to use Logger Pro software to collect and analyze data. It was extremely useful and will allow me to design meaningful lesson using "real" data.
- At this time they focus on helping our two new staff members
- To get basic skills of students to improve.

December - 06:

- Last time we met it was to work with Logger Pro and its probes and graphs on computers.
- We have been working on becoming proficient with the technology that we currently have. Our last meeting, we worked on teaching ideas using LoggerPro software.
- Multiple foci: planning, problem solving, new teacher mentoring

February - 07:

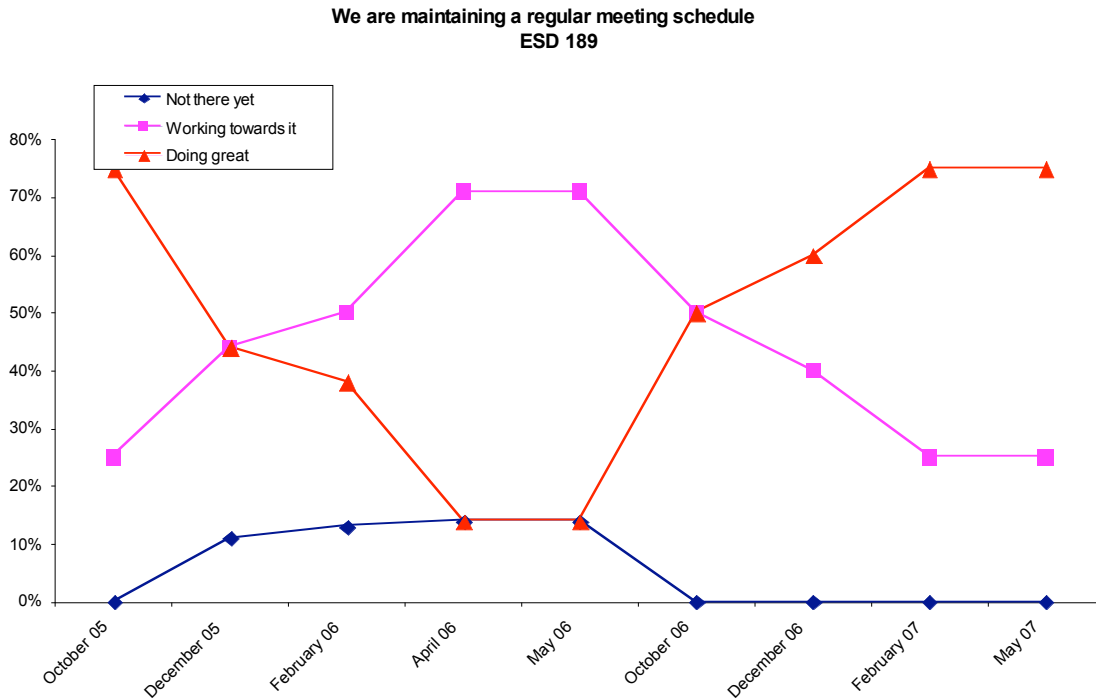
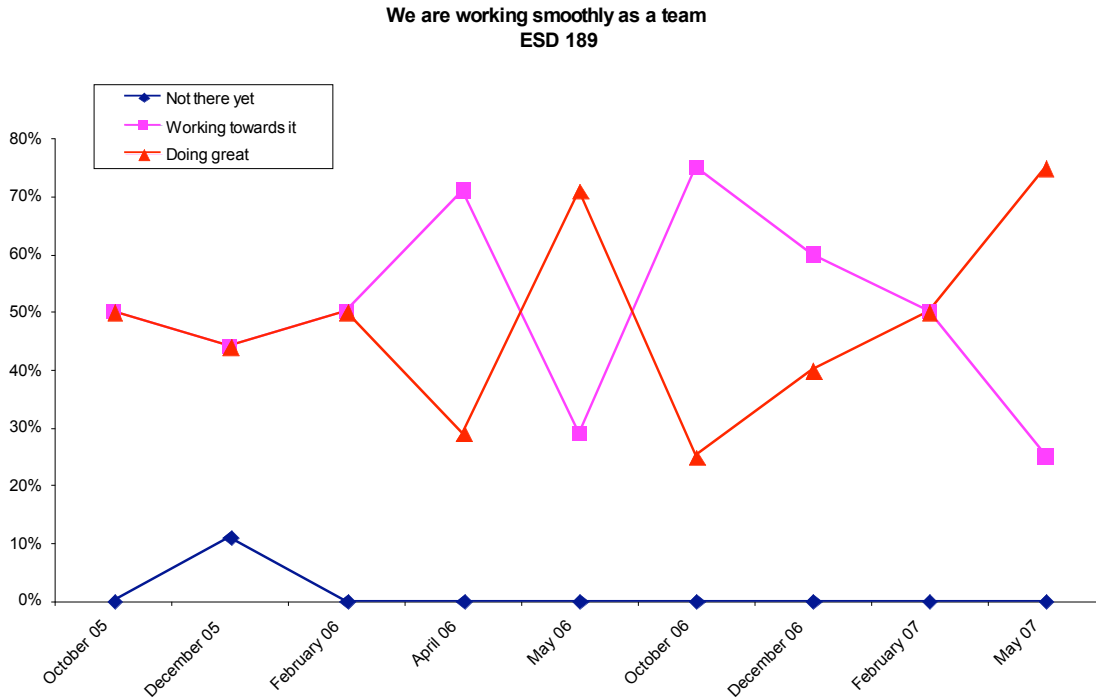
- We have taught each other different software tools for teaching, including, Loggerpro, web design programs. In addition, we are observing each other teach with a focus on student learning.
- We focus on individual student achievement and intervention for struggling students.

May - 07:

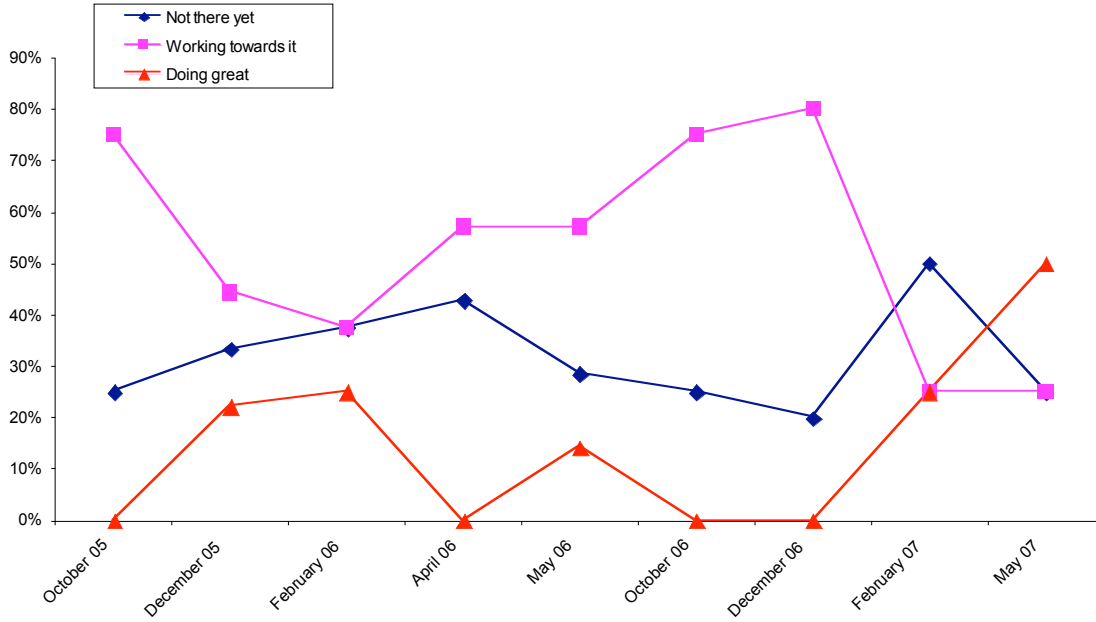
- We used the meeting to learn the software program that we currently have and we used it to reflect on teaching observations.
- Vary by need of the participants
- Closing the achievement gap in math.

Item 19:

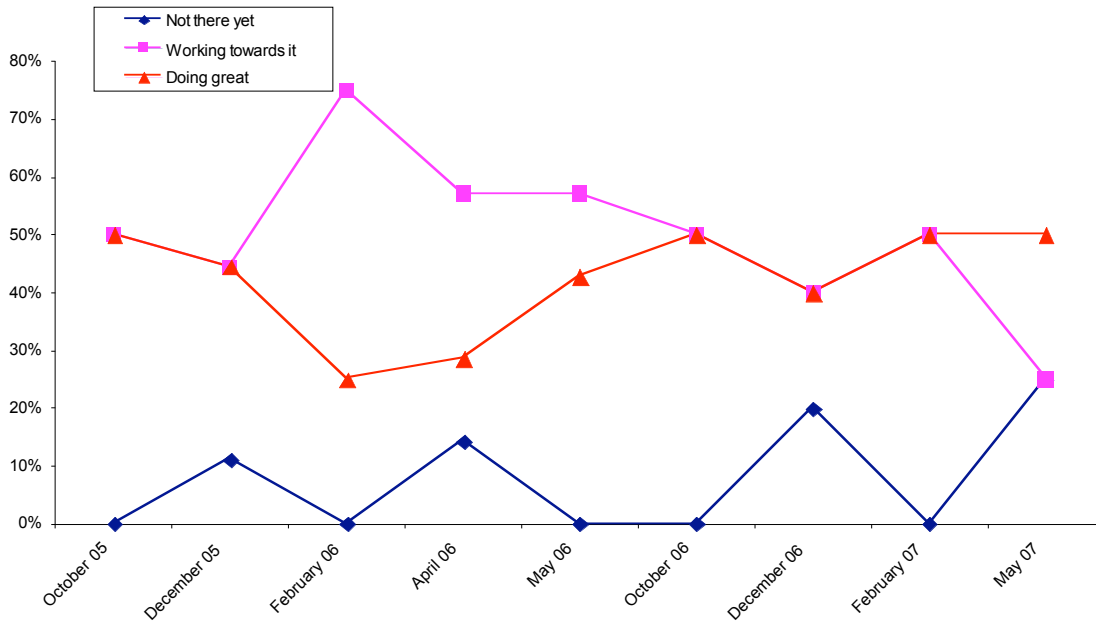
Please evaluate the effectiveness of your PLC meetings.

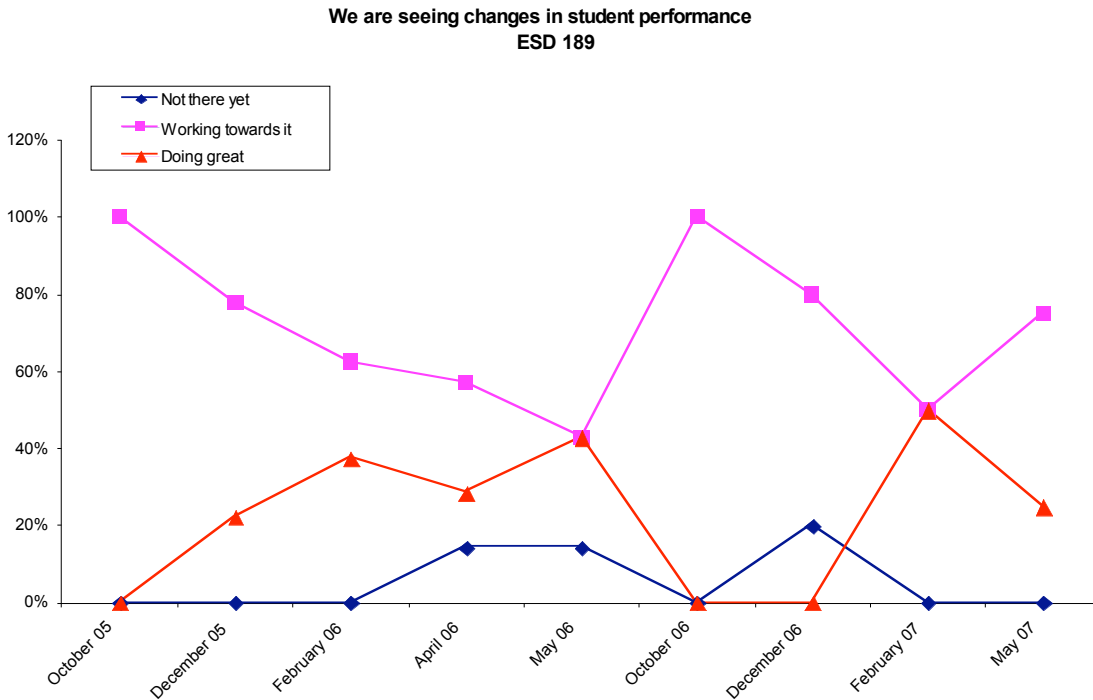
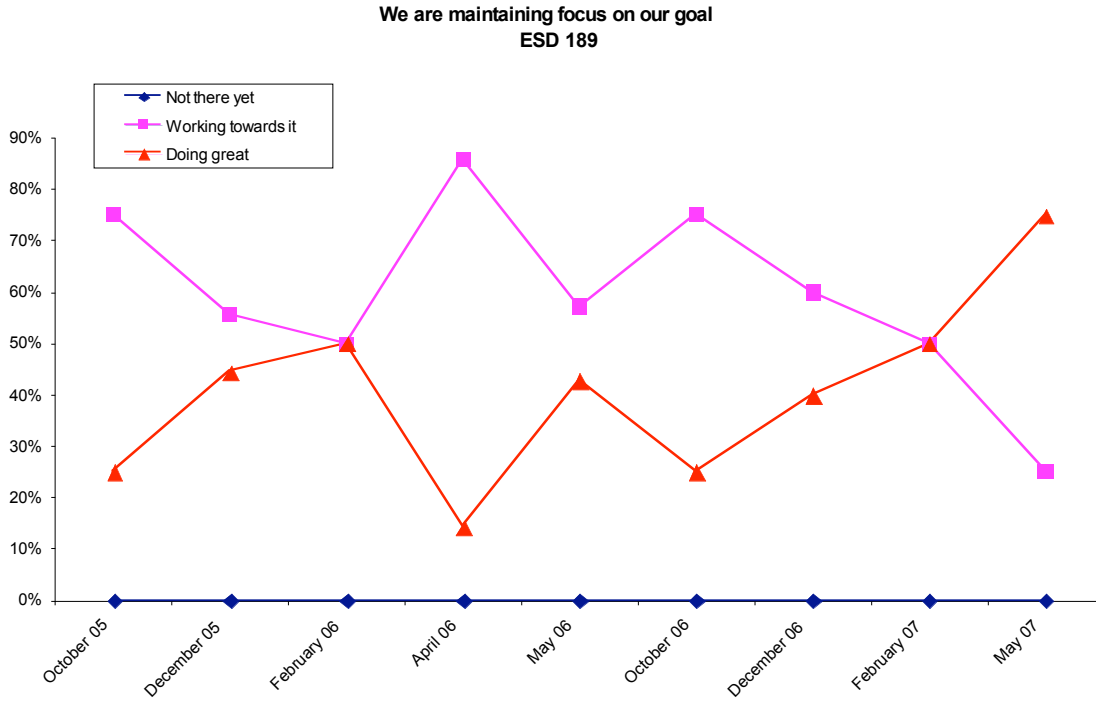


**We are reading and sharing research
ESD 189**



**We are using new teaching strategies in the classroom
ESD 189**





Comments:

October - 05:

- We are just getting started with the process.

- Our own PLC meetings are invaluable for us in terms of pulling together a brand new cadre of folks and making the situation work for all of us.

December - 05:

February - 06:

April - 06:

May - 06:

- Looking forward to this year's WASL results to see if we have made an improvement in probability.
- Because of two of us being half time and sharing a job so not able to meet at the same time and two of the others with coaching responsibilities, our PLC has not met as we would have liked. However, we have done the "catch as catch can" model and done a terrific job, I believe, of providing resources for one another even though we do not necessarily get to discuss things.

October - 06:

- It is too early to tell if we are having an effect on student performance.

December - 06:

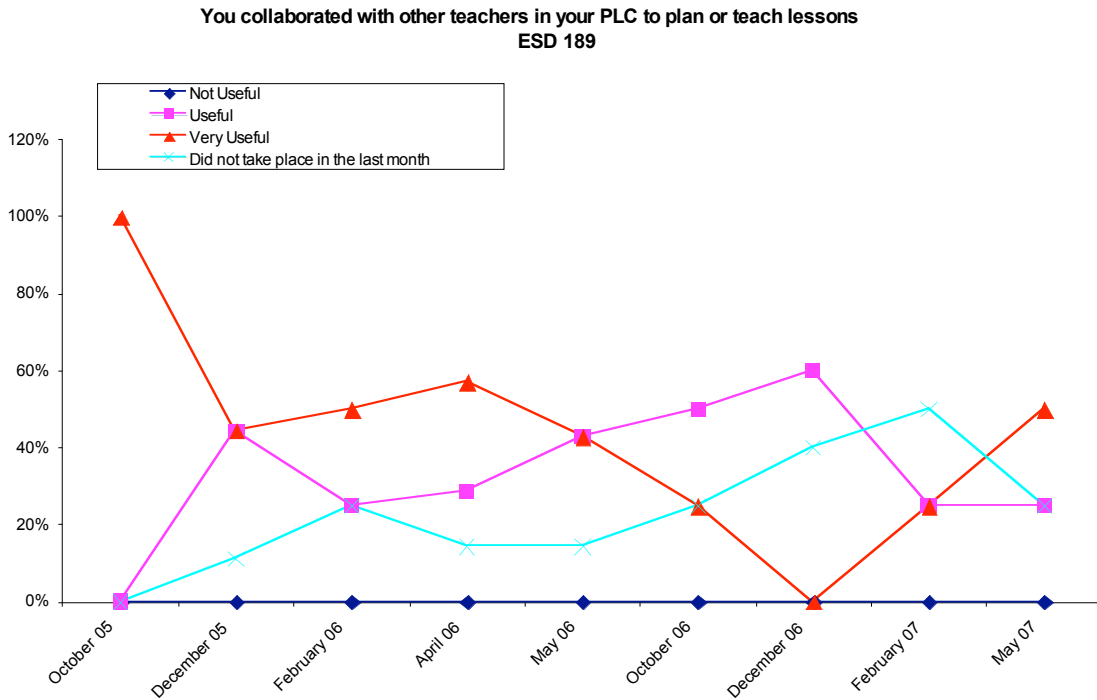
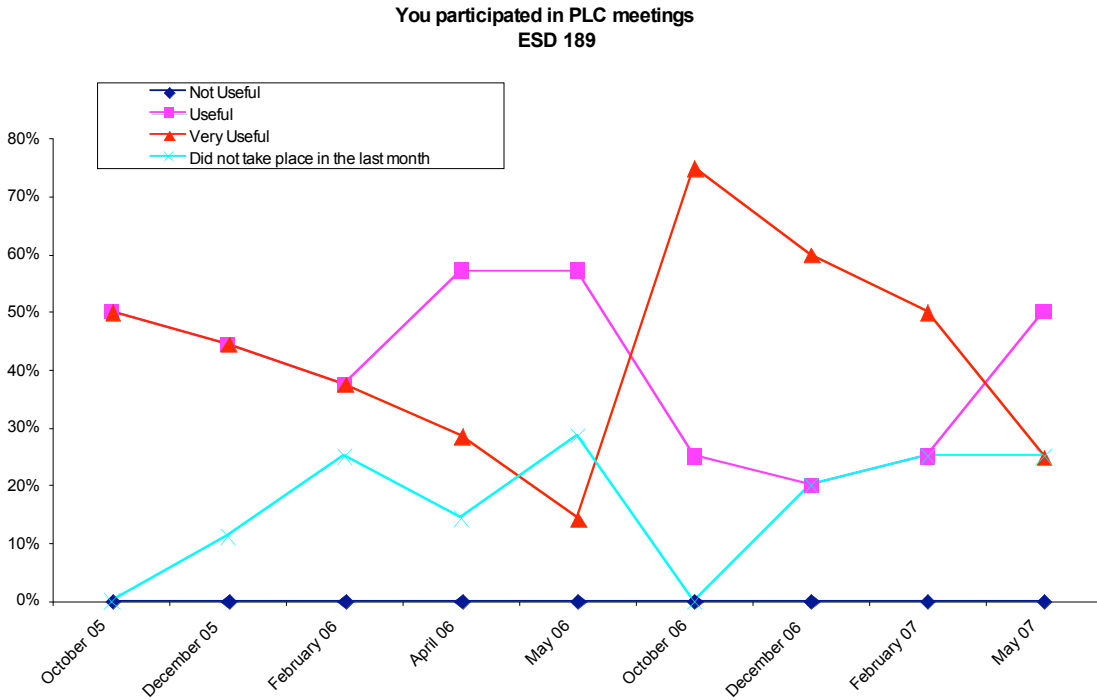
- Our last meeting planned was snowed out so we have rescheduled for January.

February - 07:

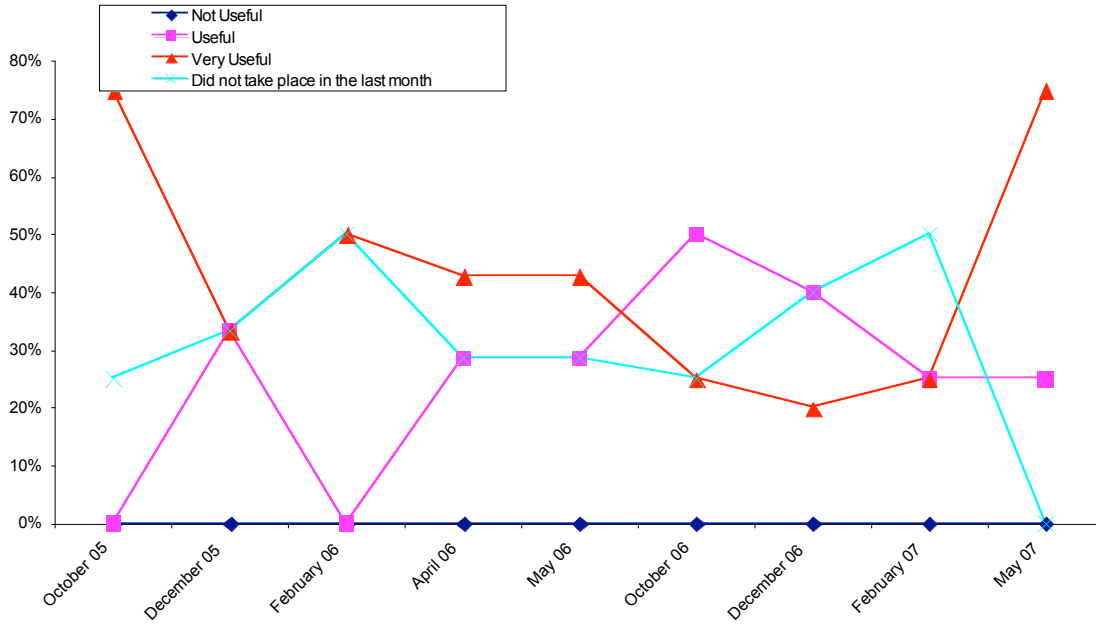
May - 07:

Item 20:

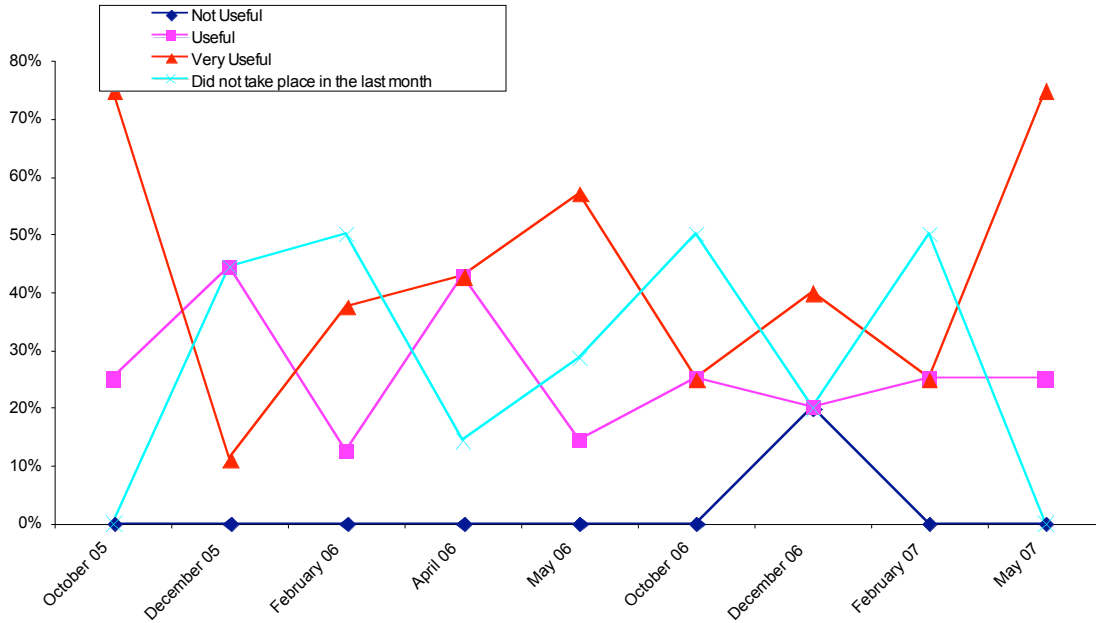
Please evaluate your PLC over the last month.



**You worked with teachers in your PLC to align curricula across grade levels
ESD 189**



**You worked with teachers in your PLC to align curricula with state and/or national standards
ESD 189**



Comments:

October - 05:

December - 05:

- None

February - 06:

- None

April - 06:

- None

May - 06:

- I find the intense focus on making all math look like the WASL offensive and not necessarily in the best interests of all of our students. Having high standards for students does not mean all students go on to a four-year institution, but with our excessive work on this, we are leaving out the workers of our future.

October - 06:

- None

December - 06:

- None

February - 07:

- We worked on setting up teacher/class webpages.

May - 07:

- None

Appendices

Appendix A: Bibliography

Anderson, L. M. (1989). Implementing instructional programs to promote meaningful, self-regulated learning. In J. Brophy (Ed.), *Advances in research on teaching: Vol. 1. Teaching for meaningful understanding and self-regulated learning* (pp. 313-343). Greenwich, CT: JAI.

Baker, E. L., J. L. Hermann, & Gearhart, M. (1996). Does technology work in schools? Why evaluation cannot tell the full story. In C. Fisher, D.C. Dwyer & K. Yocam (Eds.), *Education and technology: Reflections on computing in classrooms* (pp.185-202). San Francisco: Jossey Bass.

Becker, H.J. (2000). Who's wired and who's not: Children's access to and use of computer technology. *The Future of Children* 10(2), 44-75.

Becker, H.J. & Ravitz, J. (1999). The influence of computer and Internet use on teachers' pedagogical practices and perceptions. *Journal of Research on Computing in Education*, 31(4), 356-384.

Borko, H., Davinroy, K., Bliem, C. L., & Cumbo, K. B. (2000). Exploring and supporting teacher change: Two third-grade teachers' experiences in a mathematics and literacy staff development project. *The Elementary School Journal*, 100(4), 273-306.

Borko, H., & Putnam, R. T. (1996). Learning to teach. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 673-708). New York: Macmillan.

Carroll, T. G. (2000). If we didn't have the schools we have today, would we create the schools we have today? *Contemporary Issues in Technology and Teacher Education* [Online serial], 1 (1). Available: <http://www.citejournal.org/vol1/iss1/currentissues/general/article1.htm>

Cohen, D. K., & Ball, D. L. (1990). Relations between policy and practice: A commentary. *Educational Evaluation and Policy Analysis*, 12, 330-338.

Desimone, L.M., Porter, A.C., Garet, M.S., Yoom, K.S. & Birman, B.F. (2002). Effects of professional development on teachers' instruction: Results from a three-year longitudinal study. *Educational Evaluation and Policy Analysis*. 24(2), 81-112.

DuFour, R. & Eaker, R. (1998). *Professional learning communities at work: Best practices for enhancing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.

DuFour, R., DuFour, R., Eaker, R. & Karhanek, G. (2004). *Whatever it takes: How professional learning communities respond when kids don't learn*. Bloomington, IN: National Educational Service.

Dwyer, D., Ringstaff, C. & Sandholtz, J. (1991). Changes in teachers' beliefs and practices in technology-rich classrooms. *Educational Leadership* 48(8), 45-52.

Hargreaves, A., Earl, L., Moore, S. & Manning, S. (2001). *Learning to change: Teaching beyond subjects and standards*. San Francisco: Jossey-Bass.

Harpel, B. (2004, April). How to really teach math through writing. Workshop presented at the National Council of Teachers of Math Annual Conference, Philadelphia.

Herman, J.L. (1994). Evaluating the effects of technology in school reform. In B. Means (Ed.), *Technology and education reform: The reality behind the promise* (pp. 133-167). San Francisco: Jossey-Bass.

Honey, M. & Moeller, B. (1990). Teachers' beliefs and technology integration: Different values, different understandings. CTE Technical Report Issue No. 6. New York: Center for Children and Technology.

International Society for Technology in Education (2000). *National educational technology standards for students: Connecting curriculum and technology*. Eugene, OR: Author.

Knapp, N. F., & Peterson, P. L. (1995). Teachers' interpretations of "CGI" after four years: Meanings and practices. *Journal for Research in Mathematics Education*, 26, 40-65.

McCabe, Melissa & Skinner, Ronald A. (2003) Analyzing the tech effect. *Education Week's Technology Counts 2003*, 22(35), 50-52.

National Council of Teachers of Mathematics (1989). *Curriculum and Evaluation Standards for school mathematics*. Reston, VA: Author.

National Council of Teachers of Mathematics (2000). *Principles and standards for school mathematics*. Reston, VA: Author.

National Research Council (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.

Networked Learning Community (2002). Frequently Asked Questions. Unpublished document.

Schön, D. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

Swanson, C.B. & Stevenson, D.L. (2002). Standards-Based Reform in practice: Evidence on state policy and classroom instruction from the NAEP state assessments. *Educational Evaluation and Policy Analysis* 24(1), 1-27.

TERC (1997). *Investigations in Number, Data, and Space*. Upper Saddle River, NJ: Pearson



Wenglinsky, H. (2002). How schools matter: The link between teacher classroom practices and student academic performance. *Education Policy Analysis Archives*, 10(12), 1-21.

Westreich, J. (2000). High-tech kids: Trailblazers or guinea pigs? In D. T. Gordon (Ed.), *The digital classroom: How technology is changing the way we teach and learn* (pp. 19-31). Cambridge, MA: Harvard Education Letter.

Zhao, Y., Pugh, K., Sheldon, S., and Byers, J.L. (2002). Conditions for classroom technology innovation. *Teachers College Record*, 104(3), 482-515.

Appendix B: Sample Teacher Log (including NLC section at end)

Page 1 of 29

Teacher Log — May 2005
Web Survey for NO LIMIT! Teachers

Welcome!
 The purpose of this survey is to gather information from teachers participating in the "NO LIMIT!" initiative. The data will be kept confidential and will not be shared with ESD or OSPI personnel in a form that permits the identification of individual respondents. If you are not clear about how to answer a question, please feel free to [contact us for help](#). For any questions regarding this survey or the evaluation of the "NO LIMIT!" project, please contact Kate Popejoy at Kate.Popejoy@wwu.edu or call (360) 650-7608.

Identification Section

1a. Your date of birth:

(Click here to choose) ▾

file:///C:/Documents and Settings/popejok/Local Settings/Application Data/Perseus/vq66mnezh.htm 1/23/2006

Page 2 of 29

1b. Your month of birth:

(Click here to choose) ▾

1c. First letter of your last name:

(Click here to choose) ▾

2. Your ESD affiliation:

ESD affiliation

3. Your school district name (for example, Fargo):

School District

4. The grade levels you teach (please check all that apply):

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- 1st
- 2nd
- 3rd
- 4th
- 5th
- 6th
- 7th
- 8th
- 9th
- 10th
- 11th
- 12th

Please Answer the Following Questions About Your NO LIMIT! Experience

5a. In an average week, a variety of activities may take place in your classroom. During the last week, what percentage of time do you think was spent on the following activities:

- Involvement in project based activities %
- Lecture about subject matter %
- Facilitate student discussions about mathematical concepts %
- Specifically prepare students for standardized tests %
- Administer tests (any type) %
- Go over homework assignments %

Other, please specify %

5b. Comments

6a. Please indicate your opinion about each of the following statements by rating them. There are no right or wrong answers. We are interested in your frank opinions.

I am prepared to...

	Strongly Agree	Agree	Disagree	Strongly Disagree
Teach mathematics as a co-inquirer with students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Give students opportunities to demonstrate their understanding of mathematical concepts in ways that match their individual learning styles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use cooperative learning approaches.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implement a variety of mathematics teaching strategies that incorporate problem/project based learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Involve students in hands-on, concrete mathematical experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teach mathematics lessons that include the use of graphing calculators.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locate online resources in support of mathematics learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate computer-based activities in support of mathematics learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6b. Comments

7a. Please indicate whether the type of technology is available. If the technology is available, please indicate the frequency that your students have used it in your mathematics class over the last ten lessons.

	Available?		Frequency										
	Yes	No	0	1	2	3	4	5	6	7	8	9	10
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Application software (e.g. spreadsheet, Geometer's Sketchpad).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instructional software (e.g. educational games, drill and practice).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online mathematical resources (e.g. NCTM's Illuminations applets).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Graphing calculator/calculator.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PDA (e.g. Palm Pilot).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SmartBoard™ or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LCD projector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7b. 'Other', as specified in 7a above.

8a. Please indicate your opinion about each of the following statements by rating them. There are no right or wrong answers. We are interested in your frank opinions.

	Strongly Agree	Agree	Disagree	Stro
NO LIMIT! has changed the way I teach this year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
NO LIMIT! has changed how my students learn math this year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I feel more comfortable using technology to teach math than I did at the beginning of the year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Being involved in NO LIMIT! has benefited me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Being involved in NO LIMIT! has benefited my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

8b. Comments

8c. List three of the most helpful things you did in cluster meetings:

8d. List three of the most effective training opportunities provided by NO LIMIT!

8e. Did you attend any professional conferences during your participation in NO LIMIT!?

- Yes
- No

8f. If yes, please list them here:

8g. Did you give any presentations about NO LIMIT! at professional conferences?

- Yes
- No

8h. If yes, please describe here:

8i. Were you the only NO LIMIT! teacher in your building?

- Yes
- No

8j. If yes, what were the advantages and/or disadvantages?

8k. What do you see as the emphasis of NO LIMIT!?

- Mathematics
- Technology
- Both
- Other

8l. Was this emphasis appropriate?

- Yes
- No
- Don't know

8m. Comments

8n. Did your district apply for NO LIMIT! funding for next year?

- Yes
- No
- Don't know

8o. Were you part of the application?

- Yes
- No
- Don't know

8p. Was your district's application funded?

- Yes
- No
- Don't know

8q. If not part of new funding, will you continue as a district-funded participant?

- Yes
- No
- Don't know

8r. If not district-funded, do you still want to continue with NO LIMIT!?

- Yes
- No
- Don't know

8s. Comments

8t. What advice would you give to a colleague about becoming involved in NO LIMIT!?

8u. Please give one short example of change in your student(s) that can be attributed to NO LIMIT!.

8v. Please give one short example of change in your teaching that can be attributed to NO LIMIT!.

8w. What was the **one** thing that was most effective about NO LIMIT!?

8x. What is the **one** thing that you would change about NO LIMIT!, and why?

8y. Knowing what you know now, would you participate in NO LIMIT!?

- Yes
- No
- Don't know

8z. Why or why not?

[Empty text box]

9. Please choose the appropriate section corresponding to your participation in NO LIMIT!

- Regular NO LIMIT! Participant
- Washington State NO LIMIT! Grant for Learning Disabilities (this completes the survey for this group)
- Networked Learning Communities Participant (David and Ken's group)

10. How often were you in contact with the Math Integration Specialist(s) from the ESD during the last month?

- Several times a week
- Weekly
- Once or twice
- No contact was made

In question 11a through 11k, please rate the usefulness of the following activities in the last month. If the activity has not taken place in the last month, select "This activity did not take place in the last month" from the drop down box.

11a. The Math Integration Specialist (MIS) modeled a lesson.

Please Rate [text box]

11b. The MIS coached, observed, or team taught a lesson.

Please Rate [text box]

11c. The MIS worked with students.

Please Rate [text box]

11d. The MIS helped with planning a lesson.

Please Rate [text box]

11e. The MIS helped with schedules, logistics, or administrative issues.

Please Rate [text box]

11f. The MIS helped with technology.

Please Rate [text box]

11g. The MIS provided instructional resources.

Please Rate [text box]

11h. You participated in cluster meetings.

Please Rate [text box]

11i. You collaborated with other teachers in your cluster to plan or teach lessons.

Please Rate [text box]

11j. You worked with teachers in your cluster to align curricula across grade levels.

Please Rate

11k. You worked with teachers in your cluster to align curricula with State and/or national standards.

Please Rate

11l. Comments

12a. Your students worked on the Fraction of the Cost (skateboard ramp) Anchored Instruction project.

- Yes
- No

12b. Approximately how many students participated?

	Number of students
Special education	<input type="text"/>
Regular education	<input type="text"/>

12c. Have your students completed the project?

- Yes
- No

13a. Your students worked on the Hovercraft Anchored Instruction project.

- Yes
- No

13b. Approximately how many students participated?

	Number of students
Special education	<input type="text"/>
Regular education	<input type="text"/>

13c. Have your students completed the project?

- Yes
- No

In question 14a through 14e, please rate the usefulness of the following activities in the last month. If the activity has not taken place in the last month, select "This activity did not take place in the last month" from the drop down box.

14a. You participated in cluster meetings.

Please Rate

14b. You collaborated with other teachers in your cluster to plan/teach lessons.

Please Rate

14c. You worked with teachers in your cluster to align curricula across grade levels.

Please Rate

14d. You worked with teachers in your cluster to align curricula with state and/or national standards.

Please Rate

14e. You worked with the LD Project Administrators.

Please Rate

14f. Comments

15. How often were you in contact with the LD Project Administrators during the last month?

- Several times a week
- Weekly
- Once or twice
- No contact was made

16. Please note: In the questions below, the term "NLC Coach" refers to David or Ken; "Mentor-Leader" includes Julie, Jo, Patsy, and Brett; "Teammate" means any other NLC teacher, at your own site or another.

	Two or more times a week	Weekly	Once or twice	No contact was made
How often during the past month were you in contact with the NLC Coaches about math teaching or technology issues? (Contact could be in person, via e-mail, or on eCoach.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often during the past month were you in contact with NLC Mentor-Leaders about math teaching or technology issues? (Contact could have been in person, via e-mail, or on eCoach.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often during the past month were you in contact with NLC Teammates about math teaching or technology issues? (Contact could have been in person, via e-mail, or on eCoach.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17a. Please tell us about the following activities involving a Networked Learning Community (NLC) Coach over the last month.

Activity	Occurred?		How?			Useful?		
	Yes	No	In person	Via e-mail	On eCoach	Very useful	Useful	Not useful
An NLC coach modeled a lesson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An NLC coach observed a lesson that you prepared or team-taught a lesson with you.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An NLC coach worked with students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An NLC Coach helped with planning a lesson.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An NLC Coach helped me learn something about mathematics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An NLC Coach helped with schedules/logistics/administrative issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An NLC Coach helped with technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An NLC Coach provided instructional resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17b. 'Other', if indicated in 17a above..

17c. Comments

18a. Please tell us if any of the following activities involving a Networked Learning Community (NLC) **Mentor-Leader** took place in the last month.

Activity	Occurred?		How?			Useful?		
	Yes	No	In person	Via e-mail	On eCoach	Very useful	Useful	Not useful
An NLC Mentor-Leader modeled a lesson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An NLC Mentor-Leader observed a lesson that you prepared or team-taught a lesson with you.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

An NLC Mentor-Leader worked with students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Mentor-Leader helped with planning a lesson.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Mentor-Leader helped me learn something about mathematics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Mentor-Leader helped with schedules/logistics/administrative issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Mentor-Leader helped with technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Mentor-Leader provided instructional resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other. (specify below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18b. 'Other', if indicated in 18a above.

18c. Comments

19. Please tell us if any of the following activities involving a Networked Learning Community (NLC) Teammate took place in the last month.

Activity	Occurred?		How?			Useful?		
	Yes	No	In person	Via e-mail	On eCoach	Very useful	Useful	Not useful
An NLC Teammate modeled a lesson	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Teammate observed a lesson that you prepared or team-taught a lesson with you.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Teammate worked with students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Teammate helped with planning a lesson.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

An NLC Teammate helped me learn something about mathematics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Teammate helped with schedules/logistics/administrative issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Teammate helped with technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An NLC Teammate provided instructional resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (specify below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19b. 'Other', if indicated in 19a above.

19c. Comments

20a. You have been creating a model investigation on eCoach by completing training topics or activities. Please rank order in terms of usefulness the kinds of support that you received in completing this month's task. Use 1 for *most useful* and 9 for *least useful* - or select "I received no assistance" if you have not received assistance from a source below.

	1	2	3	4	5	6	7	8	9	I received no assistance.
NLC Coaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor-Leaders or Teammates in my school building.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentor-Leaders or Teammates <i>not</i> in my school building.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teachers in my school building who are not part of NLC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teachers outside my school building who are not part of NLC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrators.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other types of "experts".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources on eCoach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online resources other than eCoach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20b. Comments

21a. What components of eCoach did you find most useful for your participation in the Networked Learning Community this month? Please rank order in terms of usefulness; Use 1 for *most useful* and 9 for *least useful* - or select "I received no assistance" if you have not received assistance from a source below.

	1	2	3	4	5	6	7	8	9	I received no assistance.
Ask eCoach for communication with NLC Coaches or Mentor-Leaders.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community Discussion Board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum builders (e.g., Activity Builder, Custom Builder, Web Resource List, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
eLibrary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources posted by Coaches (e.g., Balancing Act model lesson, Collaborative Classroom website, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

eCoach profiles with e-mail links.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Published work feature.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feedback from Coaches, Mentors, or Teammates on my projects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Who's Logged On Now? feature.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21b. Comments

22a. Please tell us if you engaged in any of the following activities during the past month.

	Yes	No
Provided technology support or resources to another NLC teacher.	<input type="radio"/>	<input type="radio"/>
Provided technology support or resources to a non-NLC teacher.	<input type="radio"/>	<input type="radio"/>
Provided mathematics pedagogy or content support for an NLC teacher.	<input type="radio"/>	<input type="radio"/>

Provided mathematics pedagogy or content support for a non-NLC teacher.	<input type="radio"/>	<input type="radio"/>
Collaborated with other teachers in my building to plan mathematics curriculum or instruction.	<input type="radio"/>	<input type="radio"/>
Participated in a district committee or professional organization to plan mathematics curriculum or instruction.	<input type="radio"/>	<input type="radio"/>
Presented a workshop or other professional development activity related to mathematics or technology.	<input type="radio"/>	<input type="radio"/>
Engaged in other leadership activities in my school or district. (identify below)	<input type="radio"/>	<input type="radio"/>

22b. Please identify any leadership activities from 22a above.

23a. What kind of support are you receiving from your school or district that makes your participation in the NLC possible or more effective. Check all that apply:

- Release time during school (could be through the allocation of a student teacher or any other method).
- Additional technology resources.
- Additional training in technology.
- Additional training in mathematics content or pedagogy.
- Incentives (or requirements) to analyze student standardized test scores or other performance indicators.
- Math curricular resources that support NO LIMIT! goals.

- Incentives (or requirements) to align math curriculum with standards.
- Incentives to participate in a school or district learning community.
- Paid professional development time out of regular school hours.
- Other (specify below)

23b. 'Other', if indicated in 23a above.

23c. Comments

24. One of the goals of this Networked Learning Community project is to encourage participants to make cooperative decisions about how math is taught in their school or district and how technology can and should be used in their school or district. Did you (as part of a team) make any decisions about how math and technology can be taught better? Please tell us about your team activity--who participated, how often you met, and what decisions you made.

Appendix C: Year Five RFP for School Districts

(from OSPI verbatim)

General Information and Requirements

The NO LIMIT Project (Options A & B) will provide approximately \$4,000 in hardware, software, and instructional materials for each NEW classroom, and approximately \$10,000 to \$26,000 per building in technology professional development (based upon the number of participating teachers funded for the grant) for Math Integration Specialist (MIS) support from the Educational Service Districts (ESDs) or the Network Learning Community (NLC). The Technology and Learning Disabilities Project will provide approximately \$13,000 in hardware, software, and instructional materials for each NEW classroom, and approximately \$7,000 per classroom in technology professional development from the Special Education Technology Center. **Each application submitted should be for a building to participate in Option A, B, or C ONLY.**

OSPI reserves the right to withhold grant funds upon written notice of non-compliance to the New Outcomes: Learning Improvement in Mathematics Integrating Technology (NO LIMIT!) or Technology and Learning Disabilities program grantee.

It is required that the NO LIMIT school grantees will use all of their EETT professional development competitive grant funds to purchase the services of the ESD Math Integration Specialist or NLC.

A team from the ESD or NLC will facilitate teachers in these buildings throughout the year in staff development. It is required that the Technology and Learning Disabilities Project grantees will use all of their EETT professional development competitive grant funds to purchase the services of the Special Education Technology Center.

It is also required that selected districts will provide in-kind contributions, and use part of its funds from Title V, Innovative; Title II D, Flow Through Formula from Enhancing Education Through Technology; or Title II-A, Improving Teacher Quality as options to support the projects.

PROJECT OVERVIEWS

NO LIMIT! Project: Option A

The overarching goal of the NO LIMIT! Project is to develop classroom models where students in the middle grades (grades 5-9) are engaged in activities that lead to a deeper understanding of mathematical concepts and improvement in mathematics achievement. This will be accomplished through the development of professional learning communities at the building level that focus on effective mathematics instruction and integration of appropriate technology. Participating school districts will be expected to support the development and operation of a professional learning community with the expectation that it remains in place beyond the duration of the project. It is anticipated that this will be a two-year project, pending second-year federal funding for Title II, Part D.

The approach to this project will include the following components:

5. Providing, sustained, collegial, professional development focused on increasing the mathematical content knowledge of teachers, supporting the use of effective mathematics instructional strategies, and the appropriate use of technology in the classroom.
6. Providing educators and students with greater access to technology and materials that support effective mathematics teaching and learning.
7. Developing and supporting a professional learning community among teachers of mathematics in the building.
8. Implementing a strong evaluation that provides data about the progress being made in the improvement of teaching and learning through the NO LIMIT! Project.

Other key elements of the project will be:

6. Active administrative involvement, inclusion, and sustained support for the professional learning community.
7. Assisting educators to better understand the Grade Level Expectations (GLEs) and how to use them to improve instruction in their classrooms.
8. Training educators in use of document camera, projector, laptop computer, and other classroom materials to support project-based learning and other effective instructional strategies in a constructivist environment.
9. Assisting educators in meeting the needs of diverse learners.
10. Encouraging parental support and involvement.

Timeline for Professional Development:

- ◆ **In the summer of 2005, all participating teachers will attend a 3 to 5-day orientation, which will be focused on:**
 - Introducing the teacher participants to the project and its goals.
 - Creating visions of new classroom cultures.
 - Alignment/Integration of Essential Academic Learning Requirements (EALRs) and GLEs for Mathematics and the National Council of Teachers of Mathematics standards.
 - Introduction to laptops, document cameras, multimedia projectors and basic software programs.
 - Strategies and models for the one-computer classroom, and the effective use of existing technologies available to the participating classrooms.
 - Strategic planning for their classrooms.
 - Preparing for ongoing support over the K-20 with the regional facilitators.
 - Conducting status assessments of classroom materials.
 - Collecting baseline data for the evaluation.
- ◆ **It is also recommended that the participating teachers attend the Northwest Mathematics Conference and Northwest Council for Computer Education Conferences to increase their awareness of technology-based solutions, classroom strategies and national trends in math instruction.**

Assessment:

Goal: Use assessment to increase program effectiveness, and to promote the use of classroom-based assessment strategies through the use of technology and data-driven decision making.

- ◆ Analyze WASL and other test results.
- ◆ Utilize classroom-based assessment strategies.
- ◆ Incorporate student self-assessment strategies.
- ◆ Participate in reflections and self-assessments.
- ◆ Participate in a regional and statewide evaluation of the project.

Program Evaluation:

Participating schools will be required to contract with the Math Integration Specialist from the ESD for professional development services. The program evaluation will be through Western Washington University Woodring Research Center. Participation is required for successful grantees. Costs of the evaluation have been set aside from grant funds prior to distribution of funds to subgrantees.

NO LIMIT! Project Option B: Network Learning Communities (NLC)

The NO LIMIT! Network Learning Communities Project includes working with teams of 3-5 teachers in grades 5-9 to improve teaching practices in mathematics using technological tools and other research-based methodologies. Much of the instruction and professional development will be delivered online after the initial face-to-face meetings, which will occur often.

In the NLC, 3-5 teachers in a school building that will actively collaborate to solve a math literacy problem. The NLC will evolve in size and direction as its goal becomes clearer (more refined). Learning together as they develop solutions in common, NLC participants takes on the role as learners as well as teachers in such an environment. There is a dynamic exchange of knowledge between all participants (including from children to adults, in addition to from adults to children); thus setting a foundation for construction of new knowledge.

This NLC will be “networked” meaning that a large part of the dynamic exchange of knowledge will occur online asynchronously so that teachers can access the information at their convenience. A file exchange also occurs on network servers.

Participating schools will be required to contract with the Networked Learning Communities team for professional development services. The program evaluation will be through Western Washington University Woodring Research Center. Participation is required for successful grantees. Costs of the evaluation have been set aside from grant funds prior to distribution to subgrantees.

Option C: Technology and Learning Disabilities Project Overview

The overarching goal of the Technology and Learning Disabilities Project is to level the academic playing field for students with learning disabilities through the use of technology in grades 6 - 12. This will be accomplished through training the special educator in the use of advanced software and hardware as well as implementation of evidence-based teaching strategies in reading, writing, and mathematics.

It is anticipated that this will be a two-year project, pending second-year federal funding for Title II, Part D. Technology and Learning Disabilities Project implementation and grant funding will be administered through the Special Education Technology Center at Central Washington University (with Kittitas School District acting as the fiscal agent).

The approach to this project will include the following components:

1. Development and support of the special educator as they explore and become immersed in technology (document camera, projector, computers, software and other classroom materials) that will enhance and extend their learning disabled students' academic skills in the areas of writing, reading and mathematics.
2. Supplementation of existing curriculum.
3. Exploration of evidence based practices in relation to technology and its application to the writing, reading and mathematics curricula.
4. Implementation of an outside evaluation that will provide data regarding the efficacy of this project in affecting student learning.
5. Promotion of parental support and involvement.
6. Support for the special educator in disseminating information gained from the grant project to other educators and audiences (year 2).

Grant requirements for applicants:

Preference will be given to special educators who: 1) teach reading, writing and math; 2) demonstrate basic computer skills; 3) show willingness to try new teaching methods and to utilize newly acquired skills; 4) agree to sign a letter of commitment to the grant for a minimum of two full years; 5) agree to attend 4-5 days of mandatory training during the second week of August 2005; and 6) agree to be out of the classroom for professional development up to 7 days per school year.

The school district must provide: 1) Classroom internet and email access; 2) basic furnishings for technology equipment; 3) timely technical support; 4) teacher access to operable K-20 videoconferencing equipment; 5) assistance with any substitute costs that exceed \$100 per day (up to 7 days); 6) commitment to keep technology equipment and other grant materials in the Special Education classroom for at least 3 years beyond the end of the grant; 7) administrative support of the special education teacher and the grant project throughout its two-year duration; 8) opportunities for inclusion of the special educator in technology and curriculum committees that can utilize their expertise; and 9) consideration of project outcomes (based on outside evaluation of this project) in future decision making in the areas of technology and special education.

For more information, please go to: <http://www.k12.wa.us/edtech/> or www.cwu.edu/~setc/tld or contact the Special Education Technology Center (509) 963-3350.

Scoring and Review

How will the application be scored?

OSPI will set a minimum qualifying score. Funded proposals must meet or exceed this score. A broad-based committee of readers with experience in educational technology programs will review the proposals. OSPI may require revision of grant proposals and budgets prior to

approval, award, or release of funds. Decisions by OSPI on funding and awarding of grants shall be final. Review will be based on specific criteria listed in this application and scored using the following:

Narrative Elements

- Describe why you think your school should be involved with this project 30 points
- Description of instructional goals & activities 25 points
- Description of how school or district will provide time for teachers to collaborate, plan and design lessons 20 points
- Description of project, district, and school support 15 points
- Overall Poverty Percentage and Technology Need 10 points
- TOTAL POINTS AVAILABLE 100 points

Evaluation will be provided by external agency.

Information and Instructions

APPLICATION INSTRUCTIONS

- **Applications must be received by OSPI by 4:00 pm on Friday, April 2, 2005.**
- Faxed or electronic transmissions will **not** constitute an acceptable application submission.
- Applicants must submit an **original and three copies of the full proposal** to OSPI. Incomplete or improperly formatted applications will not be considered.
 - Double-spaced.
 - 12-point font.
 - All pages numbered.
 - One-inch margins.
 - Maximum of 30 lines of text per page.
 - Do not attach additional support materials, school profiles, or appendices. Excess materials will be discarded.
 - Do not use spiral binding.

INSTRUCTIONS FOR NARRATIVE ELEMENTS

Please attach to the project application. Use up to 3 typed and double-spaced pages total.

CHOOSE ONE: A, B, OR C

OPTION A: NO LIMIT! Project

The overarching goal of the NO LIMIT! Project is to develop classroom models where students in the middle grades (grades 5-9) are engaged in activities that lead to a deeper understanding of

mathematical concepts and improvement in mathematics achievement. This will be accomplished through the development of professional learning communities at the building level that focus on effective mathematics instruction and integration of appropriate technology. Up to five teachers may apply from an eligible building.

OPTION B: NO LIMIT! Project - Network Learning Communities (NLC)

Option B includes working with teams of 3-5 teachers in grades 5-9 to improve teaching practices in mathematics using technological tools and other research-based methodologies. Much of the instruction and professional development will be delivered online, after face-to-face meetings. Authentic activities using eCoach, an online classroom tool, will be provided to a cadre of math teachers in the building.

OR:

OPTION C: TECHNOLOGY AND LEARNING DISABILITIES PROJECT

This project includes working with 5th through 12th grade teachers to improve teaching practices in reading, writing, and mathematics using assistive technologies. Directed by the Special Education Technology Center (SETC) at Central Washington University. One or more special education teachers from a building may apply.

ESD _____ CO _____ DIST _____
2005-2007 ENHANCING EDUCATION THROUGH TECHNOLOGY
COMPETITIVE GRANT APPLICATION
OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION
Old Capitol Building
PO BOX 47200
OLYMPIA WA 98504-7200
(360) 725-6235 TTY (360) 664-3631

FACE PAGE

PROJECT OVERVIEWS:

NO LIMIT! Project: Option A

The overarching goal of the NO LIMIT! Project is to develop classroom models where students in the middle grades (grades 5-9) are engaged in activities that lead to a deeper understanding of mathematical concepts and improvement in mathematics achievement. This will be accomplished through the development of professional learning communities at the building level that focus on effective mathematics instruction and integration of appropriate technology. Participating school districts will be expected to support the development and operation of a professional learning community with the expectation that it remains in place beyond the duration of the project. It is anticipated that this will be a two-year project, pending second-year federal funding for Title II, Part D. Up to five teachers may apply from an eligible building.

NO LIMIT! Project: Option B

OPTION B: NO LIMIT! Project - Network Learning Communities (NLC)

Option B includes working with teams of 3-5 teachers in grades 5-9 to improve teaching practices in mathematics using technological tools and other research-based methodologies. Much of the instruction and professional development will be delivered online, after face-to-face meetings. Authentic activities using eCoach, an online classroom tool, will be provided to a cadre of math teachers in the building.

OR:

OPTION C: TECHNOLOGY AND LEARNING DISABILITIES PROJECT

This project includes working with 5th through 12th grade teachers to improve teaching practices in reading, writing, and mathematics using assistive technologies. Directed by the Special Education Technology Center (SETC) at Central Washington University. One or more special education teachers from a building may apply.

SECTION 1 (Options A, B, and C):

Be sure to indicate clearly which Option (A, B, or C) this application is for.

PARTICIPATING SCHOOL DISTRICT INFORMATION

SCHOOL DISTRICT		OPTION (A, B, or C):
CONTACT PERSON (for follow-up information)	ADDRESS	
	CITY, STATE, ZIP	
CONTACT'S TELEPHONE NUMBER	CONTACT'S E-MAIL ADDRESS	
NAME OF CURRICULUM COORDINATOR OR MATH CURRICULUM SPECIALIST OR SPECIAL EDUCATION COORDINATOR, IF APPLICABLE	ADDRESS	
	CITY, STATE, ZIP	
TELEPHONE NUMBER	E-MAIL ADDRESS	
NAME OF DISTRICT TECHNOLOGY COORDINATOR	ADDRESS	
	CITY, STATE, ZIP	
TELEPHONE NUMBER	E-MAIL ADDRESS	

PARTICIPATING TEACHER INFORMATION

Please **CIRCLE** the name of any participating teacher listed below that has been part of a prior funded NO LIMIT grant (i.e., during 2001-2003 and/or 2003-2005)

BUILDING NAME	ADDRESS		SCHOOL PHONE NO.
PRINCIPAL NAME			E-MAIL ADDRESS
PARTICIPATING TEACHER NO. 1	GRADE LEVEL(S)	NO. OF YEARS TAUGHT	E-MAIL ADDRESS
			SCHOOL PHONE NO.
PARTICIPATING TEACHER NO. 2	GRADE LEVEL(S)	NO. OF YEARS TAUGHT	E-MAIL ADDRESS
			SCHOOL PHONE NO.
PARTICIPATING TEACHER NO. 3	GRADE LEVEL(S)	NO. OF YEARS TAUGHT	E-MAIL ADDRESS
			SCHOOL PHONE NO.
PARTICIPATING TEACHER NO. 4	GRADE LEVEL(S)	NO. OF YEARS TAUGHT	E-MAIL ADDRESS
			SCHOOL PHONE NO.
PARTICIPATING TEACHER NO. 5	GRADE LEVEL(S)	NO. OF YEARS TAUGHT	E-MAIL ADDRESS
			SCHOOL PHONE NO.

In addition to any circled names above, please list all teachers from this building that have also been part of prior funded NO LIMIT grants, if any:

SECTION 2: Scoring Information (Options A and B)

	NARRATIVE ELEMENTS (TO BE ATTACHED TO THE PROJECT APPLICATION— UP TO 3, TYPED, DOUBLE-SPACED PAGES TOTAL)	POINTS POSSIBLE
1	Description of why you think your school should be involved with the NO LIMIT! Project (i.e., WASL scores in 7 th grade math below state average, etc.; building is in School Improvement or did not meet AYP). If one or more teachers have participated in prior NO LIMIT grants, explain how your participation will build upon their experiences.	30
2	Description of math instructional goals and activities in your building’s School Improvement Plan, and/or description of the efforts your school has already made toward improving math learning (i.e., alignment of the curriculum to the EALRs and GLEs, profiling your school, staff development activities, use of data-driven decision-making, working with the ESD School Improvement Planning Team, etc.).	25
3	Description of how the school or district will provide common time for the teachers to collaborate, plan, and design lessons.	20
4	Description of project, district, and school support: Description from building or district administrator, which outlines the district’s intent to supplement the project with resources and/or funds (i.e., use of I-728 funds, use of state or district training days, release or planning time for teachers, travel expenses, hardware relocation, etc.).	15
5	Overall Poverty Percentage and Technology Need (will be filled in by OSPI staff) _____	10
	TOTAL	100

Program evaluation will be provided by an external state agency, WWU.

SECTION 2: Scoring Information (Option C)

	NARRATIVE ELEMENTS (TO BE ATTACHED TO THE PROJECT APPLICATION— UP TO 3, TYPED, DOUBLE-SPACED PAGES TOTAL)	POINTS POSSIBLE
1	Description of why you think your school should be involved with the Technology and Learning Disabilities Project (i.e., WASL scores in 7 th grade math below state average, etc.; building is in School Improvement or did not meet AYP). If one or more teachers have participated in prior NO LIMIT grants, explain how your participation will build upon their experiences.	30
2	Description of instructional goals and activities in your building’s School Improvement Plan, and/or description of the efforts your school has already made toward improvement (i.e., alignment of the curriculum to the EALRs and GLEs, profiling your school, staff development activities, use of data-driven decision-making, working with the ESD School Improvement Planning Team, etc.).	25
3	Description of how the school or district will provide common time for the teachers to collaborate, plan, and design lessons.	20
4	Description of project, district, and school support: Description from building or district administrator, which outlines the district’s intent to supplement the project with resources and/or funds (i.e., use of I-728 funds, use of state or district training days, release or planning time for teachers, travel expenses, hardware relocation, etc.).	15
5	Overall Poverty Percentage and Technology Need (will be filled in by OSPI staff) _____	10
	TOTAL	100

Program evaluation will be provided by an external agency.

SECTION 3: Items that are not scored but *must* be received (Options A, B, and C):

ITEM	
Signed commitment form by <u>each</u> participating teacher, demonstrating understanding of level of commitment.	[]
Signed commitment form by <u>each</u> participating building principal, demonstrating understanding of level of commitment.	[]
Signed commitment form by the curriculum coordinator or math specialist or special education coordinator (if applicable), demonstrating understanding of level of commitment.	[]
Signed commitment form by the technology coordinator, demonstrating understanding of level of commitment.	[]
Signed commitment form by the district superintendent, demonstrating understanding of level of commitment.	[]
Signed assurance form by the district superintendent.	[]
Evidence of readiness: <ul style="list-style-type: none"> • Are all participating classrooms currently connected to the Internet? YES <input type="checkbox"/> NO <input type="checkbox"/> • Does each classroom have at least one “standards-based computer” connected to the Internet? YES <input type="checkbox"/> NO <input type="checkbox"/> • Do all applicants currently have e-mail accounts? YES <input type="checkbox"/> NO <input type="checkbox"/> 	

SECTION 4: Additional Information (Options A, B, and C)

Does each team member have access to K-20 videoconferencing equipment? YES NO

If so, describe its proximity to your building(s):

What math curriculum is your school currently using? (Options A and B only)

DISTRICT OFFICE COMMITMENT

The applicant certifies that to the best of his/her knowledge, the information in this application is correct. The filing of the application has been duly authorized and agreed upon by the district, building administration, and teachers involved. All agree to meet the obligations set forth by the NO LIMIT! or Technology and Learning Disabilities project requested in this application. This certifies that the district is committed to participation by the identified building staff for the duration of this project (July 1, 2005 through June 30, 2007), regardless of administrative and/or faculty staffing changes. An original signature of the district superintendent is required. If the district employs a technology coordinator and a math curriculum specialist, these individuals should also sign. In addition, one commitment form must be completed by each participating teacher and principal.

In addition, the district commits to the following:

- Identify a district contact person who will provide overall coordination of project efforts.
 - Provide technical and networking support for the participating teachers.
 - Provide release time for participating teachers from classroom responsibilities for required project training.
 - Provide Internet access and a minimum of one standards-based computer to each participating classroom.
 - Support for participating teachers for the project goals and objectives.
- All hardware, software, and supplies acquired through this project will remain in the participating teacher's classroom for the duration of the grant project (July 2005-June 30, 2007) and in the building for three years beyond the end of the project.
- Provide management and inventory for the equipment purchased for this project.
- Submit all required or necessary evaluations/assessments to the project director by the identified deadline. Keep project information in safe, accessible, long-term storage for up to three years after the conclusion of the project.
- Provide supplemental funds and/or resources as outlined in the application.

Name of District _____	
Superintendent's Signature _____	
Curriculum Coordinator's Signature _____	
Technology Coordinator's Signature _____	

Math Curriculum Specialist's Signature _____
Number of school buildings from your district participating in this proposal. _____

BUILDING COMMITMENT

The applicant certifies that to the best of his/her knowledge, the information in this application is correct. The filing of the application has been duly authorized and agreed upon by the district, building administration, and teachers involved. All agree to meet the obligations set forth by the NO LIMIT! or Technology and Learning Disabilities Project requested in this application. Original signature of building principal is required. One Commitment Form must be completed for application submitted from a building.

In addition, the building commits to the following:

- Identify a district contact person who will provide overall coordination of project efforts.
 - Provide technical and networking support for the participating teachers.
 - Provide release time for participating teachers from classroom responsibilities for required project training.
 - Provide Internet access and a minimum of one standards-based computer to each participating classroom.
 - Support for participating teachers for the project goals and objectives.
- Ensure all hardware, software, and supplies acquired through this project will remain in the participating teacher’s classroom for the duration of the grant project (July 2005–June 30, 2007) and in the building for three years beyond the end of the project.
 - Provide management and inventory for the equipment purchased for this project.
 - Submit all required or necessary evaluations/assessments to the project director by the identified deadline. Keep the project information in safe, accessible, long-term storage for up to three years after the conclusion of the project.
- Monthly contact with participating teachers (i.e., attend meetings and training sessions, classroom observations, and conferences with teacher).
- Adhere to project objectives and directions, regardless of administrative and/or faculty staffing changes.
 - Commit to aligning the math curriculum with the Essential Academic Learning Requirements and Grade Level Expectations.

Name of Building _____ Name of District _____ Principal’s Signature _____ Principal’s Name (print or type) _____

Number of school buildings from your district participating in this proposal. _____

TEACHER COMMITMENT

The applicant certifies that to the best of his/her knowledge, the information in this application is correct. The filing of the application has been duly authorized and agreed upon by the district, building administration, and teachers involved. All agree to meet the obligations set forth by the project requested in this application. This certifies that the teacher is committed to participation for the duration of the NO LIMIT! or Technology and Learning Disabilities project (July 1 2005 through June 30, 2007). Original signature of participating teachers is required. **One commitment form must be completed for EACH teacher participating in this project.**

In addition, the teacher commits to the following:

- To be out of the classroom for the number of days required by the project for training.
- To attend and participate in all required training, including monthly meetings and to stay overnight if necessary.
- Ensure all hardware, software, and supplies acquired through this project will remain in the participating teacher’s classroom for the duration of the grant project (July 2005–June 30, 2007), plus three additional years (through Spring 2010).
 - Provide management and inventory for the equipment purchased for this project.
 - Submit all required or necessary evaluations/assessments to the project director by the identified deadline. Keep project information in safe, accessible, long-term storage for up to three years after the conclusion of the project.
- Adhere to project objectives and directions, regardless of administrative and/or faculty staffing changes.
- To remain in your classroom position for the duration of the grant (July 2005–June 30, 2007).
 - Commitment to aligning the math curriculum with the Essential Academic Learning Requirements and Grade Level Expectations.
- Provide access to my classroom on a regular basis for trainer modeling and observation.

Name of District _____ Name of Building _____ Teacher’s Signature _____ Teacher’s Name (print or type) _____ Number of school buildings from your district participating in this proposal. _____
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DISTRICT OFFICE ASSURANCE

1. The sub grantee assures that this project will be conducted in accordance with the principles and requirements of the Section 2401 of Part D of Title II of the ESEA.
2. The sub grantee will report progress as required to the Office of Superintendent of Public Instruction (OSPI) and complete a plan as dictated by the project or federal law.
3. Sub grantee shall comply with any and all applicable federal and state nondiscrimination laws including, but not limited to, Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972 Section 504 of the vocational Rehabilitation Act of 1973, The Americans with Disabilities Act of 1991, and Washington State Laws against Discrimination (chapter 28A.640 RCW and chapter 49.60 RCW) in the administration of this grant program. No person shall, on the grounds of race, creed, color, national origin, sex, martial status, or the presence of any sensory, mental or physical disability, unlawfully be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any activity performed pursuant to this grant.
4. The sub grantee agrees to be the fiscal agent or designates assignment to another eligible LEA. Please provide the name of the designated LEA: _____

Name of District _____	
Superintendent's Signature _____	

Appendix D: Year Five Teacher Participants*Strikethrough= withdrawn*

Last Name	First Name	ESD	District	School
Gray	Mark	101	Wellpinit	Wellpinit Elementary School
Hudkins	Rob	101	Rosalia	Rosalia School
Schmidt	Larry	101	Curlew	Curlew Elem & High School
Heidenreich	Martha	101	Ritzville	Ritzville Elementary
Krantz	Aaron	101	Endicott	Endicott-St.John Middle School
Davis	Betty	101	Curlew	Curlew Elem & High School
Kjack	Brenda	101	Rosalia	
Mendoza	Tammy	101	Tekoa	Tekoa Elementary School
Hallenius	Richard	101	Endicott	Endicott-St.John Middle School
Peone	Debby	101	Wellpinit	Wellpinit Middle School
Wensel	Karen	101	Wellpinit	Wellpinit Middle School
Harder	Maureen	101	Ritzville	Ritzville Elementary
Loucks	Lisa	101	Rosalia	Rosalia School
Craw	Jim	101	Curlew	Curlew Elem & High School
Mattson	Andy	101	Tekoa	Tekoa Elementary School
Stinson	Andy	101	Tekoa	Tekoa Elementary School
Bell	John	101	Curlew	Curlew Elem & High School
Watson	Rob	101	Rosalia	Rosalia School
LaMunyan	Doug	101	Rosalia	Rosalia School
Cribby	Seth	101	Curlew	Curlew Elem & High School
Davidson	Terra	101	West Valley	West Valley High School
Hombel	Gerald	101	Wellpinit	Wellpinit High School
Karas	David	101	Wellpinit	Wellpinit High School
Rose	Myrna	101	West Valley	West Valley High School
Wells	Peggy	101	West Valley	West Valley High School
Struthers	Tom	101	West Valley	West Valley High School
Andra	David	105	Royal	Royal Middle School
Berg	Eric	105	Sunnyside	Harrison Middle School

Last Name	First Name	ESD	District	School
Blodgett-Goins	Debbie	105	Yakima	Martin Luther King Jr. Elem
Peyser	Stephanie	105	Yakima	Martin Luther King Jr. Elem
Brunson	Rachael	105	Kittitas	Kittitas Elementary School
Burger	Diana	105	Yakima	Martin Luther King Jr. Elem
Denney	Tracy	105	Yakima	Martin Luther King Jr. Elem
Hudson	Marylou	105	Kittitas	Kittitas Elementary School
Sillery	Jerriane	105	Yakima	Martin Luther King Jr. Elem
McIntyre	Starlet	105	Granger	Granger Middle School
Brownlee	Gary	105	Granger	Granger Middle School
Houck	Jeff	105	Kittitas	Kittitas Secondary School
Lange	Irma	105	Granger	Granger Middle School
Pabisz	Kathye	105	Toppenish	Toppenish Middle School
Wolfe	Carla	105	Mabton	Mabton Jr/Sr High School
Sanchez	Jose	105	Toppenish	Toppenish Middle School
Johnson	Heidi	105	Royal	Royal Middle School
Lean	Albert "Zach"	105	Sunnyside	Harrison Middle School
Anderson	Jamie	105	Zillah	Zillah Middle School
Graf	Linda	105	Kittitas	Kittitas Secondary School
Sexton	W. Scott	105	Mabton	Mabton Jr/Sr High School
Smies	Stacey	105	Zillah	Zillah Middle School
Stewart	Lon	105	Granger	Granger Middle School
Sustaita	Nicolas	105	Mabton	Mabton Jr/Sr High School
Woodyard	Cathy	105	Zillah	Zillah Middle School
Castro	Raul	105	Sunnyside	Harrison Middle School
Lopez	Arturo	105	Sunnyside	Harrison Middle School
Norwood	Lois	105	Royal	Royal Middle School
Thomas	Patricia	105	Toppenish	Toppenish Middle School
Reed	Rick	105	Mabton	Mabton Jr/Sr High School
Beyrouy	Christopher	105	Wapato	Wapato High School
Garza	Everardo	105	Wapato	Wapato High School
Merz	Wanda	105	Wapato	Wapato High School
Phillips	Nathan	105	Kittitas	Kittitas Secondary School
Walsh	Kimberly	105	Wapato	Wapato High School

Last Name	First Name	ESD	District	School
Wheeler	Randy	105	Wapato	Wapato High School
Alseth	Tyler	105	Sunnyside	Harrison Middle School
Kangas	Richard	105	Mabton	Mabton Jr/Sr High School
Ramos	Monica	105	Toppenish	
Rodriguez	Estela	105	Toppenish	
Stephens	Tom	105	Granger	
Jablonski	Dennis	112	White Salmon Valley	Henkle Middle School
McBride	Nina	112	White Salmon Valley	Henkle Middle School
Strom	Amy	112	White Salmon Valley	Henkle Middle School
Wells	Sally	112	White Salmon Valley	Henkle Middle School
Enyeart	Dena	112	Longview	Mt. Solo Middle School
Nelson	Jerry	112	Longview	Monticello Middle School
Thiessen	Heather	112	Vancouver	McLoughlin Middle School
Arkoosh	Katie	112	Vancouver	McLoughlin Middle School
Moore	Ron	112	Longview	Mt. Solo Middle School
Scattergood	Claudia	112	Longview	Monticello Middle School
Nelson	Lynn	112	Longview	Mt. Solo Middle School
Impson	Todd	112	Wishram	Wishram Elem & High School
Antonini	Celia	112	Vancouver	McLoughlin Middle School
Firth	Scott	112	Longview	Monticello Middle School
McCoy	Aaron	112	Vancouver	McLoughlin Middle School
Olason	Thomas	112	Longview	Mt. Solo Middle School
Strain	Karen	112	White Salmon Valley	Henkle Middle School
Patterson	Wade	112	Longview	Monticello Middle School
Ringer	Kristen	112	Wishram	Wishram Elem & High School
Williams	Michael	112	Lyle	Lyle High School
Barthlow	David	112	Lyle	Lyle High School
Blanchat	Jennifer	112	Vancouver	McLoughlin Middle School
Mohar	Jerry	112	Lyle	Lyle High School
Nickerson	Dan	112	Longview	Mt. Solo Middle School
Shingleton	Jim	112	Longview	Monticello Middle School

Last Name	First Name	ESD	District	School
Sheldon	Autumn	113	Pioneer	Pioneer Elem/Middle School
Teague	Karen	113	McCleary	McCleary School
Bridge	Lynne	113	Elma	Elma Elementary
Fielding	Crystal	113	Elma	Elma Elementary
Gagnon	Robin	113	Shelton	Mountain View Elementary
Gregory	Kati	113	Shelton	Mountain View Elementary
Harjo	Martha	113	Centralia	Oakview Elementary
Larson	Mark	113	Shelton	Mountain View Elementary
Macke	Jennifer	113	Shelton	Mountain View Elementary
Meissner	April	113	Aberdeen	Stevens Elementary
Miller	Cindy	113	Aberdeen	AJ West Elementary
Rajcich	Kim	113	Aberdeen	Stevens Elementary
Roberts	Jaye	113	Centralia	Oakview Elementary
Scott	Hari-Jodan	113	Aberdeen	AJ West Elementary
Stewart	Gayla	113	Aberdeen	AJ West Elementary
Wetterauer	Sandy	113	Raymond	Raymond Elementary
Jordan	Kirk	113	Raymond	Raymond Elementary
Brown	Christina	113	Raymond	Raymond Elementary
Campbell	Jeanene	113	Pioneer	Pioneer Elem/Middle School
Johnson	Kristeen	113	Centralia	Oakview Elementary
King	Dianne	113	Aberdeen	Stevens Elementary
Kinney	Linda	113	Centralia	Oakview Elementary
Lennier	Martha	113	Aberdeen	Stevens Elementary
Quentin	Keith	113	Centralia	Oakview Elementary
Skuzza	Lynn	113	Elma	Elma Middle School
Stewart	Kelly	113	Aberdeen	AJ West Elementary
Tinsley	Kris	113	Pioneer	Pioneer Elem/Middle School
Van Aagten	Jessie	113	Pioneer	Pioneer Elem/Middle School
Van Volkinburg	Richard	113	Aberdeen	AJ West Elementary
Mann	Tom	113	McCleary	McCleary School
Williams	Dave	113	Pioneer	Pioneer Elem/Middle School
Tully	Mike	113	Raymond	Raymond Jr/Sr High
Deyette	Jennifer	113	Shelton	Oakland Bay Junior High

Last Name	First Name	ESD	District	School
Perry	John	113	Shelton	Oakland Bay Junior High
Comsia	Doug	113	Shelton	Oakland Bay Junior High
Gish	Vickie	113	Shelton	Oakland Bay Junior High
Perigo	Kristey	113	Shelton	Oakland Bay Junior High
Crawford	Julie	113	Elma	Elma High School
Haerling	Gayle	113	Raymond	Raymond Elementary
Balkan	Becky	114	Sequim	Helen Haller Elementary
Bell	Martha	114	Quillayute Valley	Forks Elementary
Bauman	Leah	114	Port Angeles	Roosevelt Middle School
Corbus	Willa	114	Queets-Clearwater	Queets-Clearwater School
Ferguson	Michael	114	Queets-Clearwater	Queets-Clearwater School
Pfaff	Sally	114	Chimacum	Chimacum Elementary
Brennan	Mitch	114	Chimacum	Chimacum Elementary
Gambill	Karin	114	Chimacum	Chimacum Elementary
Glessing	Shari	114	Chimacum	Chimacum Elementary
McCarter	Neal	114	Sequim	Helen Haller Elementary
McCue	Anna	114	Sequim	Helen Haller Elementary
Moon	Donna	114	Quillayute Valley	Forks Elementary
Raymond	Mike	114	Chimacum	Chimacum Elementary
Suryan	Sheri	114	Sequim	Helen Haller Elementary
Wilcox	Melanee	114	Sequim	Helen Haller Elementary
Brinkman	Paul	114	Port Angeles	Roosevelt Middle School
Gundersen	Brian	114	Port Angeles	Roosevelt Middle School
Langston	Joni	114	Chimacum	Chimacum Middle School
McCracken	Kirsten	114	Quillayute Valley	Forks Middle School
Meacham	Shawn	114	Chimacum	Chimacum Middle School
Sedgwick	Nicole	114	Quillayute Valley	Forks Middle School
Stewart	Leslye	114	Quillayute Valley	Forks Middle School
Storrs	Carol	114	Queets-Clearwater	Queets-Clearwater School
Butler	Rich	114	Port Angeles	Roosevelt Middle School
Rowan	Laurel	114	Chimacum	Chimacum Middle School
Schmitt	Tami	114	Port Angeles	Roosevelt Middle School

Last Name	First Name	ESD	District	School
Soule	Scott	114	Port Angeles	Roosevelt Middle School
Lien	Joan	114	Quillayute Valley	Forks Middle School
Forsberg	Eric	114	Quillayute Valley	Forks Middle School
Devlin	Michelle	114	Port Angeles	Roosevelt Middle School
Jamison	John	114	Chimacum	Chimacum Middle School
Kaufmann	Laurel	114	Port Angeles	Roosevelt Middle School
Knowles	Laura	114	Port Angeles	Roosevelt Middle School
Flanagan	Louise	114	Queets-Clearwater	Queets-Clearwater School
Baldwin	Jeff	114	Quillayute Valley	Forks High School
Lorton	Kathy	114	Queets-Clearwater	Queets-Clearwater School
McElravy	Samuel	114	Queets-Clearwater	Queets-Clearwater School
Beeler	Grace	121	Seattle	African American Academy
Aldous	Debbie	121	Tukwila	Showalter Middle School
Allison	Wilfred	121	Tacoma	Gault Middle School
Bennight	Cindy	121	Highline	Pacific Middle School
Blair	Barbara	121	Tacoma	Stewart Middle School
Kyriacopoulos	Kosta	121	Seattle	Summit K-12
Rotton	Keri	121	Seattle	Summit K-12
Bourgaize	John	121	Clover Park	Lochburn Middle School
Crump	Damond	121	Clover Park	Woodbrook Middle School
Eastman	Kathy	121	Tacoma	Gray Middle School
Galligan	Sid	121	Clover Park	Hudtloff Middle School
Imo	Nnenna	121	Tacoma	Stewart Middle School
Kimmel	Nina	121	Clover Park	Woodbrook Middle School
Knoll	Michelle	121	Clover Park	Lochburn Middle School
Nelson	Mark	121	Clover Park	Lochburn Middle School
Ragin	Annie	121	Tacoma	Gray Middle School
Sanford	Debra	121	Tacoma	Gault Middle School
Sullivan	Kimberly	121	Clover Park	Hudtloff Middle School
Chang	Donna	121	Tacoma	Gault Middle School
Fletcher	Eric	121	Tukwila	Showalter Middle School
Rhoades	Anna	121	Tacoma	Gray Middle School

Last Name	First Name	ESD	District	School
Shaw	Keshia	121	Tacoma	Gray Middle School
Breland	George	121	Seattle	African American Academy
Cory	Tim	121	Clover Park	Lochburn Middle School
DeMoyses	Kenneth	121	Clover Park	Woodbrook Middle School
Ferguson	Beverly	121	Seattle	African American Academy
Grady	Johnnie	121	Tacoma	Gray Middle School
Keehn	Tamatha	121	Clover Park	Lochburn Middle School
Merwin	Ashley	121	Clover Park	Woodbrook Middle School
Morgan	Lisa	121	Tacoma	Gault Middle School
Seberson	Steve	121	Clover Park	Hudtloff Middle School
Smith	Janna	121	Tukwila	Showalter Middle School
Smith	Wayne	121	Tukwila	Showalter Middle School
Snider	Dalice	121	Clover Park	Hudtloff Middle School
Woodard	Jori	121	Clover Park	Woodbrook Middle School
Olver	Jonathan	121	Seattle	Summit K-12
Wilson	Lisa	121	Highline	Pacific Middle School
Asaturova	Galina	121	Highline	Pacific Middle School
Biehn	Mike	121	Highline	Pacific Middle School
Fernley	Mary	121	Highline	Sylvester Middle School
Hartwell	Jessica	121	Mount Vernon	LaVenture Middle School (ESD189)
Hausauer	Carl	121	Mount Vernon	LaVenture Middle School (ESD189)
Hole	Sydney	121	Mount Vernon	LaVenture Middle School (ESD189)
Johnson	Kenneth	121	Mount Vernon	LaVenture Middle School (ESD189)
Snow	Carol	121	Seattle	African American Academy
Hoffman	Kimberley	121	Highline	Pacific Middle School
Zombro	Janet	121	Tukwila	Showalter Middle School
Albaugh	Erin	121	Clover Park	Hudtloff Middle School
Bryant	Dave	121	Tacoma	Gault Middle School
Butler	William	121	Seattle	African American Academy
Clifford	Deva	121	Seattle	Summit K-12
Marti	Christianson	121	Seattle	Summit K-12
Eriksen	Travis	121	Highline	Sylvester Middle School

Last Name	First Name	ESD	District	School
Ivy	Breck	121	Highline	Sylvester Middle School
Sharp	Nicole	121	Tacoma	Stewart Middle School
Thomas	Pam	121	Tacoma	Stewart Middle School
Trochalakis	Mike	121	Highline	Pacific Middle School
Webster	Don	121	Tacoma	Gray Middle School
Elkins	David	123	Kennewick	Park Middle School
Ross	William	123	Dixie	Dixie Elementary
Wooldridge	Katie	123	Starbuck	Starbuck School
Johnson	Robert	123	Dixie	Dixie Elementary
Essary	Christine	123	Prosser	Housel Middle School
Hollenberg	Karen	123	Pasco	McLoughlin Middle School
Kester	Kathryn	123	Pasco	Ochoa Middle School
Knopp	Russ	123	Waitsburg	Preston Hall Middle School
Landram	Jason	123	Pasco	Ochoa Middle School
Wiens	Jeff	123	Kennewick	Park Middle School
Hachtel	Connie	123	Prosser	Housel Middle School
Lau	Edith	123	Pasco	Ochoa Middle School
Humberstad	Patrick	123	Prosser	Housel Middle School
Heitschmidt	Corey	123	Prosser	Housel Middle School
Rutz	Lesley	123	Kennewick	Park Middle School
Bissell	Teresa	123	Kennewick	Park Middle School
Carreno	Enrique	123	Pasco	Stevens Middle School
Decoursey	Crystal	123	Pasco	Ochoa Middle School
Frankenfield	Carolynn	123	Pasco	Ochoa Middle School
Freitag	Gail	123	Pasco	Stevens Middle School
Pearson	Christine	123	Waitsburg	Preston Hall Middle School
Whitemarsh	Eric	123	Pasco	Stevens Middle School
McCoard	Evelyn	123	Pomeroy	Pomeroy Jr/Sr High School
Valdez	Paul	123	Pasco	McLoughlin Middle School
Estes	Linda	123	Pasco	Stevens Middle School
Maxwell	Gloria	123	Pasco	McLoughlin Middle School
Schnellbach	Joe	123	Prosser	Housel Middle School

Last Name	First Name	ESD	District	School
Simmerer	Ralph	123	Waitsburg	Preston Hall Middle School
Brooks	Careina	123	Kennewick	Kennewick High School
Selph	Teresa	123	Kennewick	Kennewick High School
Flora	Patti	123	Kennewick	Kennewick High School
Kangas	Pamela	123	Kennewick	Kennewick High School
Sandbeck	Michael	123	Kennewick	Kennewick High School
Gwinn	Rachel	123	Pomeroy	Pomeroy Elementary
Curtis	Trevor	123	Pasco	
Dennis	Karen	123	Kennewick	Park Middle School
Myers	LeAndra	123	Pasco	McLoughlin Middle School
Rose	Jack	123	Prosser	
Valett	Matt	123	Pasco	
Vaneaton	Kim	123	Pasco	Stevens Middle School
Dashiell	Susan	171	Grand Coulee Dam	Grand Coulee Dam Middle
Kee	Doug	171	Oroville	Oroville Elementary
Taylor	Dave	171	Oroville	Oroville Elementary
Woolsey	Mark	171	Wenatchee	Columbia Elementary
Bushnell	Jerry	171	Bridgeport	Bridgeport Middle School
Chesledon	Karen	171	Okanogan	Okanogan Middle School
Erickson	Carrie	171	Grand Coulee Dam	Grand Coulee Dam Middle
Garrison	Robin	171	Moses Lake	Chief Moses Middle School
Gilmore	Mike	171	Okanogan	Okanogan Middle School
Llamas	Leticia	171	Bridgeport	Bridgeport Middle School
Monahan	Lynn	171	Moses Lake	Chief Moses Middle School
Root	Lee	171	Oroville	Oroville Elementary
Schildgen	Julie	171	Oroville	Oroville Elementary
Wheeler	Rebecca	171	Oroville	Oroville Elementary
Anderberg	Terry	171	Wenatchee	Orchard Middle School
Merriman	Eric	171	Wenatchee	Orchard Middle School
Rise	Linda	171	Grand Coulee Dam	Grand Coulee Dam Middle
Mullin	Jeff	171	Moses Lake	Chief Moses Middle School
Thompson	Mark	171	Moses Lake	Chief Moses Middle School

Last Name	First Name	ESD	District	School
Klepec	Dean	171	Okanogan	Okanogan High School
Moeder	Keith	171	Bridgeport	Bridgeport Middle School
Worden	Brenda	171	Bridgeport	Bridgeport Middle School
Gross	Jaci	171	Grand Coulee Dam	Grand Coulee Dam Middle
Humphrey	Jason	171	Moses Lake	Chief Moses Middle School
Phillips	Linda	171	Okanogan	Okanogan High School
Radke	Darin	171	Okanogan	Okanogan High School
Ferguson	Lois	171	Bridgeport	Bridgeport Elementary
Graham	Randy	171	Wenatchee	Orchard Middle School
Rise	Ralph	171	Grand Coulee Dam	Grand Coulee Dam Middle
Steinburg	Pam	171	Wenatchee	Orchard Middle School
		NLC		
Sauer	Larry	NLC 101	Newport	Stratton Elementary
Opp	Eloise	NLC 101	Newport	Stratton Elementary
Orth	Truday	NLC 101	Newport	Stratton Elementary
Meade	Mike	NLC 101	Newport	Stratton Elementary
Hamond	Patsy	NLC 101	Newport	Stratton Elementary
Monk	Patty	NLC 101	Newport	Stratton Elementary
Bodmer	Gerene	NLC 105	Grandview	Harriet Thompson Elementary
Hart	Carolyn	NLC 105	Grandview	Harriet Thompson Elementary
Morales	Jaime	NLC 105	Grandview	Harriet Thompson Elementary
Andrews	Helen	NLC 105	Grandview	Harriet Thompson Elementary
Coleman	Patti	NLC 105	Grandview	Harriet Thompson Elementary
Goodman	Eric	NLC 121	Franklin-Pierce	Keithley Middle School
Wiggins	Ryan	NLC 121	Franklin-Pierce	Keithley Middle School
Clyde	Angela	NLC 121	Franklin-Pierce	Keithley Middle School
Wilson	Kyle	NLC 121	Franklin-Pierce	Keithley Middle School
Knowles	Joyce	NLC 121	Franklin-Pierce	Keithley Middle School
Tabor	Eugene	NLC 121	Franklin-Pierce	Keithley Middle School
Schafer	Kelley	NLC 171	Coulee-Hartline	Coulee City Elementary / Middle
Hein	Tony	NLC 171	Almira	Almira Elementary
Matthewson	Sean	NLC 171	Coulee-Hartline	Coulee City Elementary / Middle

Last Name	First Name	ESD	District	School
Douglas	Susan	NLC 171	Almira	Almira Elementary
Elder	Pat	NLC 171	Almira	Almira Elementary
Chavez	Aaron	NLC 171	Almira	Almira Elementary
Bronkema	Pam	NLC 189	Nooksack	Nooksack Valley Middle School
Schlegel	Neal	NLC 189	Mount Baker	Mount Baker Junior High
Vander Yacht	Joel	NLC 189	Nooksack	Nooksack Valley Middle School
Franklin	Kimberly	NLC 189	Mount Baker	Mount Baker Junior High
Grant	Fred	NLC 189	Nooksack	Nooksack Valley Middle School
Johnson	Gwen	NLC 189	Nooksack	Nooksack Valley Middle School
Zeiler	Rodd	NLC 189	Mount Baker	Mount Baker High School
Romito	Rick	NLC 189	Mount Baker	Mount Baker High School
Brauer	Pat	NLC 189	Mount Baker	Mount Baker High School
Mathews	Tari	NLC 189	Nooksack	Nooksack Valley Middle School

Appendix E: Year Six Teacher Participants

Last Name	First Name	ESD	District	School
Loftus	Amelia	101	West Valley	Centennial Middle School
Bell	John	101	Curlew	Curlew
Bell	Chris	101	Curlew	Curlew
Davis	Betty	101	Curlew	Curlew
Cribby	Seth	101	Curlew	Curlew School
Schmidt	Larry	101	Curlew	curlew school
Krantz	Aaron	101	Endicott	Endicott Elem. & Middle School
Hallenius	Richard	101	Endicott	Endicott-St. John School
Kjack	Brenda	101	Rosalia	Rosalia
Hudkins	Rob	101	Rosalia	Rosalia Elementary
LaMunyan	Douglas	101	Rosalia	Rosalia High School
Watson	Rob	101	Rosalia	Rosalia HS
Loucks	Lisa	101	Rosalia	Rosalia MS
Mattson	Andy	101	Tekoa	Tekoa
Mendoza	Tammy	101	Tekoa	Tekoa Elementary
Schulz	Kim	101	Tekoa	Tekoa Elementary
gray	mark	101	Wellpinit	Wellpinit
Karas	David	101	Wellpinit	Wellpinit High School
Brunette	Stephanie	101	Wellpinit	Wellpinit Middle School
Peone	Debby	101	Wellpinit	Wellpinit Middle School
Wensel	Karen	101	Wellpinit	Wellpinit Middle School
Davidson	Terra	101	West Valley	West Valley High School
Rose	Myrna	101	West Valley	West Valley High School
Struthers	Tom	101	West Valley	West Valley High School
Brunson	Rachel	105	Kittitas	Kittitas Elem.
Graf	Linda	105	Kittitas	Kittitas MS/HS
Houck	Jeff	105	Kittitas	Kittitas MS/HS
Hudson	Mary Lou	105	Kittitas	Kittitas Elem.
Phillips	Nate	105	Kittitas	Kittitas MS/HS
Fleming	Ron	105	Mabton	Jr/Sr High
Downing	Ryan	105	Mabton	Jr/Sr High
Sexron	Scott	105	Mabton	Jr/Sr High
Ross	Jeff	105	Mabton	Jr/Sr High
Kangas	Richard	105	Mabton	Artz Fox
Platsman	Tim	105	Mabton	Artz Fox
Andra	David	105	Royal	Royal MS
Johnson	Heidi	105	Royal	Royal MS
Stougard	Lois	105	Royal	Royal MS
Alseth	Tyler	105	Sunnyside	Sierra Vista MS
Castro	Raul	105	Sunnyside	Sierra Vista MS
Gutierrez	Linda	105	Sunnyside	Harrison MS
Lopez	Art	105	Sunnyside	Harrison MS
Berg	Eric	105	Sunnyside	Sierra Vista MS
Kuhnhenh	Kris	105	Zillah	Zillah MS
Smies	Stacey	105	Zillah	Zillah MS
Woodyard	Cathy	105	Zillah	Zillah MS
Strain	Karen	112	White Salmon	Henkle Middle School

Last Name	First Name	ESD	District	School
Wells	Sally	112	White Salmon	Henkle Middle School
Thiessen	Heather	112	Vancouver	McLoughlin
Antonini	Celia	112	Vancouver	McLoughlin Middle School
Arkoosh	Katie	112	Vancouver	McLoughlin Middle School
Blanchat	Jennifer	112	Vancouver	McLoughlin Middle School
McCoy	Aaron	112	Vancouver	McLoughlin Middle School
Firth	Scott	112	Longview	Monticello
Scattergood	Claudia	112	Longview	Monticello
Shingleton	Jim	112	Longview	Monticello
Chinchen	Ryan	112	Longview	Monticello Middle School
Enyeart	Dena	112	Longview	Mt Solo
Olason	Thomas	112	Longview	Mt Solo Middle School
Nickerson	Dan	112	Longview	Mt. Solo
Moore	Ron	112	Longview	Mt. Solo Middle School
Nelson	Lynn	112	Longview	Mt. Solo Middle School
Ringer	Kristen	112	Wishram	Wishram School
Stewart	Kelly	113	Aberdeen	A.J. West
Murphy	Kerin	113	Aberdeen	A.J. West Elementary
Van Volkinburg	Richard	113	Aberdeen	A.J. West Elementary
Lennier	Martha	113	Aberdeen	Aberdeen School District
Miller	Cindy	113	Aberdeen	AJ West
Stewart	Gayla	113	Aberdeen	AJ West
Harjo	Martha	113	Centralia	Oakview Elementary
Johnson	Kristeen	113	Centralia	Oakview Elementary
Kinney	Linda	113	Centralia	Oakview Elementary
Roberts	Jaye	113	Centralia	Oakview Elementary
Tinsley	Kristine	113	Pioneer	Pioneer Int/Mid School
Campbell	Jeanene	113	Pioneer	Pioneer Intermediate/Middle School
Devaney	Rachel	113	Pioneer	Pioneer Intermediate/Middle
Sheldon	Autumn	113	Pioneer	Pioneer Intermediate/Middle School
Brown	Chris	113	Raymond	Raymond Elementary
Rask	Derek	113	Raymond	Raymond Elementary
Wetterauer	Sandy	113	Raymond	Raymond Elementary School
Tully	Mike	113	Raymond	Raymond Jr/Sr High
Hatton	Doris	113	Aberdeen	Stevens
King	Dianne	113	Aberdeen	Stevens Elementary
Meissner	April	113	Aberdeen	Stevens Elementary
Pfaff	Sally	114	Chimacum	Chimacum
Brennan	Mitch	114	Chimacum	Chimacum Elementary
Gambill	Karin	114	Chimacum	Chimacum Elementary
Glessing	Shari	114	Chimacum	Chimacum Elementary
Raymond	Mike	114	Chimacum	Chimacum Elementary
Burson	Beth	114	Chimacum	Chimacum Middle
Jamison	John	114	Chimacum	Chimacum Middle
Langston	Joni	114	Chimacum	Chimacum Middle
Baldwin	Jeff	114	Quillayute Valley	Forks Elementary
Bell	Martha	114	Quillayute Valley	Forks Elementary
Lien	Joan	114	Quillayute Valley	Forks Elementary
Moon	Donna	114	Quillayute Valley	Forks Elementary
Forsberg	Eric	114	Quillayute Valley	Forks Middle

Last Name	First Name	ESD	District	School
McCracken	Kirsten	114	Quillayute Valley	Forks Middle School
Sedgwick	Nicole	114	Quillayute Valley	Forks Middle School
stewart	leslye	114	Quillayute Valley	Forks middle school
Balkan	Becky	114	Sequim	Haller Elementary
Ludke	Marilyn	114	Sequim	Haller Elementary
McCarter	Roland Neal	114	Sequim	Haller Elementary
McCue	Anna	114	Sequim	Haller Elementary
Wilcox	Melanee	114	Sequim	Haller Elementary
Suryan	Sheri	114	Sequim	Helen Haller
Koutnik	Mary	114	Sequim	Helen Haller Elementary
Flanagan	Louise	114	Queets-Clearwater	Queets Clearwater School
Corbus	Willa	114	Queets-Clearwater	Queets-Clearwater
Bruff	Shannon	114	Queets-Clearwater	Queets-Clearwater School
Storrs	Carol	114	Queets-Clearwater	Queets-Clearwater School
Butler	Rich	114	Port Angeles	Roosevelt
Knowles	Laura	114	Port Angeles	Roosevelt
Soule	Scott	114	Port Angeles	Roosevelt
Gunderson	Brian	114	Port Angeles	Roosevelt Middle
Brinkmann	Paul	114	Port Angeles	Roosevelt Middle School
Devlin	Michelle	114	Port Angeles	Roosevelt Middle School
Beeler	Grace	121	Seattle	African American Academy
Butler	William	121	Seattle	African American Academy
Bryant	David	121	Tacoma	Gault
Allison	Wilfred	121	Tacoma	Gault Middle School
Chang	Donna	121	Tacoma	Gault Middle School
Morgan	Lisa	121	Tacoma	Gault Middle School
Sanford	Deb	121	Tacoma	Gault Middle School
Ragin	Annie	121	Tacoma	Gray Middle School
Rhoades	Anna	121	Tacoma	Gray Middle School
Webster	Don	121	Tacoma	Gray MS
Albaugh	Erin	121	Clover Park	Hudtloff
Galligan	Sid	121	Clover Park	Hudtloff Middle School
Seberson	Steve	121	Clover Park	Hudtloff Middle School
Snider	Dalice	121	Clover Park	Hudtloff Middle School
Knoll	Michelle	121	Clover Park	Lochburn
Bourgaize	John	121	Clover Park	Lochburn Middle School
Keehn	Tami	121	Clover Park	Lochburn Middle School
Nelson	Mark	121	Clover Park	Lochburn Middle School
Fletcher	Eric	121	Tukwila	Showalter
Kyriacopoulos	Konstantine	121	Seattle	Summit K-12
Olver	Jonathan	121	Seattle	Summit K-12
Rotton	Keri	121	Seattle	Summit K-12
Fernley	Mary	121	Highline	Sylvester Middle School
Eriksen	Travis	121	Highline	Sylvester MS
Crump	Damond	121	Clover Park	Woodbrook
Woodard	Jori	121	Clover Park	Woodbrook
DeMoyses	Kenneth	121	Clover Park	Woodbrook Middle School

Last Name	First Name	ESD	District	School
Kimmel	Nina	121	Clover Park	Woodbrook Middle School
Merwin	Ashley	121	Clover Park	Woodbrook Middle School
Scott	Randy	123	Kennewick	KeHS
Bushman	Degen	123	Pasco	Mac
Carreno	Enrique	123	Pasco	Mac
Curtis	Trevor	123	Pasco	Stevens
Decoursey	Crystal	123	Pasco	Ochoa
Estes	Linda	123	Pasco	Stevens
Flora	Patti	123	Kennewick	KeHS
Frankenfield	Carolynn	123	Pasco	Ochoa
Freitag	Gail	123	Pasco	Stevens
Fulton	Hugh	123	Pasco	Mac
Haug	David	123	Pasco	Mac
Johnson	Robert	123	Dixie	Consortium
Kangas	Pamela	123	Kennewick	KeHS
Kester	Kathryn	123	Pasco	Ochoa
Knopp	Russ	123	Waitsburg	Consortium
Landram	Jason	123	Pasco	Ochoa
Lau	Edith	123	Pasco	Ochoa
Maves	Jennifer	123	Pomeroy	Pomeroy
Maxwell	Gloria	123	Pasco	Mac
McCoard	Evelyn	123	Pomeroy	Pomeroy
Pearson	Christine	123	Waitsburg	Consortium
Reser	Sarah	123	Waitsburg	Consortium
Ross	William	123	Dixie	Consortium
Sandbeck	Michael	123	Kennewick	KeHS
Selph	Teresa	123	Kennewick	KeHS
Valett	Matt	123	Pasco	Stevens
Vaneaton	Kim	123	Pasco	Stevens
Whitemarsh	Eric	123	Pasco	Stevens
Wooldridge	Katie	123	Starbuck	Consortium
Anderberg	Terry	171		Orchard MS
Bushnell	Jerry	171	Bridgeport	Bridgeport
Chesledon	Karen	171		Okanogan MS
Dashiell	Susan	171		Grand Coulee Dam MS
Derr	Carrie	171		
Garrison	Robin	171		Chief Moses MS
Gilmore	Mike	171		Okanogan
Graham	Randy	171		Orchard MS
Gross	Jaci	171		Grand Coulee Dam MS
Humphrey	Jason	171		Chief Moses MS
Klepec	Dean	171		Okanogan MS
Merriman	Eric	171		Orchard MS
Moeder	Keith	171	Bridgeport	Bridgeport
Monahan	Lynn	171		Chief Moses MS
Mullin	Jeff	171		Chief Moses MS
Piturachsattit	Jeff	171		
Radke	Darin	171		Okanogan MS
Rise	Linda	171		Grand Coulee Dam MS
Rise	Ralph	171		Lake Roosevelt HS

Last Name	First Name	ESD	District	School
Steinburg	Pam	171		Orchard MS
Thompson	Mark	171		Chief Moses MS
Woolsey	Mark	171		Columbia Elementary
		NLC		
Betz	Candy	101	Newport	Stratton Elementary
Cunningham	Karen	101	Newport	Stratton Elementary
Downie	Vickie	101	Newport	Stratton Elementary
Gamma	Suzi	101	Newport	Stratton Elementary
Monk	Patti	101	Newport	Stratton Elementary
Andrews	Helen	105	Grandview	Harriet Thompson Elementary
Bodmer	Gerene	105	Grandview	Harriet Thompson Elementary
Coleman	Patti	105	Grandview	Harriet Thompson Elementary
Heimbigner	Rachel	105	Grandview	Harriet Thompson Elementary
Morales	Jaime	105	Grandview	Harriet Thompson Elementary
Chavez	Aaron	171	Almira	Almira Elementary
Douglas	Susan	171	Almira	Almira Elementary
Elder	Kristen	171	Almira	Almira Elementary
Sample	Sarah	171	Almira	Almira Elementary
Sieg	Anita	171	Almira	Almira Elementary
White	Mary Beth	171	Almira	Almira Elementary
Elder	Pat	171	Almira	Almira Elementary

Appendix F Year Five - Math Integration Specialists

ESD	First	Last Name	Role
101	Sally	Stratton	Math Integration Specialist
101	Brent	Howard	Math Integration Specialist
105	Catherine	Ball	Math Integration Specialist
105	Laurel	Carpino	Math Integration Specialist
112	Bill	Kring	Math Integration Specialist
112	Shawna	Marshall	Math Integration Specialist
112	Sue	Bluestein	Math Integration Specialist
113	Janet	Collier	Math Integration Specialist
113	Heather	Dorsey	Math Integration Specialist
113	Joel	Williams	Math Integration Specialist
113	Cindy	Jouper	Math Integration Specialist
114	Katy	Absten	Math Ed Director/MIS
114	Tamara	Smith	Math Integration Specialist
121	Glenda	Blankenship	Math Integration Specialist
121	Sandy	Christie	Math Integration Specialist
121	David	Duttry	Math Integration Specialist
121	Sandy	Gady	Math Integration Specialist
123	Mary S.	Anderson	Math Integration Specialist
123	Tami	Matsumoto	Math Integration Specialist
171	Joyce	Stevens	Math Integration Specialist
171	Ted	Edwards	Math Integration Specialist
171	Mary Jane	Ross	Math Integration Specialist
171	Brent	Morrison	Math Integration Specialist
NLC	David	Tucker	Math Integration Specialist
NLC	Ken	Bakken	Math Integration Specialist
LD	Ann	Black	LD Coordinator
LD	Jill	Hallows	LD Coordinator

Appendix G – Year Six Math Integration Specialists

ESD	First	Last Name	Role
101	Brent	Howard	Math Integration Specialist
105	Catherine	Ball	Math Integration Specialist
105	Terrie	Goodrow	Math Integration Specialist
105	Sasha	Hammond	Math Integration Specialist
112	Bill	Kring	Math Integration Specialist
113	Heather	Dorsey	Math Integration Specialist
113	Joel	Williams	Math Integration Specialist
113	Cindy	Jouper	Math Integration Specialist
114	Katy	Absten	Math Ed Director/MIS
114	Tamara	Smith	Math Integration Specialist
121	Sandy	Christie	Math Integration Specialist
123	Mary S.	Anderson	Math Integration Specialist
123	Tami	Matsumoto	Math Integration Specialist
171	Joyce	Stevens	Math Integration Specialist
171	Ted	Edwards	Math Integration Specialist
171	Mary Jane	Ross	Math Integration Specialist
171	Brent	Morrison	Math Integration Specialist
NLC	David	Tucker	Math Integration Specialist
NLC	Ken	Bakken	Math Integration Specialist