THE EFFECTS OF DIFFERENTIATION AND MOTIVATION ON STUDENTS PERFORMANCE

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ABSTRACT

This report described how implementation of differentiated assignments provided documentation of how students' motivation increased. The volunteers that participated in this study were 6th, 7th, and 8th graders. Students struggle academically to meet the expectations of their instructors. These struggles impact how students learn academically, behave socially, and participate collaboratively within a classroom.

Implementation of differentiation showed some improvement in students' learning as well as increases in student motivation. These strategies were documented using surveys and exit slips. Participants received a multiple intelligence survey to see how their individual learning styles impacted their academic success. These collection tools were documented to show how students progressed academically. As teachers, we influenced the attitudes and motivational levels of our students. Providing positive reinforcement and leveled assignments, our students experienced success and progressed academically.

The intervention's post data resulted in academic growth. Using differentiated strategies allowed students to become motivated according to their ability. There were extraneous factors that affected the students' level of motivation; however, the majority of students showed an increase in motivation. This increase was a result of using differentiated methods of instruction in a classroom setting. The implication of these tools allowed students to become successful in their academics.

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CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

This paper targets struggling middle school 6th, 7th, and 8th graders. In middle schools students are struggling to achieve academically due to a lack of motivation. Students come from diverse backgrounds and the majority is English language learners. Students also are from a large urban Midwest community. Data will be analyzed and synthesized to prove how successful differentiation and motivation can improve student performance.

Description of School

Site 1:

The middle school is located in a large urban Midwest community of the United States. It has a total of 50 classrooms. These classrooms range from regular educational instruction to self-contained instruction. The school also contains a 500-seat auditorium, an Olympic regulation swimming pool, three large combined gymnasiums, and three newly remodeled laboratories. The middle school staff ratio is 92.0% Caucasian instructors, 7.5% Hispanic, and 0.5% Asian. This leaves 0.7% teachers who are not highly qualified. The average annual salary of an instructor is $54,560 compared to administrators, which are at $116,749. Instructional expenditure per pupil is $6,745 compared to an average of $5,567 to the state of Illinois. The middle school is composed of 68.1% Hispanic, 25.1% Caucasian, 2.9% Asian, 1.9% African

American, 1.8% Multiracial, and 0.2% Native American. The student population is 60% low-income. This school is in an industrial area of the Midwest. Many of the students solely depend on this school as a reservoir in providing a safe haven. Students are offered many extracurricular activities to provide them with a safe environmental setting afterschool. This middle school deals with enriching adolescents academically, physically, and emotionally. Students and teachers have a close relationship with each other.

Description of the Classroom

Classroom A:

I teach Family and Consumer Education (FACE) in two classrooms. One room is equipped with several sewing machines and sewing equipment. The other classroom is equipped with stoves and cooking equipment. Of the two classrooms, I will be utilizing the classroom with the cooking equipment for the purposes of this research.

You enter my cooking classroom through double doors and you immediately see several kitchens and a large green chalkboard. I have several large windows that span the width of the room. There are four large bulletin boards that are decorated with colorful paper, borders, and posters. There are also colorful posters positioned around the room. There are two refrigerators and several large cabinets for storing supplies. My desk is located in the center of the room. At times navigating around my desk, the tables, and the students, seems like an obstacle course.

My classroom has six units. Each unit is equipped with a stove, sink, counter, and cabinets. I also have six tables in my room. Up to four students can sit at each table. Many classes have three to four students per table.

The class size varies. The maximum number of students the room accommodates is 24. I usually have 20 to 24 students in each class. I teach in two classrooms, and I also do outside

duty observing students entering and exiting the building, as assigned. I teach Food and Nutrition first, second, fifth, and sixth periods. I have planning periods third and eighth. I teach Clothing and Textiles fourth and ninth. Clothing and Textiles classes meet in a different room.

Researcher A Reflection:

This is my third year in the teaching profession. I believe it is the most enjoyable year yet. I try to be a teacher unlike most of the teachers I have had during my school career. I did have some really great teachers but these can be counted on one hand. I try to make learning a fun experience in my classroom.

I did not have the desire to go into education from a young age. I actually started working after graduating high school. I had several jobs in the business world, before finding a long-term home with a chrome plating company. I worked for this company for about fifteen years before changing careers. I never really considered myself a people person. So, finding myself here working with students everyday, and enjoying it, amazes me. I did know that I had a passion for cooking. I believe this passion can be attributed to my mother.

My mother was a fantastic cook and she let her children help out in the kitchen from a very young age. I know now, I was more of a hindrance than help.

It was because of my love of cooking that I attended Washburn Culinary School. This was a fantastic program. The program consisted of almost 40 hours per week of hands-on activities, bookwork, and lecture. The duration of the program was 20 months.

During my time at Washburn, I changed my mind about being a chef, however, I still wanted to use what I learned and do something creative with food. I decided teaching Family and Consumer Science would be a good fit. I could teach young people a life skill. I attended

College of DuPage to obtain my associate degree. Then I went on to Northern Illinois University for my teacher certification and bachelor's degree.

During my time at Northern I observed at several very good schools with excellent Family and Consumer Science departments. I did my student teaching at Hinsdale Central High School. Hinsdale Central has an excellent Family and Consumer Science program. They actually have a Chef and Restaurant Program that does catering.

After completing my student teaching, I entered the teaching profession. I obtained my first position in a middle school. I am the only FACS teacher here, and I have changed the program greatly, in comparison with the previous teacher. My students engage in a lab every week. Our labs range from one to three days.

I really enjoy getting my students to try new things, and watching as they realize they like new things. Granted there are some students who may not enjoy a lab, but I believe they enjoy most of them. I realize everyone has different tastes, and I cannot please everyone.

Because I have no one with whom I can collaborate in my area, I enrolled in a Teaching and Leadership Masters program to improve myself as a teacher. I want to be the best teacher I can be for my students.

Classroom B:

My bilingual/ESL classroom is centrally located on the second floor of the middle school, directly across from the library. The length of the classroom is lined with huge windows that overlook the courtyard. The room is exceptionally spacious compared to other rooms in the building. This room accommodates 30 student desks, two teacher desks, two round worktables and a workstation with five computers.

Upon entering the naturally day-lit classroom, you see the large trees through the windows as well as the American Flag waving in the breeze. As you look around the room, posters remind students that both reading and an education are important for them to succeed in life. Overall, colorful posters and positive sayings line the classroom. The east wall displays mathematical and science-related posters as well as science research projects. The west wall displays grammar-related posters, student-written book reports and essays. The south wall is filled with maps and posters about famous Americans. The north wall is taken up mostly by the chalkboard; however, there are two small bulletin boards on either side. One side displays the classroom rules and important school happenings. The other bulletin board has seven labeled pouches where students drop off their class work and homework in the subject-appropriate pouch.

A built-in shelving unit spans the length of the classroom and holds books, reinforcement materials and guides for seven subject areas. The designated areas on the shelving unit are: social studies, pre-algebra, algebra, language arts, science, and reading.

Students in this classroom have unique schedules. Some remain self-contained throughout the day while others exit to mainstream classes in the 6th, 7th,or 8th grade wings. Several students attend class in this room for only language arts. The average class size is about 15 students, which is half the number of the mainstream teachers' class size. The typical schedule for this researcher is to absorb an 8th grade advisory and then to continue the rest of the day with a mix of 7th and 8th grade bilingual students. After advisory, students continue their day with a physical education class followed by social studies, math, language arts, an exploratory class, lunch, science, and finally a double block of reading. Students finish the day at 3:05 p.m.,

however, many stay until 4:05 p.m. to attend an ESL Homework/Enrichment Club two days a week in this classroom.

Researcher B Reflection:

Growing up I was exposed to various types of teachers. Some were very tough and demanded a lot from me. Some were indifferent and insensitive while others were very easy going and sympathetic. Some years I would go from one extreme to the other. I would be mentally exhausted since I was scared of some teachers because they were too demanding and that created a lot of stress in the classroom environment. Other years I would have an easier time because I thought I was lucky to get into a nice teacher's classroom. However, within a couple of weeks, the unchallenging atmosphere began to bore me and I realized that an easy-going teacher didn't always keep her students motivated and challenged.

When I reached 7th grade I meet a teacher who had the reputation for being mean and insensitive because she gave out too much homework. I was very nervous at first because she was extremely tough, but within a week I realized that she was also very nice and caring. I worked hard throughout the day, as well as most of the evening completing the hours of homework that was assigned. I remember complaining about the school year, but my parents reminded me of how I also complained when I was bored and unchallenged the year before. I decided that this year was much better than being bored and unmotivated.

To my surprise, I was assigned to this teacher's class for 8th grade. I was already used to her teaching style, so I was very comfortable my last year in elementary school. I now realize that my 8th grade teacher was different from the others I had because she challenged us constantly, however, she knew when we were close to being frustrated and she made sure we always remained at a comfortable learning level in her classroom. I remember her telling us that

we could all test into Lane Tech High School if we worked hard throughout the year. I admire her for helping us set goals for ourselves and believing in each and every one of her students.

Throughout my four years at Lane Tech High School, I observed various teachers and I compared their teaching styles. I frequently compared my high school teachers to my 7th and 8th grade teacher. I learned easily with some teachers and with others I worked hard, but acquired little knowledge that I remember. I began to seriously consider becoming a teacher who could positively influence her students and challenge each and every one of them.

I graduated from Loyola University of Chicago with a secondary teaching degree in English and language arts. I married that year and began substituting while looking for a full-time job at a high school. There was a large influx of English teachers at the time and it was difficult to find a job. My husband and I decided to start a family. I stayed home and raised our three children for 12 years while I taught at a Ukrainian school on Saturdays. I decided to enter the teaching profession again, however, I ended substituting since it was difficult to find a job teaching high school English close to home.

While substituting at my children's elementary school, I was offered a full-time position teaching Bilingual/ESL students since I spoke English, Ukrainian, and Spanish. I taught 3rd, 4th, and 5th graders at this school for two years. During this time, I realized that because I could speak several languages, I would have a fairly easy time finding a job as a bilingual teacher. I received my Bilingual and English as a Second Language Certification through Concordia University in Illinois. I quickly found a teaching position at a middle school not far from my home where I was able to teach older students. I have been at this position for five years now and I am extremely happy with my decision to add a Bilingual/ESL certification to my degree.

Every single day of my school year is fast paced and exciting. I teach self-contained as well as partially mainstreamed bilingual students. I also teach five subject areas which are reading, language arts, pre-algebra/algebra, science and social studies. I strive to model the teaching qualities of my 7th and 8th grade teacher who I still admire. I focus on challenging each student daily regardless of their proficiency level. I have high expectations of my students and I constantly remind them of the fact that if they focus on a goal, they have the power to reach it.

I realize now that the field of Bilingual/ESL education is perfect for me. I am able to teach various subjects to new students, as well as help them adjust socially and emotionally to a new environment. It is exciting to see how students progress with language acquisition and development. It is wonderful to see the pride in students faces when they succeed in a mainstream class. I am very fortunate to have had several great teachers and one exceptional teacher who had a role in my personal development as a teaching professional.

Classroom C:

In my science classroom, my students are mostly visual students. A classroom needs to incorporate visual aids that help students understand the curriculum. I like to differentiate the visuals on my bulletin boards so students can see a variety of methods that discuss the same topic. The theme of my classroom relates to the various curricula that I teach for that year.

When you walk into my classroom, you will see the most common misspelled terms for 7th graders. You will also see white boards because I am allergic to chalk and students know that the district accommodated my needs. You will also notice that all of my bulletin boards are covered with fabric in various colors. One board looks like blue snake scales. Another has a variety of colors, such as yellow, orange, blue, red, and green circles and geometric by shaped diamonds. Students work is also posted around my classroom and there is a bulletin board

dedicated for their work. I also decorate a bulletin board outside of my classroom and will occasionally post curriculum- related posters that tie in with the current unit.

My classroom is arranged in a conventional setting. My desk is located toward the back of the room at an angle. I have a classroom that consists of 27 to 29 students. Students are faced toward the boards and after instruction students assemble themselves into groups to continue to work on their projects. I have a demonstration table in the front of the classroom. I occasionally conduct various experiments to illustrate the task that students will complete in the lab. Students may also sit in front of the demonstration table if they need to take notes during instruction.

I have access to laptops and a mobile projector if I need it during lessons. I also have two classroom computers that students can use in the back of the classroom. Students use them to conduct research, such as find articles, pictures, or type out lab reports. They also have access to markers, rulers, construction paper, scissors, and glue if they need any supplies to complete any assigned projects during class.

Researcher C Reflection:

I never thought I was going to become an educator because I had educators who never supported me. Lack of involvement at an early age made me regress in middle school. It was not until high school when I had a biology instructor who constantly provided me with positive reinforcement which allowed me to excel. Those techniques made me want to inspire students. I never thought that I would teach in a middle school setting. However, I am quite content with these students because I enjoy guiding them and inspiring them to want to achieve success.

I began my educational field at Prairie State College wanting to become a dental hygienist. After working for a year in a dental office, I was not content with that field of work. I obtained an associate in sciences from Moraine Valley Community College. I continued my

education at Saint Xavier University (SXU) because I wanted to pursue a degree in biology. After a semester at SXU, I knew that teaching biology was something that I wanted to pursue. I continued to work on my degree and graduated with a Bachelor's of Science in Education. Now, I am back at SXU because many of their faculty members inspired me while in my undergraduate studies. I loved the professionalism that SXU had to offer and will continue to further my educational goals there.

As an instructor, I have had three years of implementing various teaching strategies. I am constantly learning new innovative methods to incorporate within my field. As an instructor, it is vital that my students gain up-to-date information on new procedures related to the curriculum that I teach. My obligation as an instructor is to allow my students to reach their objected goals so that they may succeed the following year.

I previously taught in District 153 and learned that science needs to be taught through inquiry design. I was just starting as an educator and my experience at District 153 allowed me to gain a better insight through a hands-on approach for science. Students not only gained mastery, but also gained strength in producing a thorough scientific approach to analyzing lab experiments. Teaching through the Foundational Approaches of Science Teaching curriculum or F.A.S.T. allowed students to solve anomalies, analyze questions, and produce their own their lab experiments. This year I plan to also adopt those strategies and implement them within my teachings.

I always felt an obligation to teach or offer assistance within my career. I previously worked as a pharmaceutical technician and aided patients with their medical inquiries. Working as a technician for eight years never truly satisfied my passion to aid others. I gained that passion when I began working with adolescents and seeing them gradually gain insightful

information about scientific inquiry. The district in which I currently teach does not have a hands-on - approach to teaching science and I plan on incorporating various labs to see if my students will grow academically and motivate them in the science curriculum.

Description of District

This district is located in a large urban Midwest community of the United States. It is located among multiple industrial companies and trucking companies. This district has a total enrollment of 2, 707 students. The district consists of four elementary and one middle school. It is composed of 68.8% Hispanic, 23.4% Caucasian, and 1.6% African Americans. There is a 47.4% low-income rate and 23.1% of students are limited English proficient. Staff ratio is composed of 92.0% Caucasian instructors, 7.5% Hispanic, and 0.5% Asian. There is a ratio of 82.9% female to 17.1% male instructors. There are a total of 188 staff members in the district. On average instructors have 12.1% years teaching experience with 55.5% instructors who possess a bachelor's degree and 44.5% posses a Masters.

This district offers families of low-income assistance with clothing, food, and alternative shelter methods. Even though the school has been on the annual yearly progress (AYP) listing for four years, this district has shown a significant improvement from 2004 – 2008 with a 28% increase in reading and mathematical scores. This district is working on a newly revised school improvement plan to implement new strategies to make AYP. The districts improvement committee meets regularly to discuss and ensure that the improvement plans are implemented throughout the building.

There are three elementary schools and one middle school in the district. Another school building offers aid to the physically disabled. They aid the severely handicapped students from kindergarten to 21years of age. This district is welcoming and offers many special programs to

aid students. They offer a free or reduced lunch program, Read 180, which is a computer based reading intervention program, and various technological grants that are acquired by the district to aid students. They also offer bilingual, ESL, and exploratory classes, such as music, art, keyboarding, life skills, and chorus.

This district values excellence and achievement. The district is recognized for its ability to aid students who are physically challenged with motor skill function. They have incorporated a separate school with a therapeutic setting. This allows students to develop and master motor and physical skills on a daily basis.

Description of Community

This community consists of a population of 23,171 people. It was incorporated during 1882. It encompasses 342.74 acres. This community consists of 7,631 families. In the 2000 census, the total number of families with under age children was 24%. This community is mainly composed of blue-collar workers. The median family income is $40,689. The median education that is obtained in this community is 18.2%. The mean age of residents is 30.6 years of age. Thirty-one percent of the employed population ages 16 years and older are working in production, transportation, and material moving. Twenty-six percent of the working population works in a manufacturing business. Sales and office occupations encompass 28% of this community. The poverty status in this community is 8.7% in family households; while families of female households, with no husband present, have a poverty status of 16.6%. Ten point two percent of individuals are living at the poverty level.

The average household income is $50,000 – $74,999. The mean household income is $51,126. The mean earning for a male, fulltime, year-round employee is $31,353 and for a female, fulltime, year-round employee it is $24,961. The mean public assistance income in this

population is $3,772. Types of housing found in this community consists of one-unit detached garage, which is 39.3%, single-family homes with an attached garage, which is 4.3%, a duplex, which is 17.1%, mobile homes, which is 6.3%, and 10 to 20-unit housing, which is 11.1%. Many of these structures were built between 1940 and1959. The average household family size is 3.61%. Fifty-four point seven percent of the community owns housing units and 45.3% occupy units as renters.

The ethnic demographics within this community are mainly Hispanic or Latino at 53.9%, with a majority being Mexican at 45.3%, Non-Hispanic or Latino comprises 53.9%, Caucasian is 40.5%, Black is 2.9%, and Asian is 2%. Major businesses in this community consist of industries, such as manufacturing, hospitals, parks and recreation, churches, schools, village hall, nursing homes, fast-food restaurants, shopping plazas, supermarkets, and gas stations.

This community offers students recreational centers, which hold mixers and numerous events for students to attend. Public transportation is offered for the community to aid them in mobility.

National Context of the Problem

Many middle school learners are not motivated as young adolescents to achieve success academically. Some of that may stem from various scenarios, such as classes, lifestyle, peer involvement, or parental involvement. Teachers need to incorporate various methods and techniques to strengthen their instructional design. Research has shown that high–stakes testing, and classroom–based learning opportunities are focused on ensuring that students reach minimal competency standards (Ozturk & Debelak, 1997).

As an instructor, lack of motivation has decreased involvement with students completing classroom activities. Instructors try to incorporate various methods and ideologies through their

lesson; however, many students are not responding to these new methods in a positive manner. According to Ruth Small, “the learning task needs to be presented in a way that is engaging and meaningful to the student, and in a way that promotes positive expectations for the successful achievement of learning objectives” (Small, 2000).

Instructors need to differentiate their assignments to help unmotivated students grasp the assignment. For example, according to Cynthia Desrochers, “Students are motivated by their interests. Therefore, motivation is piqued by working on projects that are relevant to them, elicit their curiosity, and involve their choice or control over important elements” (Desrochers, 2000). Differentiated assignments may give students the opportunity to be successful while completing a leveled task. Students in the middle school years are undergoing many changes. These changes include physical, emotional, and developmental. Finding the correct blend of “relevance, rigor, and responsiveness” for middle school students is challenging for teachers. However, it is important to keep students engaged when they are going through so many changes. Students in the middle school years are also dealing with issues of independence, social acceptance, and curiosity (Manzo, 2008).

Students lack motivation to succeed academically due to boredom in school. Many students surveyed reveal they find school boring more than half of the time. Further, learners see no real connection of content learned to their personal lives. They admit to passively sitting through lessons. Students need to be actively engaged participants in academic activities and throughout their learning process. Incorporating differentiation by offering student choices increases motivation and interest in the learning process (Hootstein, 1994).

As educators, we are responsible for preparing our students to become lifelong learners. According to Elser and Rule (2008), students need to be prepared academically. Students will be

assessed on preparation, ability and performance, culture, and interests. Instructors need to start preparing students globally to ensure they succeed academically. By having instructors embrace diversity, students will become aware of the different intelligences that individuals possess. Identifying their learning preferences will provide effective instruction to guide students with understanding and comprehension.

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

Classroom A: Group 1

The data in Figure 1 shows 6th grade students' responses to a multiple intelligences test (Appendix H) administered at the beginning of the intervention. The test was administered during class time to 18 students.

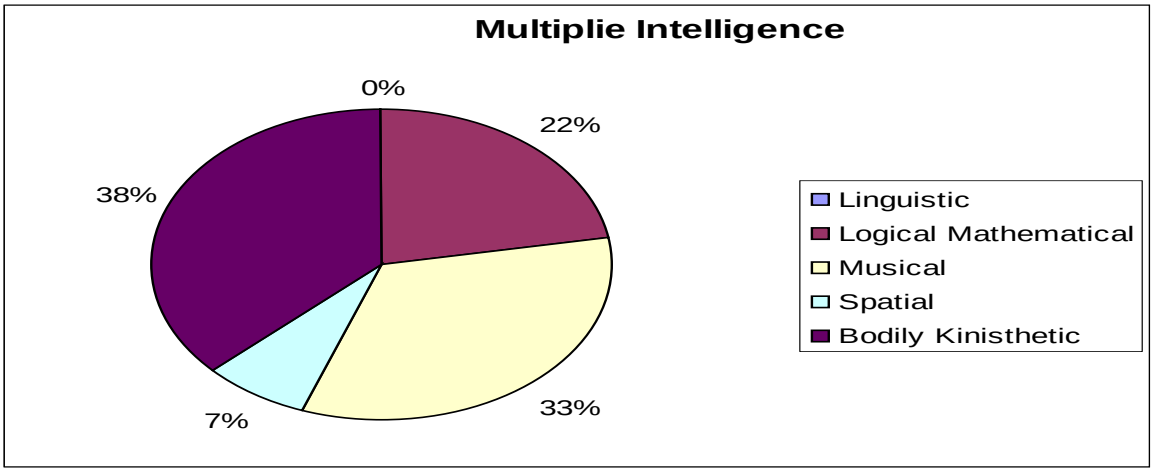


Figure 1. Responses from 6th grade students to multiple intelligences test administered at the beginning of the intervention.

This test represents the preferred modality of learning of 6th grade students in various multiple intelligence groups. The largest majority of students preferred modality is bodily kinesthetic; this was followed by musical. About 25% of the students said they preferred logical mathematical. The smallest intelligence group was spatial. There were no students with a

preference for the linguistic. One student was absent and a multiple intelligence test was not submitted.

Classroom A: Group 2

The data in Figure 2 shows 6th grade students' responses to a multiple intelligences test administered at the beginning of the intervention. The test was administered during class time to 14 students.

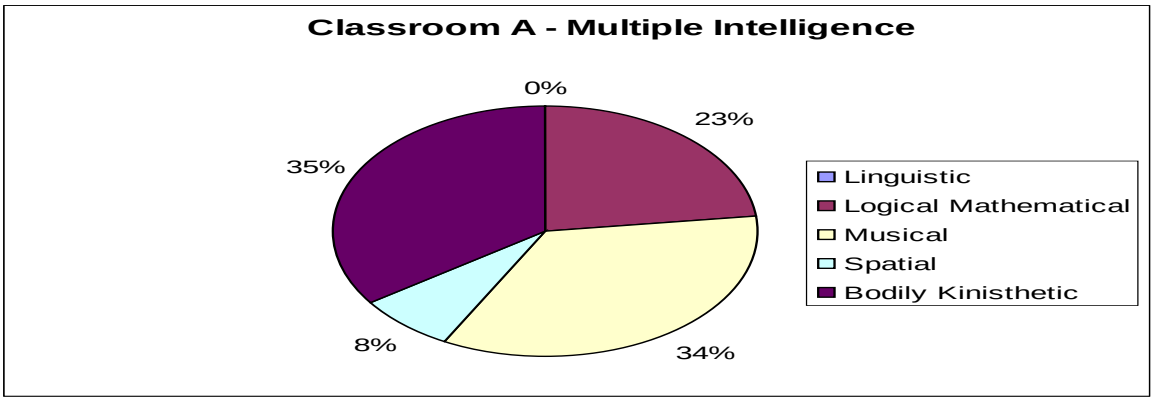
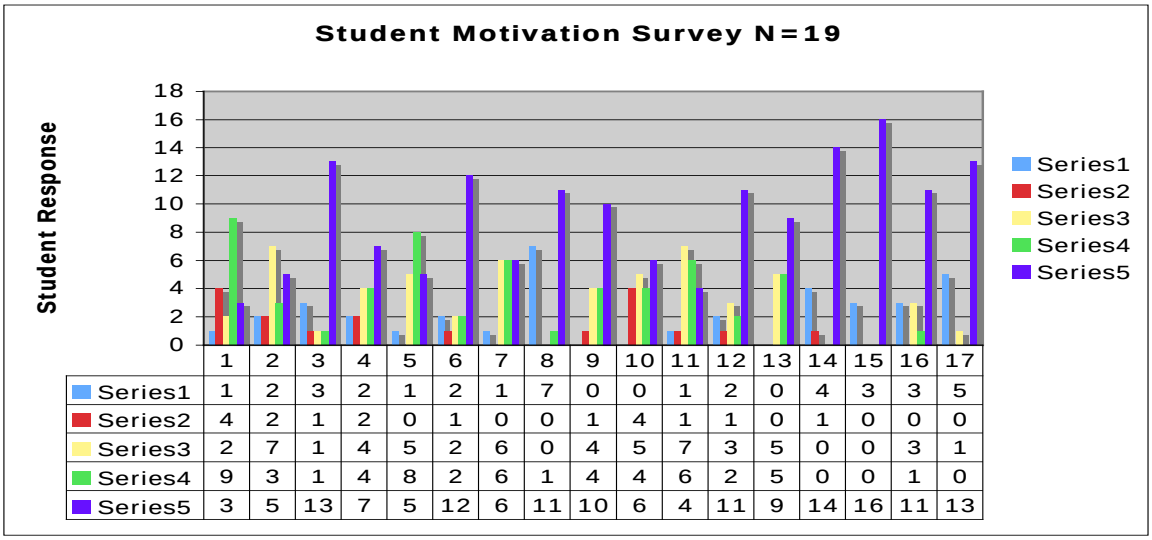


Figure 2. Responses from 6th grade students to multiple intelligences test administered at the beginning of the intervention.

This test represents the preferred modality of learning of 6th grade students in various multiple intelligence groups. The largest majority of students preferred modality is bodily kinesthetic; this was followed by musical. About 25% of the students said they preferred logical mathematical. The smallest intelligence group was spatial. There were no students with a preference for the linguistic.

Classroom A Group 1

The data in Figure 3 represents a survey (Appendix C) used to assess the student's behavior, study habits, organization, work potential, and level of motivation. Students ranked each statement from 1 to 5; with 1 being less true and 5 being more true.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Series1	1	2	3	2	1	2	1	7	0	0	1	2	0	4	3	3	5
Series2	4	2	1	2	0	1	0	0	1	4	1	1	0	1	0	0	0
Series3	2	7	1	4	5	2	6	0	4	5	7	3	5	0	0	3	1
Series4	9	3	1	4	8	2	6	1	4	4	6	2	5	0	0	1	0
Series5	3	5	13	7	5	12	6	11	10	6	4	11	9	14	16	11	13

Figure 3. Student responses to Student Motivational Survey administered at the beginning of the intervention.

Questions 1, 2, 4, 5, 6, & 7 asked about study habits, study skills, and organization. In Question 1, nine students rated a 4 as being well organized. In Question 2, seven students rated a 3 for having good work and study habits. In Question 4, seven students rated a 5 for working up to their full potential. In Question 5, eight students rated a 4 for not letting friends distract them from doing schoolwork and homework. In Question 6, twelve students rated a 5, for always doing homework without reminders from parents or teachers. In Question 7, the ranking was split six students rated a 3, six students rated a 4, and six students rated a 5 for putting a lot of thought and effort into their work.

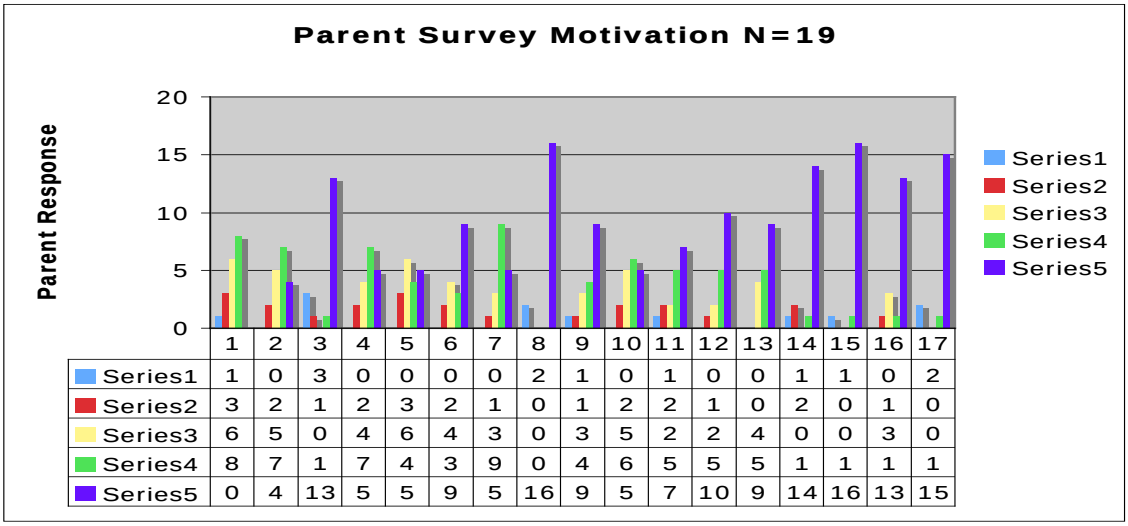
Questions 3, 8, 14, & 15 ask about behavior in school that may result in suspension, expulsion, or repeating grades. In Question 3, thirteen students rated a 5, for never having a violent outburst or getting into a fight at school. In Question 8, eleven students rated a 5 for never repeating a grade in middle school. In Question 14, fourteen students rated a 5 for never being suspended from school. In Question 15, sixteen students rated a 5 for never being expelled from school as a result of behavior.

Questions 10, 11, 12, and 13 pertain to students' attitudes and how they feel about school. In Question 10, six students rated a 5 for waking refreshed and ready for school. In Question 11, seven students rated a 3 for rarely complaining about school. In Question 12, eleven students rated a 5 for working hard in school even when there is a dislike for the teacher. In Question 13, nine students rated a 5 for possessing a positive attitude and beliefs about school.

In Question 9, ten students ranked a five for preferring to be seen as school smart over street smart. In Question 16, eleven students rated a 5 for having A's and B's in all classes on the last report card.

Classroom A Group 1

The data in Figure 4 represents a survey (Appendix D) used to ask parents to assess their child's behavior, study habits, organization, work potential, and level of motivation. Parents ranked each statement from 1 to 5; with 1 being less true and 5 being more true. One parent survey was not submitted for data collection.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Series1	1	0	3	0	0	0	0	2	1	0	1	0	0	1	1	0	2
Series2	3	2	1	2	3	2	1	0	1	2	2	1	0	2	0	1	0
Series3	6	5	0	4	6	4	3	0	3	5	2	2	4	0	0	3	0
Series4	8	7	1	7	4	3	9	0	4	6	5	5	5	1	1	1	1
Series5	0	4	13	5	5	9	5	16	9	5	7	10	9	14	16	13	15

Figure 4. Parent responses to Student Motivational Survey administered at the beginning of the intervention.

Questions 1, 2, 4, 5, 6, & 7 asked about the child's study habits, study skills, and organization. In Question 1, eight parents rated a 4 for their child being well organized. In

Question 2, seven parents rated a 3 for the child having good work and study habits. In Question 4, seven parents rated a 4 for the child working up to their full potential. In Question 5, six parents rated a 3 for the child not letting friends distract them from doing schoolwork and homework. In Question 6, nine parents rated a 5, for the child always doing homework without reminders from parents or teachers. In Question 7, nine parents rated a 4 for the child putting a lot of thought and effort into their work.

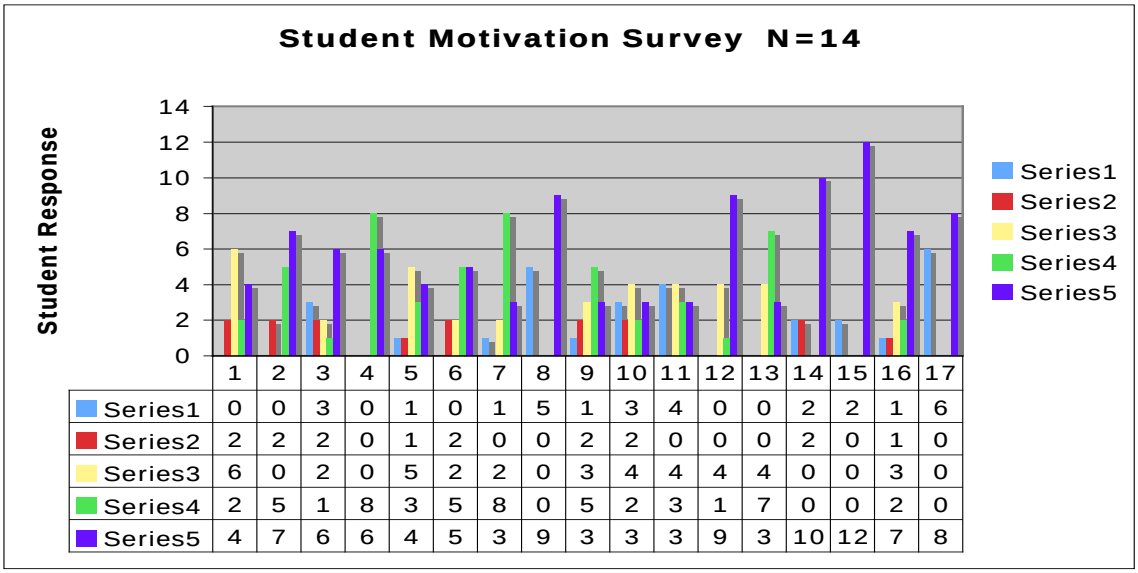
Questions 3, 8, 14, & 15 ask about the child's behavior in school that may result in suspension, expulsion, or repeating grades. In Question 3, thirteen parents rated a 5, for the child never having a violent outburst or getting into a fight at school. In Question 8, sixteen parents rated a 5 for the child never repeating a grade in middle school. In Question 14, fourteen parents rated a 5 for the child never being suspended from school. In Question 15, sixteen parents rated a 5 for the child never being expelled from school as a result of behavior.

Questions 10, 11, 12, and 13 pertain to the child's attitude and how they feel about school. In Question 10, six parents rated a 4 for the child waking refreshed and ready for school. In Question 11, seven parents rated a 5 for the child rarely complaining about school. In Question 12, ten parents rated a 5 for the child working hard in school even when there is a dislike for the teacher. In Question 13, nine parents rated a 5 for the child's possession of a positive attitude and beliefs about school.

In Question 9, nine parents rated a five for the child's preference to be seen as school smart over street smart. In Question 16, thirteen parents rated a 5 for the child having A's and B's in all classes on the last report card.

Classroom A Group 2

The data in Figure 5 represents a survey used to assess the student's behavior, study habits, organization, work potential, and level of motivation. Students ranked each statement from 1 to 5; with 1 being less true and 5 being more true.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Series1	0	0	3	0	1	0	1	5	1	3	4	0	0	2	2	1	6
Series2	2	2	2	0	1	2	0	0	2	2	0	0	0	2	0	1	0
Series3	6	0	2	0	5	2	2	0	3	4	4	4	4	0	0	3	0
Series4	2	5	1	8	3	5	8	0	5	2	3	1	7	0	0	2	0
Series5	4	7	6	6	4	5	3	9	3	3	3	9	3	10	12	7	8

Figure 5. Student responses to Student Motivational Survey administered at the beginning of the intervention.

Questions 1, 2, 4, 5, 6, & 7 asked about study habits, study skills, and organization. In Question 1, six students rated a 3 as being well organized. In Question 2, seven students rated a 5 for having good work and study habits. In Question 4, eight students rated a 4 for working up to their full potential. In Question 5, five students rated a 3 for not letting friends distract them from doing schoolwork and homework. In Question 6, the ranking was split 5 students rated a 5 and 5 students rated a 4, for always doing homework without reminders from parents or teachers. In Question 7, eight students rated a 4 for putting a lot of thought and effort into their work.

Questions 3, 8, 14, & 15 ask about behavior in school that may result in suspension, expulsion, or repeating grades. In Question 3, six students rated a 5, for never having a violent outburst or getting into a fight at school. In Question 8, nine students rated a 5 for never

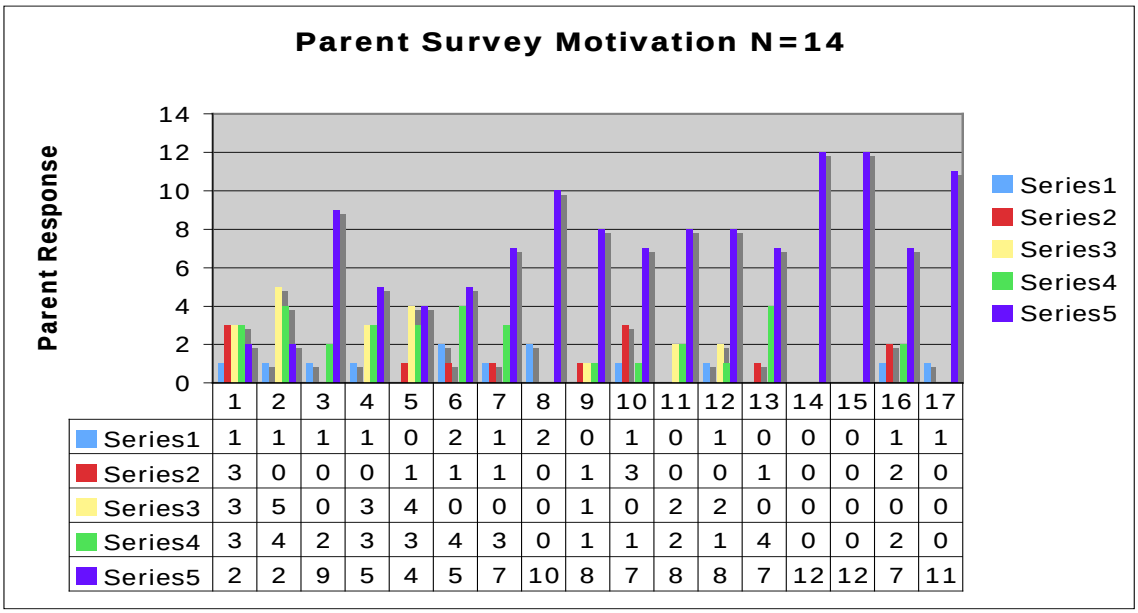
repeating a grade in middle school. In Question 14, ten students rated a 5 for never being suspended from school. In Question 15, twelve students rated a 5 for never being expelled from school as a result of behavior.

Questions 10, 11, 12, and 13 pertain to students' attitudes and how they feel about school. In Question 10, four students rated a 3 for waking refreshed and ready for school. In Question 11, the rating is split four students rated a 1 and four students rated a 3 for rarely complaining about school. In Question 12, nine students rated a 5 for working hard in school even when there is a dislike for the teacher. In Question 13, seven students rated a 4 for possessing a positive attitude and beliefs about school.

In Question 9, five students rated a 4 for preferring to be seen as school smart over street smart. In Question 16, seven students rated a 5 for having A's and B's in all classes on the last report card.

Classroom A Group 2

The data in Figure 6 represents a survey used asking parents to assess their child's behavior, study habits, organization, work potential, and level of motivation. Parents ranked each statement from 1to 5; with 1 being less true and 5 being more true. Two parent surveys were not submitted for data collection.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Series1	1	1	1	1	0	2	1	2	0	1	0	1	0	0	0	1	1
Series2	3	0	0	0	1	1	1	0	1	3	0	0	1	0	0	2	0
Series3	3	5	0	3	4	0	0	0	1	0	2	2	0	0	0	0	0
Series4	3	4	2	3	3	4	3	0	1	1	2	1	4	0	0	2	0
Series5	2	2	9	5	4	5	7	10	8	7	8	8	7	12	12	7	11

Figure 6. Parent responses to Student Motivational Survey administered at the beginning of the intervention.

Questions 1, 2, 4, 5, 6, & 7 asked about the child's study habits, study skills, and organization. In Question 1, the rating was split three parents rated a 2, three parents rated a 3, and three parents rated s 4 for their child being well organized. In Question 2, five parents rated a 3 for the child having good work and study habits. In Question 4, five parents rated a 5 for the child working up to their full potential. In Question 5, the rating is split four parents rated a 3 and four parents rated a 5 for the child not letting friends distract them from doing schoolwork and homework. In Question 6, five parents rated a 5, for the child always doing homework without reminders from parents or teachers. In Question 7, seven parents rated a 5 for the child putting a lot of thought and effort into their work.

Questions 3, 8, 14, & 15 ask about the child's behavior in school that may result in suspension, expulsion, or repeating grades. In Question 3, nine parents rated a 5, for the child never having a violent outburst or getting into a fight at school. In Question 8, ten parents rated a 5 for the child never repeating a grade in middle school. In Question 14, twelve parents rated a

5 for the child never being suspended from school. In Question 15, twelve parents rated a 5 for the child never being expelled from school as a result of behavior.

Questions 10, 11, 12, and 13 pertain to the child's attitude and how they feel about school. In Question 10, seven parents rated a 5 for the child waking refreshed and ready for school. In Question 11, eight parents rated a 5 for the child rarely complaining about school. In Question 12, eight parents rated a 5 for the child working hard in school even when there is a dislike for the teacher. In Question 13, seven parents rated a 5 for the child's possession of a positive attitude and beliefs about school.

In Question 9, eight parents rated a five for the child's preference to be seen as school smart over street smart. In Question 16, seven parents rated a 5 for the child having A's and B's in all classes on the last report card.

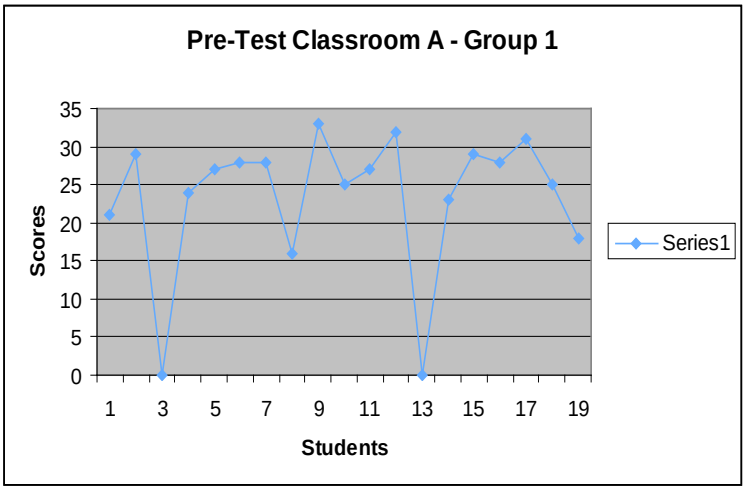
The data in Figure 7 shows 6th grade student's scores on the pre-test (Appendix E). This test was used to measure what students know about the topics to be covered during the course. There were two students absent for the pre-test; these students did not receive a score.

Classroom A. Group 1

This pre-test measured what students knew about the topics to be covered; it included areas of safety, sanitation, measuring, and abbreviations. The highest score was 33; which is 84.62%. The lowest score was 16 points; which is 41.03%.

Pre-Test

Students	Pre Test Score
1	21
2	29
3	~
4	24
5	27
6	28
7	28
8	16
9	33
10	25
11	27
12	32
13	~
14	23
15	29
16	28
17	31
18	25
19	18



N=19

Figure 7. Responses from 6th grade students to pre-test assessment administered at the beginning of the intervention.

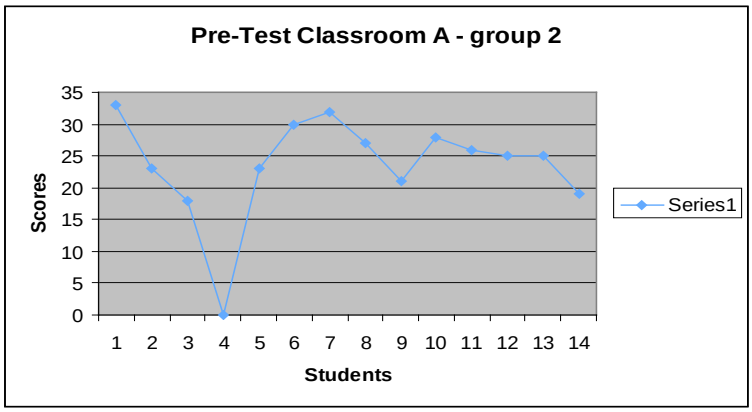
The data in Figure 8 shows 6th grade student's scores on the pre-test. This test was used to measure what students know about the topics to be covered during the course. There was one student absent for the pre-test; this student did not receive a score.

Classroom A. Group 1

This pre-test measured what students knew about the topics to be covered; it included areas of safety, sanitation, measuring, and abbreviations. There were two students absent for the pre-test; these students did not receive a score. The highest score was 33; which is 84.62%. The lowest score was 18 points; which is 46.15%.

Pre Test

Students	Pre Test Score
1	33
2	23
3	18
4	-
5	23
6	30
7	32
8	27
9	21
10	28
11	26
12	25
13	25
14	19



N=14

Figure 8. Responses from 6th grade students to pre-test assessment administered at the beginning of the intervention.

Classroom B

The data in Figure 11 shows the 8th grade student responses to a multiple intelligence test administered at the beginning of the case study. The test was administered during class time to 12 students.

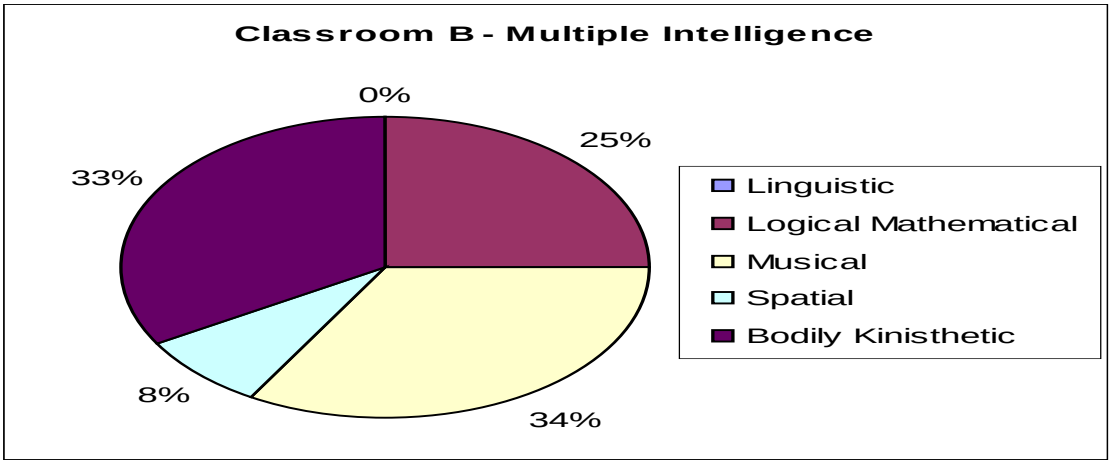
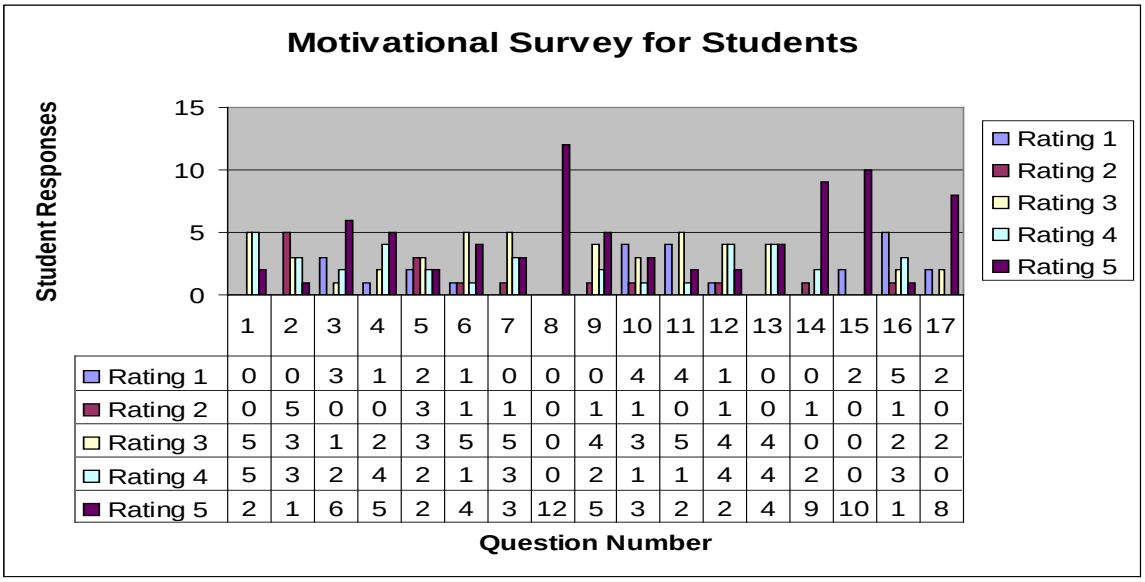


Figure 11. Responses from 8th grade students to Multiple Intelligence Test.

The preceding circle graph represents data that reflects the preferred learning styles of twelve, 8th grade students in various multiple intelligence groups. The Multiple Intelligence Survey revealed that, as a group, the students had four preferred modalities of learning. In

response to the survey Questions, the two highest categories were musical, at 34%, and bodily/kinesthetic learners, at 33%. There were no students who preferred the linguistic modality for learning.

The data in Figure 12 represents a survey that was used to assess student behavior, study habits, organization, work potential, and level of motivation. Students ranked each statement on a scale of 1 to 5; with number 5 representing the most positive response.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Rating 1	0	0	3	1	2	1	0	0	0	4	4	1	0	0	2	5	2
Rating 2	0	5	0	0	3	1	1	0	1	1	0	1	0	1	0	1	0
Rating 3	5	3	1	2	3	5	5	0	4	3	5	4	4	0	0	2	2
Rating 4	5	3	2	4	2	1	3	0	2	1	1	4	4	2	0	3	0
Rating 5	2	1	6	5	2	4	3	12	5	3	2	2	4	9	10	1	8

Figure 12. Student responses to Student Motivational Survey administered at the beginning of the intervention.

Questions 1, 2, 4, 6, and 7 refer to students' organizational skills as well as school study habits. In Question number 1, two students from the group of twelve rated themselves a 5 for superior organization. The remaining ten were at a rating of 3 and 4. Question 2 asked about positive work and study habits. One out of twelve students rated themselves as a 5. The majority rated themselves as a 2 in regards to positive work and study habits. On Question 4, five out of twelve students rated themselves as working to their full potential by circling a rating of 5. In Question 6, five students chose a middle rating indicating that they are self motivated to

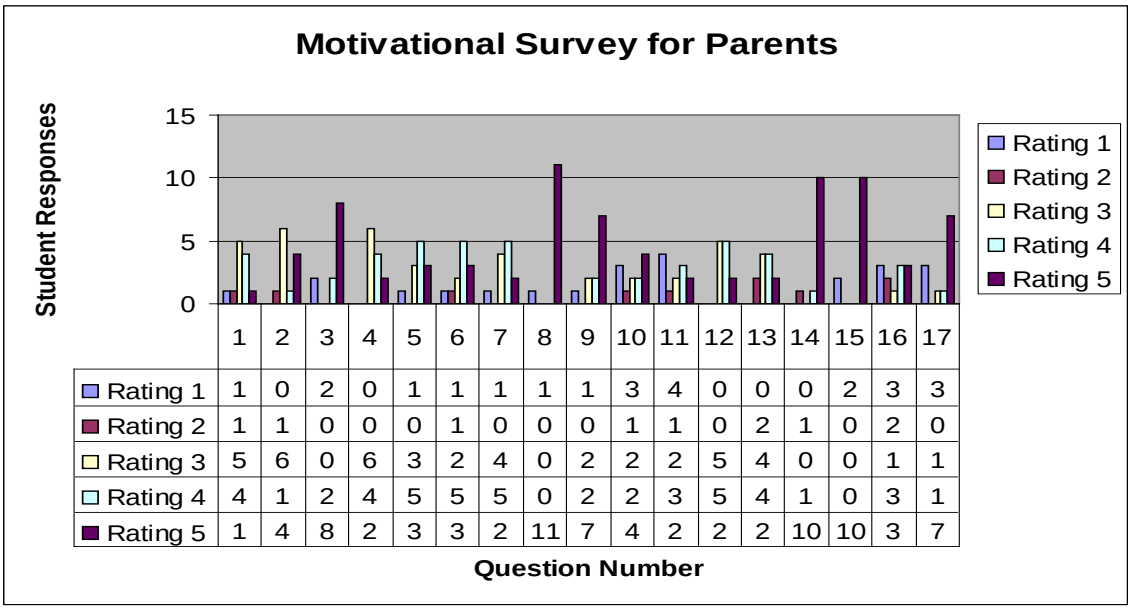
complete homework. Question 7 focused on personal thought and effort in regards to academic work. The majority of students rated themselves at a 3.

Question numbers 3, 8, 9, 14, and 15 focus on student behavior. Six students chose a rating of 5 on Question 3 for never having a violent outburst or being involved in a fight. Three students chose a rating of 1, indicating that an outburst and/or fight were a part of their past. Question 8 asked about repeating a grade level. All twelve students indicated that they have never repeated a grade level by choosing a rating of 5. In Question 9, five students reported that they would rather be known as 'school smart' than 'street smart'. For Question 14, one of the twelve students indicated that they were suspended within the past two years. Expulsion was the focus in Question 15. Two of the twelve students reported that they have been expelled from school at some point in their academic life.

Question numbers 5, 10, 11, 12, 13, 16, and 17 focus on student involvement within the school. The group was dispersed within all ratings for Question 5 when asked about whether or not they allow friends to distract them from academic work. The highest ratings were with three students in both ratings of 2 and 3. For Question 10, four students indicated that they do not wake up feeling refreshed for school in the mornings. In Question 11, the majority of students, five in total, reported a rating of 3 for complaining about school. However four students chose a rating of 1 to indicate that they often do complain about academics. Question 12 asked students if their attitude towards the teacher affects their school performance. Four students chose a rating of 3, and another four students chose a rating of 4. In Question 13, the students were grouped by fours at a ratings of 3, 4, and, 5 when they indicated that they possess positive attitudes towards school. Five students chose a rating of 1 to indicate that they received A's and

B's on their last report card. Eight students rated a 5 for never having the need to attend mandatory summer school for failing grades.

The data in Figure 13 represents a survey used by parents to assess their child's behavior, study habits, organization. Work potential, and level of motivation. Parents ranked each statement from 1 to 5; with number 1 being less true and number 5 being the most positive. Twelve parents completed the survey.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Rating 1	1	0	2	0	1	1	1	1	1	3	4	0	0	0	2	3	3
Rating 2	1	1	0	0	0	1	0	0	0	1	1	0	2	1	0	2	0
Rating 3	5	6	0	6	3	2	4	0	2	2	2	5	4	0	0	1	1
Rating 4	4	1	2	4	5	5	5	0	2	2	3	5	4	1	0	3	1
Rating 5	1	4	8	2	3	3	2	11	7	4	2	2	2	10	10	3	7

Figure 13. Parental Responses to the Student Motivational Survey administered at the beginning of the intervention.

This survey was used as an instrument to assess parental views on their child's academic motivation. Parents, and their students, used the identical rating scale for the survey. Questions within the survey, focused on student motivation, organization, study habits, academic behavior, and work potential.

Questions 1, 2, 4, 6, and 7 refer to a student's organizational and study habits. On Question number 1, five parents chose a rating of 3 to represent their child's organizational skills. Four parents chose a rating of 4 to represent that they notice a slightly higher level of organizational skills within their children. Question 2 received a rating of 3 by six parents that

believe their child has good study habits. The majority of parents chose a rating of 3 for Question 4 to represent how their child is working up to their full potential. Question 6 focused on whether or not parents need to remind their child to complete homework. Five parents rated this Question with a 4. On Question 7, five parents circled a rating of 4 to represent their child's effort in regards to academics.

Question numbers 3, 8, 9, 14, and 15 focus on how parents perceive their child's behavior in regards to the school environment. In regards to Question number 3, eight parents stated that their child has never had a violent outburst or fight within the school. On Question 8, eleven parents agreed that their child was never required to repeat a grade in middle school. Question number 9 asked if parents thought that their child would rather be seen as 'school smart' instead of 'street smart'. Seven individuals agreed by choosing a rating of 5. On Question 14, ten adults documented that their child was not suspended from school in the past two years. Ten parents also stated on Question 15 that their child has never been expelled from school.

Question numbers 5, 10, 11, 12, 13, 16, and 17 all focus on the issue of their children's involvement with the school. Question 5 received five ratings of a 4 in regards to their children being distracted from schoolwork by their friends. On Question 10, four parents admitted that their children wake up refreshed and ready for school in the morning. Question 11 asked if parents witnessed complaints from their child about school. Four adults chose a rating of 1, where they did not witness complaining about academics. Question 12 asked if a negative attitude toward a teacher affects their child's performance. Five parents chose a rating of 3, and five chose a rating of 5 to answer this Question. Question number 13 also had a tie in regards to a student's positive attitude towards school. Four parents circled a rating of 3 as well as a rating of 4. Question 16 asked if students received A's and B's on their report cards. There was a three

way tie with regards to the highest rating groups. Three parents chose a rating of 1, three chose a 4, and three chose a 5. Seven parents documented on Question 17 that their child has never attended mandatory summer school.

The data in Figure 14 represents the scores received by the students on a pre-test assessment. The pre-test was used to measure how well prepared students were to begin the upcoming 8th grade social studies curriculum. Twelve students completed the pre-test.

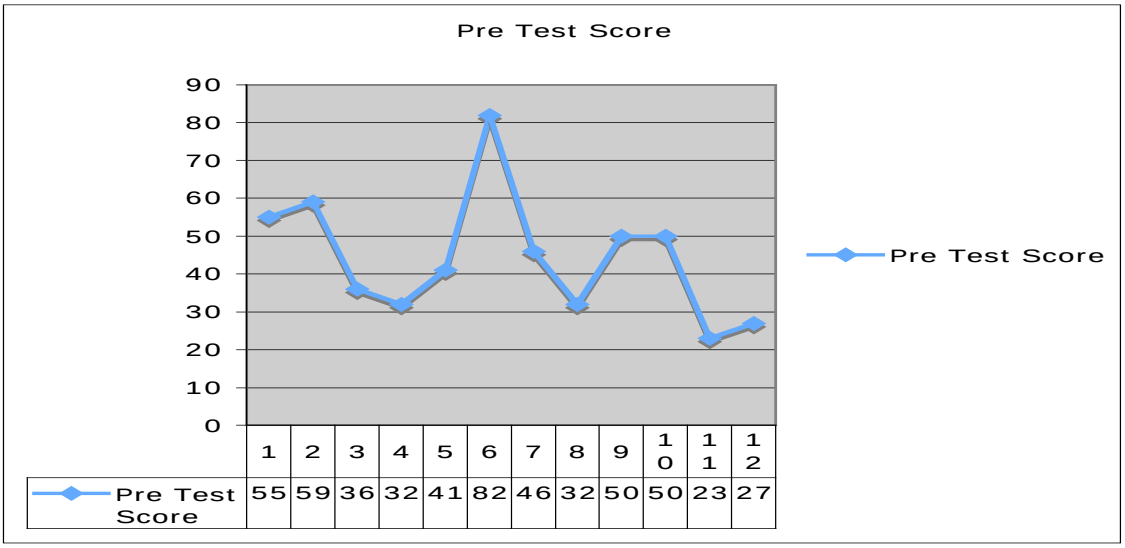


Figure 14. Scores from the 8th grade student Pre-test in Classroom B.

Students in Classroom B were administered a pretest in social studies to measure their reading ability in regards to geographic literacy and visual analysis. The pre-test document contained all the necessary information needed to answer Questions and successfully complete the exam. Charts, graphs, and maps were provided within the document. Students were responsible for using the information provided by the visuals to answer Questions correctly. One out of the twelve students within the study group received a passing score of 82%. Eleven out of twelve students scored a 59% or lower. The lowest score was 23%.

After analyzing the pre-test, the data shows that students lack the skills needed to read charts and interpret data. Basic skills such as comparing ocean depths and altitudes, identifying

capital cities, estimating distances between cities, and following travel routes are challenging tasks for this group of students. The second half of the pretest focused on acquiring data from timelines and interpreting messages from simple political cartoons. One passing grade from a group of twelve eight graders, demonstrates a need to help ELL students build upon data interpretation. Since prior/background knowledge was not a significant factor in this pretest, students need to be taught how to approach graphic literacy. They will need to learn how to use provided materials to extract information necessary for assignment completion. Modeled, as well as guided practice in the before mentioned areas will increase student achievement in future tasks involving map skills and visual interpretation.

Classroom C

The data in Figure 15 shows 8th grade students' during 8th period response to a muliple intellegiences test administered at the beginning of the intervention. The test was administered during the class time to 28 students.

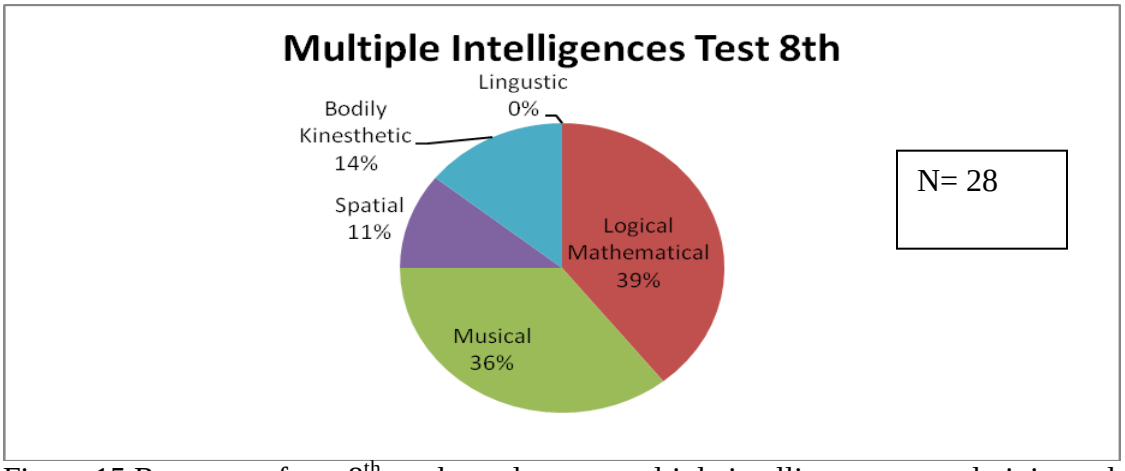


Figure 15 Responses from 8th grade students to multiple intelligences test administered at the beginning of the intervention.

This test represents data reflecting the modality of 8th grade students in 8th period in various multiple intelligence groups. In responding to the test, most students indicated they were

either logical and mathematical, or musical. About 25% of the students said they preferred either bodily kinesthetic or spatial. No student chose linguistic.

The data in Figure 16 shows 8th grade students' during 9th period response to a muliple intellegiences test administered at the beginning of the intervention. The test was administered during the class time to 29 students.

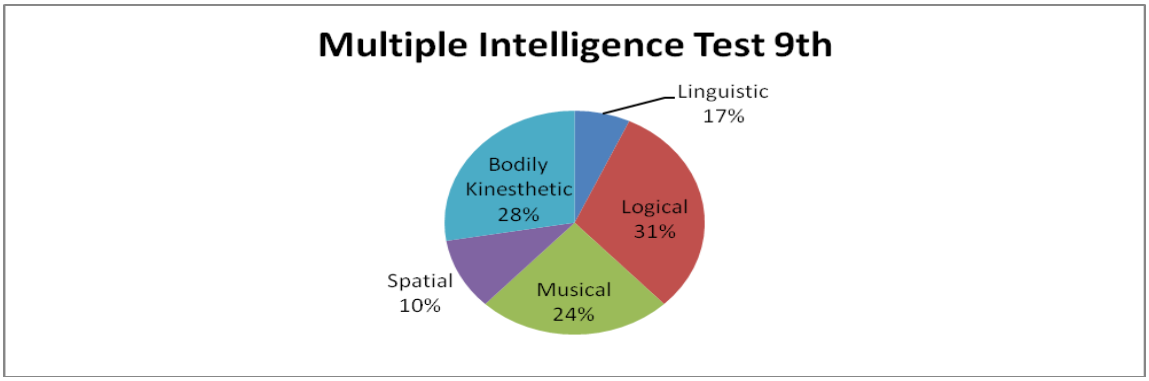
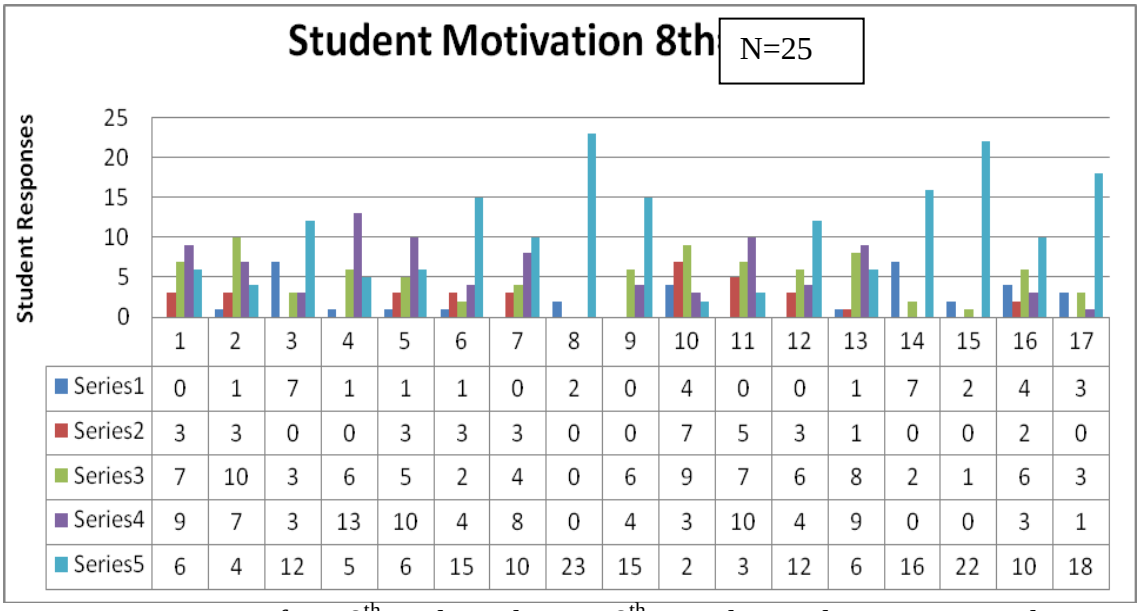


Figure 16 Responses from 8th grade students to multiple intelligences test administered at the beginning of the intervention.

This test represents data reflecting the modality of 8th grade students in 9th period in various multiple intelligence groups. In responding to the test, similar numbers of students indicated they were logical and mathematical, bodily kinesthetic, or musical, with the first two categories being the most popular. Slightly fewer students said they preferred either spatial or linguistic.

The data in Figure 17 shows 8th grade students' during 8th period response to a student motivational survey administered at the beginning of the intervention. The test was administered during the class time to 25 students.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Series1	0	1	7	1	1	1	0	2	0	4	0	0	1	7	2	4	3
Series2	3	3	0	0	3	3	3	0	0	7	5	3	1	0	0	2	0
Series3	7	10	3	6	5	2	4	0	6	9	7	6	8	2	1	6	3
Series4	9	7	3	13	10	4	8	0	4	3	10	4	9	0	0	3	1
Series5	6	4	12	5	6	15	10	23	15	2	3	12	6	16	22	10	18

Figure 17 Responses from 8th grade students in 8th period to student motivational survey administered at the beginning of the intervention.

This survey assessed students on their motivation and study habits. Students rated each statement on a scale from 1-5, with 5 being the highest. Some of the Questions assessed on this survey dealt with student organization, study habits, academic behavior, and work potential.

Questions 1, 2, 4, and 7 assessed students' on organizational and study habits skills in school. Question number 1 nine students rated a 4 that they were well organized. Question 2 ten students rated a 3 for having good work habits and study habits. Question 4 thirteen students rated a 4 they working up to their potential. Question 7 ten students rated 5 that they put a lot of thought and effort into their work. The majority of the twenty five students that evaluated themselves on organization and study habit skills ranked themselves about a 4.

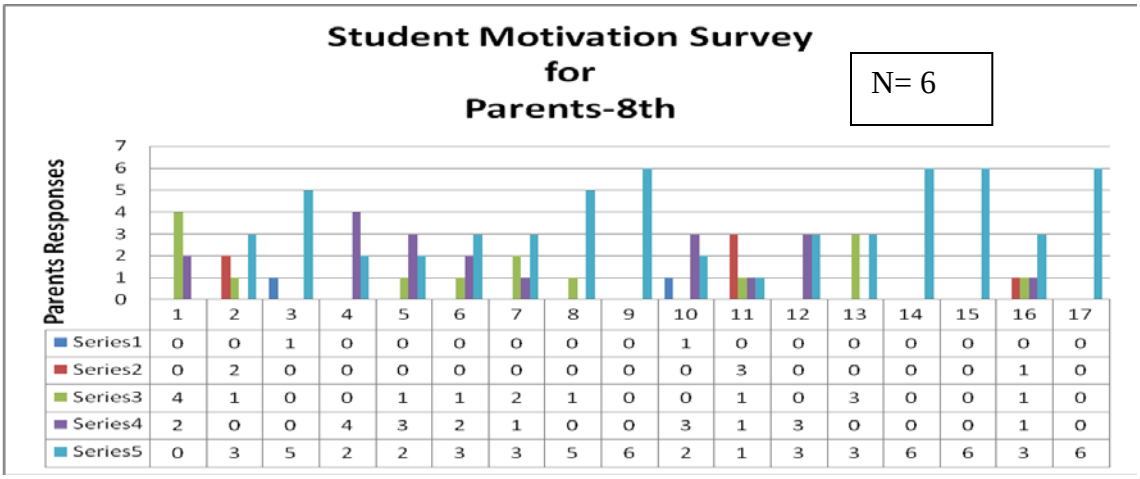
Questions 3, 8, 14, and 15 focused on students' behavior with expulsion regarding school or behavior. Question 3 twelve students rated a 5 for never having a violent outburst or fighting a school. Question 8 twenty three students rated a 5 for never repeating a grade level. Question 14 sixteen students rated a 5 for having never been suspended. Question 15 twenty two students

rated a 5 for never been expelled from school. Students' have not been expelled for their behavior and rated themselves a 5.

Questions 10, 11, 12, and 13 focused on students school involvement. Question 10 nine students rated a 3 for feeling refreshed and ready to begin school. Question 11 ten students rated a 4 for rarely complaining about school. Question 12 twelve students rated a 5 for work completion when he or she favors or does not favor the educator. Question 13 nine students rated a 4 for having a positive attitude and belief of school. Their responses averaged about a 4 in regards to their school involvement.

Question 5 ten students rated a 4 for not having other students distract them from doing schoolwork or homework. Question 6 fifteen students rated a 5 for always doing homework without parents or teachers reminding them. Question 9 fifteen students rated a 5 for wanting to be seen as school smart than street smart. Question 16 ten students rated a 5 for having an A and B in all their classes on their report card. Question 17 eighteen students rated a 5 for not having to attend mandatory summer school for failing grades.

The data in Figure 18 shows 8th grade parents' response during 8th period response to a student motivational survey administered at the beginning of the intervention. The test was administered to the parents at home and 6 parents' responded to intervention.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Series1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Series2	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0
Series3	4	1	0	0	1	1	2	1	0	0	1	0	3	0	0	1	0
Series4	2	0	0	4	3	2	1	0	0	3	1	3	0	0	0	1	0
Series5	0	3	5	2	2	3	3	5	6	2	1	3	3	6	6	3	6

Figure 18 Responses from 8th grade parents' response during 8th period to student motivational survey administered at the beginning of the intervention.

This survey assessed parents on how they felt their child viewed their child's motivation in school. Parents rated each statement on a scale of 1-5, with 5 being the highest. Some of the Questions assessed on this survey dealt with student organization, study habits, academic behavior, and work potential.

Questions 1, 2, 4, and 7 focused on their child's organizational and study habit skills. Question 1 four parents rated a 3 for if their child is organized. Question 2 three parents rated a 5 for their child's good work habits and study habits. Question 4 four parents rated a 4 for their child is working up to their potential. Question 7 three parents rated a 5 for their child putting a lot of thought and effort into their work. These Questions assessed parents on their child's organizational and study habit skills the majority ranked a 4.

Questions 3, 8, 14, and 15 deal with parents assessing their child's behavior with expulsion regarding school or behavior. Question 3 five parents rated a 5 documenting that their child has never had a violent outburst or gotten into a fight. Question 8 five parents rated a 5 as regards to if their child repeated a grade level. Question 14 and 15 six parents rated a 5 if their

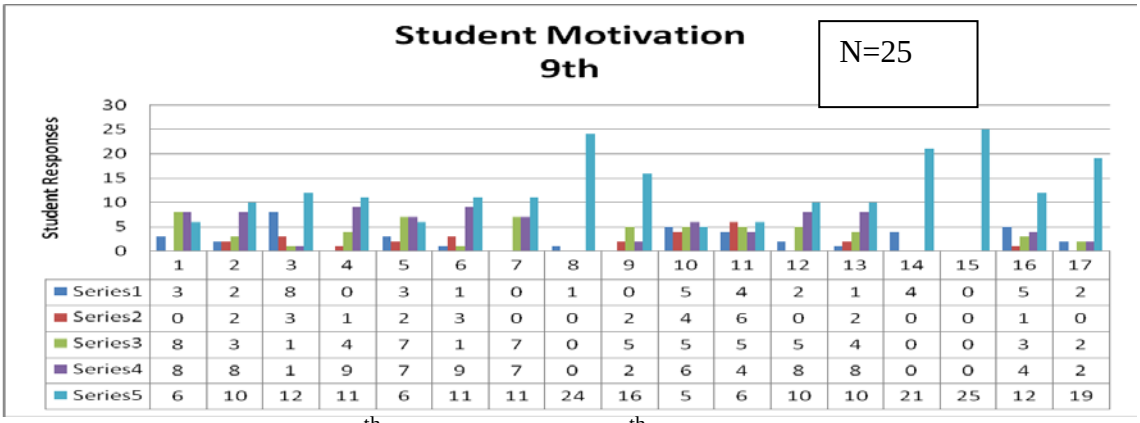
child has ever been suspended or expelled. When assessing their child's behavior with expulsion in regards to their behavior, parents ranked a 5.

Questions 10, 11, 12, and 13 deals with students school involvement. Question 10 three parents rated a 4 regarding if their child was prepared and ready for school. Question 11 three parents rated a 2 about if their child complains about school. Question 12 three parents rated a 4 and 5 for work completion when he or she favors or does not favor the educator. Question 13 three parents rated a 3 and 5 that their child has a positive and negative attitude about school. Parents assessed their child's school involvement and the majority ranked a 4.

Question 5 three parents rated a 4 that their child is not distracted from doing their schoolwork. Question 6 three parents rated a 5 stating that their child does not need to be reminded to complete their assignments. Question 9 six parents rated a 5 that they would rather their child be seen as school smart rather than street smart. Question 16 three parents rated a 5 that their child received an A or B in all of their classes. Question 17 six parents rated a 5 that their child never attended mandatory summer school for failing grades.

The data in Figure 19 shows 8th grade students' during 9th period response to a student motivational survey administered at the beginning of the intervention. The test was administered during the class time to 25 students.

This survey assessed students on their motivation and study habits. Students rated each statement on a scale from 1-5, with 5 being the highest. Some of the Questions assessed on this survey dealt with student organization, study habits, academic behavior, and work potential.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Series1	3	2	8	0	3	1	0	1	0	5	4	2	1	4	0	5	2
Series2	0	2	3	1	2	3	0	0	2	4	6	0	2	0	0	1	0
Series3	8	3	1	4	7	1	7	0	5	5	5	5	4	0	0	3	2
Series4	8	8	1	9	7	9	7	0	2	6	4	8	8	0	0	4	2
Series5	6	10	12	11	6	11	11	24	16	5	6	10	10	21	25	12	19

Figure 19 Responses from 8th grade students in 9th period to student motivational survey administered at the beginning of the intervention.

Questions 1, 2, 4, and 7 focused on student organizational and study habit skills. Question 1 eight students rated a 3 and 4 that they were very well organized. Question 2 ten students rated a 5 that they possessed good work and study habits. Question 4 eleven students rated a 5 that they work up to his or her potential. Question 7 eleven students rated a 5 that they put a lot of thought and effort into his or her work. The majority of the twenty five students ranked a 5 on organizational and study habit skills.

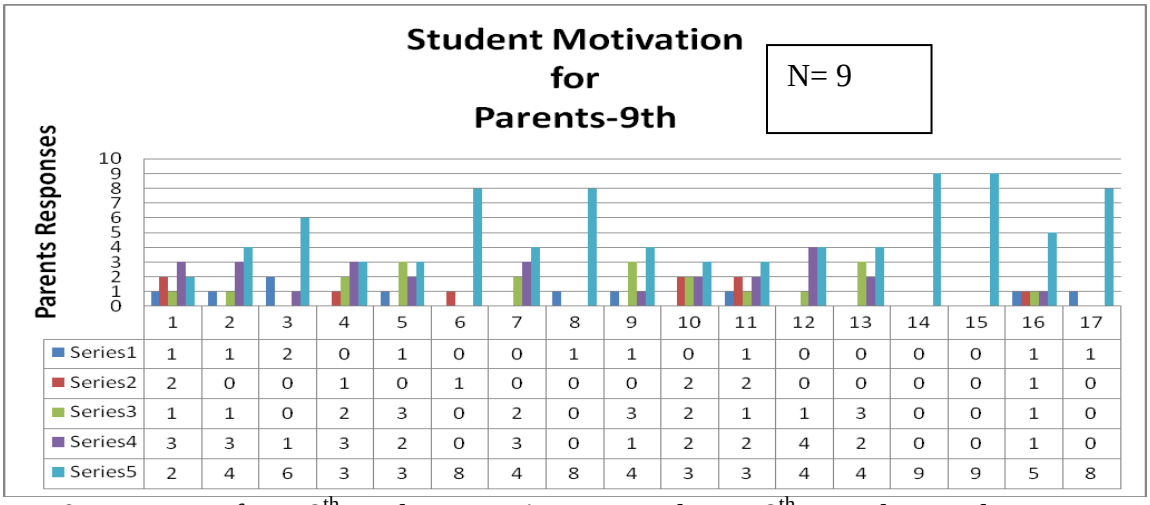
Questions 3, 8, 14, and 15 addressed students' behavior with expulsion regarding school or behavior. Question 3 twelve students rated a 5 that they never had a violent outburst or gotten into a fight at school. Question 8 twenty four students rated a 5 that they never repeated a grade in middle school. Question 14 twenty one students rated a 5 that they never have been suspended. Question 15 twenty five students rated a 5 that they have never been expelled. The majority of students' ranked a 5 in regards to their behavior with expulsion regarding school or behavior.

Questions 10, 11, 12, and 13 focused on students' school involvement. Question 10 six students rated a 4 that they feel prepared and ready for school. Question 11 six students rated a 2 and 5 that they rarely complain about school. Question 12 ten students rated a 5 for work

completion when he or she favors or does not favor the educator. Question 13 ten students rated a 5 for positive attitude and beliefs about school. The majority of students ranked themselves a 4 for being involved in various school activities.

Question 5 seven students rated a 3 and 4 that they do not let their friends distract them from completion of assignments. Question 6 eleven students rated a 5 that they do not need to be reminded to complete their assignments. Question 9 sixteen students rated a 5 that they would rather be seen as school smart than street smart. Question 16 twelve students rated a 5 that they received A's and B's in all their classes. Question 17 nineteen students rated a 5 that they never attended mandatory summer school for failing grades.

The data in Figure 20 shows 8th grade parents' response during 9th period response to a student motivational survey administered at the beginning of the intervention. The test was administered to the parents at home and 9 parents' responded to intervention.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Series1	1	1	2	0	1	0	0	1	1	0	1	0	0	0	0	1	1
Series2	2	0	0	1	0	1	0	0	0	2	2	0	0	0	0	1	0
Series3	1	1	0	2	3	0	2	0	3	2	1	1	3	0	0	1	0
Series4	3	3	1	3	2	0	3	0	1	2	2	4	2	0	0	1	0
Series5	2	4	6	3	3	8	4	8	4	3	3	4	4	9	9	5	8

Figure 20 Responses from 8th grade parents' response during 8th period to student motivational survey administered at the beginning of the intervention.

This survey assessed parents on how they felt their child viewed their child's motivation in school. Parents rated each statement on a scale of 1-5, with 5 being the highest. Some of the

Questions assessed on this survey dealt with student organization, study habits, academic behavior, and work potential.

Questions 1, 2, 4, and 7 assessed their child on organizational and study habit skills. Question 1 three parents rated a 4 for if their child is organized. Question 2 four parents rated a 5 for their child's good work habits and study habits. Question 4 three parents rated a 3 and 4 for their child is working up to their potential. Question 7 four parents rated a 5 for their child putting a lot of thought and effort into their work. The majority of parents ranked a 4 regarding their child's organizational and study habits.

Questions 3, 8, 14, and 15 deals with parents assessing student's behavior with expulsion regarding school or behavior. Question 3 six parents rated a 5 documenting that their child has never had a violent outburst or gotten into a fight. Question 8 eight parents rated a 5 as regards to if their child repeated a grade level. Question 14 and 15 nine parents rated a 5 if their child has ever been suspended or expelled. The majority of parents ranked a 5 for their child not exhibiting any violent behavior in school.

Questions 10, 11, 12, and 13 parents focused on how their child is involved in school. Question 10 three parents rated a 5 regarding if their child was prepared and ready for school. Question 11 three parents rated a five about if their child complains about school. Question 12 four parents rated a 4 and 5 for work completion when he or she favors or does not favor the educator. Question 13 four parents rated a 5 that their child has a positive and negative attitude about school. Six parents ranked a 5 for their child being involved in school.

Question 5 three parents rated a 3 and 5 that their child is not distracted from doing their schoolwork. Question 6 eight parents rated a 5 stating that their child does not need to be reminded to complete their assignments. Question 9 four parents rated a 5 that they would rather

their child be seen as school smart rather than street smart. Question 16 five parents rated a 5 that their child received an A or B in all of their classes. Question 17 eight parents rated a 5 that their child never attended mandatory summer school for failing grades.

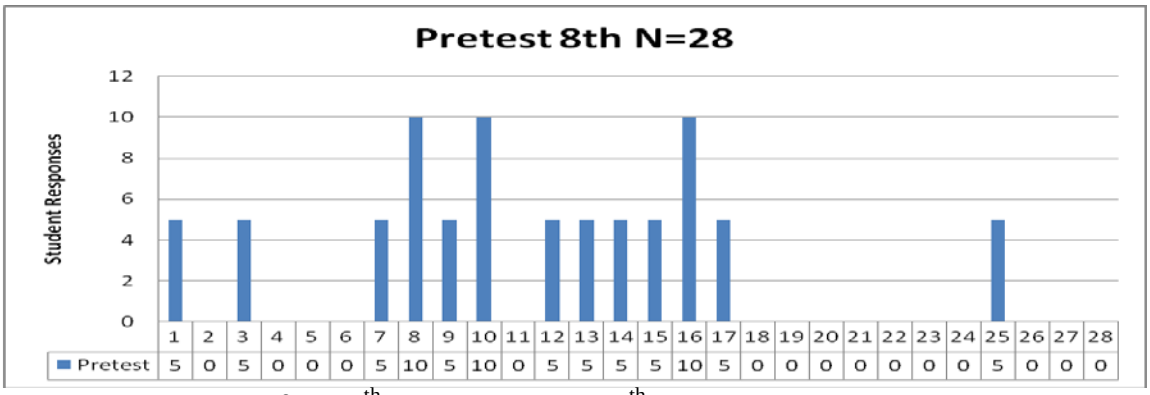


Figure 21 Responses from 8th grade students in 8th period to Pretest administered at the beginning of the intervention.

Students in Classroom C were administered a pretest in Science to measure their concepts of property of matter and energy and the interaction between them. The pre-test included vocabulary assessment, matching, true and false statements, and fill-in-the blank. Students will responsible for answering and completing the pre-test to assess their prior knowledge. When analyzing the pre-test, fifteen students out of twenty eight students received a 0%, ten students out of twenty eight received 5%, and three out of twenty eight received a 10%. The majority of the students were not able to successful complete the exam.

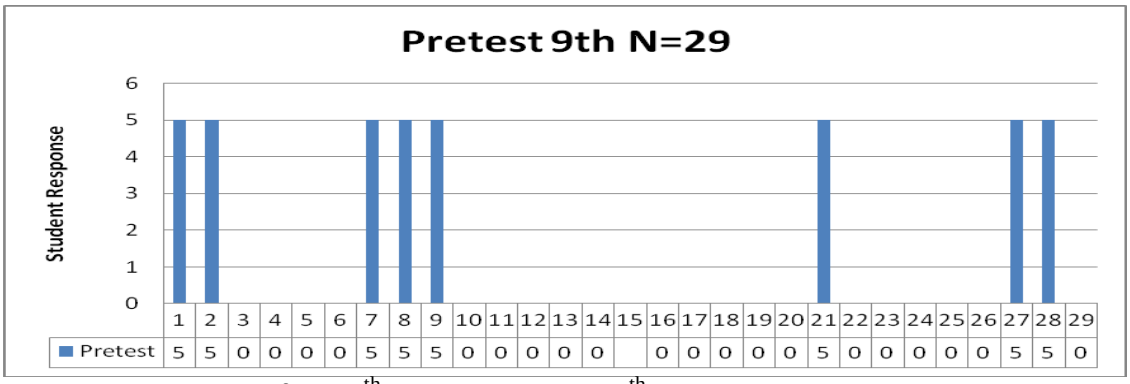


Figure 22 Responses from 8th grade students in 8th period to Pretest administered at the beginning of the intervention.

When analyzing the second group, twenty students received a 0%, eight students received a 5%, and one student was not available to take the test. The majority of the students were not able to successful master the pre-assessment.

After analyzing the pre-test, the data shows that students lack the skills needed to apply the properties of matter and the interaction between them. Students were not able to identify the various accepted practices of science. These skills still need to become developed and through the differentiated activities students will be able to master the concepts addressed in the unit. Students will use materials and hands on experiments to help them grasp the concepts to master completion of the unit.

Probable Causes:

Lumsden (1997) suggests that a teacher's expectations play a crucial role on student performance. Higher expectations tend to increase the level of student performance. However, lower expectations allow students to work at a lower level even if they are capable of producing higher quality material. A teacher's attitude and expectations determine how hard a student strives to work during a specific academic year.

Ornstein and Levine (1990) suggest another element of motivating students involves the teacher's expectations and perception of the student's ability to learn. Low teacher expectations can lead to a student's low performance. If the teacher perceives the student as an inadequate learner, the student in turn lives up to that expectation; this fosters a self-fulfilling prophecy. Other factors impacting motivation include a lack of success in earlier school experiences and negative peer pressure. The lack of success leads to the student's belief that they are not a capable learner and have no chance to be successful in school. High achieving students may be subject to negative peer pressure because they have accepted school norms.

He proposes academic deficiencies of underclass and lower level working class students can be categorized into two groups; one group relates to the teacher and the other group is not teacher related. Teachers may find it tough to motivate students due to differences in backgrounds of teacher and student. Teachers may also have difficulty communicating with minority students.

(Motivating the Unmotivated Student, 2009) this article suggests a lack of student motivation is due to a low perception of self-image. Students avoid activities they believe are beyond their ability; consequently, students are protecting their low self-image so it does not plummet further. Low expectations are also a consideration in low motivation. Students reflect on their teacher's beliefs about their own abilities, and live up or down to those expectations.

Margolis and McCabe (2004) emphasize the importance of determining the proper level to instruct students. Unreasonable levels of expectations for some students produce negative effects. Frustration and anxiety may develop, which will undermine a student's overall motivation as well as progress. Struggling readers need added attention in order to monitor their learning progress. Each child needs to have clear and attainable goals. Students also need to understand the teacher's expectations in order to succeed. When students are unmotivated and lack the desire to read, they begin to view academics as a time consuming chore. They begin to avoid assignments and acquire an attitude of avoidance (Margolis & McCabe, 2004).

According to Greenwood and McCabe (2008) teachers must find a balance between curriculum instruction and increasing a student's will to read. Motivation must be present in order to increase and sustain a desire to read. "Motivating some students to learn can be a perplexing undertaking that some teachers may find overwhelming. Due to a lack of apparent and persistent student motivation, students and their teachers may become frustrated with

themselves and with each other" (Greenwood & McCabe, 2008, 14). As levels of student frustration increase, the levels of motivation continue to decrease.

Differentiation is not only creating a classroom built on differentiated tasks, but also creates an emotional learning environment. Woolfolk, as cited in Thompson and Wheeler (2008) consider the diversity in social class, race, ethnicity, and gender. Students need to believe that their unique differences are accepted and respected. If a child does not feel appreciated for their differences, their motivational level in the classroom will change, which will impact their success. Woolfolk suggests when integrating diversity, the instructor needs to develop a content that incorporates examples from a variety of culture groups. These examples help the child understand the content and relate it to their diverse background. Reducing prejudice and identifying how students' racial attitudes can affect their learning will impact a classroom setting. Teachers need to address the school's culture and how their interaction as diverse learners influences a school's community. Teachers need to demonstrate the norm of a classroom setting and how multiple learning styles are accepted in a classroom.

In classrooms where English language learners (ELLs) are present, motivation and an understanding of why second language acquisition is necessary to the student is crucial for learning to occur. Students who do not recognize a need to learn or transfer information into a second language are not motivated to succeed. Educators face an added challenge in teaching and the responsibility of expanding the learning environment to include all levels of ELLs (Ngeow, 1998).

According to Lassmann (2006) students will become unwilling to think for themselves if they become compliant. This decreases motivation and learning, which leads to boredom and dependence. Students become uninvolved in the classroom and rely on memorization and

regurgitation of facts. Students are not going to become active learners and will not be engaged in a classroom setting. When students are bored in a classroom setting, students will become unmotivated and comprehension of the lesson becomes diminished.

Educators frequently focus on academic areas which are not yet mastered by the student. Teachers take a negative approach when trying to improve this situation. As teachers, reminding student of their difficulties, with a particular subject, the student begins to withdraw and avoid the content matter. As the focus continues to remain on a negative aspect, the student is unable to progress to a higher level of learning acquisition. Research shows that focusing on a student's deficit slows the learning process as well as destroys a student's motivation (Newman & Others, 1996).

A case study done by Hootstein (1994) revealed many students perceive schoolwork as boring. In a survey of 25,000 eighth grade students, about half declare they are bored in school, from half to most of the time. Students say, "…they see little connection between school learning and their lives outside the classroom" (Hoostein, 1994, 2). Many students simply occupy space in the classroom in a passive manner; they are not actively involved in the learning process.

Anderson (2007) discusses how educators still Question whether differentiated instruction benefits students when taking high-stakes tests. Some of the problems that arise include standardized testing is not differentiated and students will not benefit from learning by differentiated instruction. Standardized testing is biased and many students have not been selected to receive aid during testing. Anderson also stresses that differentiation might not be the answer when trying to access students accountability and performance of the student.

In a case study done by Bondy and Ross (2008) they suggest “Studies have amply demonstrated a link between achievement and academic engagement” (Bondy & Ross, 2008, 54). When students are disengaged the quality of the lesson is meaningless. The students’ resulting misbehavior demonstrates an underlying resistance. “What is missing is not skill in lesson planning, but a teacher stance that communicates both warmth and a nonnegotiable demand for student effort and mutual respect” (Bondy & Ross, 2008, 54). This stance is often referred to as the “warm demander” (Bondy & Ross, 2008).

Ginsberg (2005) addresses cultural diversity, and its impact on how motivation and differentiation influence a classrooms’ behavior. Students that are diverse learners need to be included in the classroom setting. Students that are from diverse backgrounds might not transition easily. Teachers who do not accommodate students from diverse backgrounds may experience a lack of motivation in the classroom. The challenge arises when an educator is not familiar with the student’s background, which creates tension in the classroom. These false stereo-type images need to become addressed and diminished so that the instructor creates a friendly learning environment.

Singh (1998) suggests that gender issues effect the classroom environment. Students enter classrooms with preconceived ideas of gender roles. Each student comes from a diverse background which at times can create tension and have negative effects in a classroom Preconceived ideas of gender roles may at times be reinforced when students encounter books that portray inaccurate gender stereotypes.

Another ongoing challenge that Ginsberg (2005) shares is that educators need to respect diverse values while working with diverse learners. Students need to become comfortable in their learning environment. When an instructor does not build a rapport with their students, they

will not become engaged and motivated to learn. Diversity needs to become recognized and acknowledged in the classroom so that diverse learners feel accepted.

Ginsberg (2005) focuses on how students may adopt an attitude of hopelessness, not feeling valued, and a lack of acceptance. If the instructor does not address these issues in the beginning, then students may refuse assistance and become morally compelled into dropping out. These difficult situations create lack of motivation, which will impact student learning.

Haselhuhn, Al-Mabuk, Gabriele, Groen, & Galloway (2007) imply that the decline in student motivation may be associated with changes in their achievement goals. These changes impact adolescents as they are transitioning. Their general environment becomes impacted and changes from only academic to becoming social. Students' psychological and physiological changes impact their motivation, which changes their educational environment. Adolescents are changing physically and emotionally. Instructors need to help students' transition, so they can become academically successful, when going through these changes. Haselhuhn et al. (2007) stress the importance of how learning goals help students become focused when going through these changes.

In an article written by Arnold (1980) a critical concept is identified. Many adults view adolescents simply as "…victims of a developmental stage: for example hormones with feet" (Arnold, 1980, 4). This attitude belittles students', demeans their opinions, and affects their personalities. As a result, students' self-esteem decreases because adults encourage lower expectations. Frequently, a student's sense of individuality is ridiculed and their difference of opinion is viewed as being unimportant to teachers and adults in general. Therefore, a student's motivation to participate in activities drops and the overall level of confidence begins to plummet.

Another author stresses that motivation is being lacked because of having failure syndrome tendencies. Brophy (1998) suggests that students who lack in motivation tend to have difficulty with confidence. Instructors need to recondition them or retrain them into gaining confidence. Students might lack in self-confidence in their academic abilities, which makes them experience difficulties when trying to perform in the classroom. When students experience difficulties, teachers need to find alternative methods or strategies to help build students confidence. Ames (as cited in Brophy, 1998 suggests that instructors need to teach students how to solve problems using problem-solving strategies. Brophy (1998) also found that teachers tend to provide these students support and encouragement to gradually improve their academic progress. Instructors need to offer clear guidance to these students so they can work consistently and efficiently to complete their assignments. These implementations, given by instructors, offer support to the child and can increase their motivation in the classroom.

When teachers become frustrated, student motivation is lacking in the classroom, both the instructor and student become frustrated according to Greenwood & McCabe (2008). Teachers then begin to develop a false image that their students are lazy, unwilling, and unable to learn the content. This can lead to a classroom that is not productive. Teachers tend to give up and struggling students do not benefit. As May & Rizzardi (2002) stated, “If students feel they cannot be successful, the result will typically be what is termed ‘work avoidance’” (May & Rizzardi, 2002, 331). Students tend to avoid the task and fall behind in the curriculum. Instructors need to consistently monitor the success of students, or they will not achieve success in the classroom.

Katz & Assor (2007) also address how differentiated activities such as giving a child choice in the completion of the activity might be un-motivational. Teachers might offer the child

choice in the assignment, but research has found that choice affects the child's personal traits, behavior, and environment. For choice to become beneficial, it has to be provided in a manner where all three factors are met. Choices might become overwhelming for a child and some children need specific guidance. Choices may confuse the child and not promote motivation.

Kelly (2007) stresses the importance of how self-efficacy affects individuals with low sense of competency. If students feel they are unsuccessful, they will develop low moral about themselves. These low levels of self-efficacy are associated with success in the classroom, test anxiety, completion of classroom assignments, and academic behavior. Research has documented that low achieving students are more passive when answering Questions in a classroom setting. Kelly also stresses how classroom teachers that do not incorporate classroom discussions, multiple responses to Questions, or ask high level Questions may result in a classroom that has limitations. Kelly also stresses the importance of having a classroom that does not allow students to collaborate with one another impacts the performance of their social development and results in un-motivated students.

Manzo (2008) also suggests that students need to have mixture in the classroom such as: having discussions, relevance, and responsiveness to guide students into developing life skills so that they do not drop out. These strategies can become implemented so that students can build a foundation of success. Classrooms that do not build on these methods result in an environment that is un-motivated and not accepting of differentiated activities. Students become isolated and not responsive when engaged. Addressing these issues at an early onset will prevent later troubles. Some of the issues Manzo (2008) mentions are: students that are constantly not motivate to come to class on time, poor grades, and absent offenders are constantly unsuccessful. These issues will impact their learning environment and produce an unsuccessful classroom

environment. Evidence shows when students are in a high-poverty environment, they do not value education and problems arise; however, when addressing these issues early on, teachers can implement interventions to allow students to become successful in the future.

Gorski (2007) suggests classism has an acute impact on motivation. High poverty schools often lack resources such as experienced teachers, adequate classroom materials, and full access to the internet and computers. Before the need to learn can be satisfied, children living in poverty need to have more basic needs met. These needs include food, shelter, safety, and healthcare. Students that do not have these needs met are faced with hopelessness. These circumstances and situations lead to a lack of trust; therefore, students do not trust educators and are reluctant to engage in the learning process.

SOLUTION STRATEGY

Literature Review

Motivation and differentiation are issues faced by many teachers in the classroom. Many students need differentiated instruction and motivation when they are engaged in a classroom setting. Studies suggest that students' motivation will improve their attitude, self-efficacy, and academics. Instructors need to apply a variety of teaching methods in the classroom to engage students actively to promote successful achievement in higher levels of learning.

In a case study done by Hootstein (1994) it was suggested that there is a need to learn new strategies when incorporating motivation into the instructional process. Some of his recommendations include having simulations, role-play, videos, review games, and a sense of control to be motivated.

Small's (2000) article highlights Motivational Design. She suggests that increased motivation is achieved through instructional design. Teachers who create lessons designed to motivate students observe more effort on the part of students. Effort is a measurable motivational outcome (Small, 2000). In order for effort to occur, two things must be met. Students must value the task that they are completing and they must posses**s,** the appropriate level of confidence necessary to succeed in the activity.

Davis (1999) also suggests that creating an interest in subject matter promotes motivation for students. She suggests giving students frequent positive feedback, assigning leveled tasks,

creating an atmosphere that is positive, and helping students believe they are valued members in their community, will increase their motivation in the classroom. Giving positive feedback allows students reconfirmation that they are acknowledged and involved in the classroom. Being enthusiastic demonstrates to students that the instructor is confident and excited about the subject.

Author Rui-ping (2008) suggested using motivational comments could motivate students. Positive comments may improve their task. Using specific instruction may increase their motivation. Creating a classroom that enriches them intrinsically may create acceptance in the classroom, which will improve their progress. In order to motivate students and increase students' involvement in classroom activities, teachers should build a multi-level comment model (Rui-ping, 2008). Creating a classroom that encompasses positive motivation will support students academically and intrinsically.

Hootstien (1994) provides us with documentation on how to motivate students who are unmotivated. He offers a variety of motivating strategies that are used by teachers. These methods include: providing realistic activities in which students can participate, provide social and kinesthetic activities, students should have choice, and connect the activity to students' experiences and interests. Hoostein reported that these strategies are implemented by teachers to increase excitement in the learning process.

A study by Manzo (2008) on motivating students at the middle school level suggests that establishing a warm environment and building relationships is instrumental to motivating students. Students are greeted warmly by administrators and teachers and reminded of expectations. The students realize the teachers and administrators care about them because they

are told so regularly. This sense of a warm, caring environment carries over into all grades and areas of the building, as is evidenced by the ease with which the staff and students interact.

Manzo's study also implies the teachers know how far they may push their students to keep them focused on the lesson and when to pull back to avoid student frustration. This article suggests keeping students engaged and having them create projects relevant to the lesson, which encourages student involvement.

An article by Gallicchio (1993) indicates the importance of the teacher's effort to motivate students of average ability. This article also suggests students at all levels benefit from using challenging curriculum, and all students should be privy to knowledge and techniques of higher level learning. "Most students are validated by being offered what they perceive as sophisticated curriculum" (Gallicchio, 1993, 1).

Newman and Others (1996) stresses the need for teaching students the importance of believing in themselves. Students need to be guided into focusing on the strengths that they possess. Careful attention to each student's abilities will foster a positive approach to learning. Students will develop a "Can Do" attitude toward their education (Newman & Others, 1996).

In an article written by Ngeow (1998), second language learners must recognize the importance of learning a new language. Once the student understands the relevance of learning the presented material, he or she will increase the motivation necessary to increase learning. A motivated student will actively take advantage of numerous learning opportunities.

Students who do not recognize a need to learn or transfer information into a second language are not motivated to succeed. This article suggests that students as well as teachers need to work together in order to increase motivation, which is multi-tiered. "Learners should recognize a real need to accomplish learning goals that are relevant and holistic (rather than task-

specific). This prepares them for the complexities of real-world tasks that require them to use language skills and knowledge that have to be continually transferred" (Ngeow, 1998, 3).

Another article provided intrinsic motivation with numerous strategies. Theroux (1994b) offers multiple suggestions on how to implement motivational techniques. Theroux's data illustrates the importance of incorporating various approaches to increase motivation within the classroom. She suggested higher expectations would intellectually increase students' desire to succeed academically. Providing students with higher expectations may challenge them to set and work toward learning goals. These learning goals can increase their self-efficacy. This increased confidence may help them take ownership of the choices they make. When students take ownership, students may apply these decision-making skills throughout their life.

Ornstein and Levine (1990) spoke to culture and teacher expectations. Ornstein indicates the importance of accepting the culture and lifestyle of the student as well as establishing high expectations. Teachers need to have high expectations because their expectations influence their students' performance.

In a case study done by Bondy and Ross (2008), they suggested that when the teacher takes a position that demands student effort and establishes a climate of mutual respect and warmth, student motivation is increased. They refer to this stance as the "warm demander." The warm demander has high expectations for his or her students and her or she will communicate with their students in a positive manner. The warm demander style of teaching conveys personal warmth to his or her students. The warm demander also learns about his or her students' culture.

Gallicchio (1993) also implies that student motivation is increased by developing relationships with students. The technique of the "kid log" is mentioned. This log lists the students' names, and then the teacher lists a unique fact or interest about each student.

Theroux's article also suggests that establishing a secure learning environment increases motivation. This environment provides students with a comfortable setting where they can take risks without feeling powerless. This secure environment provides students with an opportunity to take risks without any negative impact. This allows students to learn from their mistakes in a positive secure environment.

Her article suggests using open-ended activities. This allows students to create projects at their own learning level. It offers students the choice of assignment to complete. It develops their creativity and allows students to create an original product. According to Forehand (2005), this allows students to apply synthesis and analysis to their work. Students gain greater depth of knowledge on the given assignment.

One of her strategies suggests making students understand the relevance of an activity. By explaining the relevance of the lessons, students can relate them to their daily lives and build upon them academically or personally. These strategies help students see how a lesson may become useful in their present and future endeavors (Theroux, 1994a). Glasser (as cited in McCluskey & Parish, 1996**)** proposes that teachers should not have students perform useless or meaningless tasks. Teachers should explain the relevance of what they are teaching to their students and how and when the student can use it.

Zinn (2008) emphasizes the importance of connecting the subjects or topic to the students' lives, which promotes student success. When the instructor creates meaningful and engaging classrooms, students will become more motivated since they may relate to the topic on a personal level. Allowing students to have choice, relevance, engagement, active learning, and camaraderie builds entertainment and excitement within a classroom. Students will have self-expression and connect assignments that apply with their daily tasks. Assignments need to be

engaging, so that students stay focused and involved. Social aspect is important so that students feel non-threatened to express themselves and feel a sense of belonging.

Glasser (as cited in McCluskey & Parish, 1996**)** contends in order to motivate unmotivated students, teachers should teach things the students are interested in or want to learn about. This means teachers must broaden their focus beyond the required and teacher-desired curriculum.

Desrochers (2000) suggests creating lessons that are designed to motivate all students. Once a student's interest is identified, it can be used to increase the desire to learn. "Motivation is piqued by working on projects that are relevant to them, elicit their curiosity, and involve their choice" (Desrochers, 2000). Eagerness to learn will lead a student to success and, with the proper amount of teacher feedback, a student's motivational level will increase. A positive learning environment will not only increase a student's motivation, it may also reduce the number of disciplinary problems which arise from boredom. As a teacher communicates with students and makes them believe that they can succeed, the positive learning process begins to increase significantly.

Glasser (as cited in McCluskey & Parish, 1996**)** asserts that instructors should avoid punitive consequences as a means of motivating students to do their work. Glasser maintains using these strategies will motivate students intrinsically and increase the likelihood of students being highly motivated to complete other tasks.

Some of the Glasser's conditions for motivating students to complete quality work include helping students get to know you. Teachers should seize the opportunity to share things about themselves with their students. Next teachers should provide tip sheets that serve as a guidelines for the project or assignment. This helps the student understand the expectations,

requirements, and evaluation criteria. Teachers should also explain the usefulness of the assignment and how students can use what they have learned in the future (Glasser as cited in McCluskey & Parish 1996).

Another article by Beckman (2000) mentioned the importance of helping students learn the steps to become more successful in their educational growth. A teacher may enhance the learning abilities by deliberately teaching cognitive and metaphysical strategies. Teaching students how to visualize, associate, and Question gives them the knowledge of how to approach learning. Teaching students skills to problem solve increases their knowledge retention. Students become more responsible for their own learning and they begin to trust their ideas, which will allow them to gain confidence in themselves.

Theroux (1994b) addresses how organization is important when motivating a child. When teachers incorporate a variety of organizational strategies, it gives students a variety of choices to employ depending upon their task. Teachers may model these styles for students, so they can personalize them according to their needs.

Another author suggests the importance of creating a learning environment that has physical, intellectual, and emotional aspects. Thompson and Wheeler (2008) suggest that showing an environment that produces sensitivity to diverse families, students, and community creates a supportive learning environment. Students who feel appreciated and nurtured will change the dynamics of a classroom. Instructors who are aware of these needs can create a classroom where students feel safe and free to learn, explore, and create. Narum (as cited in Thompson & Wheeler, 2004) suggests that learning environments need to reflect the school's plan for success. He suggests that this encourages active learning. Thompson and Wheeler suggest that classrooms need to have the necessary arrangements to promote positive learning.

Positive learning can create a whole atmosphere to make students feel engaged and represented. “These classrooms need to bring students and teachers together to discuss content, exchange thoughts, communicate, and debate” (Thompson & Wheeler, 2008, 34). Classrooms that promote this type of active learning can demonstrate higher learning and allow students to be independent thinkers.

Graetz and Goliber (2002) suggest specific requirements that a classroom must obtain, such as: movable seats, tables, a minimum of three walls, and controlled acoustics. When a classroom encompasses these criteria, students realize that they are not just going to be seated and working alone. Active learning is a result and is promoted in the classroom. Another element suggested by Graetz and Goliber is light fixtures, temperature, space, and noise. When students are seated, light may have to be adjusted so that they can work on their projects without frustration. Temperature is another variable that can either cause students to become restless or fatigued. Noise and space are of importance because students need alone time or even time to reflect on their thoughts. All these aspects can create a productive setting in the classroom environment. When students collaboratively learn, teachers will become flexible in their classrooms and allow students to actively participate together (Graetz & Goliber, 2002).

Gardner (as cited in Forehand, 2005) promotes an intellectual learning environment. His environment includes standards, expectations, objectives, learning strategies, and assessment. These implementations need to become recognized and addressed in a classroom. Students are diverse learners and differences among them include differentiating the lesson to their own learning styles. Theroux (2004a) suggests differentiation may be having students grouped by interest with different levels of complexity. Also, varying the level of Questions during large group discussions can allow instructors to have everyone participate. Some of the suggestions

offered are creating tiered assignments, flexible grouping, and acceleration and deceleration of the lesson. These implementations in the classroom offer diverse learners an opportunity to succeed at their own level. It is necessary for the instructor to make assignments leveled, so students can succeed. Instructors may also develop tiered problem solving activities, while others receive instruction, so low-level learners can comprehend the unit and the higher-order thinkers do not become unmotivated. Instructors also need to accelerate the topic once everyone grasps the concept; however, some might need to have the assignments adjusted to a slower pace in order to experience success. Engaging with students and providing tiered assignments allows the instructor to develop the curriculum and adjust the presentation to allow success in the classroom (Theroux, 2004b).

Acharya (2002) suggests that a student's personality and learning style influences how information is acquired and integrated. A teacher can increase the level of learning for all students by identifying which learning styles exist within the classroom. By using learning style inventories, an instructor can help students become aware of their individual learning preferences. Varying the instructional methods will provide a balance of learning for all students.

Differentiation recognizes that students are unique and require different learning styles according to Anderson (2007). She promotes differentiation in the classroom because it allows students to become challenged to make decisions, take responsibility for their learning, and demonstrate what they know. Creating a classroom that engages in differentiation allows students to represent their own unique style, interest, and strengths. Differentiation allows diverse learners to accomplish the assignment according to their ability. Creating a classroom that enriches students by differentiating the tasks allows students to succeed at their own pace.

Using a variety of leveled activities can accommodate differences in the classroom (Anderson, 2007).

All classrooms are learning environments, but some are better than others. Instructors need to establish an environment that enhances students positively and encourages them to accept the values and beliefs of others. Teachers, who embrace an engaging learning environment, respect the students' right to try new approaches in the classroom. Students will allow themselves to expand intellectually and experience student-to-student trust in a classroom setting (Thompson & Wheeler, 2008).

By having differentiated tasks, students will become successful and gain skills with leveled activities. These methods allow students to think critically and allow students to successfully demonstrate their potential as learners (Anderson, 2007).

Project Objective and Processes

As a result of implementing differentiated instruction during the period of September 2009 to December 2009, the targeted sixth through eighth grade students will be motivated in order to increase academic success. In order to accomplish the objective of the research, the following process is essential:

- Accumulate survey material that will provide feedback of students' motivational levels and attitudes towards academics.
- Differentiate classroom activities that will increase student motivation.
- Analyze and identify academic growth using weekly exit slips.
- Evaluate the student's level of motivation each week in order to assess students' progress.
- Students will complete a Multiple Intelligence Survey in order to identify their individual learning styles.

Project Action Plan

This is a week-by-week action plan that will be administered to sixth through eighth grade students at two different sites. All four instructors will adapt this outline into their curriculum.

Week 1:
September 7- September 11

- Consent forms distributed and returned
- Students will complete multiple intelligence survey and student motivational survey.
- Instructor will use a K-W-L to assess prior-knowledge on content.
- Teacher leads discussion to build basic knowledge on topic.

Week 2:
September 14- September 18

- Instructor will administer pre-test in class
- Analyze student questionnaires, and evaluate Pre-tests
- Students will also complete an Exit Slip assessing what they know and what they learned. Students will address any questions relating to the unit.
- Instructor will complete a Behavioral Checklist to assess motivation and collaboration with others.

Week3:
September 21 – September 25

- Begin Differentiated Intervention
    - Students will begin choosing assignments to complete. For example, students will answer three out of six questions about the lesson.
- Parents Survey will be distributed and returned
- Instructor will collect various artifacts
- Students will complete an Exit Slip
- Instructor will complete a Behavioral Checklist.
- Students will begin choosing daily assignments to complete. For example, students will choose 3 of the 6 questions when completing various assignments.

Week 4:
September 28 – October 2

- Analyze parent survey results
- Instructor will collect differentiated assignments.
- Students will complete an Exit Slip
- Instructor will complete a Behavioral Checklist

Week 5:
October 5 – October 9

- Begin data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will collect differentiated assignments
- Students will complete an Exit Slip
- Instructor will complete a Behavioral Checklist

Week 6:
October 12- October 16

- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will collect differentiated assignments
- Students will complete a mid-term assessment.
- Instructor will discuss mid-term assessment.

Week 7:
October 19- October 23

- Begin Motivational Intervention
    - Positive parent phone calls
    - Instructor will complete a Behavioral Checklist
    - Students will complete Exit Slip

Week 8:
October 26- October 30

- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will collect differentiated assignments
    - Positive parent phone calls
    - Instructor will complete a Behavioral Checklist

Week 9:
November 2 – November 6

- Begin another Motivational/Differentiated Intervention
    - Group project with choices
- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will collect differentiated assignments
    - Instructor will complete a Behavioral Checklist
    - Positive parent phone calls

Week 10:
November 9 – November 13

- Continue group project with choices
- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will collect differentiated assignments
    - Instructor will complete a Behavioral Checklist
    - Positive parent phone calls

Week 11:
November 16 – November 20

- Continue data collection
    - Instructor will complete a Student Participation Checklist

    - Instructor will complete a Behavioral Checklist
    - Students will complete an Exit Slip
    - Positive parent phone calls
    - Instructor will collect differentiated assignment

Week 12:
November 23 – November 27

- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will complete a Behavioral Checklist
    - Students will complete an Exit Slip
    - Positive parent phone calls
    - Instructor will collect differentiated assignment

Week 13:
November 30 – December 4

- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will complete a Behavioral Checklist
    - Students will complete an Exit Slip
    - Positive parent phone calls
    - Instructor will collect differentiated assignment

Week 14:
December 7 – December 11

- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will complete a Behavioral Checklist
    - Students will complete an Exit Slip
    - Positive parent phone calls
    - Instructor will collect differentiated assignment

Week 15:
December 14 – December 18

- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will complete a Behavioral Checklist
    - Students will complete an Exit Slip
    - Positive parent phone calls
    - Instructor will collect Completed differentiated assignment
    - End intervention with post- questionnaire and formative assessment.

Week 16:
December 21 – December 25

- End data collection
    - Analyze and formulate data

- Interpret results
- Produce graphs representative of results

* An example of a differentiated lesson:

- Students will complete a project that is differentiated according to their ability. Students will have the opportunity to produce various projects according to their preference.

* A positive parent phone call:

-Students will call their parents and update them on their progress by saying one positive comment on their progress and at least one thing they are still trying to master.

Site 1 Classroom A instructor will be following a modified schedule for 9 weeks. This action plan will be a condensed version of the 16-week outline. Due to time constrains, this instructor will be starting the research project the second quarter of the year. The second quarter begins October 26, 2009 and ends January 8, 2010.

Week 1:
October 26- October 30

- Consent forms distributed and returned
- Students will complete multiple intelligence survey and student motivational survey.
- Instructor will use a game to get to know students.
- Instructor will administer pre-test in class

Week 2:
November 2- November 6

- Analyze student questionnaires, and evaluate Pre-tests
- Teacher leads discussion to build basic knowledge on topic.
- Students will also complete an Exit Slip assessing what they know and what they learned. Students will address any questions relating to the unit.
- Students work in a group performing hands-on task
- Instructor will complete a Behavioral Checklist to assess motivation and collaboration with others.

Week3:
November 9 – November 13

- Begin Differentiated Intervention
  - Students will begin choosing assignments to complete. For example, students will answer three out of six questions about the lesson.
- Parents Survey will be distributed and returned
- Students work in a group performing hands-on task
- Students will complete an Exit Slip
- Instructor will complete a Behavioral Checklist.

Week 4:
November 16 – November 20

- Analyze parent survey results
- Instructor will differentiate project according to learning style
- Students work in a group performing hands-on task
- Students will complete an Exit Slip
- Instructor will complete a Behavioral Checklist

Week 5:
November 23 – November 27

- Begin data collection
    - Instructor will complete a Student Participation Checklist
- Instructor will differentiate project according to learning style
- Begin Motivational Intervention
    - Positive parent phone calls
    - Instructor will complete a Behavioral Checklist
    - Students will complete Exit Slip
- Students will complete an Exit Slip
- Instructor will complete a Behavioral Checklist

Week 6:
November 30 - December 4

- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will differentiate project according to learning style
- Students work in a group performing hands-on task
- Students will complete an assessment.
- Instructor will discuss assessment.

Week 7:
December 7 – December 11

- Begin another Motivational/Differentiated Intervention
    - Group project with choices
- Continue Motivational Intervention
    - Positive parent phone calls
    - Instructor will complete a Behavioral Checklist
    - Students will complete Exit Slip
- Instructor will differentiate project according to learning style
- Students work in a group performing hands-on task

Week 8:
December 14 – December 18

- Continue data collection
    - Instructor will complete a Student Participation Checklist
    - Instructor will collect differentiated assignments

    - Positive parent phone calls
    - Instructor will complete a Behavioral Checklist
    - Students will complete an Exit Slip
- Instructor will differentiate project according to learning style
- Students work in a group performing hands-on task
- Instructor will collect Completed differentiated assignment
- End intervention with post- questionnaire

Week 9:
January 4 – January 8

- End data collection
    - Analyze and formulate data
    - Interpret results
    - Produce graphs representative of results

* An example of a differentiated lesson:

- Students will complete a project that is differentiated according to their ability. Students will have the opportunity to produce various projects according to their preference.

* A positive parent phone call:

-Students will call their parents and update them on their progress by saying one positive comment on their progress and at least one thing they are still trying to master.

Methods of Assessment

Several methods will be used in order to assess the effects of the differentiated instruction on student motivation. A self-assessment survey will be administered to the participating students to identify students' motivational levels. Students will complete a multiple intelligence survey in order to identify their individual learning styles. Each week the instructor will complete a behavioral checklist to monitor the students' motivational progress. Students will also complete a pre and post questionnaire in order to examine the impact of the intervention on student motivation.

CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

Classroom A

During Week One consent forms (Appendix A and B) were distributed and returned. I used a game to get to know students. Data collection begins; a pre-test (Appendix E) was administered in class. The pre-test was collected and evaluated. Due to time constraints motivational surveys and multiple intelligence tests were not given this week.

Throughout Week Two the topic of safety was introduced. I showed a video and led a discussion on safety in the kitchen. Students were given the opportunity during the discussion to contribute and ask questions. I modeled specific safety procedures, for instance use of the safety zone and cleaning up broken glass. Students worked in groups to perform a hands-on-task. Students completed an exit slip addressing what they learned, how they would change the lesson, what they thought was the best part of the lesson, and how motivated they were. I completed a teacher observation focused on motivation and collaboration. As time is an issue, student surveys were not distributed to students this week.

In the third week students completed the multiple intelligence test (Appendix H) which determined there preferred learning modality. Parent surveys (Appendix D), to be completed by parents, were distributed to students. Parent surveys were collected from students.

Differentiated intervention begins. Students worked on salsa lab completing a hands-on-task. I demonstrated making of salsa and knife skills. Students separated and chose tasks they were capable of completing. Students completed exit slips addressing what they learned, how they would change the lesson, what they thought was the best part of the lesson, and how motivated they were. I completed a teacher observation focused on motivation and collaboration.

During Week Four parent surveys were analyzed. Student motivation surveys (Appendix C) were distributed, returned, and analyzed. Students worked in groups and completed a hands-on-task. Students completed a sanitation project that was differentiated according to learning style. Students created mini books using sanitation terms. Students defined the terms and were given options to draw a picture, write a story, write a wrap, or write a poem to remember the term and definition. Students completed exit slips (Appendix G) addressing what they learned, how they would have changed the lesson, what they thought was the best part of the lesson, and how motivated they were. I completed a teacher observation focused on motivation and collaboration.

Throughout Week Five data collection continued. We continued working on the differentiated sanitation project. Students completed mini books and learning about sanitation. Motivation intervention starts this week. This was in the form of student praise for good work and effort. I completed a teacher observation focused on motivation and collaboration. This was a two day week, and due to time constraints we did not complete exit slips.

In the sixth week instructor continued data collection. Instructor implemented another differentiated intervention. Students worked on the first aid project. This was a project differentiated in that students were allowed to choose from a list of possible projects. The options included a written report, a written scenario or a created story, a poster displaying

treatment and prevention, a pamphlet or handout explaining proper treatment and prevention, or a role play/skit demonstrating first aid treatment and prevention. Students also completed a group task in the lab.

During Week Seven another differentiated intervention was implemented. Students were introduced to measuring techniques based on product medium. Students were given written measuring notes; measuring visuals are posted in the room, a live measuring demonstration performed by the instructor, and students practiced measuring in stations. Further students choose jobs and plan for the measuring lab. Students work in groups completing the three day hands-on task of the cookie lab. Students also started a differentiated Nutrition project. Students begin a research project centered around several research questions. Students are directed to create a technology project. They may choose between a written report or power point presentation; both options must include visual aids and class presentation. Instructor completed class observation. Motivation intervention continued; students were praised for their excellent work and effort.

Due to time constraints students did not complete an exit slip this week. Positive parent phone call was to be implemented in the event students were struggling in the course. No students were struggling at this time.

Throughout Week Eight data collection continued. Students continued work, in the computer lab, on the differentiated nutrition project. Projects are collected digitally. Students were directed to save projects in their student folder and in my folder. Students also participated in a hands-on task. Students completed exit slips. Instructor completed a class observation.

The intervention was scheduled to end this week; however due to a desire to cover as much of my curriculum as possible while collecting data and performing interventions we

continued into the last week of the quarter. The post-test was not given this week; however it was administered the following week.

In the ninth week students completed a hands-on task. Students completed the post-assessment and final exit slips. Data collection ended. Data was analyzed and formulated. Graphs were created interpreting and representing results of the research.

Classroom B

Twelve eighth grade students in Classroom B participated in a 16-week project action plan. This plan was implemented to monitor student motivation and utilize differentiation in order to increase motivation. The instructor focused on observing changes in motivation while presenting the Social Studies curriculum.

Week One

The instructor presented the project to students and explained how their participation would be used in the Saint Xavier's Masters Program requirement. The purpose of having students and parents sign consent forms before participation in the project was explained. After receiving the signed consent forms, students completed a motivational survey.

The instructor administered the multiple intelligence tests to the group. Students counted their answers and scored their own tests. The group listened and learned about the purpose of this test. The students highlighted their preferred learning modality on the test and learned about the various ways that each individual learns best.

The teacher presented the students with a K-W-L chart to assess what information the students retained from the previous year in regards to Geography. Students filled out what they already know, represented by the K column. They listed what they want to learn about the topic in the W column. The lists were collected and would be returned at the end of the third week.

At this point students would be able to complete the final section of the chart which was listing what they have learned under the letter L. The lesson continued to review and build upon geography and map skills.

Week Two

The instructor administered a pre-test to evaluate how prepared students were to read maps, charts and graphs, as well as interpret visuals that dealt with geography and social studies. Prior knowledge of United States history was not necessary for successful completion of this test. The students in this group are English Language Learners (ELLs), therefore the test contained all the necessary information to answer questions. Students were required to interpret data that was provided in the charts and in the short reading sections.

On Friday, students were informed of how weekly Exit Slips would be used as part of the project. The data would be used to document and measure student motivation throughout specific weeks in an eighth grade ELL Social Studies class. The Exit Slip consisted of listing two interesting things that were learned from the lesson as well as give examples of how students could use the newly acquired information. The final two, short answer questions asked students to describe the best part of the lesson and list one idea of what could have been done differently to improve the lesson. The second part of the Exit Slip consisted of eight statements that needed to be evaluated using a rating scale of 1-5, where 5 represented the highest, most positive rating.

The Behavioral Checklist and the Student Participation Checklist that were included in the original Action Plan were not administered due to time restraints. All instructors agreed that enough information could be attained from the use and analysis of weekly Exit Slips, combined with instructor observations.

Week Three

Motivational Surveys for Parents were distributed, completed, and collected. Parents responded to questions regarding their child's motivational levels towards academics. Students finished the Geography Review with the completion of the K-W-L Chart that was started in Week One. The Social Studies curriculum introduced the students to lessons in American History. The week began with an introduction to Westward Expansion. Students participated in whole group activities and presentations. Afterwards, differentiated lessons were implemented throughout the week to help advance each student through the content at an appropriate level and speed. When completing the section review, students were given the opportunity to choose three out of the six questions for their assignment.

Week Four

The instructor analyzed the Motivational Survey completed by the parents. The lessons continued with differentiated assignments, with varied learning style approaches which were given to students based upon their reading levels as well as writing skills. On Friday, students completed an Exit Slip.

Week Five

Differentiation continued throughout the lessons. Students participated in whole group instruction and guided reading. Afterwards, resource materials were provided to groups of students based on their reading and comprehension abilities. Assignments were completed based on each student's language proficiency level. An Exit Slip was completed on the last day of the week.

Week Six

Social Studies lessons continued with leveled assignments. A mid-term assessment was administered to all students on Thursday. The instructor used two versions of the same test to accommodate students based on their reading proficiency. The results of the assessment were discussed on the following day.

Weeks Seven and Eight

The instructor implemented motivational strategies to boost each student's self esteem. Positive feedback was used to motivate students so that they begin to believe in their ability to achieve A's and B's. Students received positive comments on their written assignments as well as positive comments during class work. The instructor made a conscious effort to make sure that every student received at least two positive comments during the week. Exit Slips were completed at the close of the seventh week.

Positive informational phone calls were made to parents during Week Eight. The instructor informed parents of one positive aspect in regards to their child's academics. Some students were praised for their improved behavior, as well as for appropriate behavior. Others were complemented on the continued display of mature and respectful attitudes. Several students received a positive comment about their well researched assignments and differentiated projects that were completed with extra effort. Students who worked well within groups were praised for their respectful behavior with which they listened to and added information to their group's assignment.

Weeks Nine and Ten

Students continued to receive motivational comments throughout the week. They also listened to the instructor guide them through difficult comprehension questions about the

assignment reading. Students focused on using context clues to determine the meaning of unclear words and phrases. They were all told that they have the potential to successfully complete the necessary readings and assignments.

Students were presented with a list of choices that they could make in regards to projects centering on the Civil War. Each student chose a topic for the research project that interested him or her. Several students were given permission to work with a partner. Students worked on researching and note taking throughout the ninth week. During the tenth week, students began their outlines and rough drafts. Positive parent phone calls were made to the homes of students who demonstrated noticeable growth in motivation as well as effort.

Weeks Eleven Through Fourteen

Instructor continues to monitor motivational levels as well as utilizes motivational comments to boost each student's confidence in his/her academics. Students continue to learn about American history through whole group instruction, and individual task completion with emphasis on the incorporation of different learning style activities. Students completed Exit Slips at the end of each week. Positive comment phone calls were made through the weeks.

Week Fifteen

Students completed differentiated assignments reinforcing the content of taught material. The week ended with a post-test to assess academic growth in Social Studies. The final Exit Slip was completed on the last day of the week. Positive comment phone calls were made to parents to inform them of their child's progress.

Week Sixteen

Data collect for the Project Action Plan comes to an end. The instructor analyzes and interprets data. Graphs are created to represent responses to the various instruments used to

gather data. Changes in motivational levels are also graphed. The pre-test and post-tests are analyzed and compared.

Classroom C

During Week One during students received consent forms and returned forms at the end of the week. Students took a pre-test about the content. Students also conducted a hands-on lab addressed longitudinal and transverse waves. Students also received an exit slip to evaluate the week.

During Week Two, students worked on a differentiated assignment which allowed students to have choice in completion of their assignment. Students also completed a multiple intelligences test which allowed students to see the various leveled learning styles in the classroom.

In the third week students completed a virtual worksheet online. Students also were engaged in a sound station lab hands on lab activity. Students completed a tiered lab assignment after experiment. Students completed a motivational survey and also provided an alternative survey to their parents or guardians.

During Week Four students completed a differentiated mini-book on the vocabulary of light. Students completed tiered notes of the unit. Students watched a visual video on light formation to grasp visual and auditory learners. Students received a mini-assessment on the unit.

During Week five students worked on vocabulary creating a differentiated vocabulary book. Students completed tiered notes on the next section. Students completed a hands-on lab with reflection, transmission, and absorption of light.

In the sixth week students completed a differentiated assignment with light. Students completed a lab on chromatography. Students completed tiered questions related to the hands-on lab.

During Week Seven students continued with tiered notes on light formation. Students worked on a hands-on lab using light boats, mirrors, and light filters. Students finished tiered questions and completed their lab reports. Students received an exit slip to evaluate the hands-on lab experiments as well as the differentiated assignments during the week.

During Week Eight students completed a variety of differentiated assignments, such as: mini-vocabulary books, notes, and worksheets. Some students that were struggling after visual observations received positive phone calls to document their effort and proactive involvement in the classroom.

During Week Nine parents received emails documenting student's progress. Students also completed Venn diagram comparing and contrasting real versus virtual images. Instructor continues to collect data on student's progress with differentiated assignments.

In the tenth week students will complete a differentiated assignment such as: mini-vocabulary book, diagram of the human eye, tiered notes, and participation. Students that are struggling will receive a positive motivational phone call or email regarding their participation, attitude, or progress in the class.

During Week Eleven instructor will give and collect a differentiate assignment on human versus a cows eye. Students that are visual and auditory learners will watch a video on proper laboratory dissection of a cow's eye. Students will conduct a hands-on lab dissection. Students completed an exit slip summarizing this week's activities.

During Week Twelve students worked on a tiered chapter review with differentiated tests. Students are assessed on their participation. Students who are struggling will receive a positive phone call or email regarding their progress, participation, or effort involvement in the classroom.

In the thirteenth week students begin a new unit; students took a pre-assessment of a knowledge rating scale. Students took tiered notes and were assessed on their participation. Students completed a differentiated mini-vocabulary book.

During Week Fourteen students were evaluated on their participation skills, completed differentiated activities such as organizational map on the various types of winds. Students received positive phone calls to document their progress if they were struggling with the unit.

During Week Fifteen the instructor evaluated student participation. Students completed differentiated assignments such as tiered notes and differentiated tests. Students evaluate this week with a final exit slip to document progress and gain of knowledge with incorporating differentiated strategies. Instructor continues to give positive phone calls to students struggling with the curriculum.

During Week Sixteen the instructor will end data collection. Instructor will interpret results and analyze and formulate data. Instructor will generate charts of the multiple intelligences chart, motivational surveys for student and parents, pre and post tests, and exit slip results for five weeks. This data will help analyze how differentiated tasks help motivate students progress in a classroom setting.

According to our original action plan, behavioral checklists were to be conducted throughout the sixteen week intervention. This data was not administered due to time restraints. All instructors agreed use and analysis of weekly exit slips combined with instructor

observations would satisfy our collection to see if differentiating student activities would motivate students learning.

Presentation and Analysis of Results

We distributed exit slips to determine students' motivation about the week's topics. Table 1 shows the results for Classroom A. Because our research deals with student motivation, we are analyzing question 8; this is the one question that asked students to rank their level of motivation for the week.

Table 1

Exit Slip Responses for Students in Classroom A for the First and Last Three Weeks of the Intervention

Responses	Week 2	Week 3	Week 4	Week 6	Week 8	Week 9
1	0	2	1	0	0	1
2	1	1	0	0	2	1
3	5	2	2	2	5	2
4	3	4	2	4	4	6
5	10	10	13	10	7	9

Note. N = 19. Sometimes not all students were present for the exit slips.

According to the student responses, the majority of the students seem to be motivated; more than half of the students were motivated to the highest extent four out of six weeks. Motivation went down slightly in the final week.

We distributed exit slips to determine students' motivation about the week's topics. Table 2 shows the results for group 2 Classroom A. Because our research deals with student motivation, we are analyzing the one question that asked students to rank their level of motivation for the week.

Table 2

Exit Slip Responses for Students in Classroom A for the First and Last Three Weeks of the Intervention

Responses	Week 2	Week 3	Week 4	Week 6	Week 8	Week 9
1	1	0	0	0	0	0
2	0	0	0	1	1	1
3	2	1	0	2	1	0
4	2	4	5	4	1	2
5	7	8	9	5	11	11

Note. N = 14. Sometimes not all students were present for the exit slips.

The student responses indicate the majority of the students are motivated. More than half of the students indicate they are highly motivated in all but one week. Week Six is the week with the fewest highly motivated students, but more than half of the students are motivated to the highest level or the next level.

Students completed Exit Slips on the last day of the week to help the instructor monitor motivational levels. Table 3 shows the results for Classroom B during the start of the intervention in comparison with the final three weeks of the intervention.

Table 3

Exit Slip Responses to Motivation from Students in Classroom B for the First and Last Three Weeks of the Intervention

Responses	Week 2	Week 3	Week 4	Week 13	Week 14	Week 15
1	1	1	3	3	1	3
2	1	2	0	0	2	0
3	3	3	3	2	5	1
4	3	3	2	2	0	2
5	4	3	4	5	4	6

Note. N = 12.

Table 3 represents the changes in motivational levels that occurred during the intervention within Classroom B. Students' levels of motivation were highest during Weeks

Thirteen and Fifteen when the differentiated lessons included activities that addressed each of the various learning styles.

Students were distributed exit slips to determine students' motivation about the various topics each week. Table 4 shows the results for Classroom C. Our research mainly focused on how using differentiation strategies can motivate students in a classroom setting. Our data will focused on one question from our exit slip that asked students to rank their level of motivation for the first three weeks and the last three weeks of our intervention.

Table 4

Exit Slip Responses for question 8 from Students in Classroom C in 8th period for the First and Last Three Weeks of the Intervention

Responses	Week 1	Week 2	Week 3	Week 7	Week 11	Week 15
1	2	3	3	1	0	3
2	9	7	2	3	1	1
3	7	7	13	11	4	9
4	7	7	6	11	12	9
5	1	2	4	2	11	3

Note. N=28. Sometimes not all students were present for the exit slips

According to Table 4, students were very motivated with the hands on labs conducted during weeks seven and eleven. These labs offered students an alternative method to learning the content and it also allowed students to analyze their data which used higher order thinking skills.

Table 5

Exit Slip Responses for question 8 from Students in Classroom C in 9th period for the First and Last Three Weeks of the Intervention

Responses	Week 1	Week 2	Week 3	Week 7	Week 11	Week 15
1	2	3	3	0	0	1
2	6	5	2	4	0	2
3	9	10	8	13	2	5
4	7	6	7	11	16	10
5	3	5	5	0	10	9

Note. N= 28. Sometimes not all students were present for the exit slips.

According to Table 5, students were very motivated with the hands on labs conducted during Weeks seven, eleven, and fifteen. These labs offered students an alternative method to learning content and allowed students to analyze their data using higher order thinking skills.

We administered a Post-Test (Appendix F) to compare Pre-Test scores and analyze students' growth. Figures 23 and 24 show the results for Classroom A.

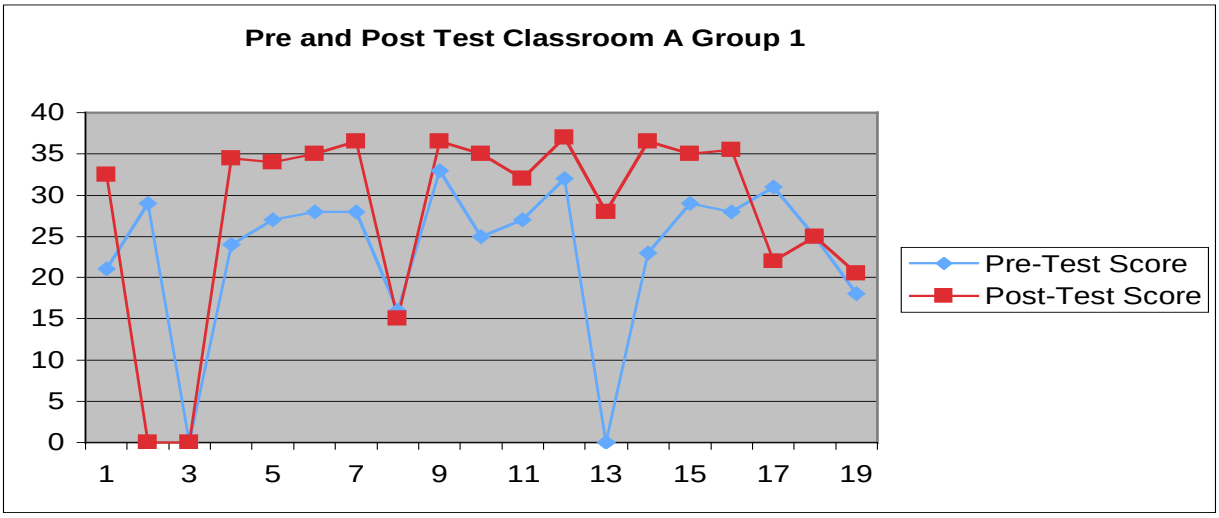


Figure 23. Results of group 1 Classroom A 6th grade Pre-Test and Post-Test administered during the intervention.

The data in Figure 23 compares the students' Pre-Test score with the students' Post-Test score. Two students were absent for the Post-Test and did not receive a score.

The majority of the students improved scores on the Post-Test in comparison to the Pre-Test. One student had the same score for both tests; while two students earned a worse score on the Post-Test. The largest decrease was 9 points equaling a 23% decrease. The largest increase was 13.5 points amounting to a 35% increase.

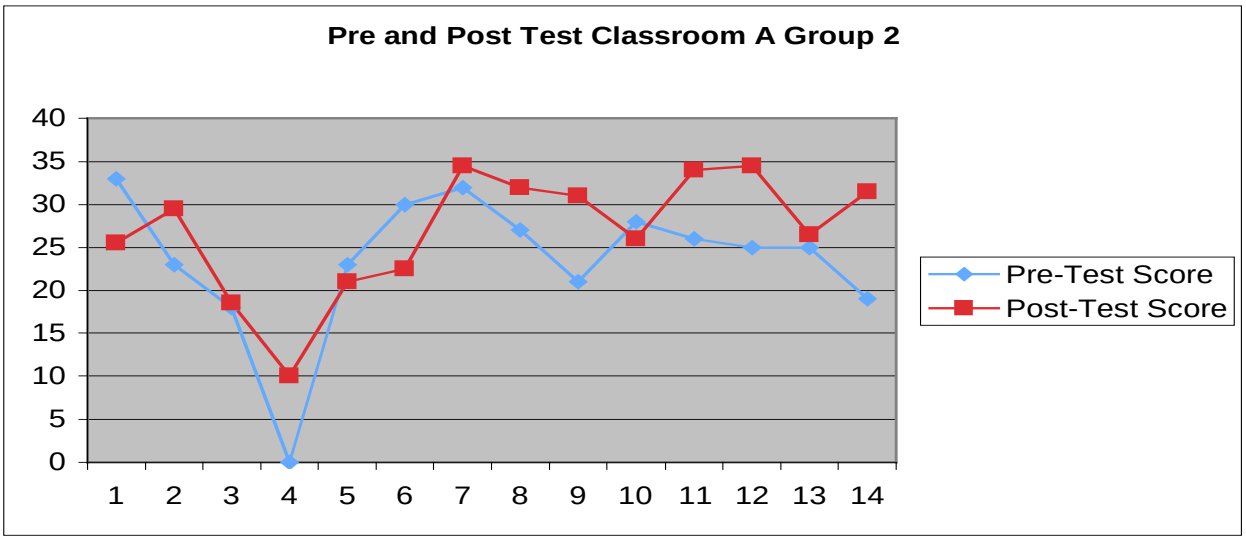
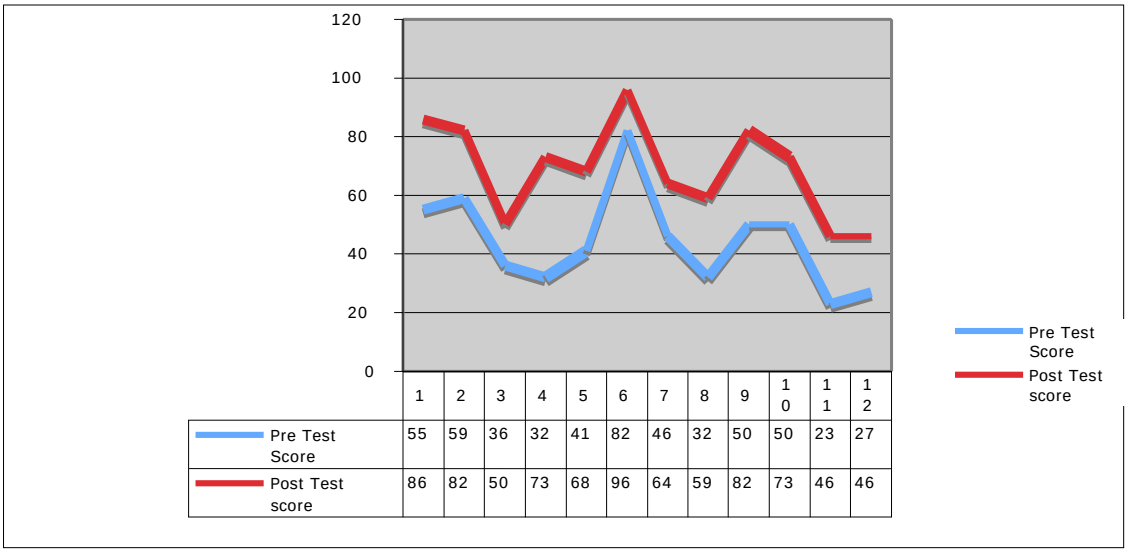


Figure 24. Results of group 2 Classroom A 6th grade Pre-Test and Post-Test administered during the intervention.

The data in Figure 24 compares the students' Pre-Test score with the students' Post-Test score. The majority of the students improved scores on the Post-Test in comparison to the Pre-Test. Four students earned a worse score on the Post-Test. The largest was 7.5 points equaling a 19% decrease. The largest increase was 12.5 points amounting to a 32% increase.

Students in Classroom B also completed post-test at the end of the fifteenth week that was identical to the pre-test that they took during the second week of the intervention. Figure 25 compares the results of both assessments.

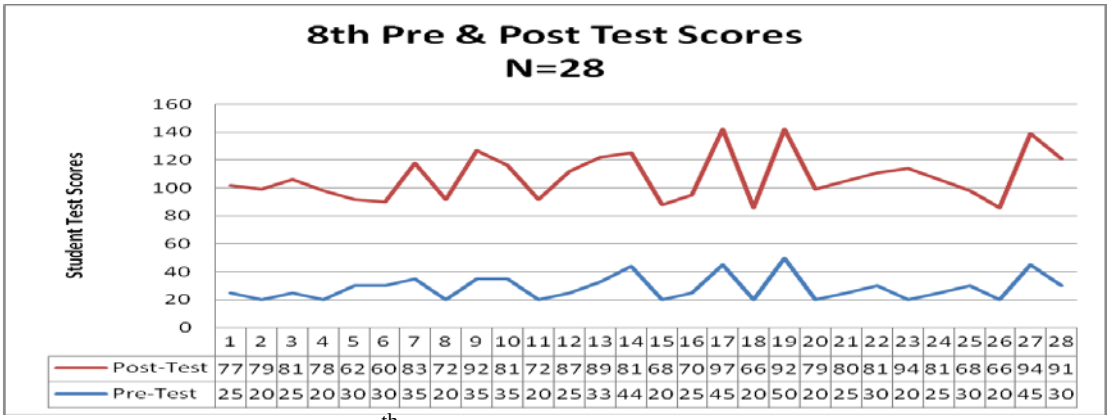


	1	2	3	4	5	6	7	8	9	10	11	12
Pre Test Score	55	59	36	32	41	82	46	32	50	50	23	27
Post Test score	86	82	50	73	68	96	64	59	82	73	46	46

Figure 25. Results of 8th grade Pre-Test and Post-Test in Classroom B.

The data in Figure 25 compares the pre–test scores to the post-test in order to show student growth in regards to geographic literacy. All students showed growth, some definitely more than others.

Students in Classroom C also completed a post-test at the end of the fifteen week intervention. Figure 26 compares the result of both assessments for 8th period students.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Post-Test	77	79	81	78	62	60	83	72	92	81	72	87	89	81	68	70	97	66	92	79	80	81	94	81	68	66	94	91
Pre-Test	25	20	25	20	30	30	35	20	35	35	20	25	33	44	20	25	45	20	50	20	25	30	20	25	30	20	45	30

Figure 26. Results of Classroom C 8th period Pre-Test and Post-Test administered during the intervention.

The data in Figure 26 compares students' pre and post-test in regards to using differentiation activities to enhance students growth of the content. The majority of students

showed a substantial improvement. Differentiated activities along with hands on lab activities allowed students to gain knowledge and understanding of the unit.

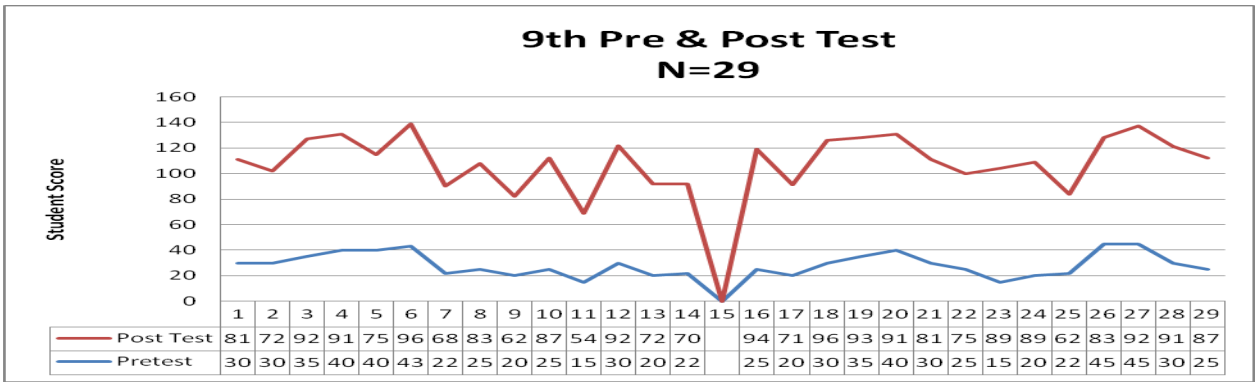


Figure 27 Results of Classroom C 9th period Pre-Test and Post-Test administered during the intervention.

The data in Figure 27 compares 9th grade students' pre and post-test data. The majority of students showed a substantial improvement. One student did not participate in both the pre and post test. All students showed growth and the majority of the students had a better understanding of the content after the intervention.

Conclusion and Recommendation

Applying differentiation to leveled learners allowed students to grow academically. Implementing these strategies helped motivate leveled learners. Using modified activities according to their own learning style allowed students to progress. Differentiation provided students with different options, which allowed students to improve. Students enjoyed the amount of control they were given pertaining to the assignment. The instructor provided exit slips to evaluate the results of the lesson. The students effectively showed signs of progression when examining their pre and posttest. Differentiated assignments allowed students to grow academically according to their ability level.

This intervention showed that students progressed with leveled material. The results allowed students to become motivated through hands-on learning applied in the classroom setting. We were satisfied with the results that were produced. This intervention applied new strategies and new methods that enhanced our classroom environments. The intervention also allowed students to critically think and reflect on their thoughts to promote academic engagement in the classroom. Implementing the intervention resulted in an enjoyable teaching experience, since the students were actively engaged in the learning process. Therefore students showed an increase in motivated which allowed them to progress academically.

Some of the modifications that need to be readapted are the exit slips. Some of the questions did not focus entirely on the issue of motivation. Exit slips consumed more time than expected. Also, teaching time had to be reduced fifteen minutes or more in order for students to complete the weekly exit slips. Another modification was the elimination of the behavioral checklist because it is was not feasible in the given time frame. The behavioral component is necessary; however, more time needs to be allotted in our intervention. Also, the parental data needs to be modified because some of the data was not useful to this research project. After conducting our research, some of our original collection tools did not prove to be useful for our data collection process. Instructors felt time was an issue and collection tools need to be concise and relevant.

In the future, behavioral data should be collected to further analyze the students' motivational level. Data collection tools, regarding motivation on student's progress, need to be modified. In addition, including a behavioral analysis component would allow the instructor to view how motivation impacts behavior towards a student's achievement.

Reflection

The research allowed the instructors to view new methods and techniques applicable to a classroom setting. We were surprised how time is a valid issue across our curriculum. Unfortunately due to time constraints, it was not possible to incorporate all of the data collection and cover all the areas of curriculum usually covered. In order to present all of the different areas of the curriculum, the instruction seemed rushed through in an effort to cover the content. The instructor also needed to compensate for missed lessons due to a lack of time in the intervention.

We were inexperienced in the development of the collection tools. Looking back, that inexperience prevented us from creating the most appropriate data collect tools. The tools were very extensive and not as specific to our intervention. Some of data provided insight to the instructor, which gave a holistic view of the student's individuality. The data was valuable to the overall intervention; however, difficult for the instructor to document.

This intervention gave us new insights, methods, and strategies; however, some of the techniques were new and unfamiliar to the researchers. The selected strategies were in the process of being mastered by the researchers both as teaching strategies and thinking processes. This left questions in the researchers' minds as to whether their personal mastery was adequate for the challenges presented by students struggling for mastery themselves.

Our research journey took slightly different paths than initially intended. Originally we implemented a behavioral component; however , when conducting the research we needed more time to document the behavioral piece. We assumed that we could accomplish everything that was compiled at the start of the action research project. We quickly realized that our research would be extremely time consuming. When implementing research strategies, time management

became an issue. However, as time progressed throughout our intervention, we learned to manage our time between teaching and researching more effectively

As educators, we became more knowledgeable in implementing various techniques and differentiated teaching strategies, to increase motivation. Our research prompted us to adapt lessons to address the multiple intelligences within our classrooms. Creating a diverse classroom setting also motivated various levels of learners to become actively engaged. Our participants were hesitant in the beginning, but realized that our lesson would be geared to their individual learning style. We praised our students for their effort; this helped to enhance motivation. Students' levels of self-efficacy increased, which promoted success in the classroom setting.

We learned that we work well as a team. Our leadership styles varied; this allowed us to learn from each other. The diversity of our group allowed us to capitalize on each other's strengths. We discovered we all posses the characteristic traits of responsibility, dedication, devotion, and professionalism. This intervention enhanced our teaching styles as professionals in an educational environment. Being engaged in this masters program allowed us to grow physically, mentally, and spiritually. This experience taught us to appreciate how the diversity of our group enhanced our work environment. We grew individually and as a team.

We learned that we could all trust and depend on each other. Differentiation helps increase motivation and thereby increases a student's academic achievement. Student's also gained a higher level of self-esteem. We know that differentiation and motivation will enhance students' levels of learning now and in the future. This intervention allowed students to become successful when working independently as well as when working in a group setting.

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APPENDICES

Appendix A

Parental Information Letter

S A I N T • X A V I E R • U N I V E R S I T Y

I n s t i t u t i o n a l R e v i e w B o a r d

Consent to Participate in a Research Study
The Effects of Differentiation and Motivation on Students' Performance

October 26, 2009

Dear Parent or Guardian,

I am currently enrolled in a master's degree program at Saint Xavier University. This program requires me to design and implement a project on an issue that directly affects my instruction. I have chosen to examine the effects of motivation and differentiation on student performance.

The purpose of this project is to gather data on how motivation and differentiation can enhance students' family and consumer science performance in class by using hands-on activities. It may help my students gain insight into their individual learning styles, as well as provide them with differentiated assignments to support those styles.

I will be conducting my project from September 2009 to April 2010. The activities related to the project will take place during regular instructional delivery. This research will be conducted during my 6th grade family and consumer science classes. It will involve parental, student, and instructional surveys. Students will receive individualized instruction that will aid in identifying student learning styles and motivation when conducting at-level, differentiated lessons. The participants who volunteer for this study will be allocated time during scheduled classes, which will encompass the regular curriculum adopted by Mannheim Middle School. The gathering of information for my project during these activities offers no risks of any kind to your child.

Your permission allows me to include your child in the reporting of information for my project. All information gathered will be kept completely confidential, and information included in the project report will be grouped so that no individual can be identified. The report will be used to share what I have learned as a result of this project with other professionals in the field of education.

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about your student will not be included in the report.

If you have any questions or would like additional information about my project, please contact me at Mannheim Middle School 847-455-5020, or by email at fennerd@d83.org.

3700 West 103rd Street • Chicago, Illinois • (773) 298-3000 • FAX (773) 779-9061

Appendix A - Continued

S A I N T • X A V I E R • U N I V E R S I T Y

I n s t i t u t i o n a l R e v i e w B o a r d

If you agree to have your child participate in the project, please sign below and return both pages to me no later than October 30, 2009. I will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Dorraine Fenner
Exploratory Team
FACE Teacher

_____
PRINT YOUR NAME

_____
PARENT SIGNATURE

PLEASE RETURN THE ATTACHED STATEMENT TO ME BY October 30, 2009.

3700 West 103rd Street • Chicago, Illinois • (773) 298-3000 • FAX (773) 779-9061

Appendix A - Continued

S A I N T •X A V I E R •U N I V E R S I T Y

Institutional Review Board

Consent to Participate in a Research Study
The Effects of Motivation and Differentiation on Students' Performance

September 1, 2009

Dear Parent or Guardian,

I am currently enrolled in a master's degree program at Saint Xavier University. This program requires me to design and implement a project on an issue that directly affects my instruction. I have chosen to examine the effects of differentiation and motivation on student performance.

The purpose of this project is to gather data on how motivation and differentiation can enhance Bilingual/ELL students' reading proficiency and comprehension. It may help my students gain insight into their individual learning styles, as well as provide them with differentiated assignments to support those styles. Increased motivation and differentiation may raise academic performance.

I will be conducting my project from September 2009 to April 2010. The activities related to the project will take place during regular instructional delivery. This research will be conducted during my 7th and 8th grade Social Studies classes. It will involve parental, student, and instructional surveys. Students will receive individualized instruction that will aid in identifying student learning styles and offer motivation when conducting at-level, differentiated lessons. The participants who volunteer for this study will be allocated time during scheduled classes, which will encompass the regular curriculum adopted by Mannheim Middle School. The gathering of information for my project during these activities offers no risks of any kind to your child.

Your permission allows me to include your child in the reporting of information for my project. All information gathered will be kept completely confidential, and information included in the project report will be grouped so that no individual can be identified. The report will be used to share what I have learned as a result of this project with other professionals in the field of education.

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about your student will not be included in the report.

If you have any questions or would like additional information about my project, please contact me at Mannheim Middle School 847-455-5020, or by email at sydorn@d83.org.

Appendix A - Continued

S A I N T •X A V I E R •U N I V E R S I T Y

I n s t i t u t i o n a l R e v i e w B o a r d

If you agree to have your child participate in the project, please sign below and return both pages to me no later than September 11, 2009. I will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Natalie D. Sydor
Mannheim Middle School
7th & 8th grade Bilingual/ESL teacher

_____
PRINT YOUR NAME

_____
PARENT SIGNATURE

PLEASE RETURN THE ATTACHED STATEMENT TO ME BY SEPTEMBER 11, 2009

Appendix A - Continued

S A I N T •X A V I E R •U N I V E R S I T Y

Institutional Review Board

Consent to Participate in a Research Study
The Effects of Differentiation and Motivation on Students' Performance

September 1, 2009

Dear Parent or Guardian,

I am currently enrolled in a master's degree program at Saint Xavier University. This program requires me to design and implement a project on an issue that directly affects my instruction. I have chosen to examine the effects of differentiation and motivation on student performance.

The purpose of this project is to gather data on how differentiation and motivation can enhance students' science proficiency by using hands-on science activities. It may help my students gain insight into their individual learning styles, as well as provide them with differentiated assignments to support those styles.

I will be conducting my project from September, 2009 to April 2010. The activities related to the project will take place during regular instructional delivery. This research will be conducted during my 8th grade science classes. It will involve parental, student, and instructional surveys. Students will receive individualized instruction that will aid in identifying student learning styles and ~~offer~~ motivation when conducting at-level, hands-on science through using differentiated lessons. The participants who volunteer for this study will be allocated time during scheduled classes, which will encompass the regular curriculum adopted by Mannheim Middle School. The gathering of information for my project during these activities offers no risks of any kind to your child.

Your permission allows me to include your child in the reporting of information for my project. All information gathered will be kept completely confidential, and information included in the project report will be grouped so that no individual can be identified. The report will be used to share what I have learned as a result of this project with other professionals in the field of education.

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about your student will not be included in the report.

If you have any questions or would like any further information about my project, please contact me at Mannheim Middle School at 847-455-5020, or by email at mansours@d83.org.

Appendix A - Continued

S A I N T •X A V I E R •U N I V E R S I T Y
I n s t i t u t i o n a l R e v i e w B o a r d

If you agree to have your child participate in the project, please sign below and return both pages to me no later than September 11, 2009. I will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Sueha Kayyal Mansour
Team 8-1
8th grade Science Teacher

_____
PRINT YOUR NAME

_____
PARENT SIGNATURE

PLEASE RETURN THE ATTACHED STATEMENT TO ME BY SEPTEMBER 11, 2009.

Appendix B

Student Informational Letter

S A I N T •X A V I E R •U N I V E R S I T Y

I n s t i t u t i o n a l R e v i e w B o a r d

Consent to Participate in a Research Study
The Effects of Differentiation and Motivation on Students' Performance

October 26, 2009

Dear Students:

I am currently enrolled in a master's degree program at Saint Xavier University. This program requires me to design and implement a project on an issue that directly affects my instruction. I have chosen to examine the effects of differentiation and motivation on student performance.

The purpose of this project is to gather data on how motivation and differentiation can enhance students' family and consumer science performance in class by using hands-on activities. It may help my students gain insight into their individual learning styles, as well as provide them with differentiated assignments to support those styles.

I will be conducting my project from September, 2009 to April 2010. The activities related to the project will take place during regular instructional delivery. This research will be conducted during my 6th grade family and consumer science classes. It will involve parental, student, and instructional surveys. Students will receive individualized instruction that will aid in identifying student learning styles and motivation when conducting at-level, differentiated lessons. The participants who volunteer for this study will be allocated time during scheduled classes, which will encompass the regular curriculum adopted by Mannheim Middle School. The gathering of information for my project during these activities offers no risks of any kind to you.

Your permission allows me to include the reporting of information for my project. All information gathered will be kept completely confidential, and information included in the project report will be grouped so that no individual can be identified. The report will be used to share what I have learned as a result of this project with other professionals in the field of education.

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about you will not be included in the report.

If you have any questions or would like any further information about my project, please contact me at Mannheim Middle School at 847-455-5020, or by email at fennerd@d83.org.

Appendix B - Continued

S A I N T •X A V I E R •U N I V E R S I T Y

I n s t i t u t i o n a l R e v i e w B o a r d

If you agree to participate in the project, please sign below and return both pages to me no later than October 30, 2009. I will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Dorraine Fenner
Exploratory Team
FACE Teacher

_____
PRINT YOUR NAME

_____
SIGN YOUR NAME

PLEASE RETURN THE ATTACHED STATEMENT TO ME BY OCTOBER 30, 2009.

Appendix B - Continued

S A I N T •X A V I E R •U N I V E R S I T Y
I n s t i t u t i o n a l R e v i e w B o a r d

Consent to Participate in a Research Study
The Effects of Motivation and Differentiation on Students' Performance

September 1, 2009

Dear Student,

I am currently enrolled in a master's degree program at Saint Xavier University. This program requires me to design and implement a project on an issue that directly affects my instruction. I have chosen to examine the effects of differentiation and motivation on student performance.

The purpose of this project is to gather data on how motivation and differentiation can enhance a Bilingual/ELL student's reading proficiency and comprehension. It may help you gain insight into your individual learning style, as well as provide you with differentiated assignments to support your learning style. Increased motivation and differentiation may raise academic performance.

I will be conducting my project from September 2009 to April 2010. The activities related to the project will take place during regular class time. This research will be conducted during my 7th and 8th grade Social Studies classes. It will involve parental, student, and instructional surveys. You will receive individualized instruction that will aid in identifying your learning style and offer motivation when conducting at-level, differentiated lessons. The participants who volunteer for this study will be allocated time during scheduled classes, which will encompass the regular curriculum adopted by Mannheim Middle School. The gathering of information for my project during these activities offers no risks of any kind to you.

Your permission allows me to include you in the reporting of information for my project. All information gathered will be kept completely confidential, and information included in the project report will be grouped so that no individual can be identified. The report will be used to share what I have learned as a result of this project with other professionals in the field of education.

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about you will not be included in the report.

If you have any questions or would like additional information about my project, please contact me at Mannheim Middle School 847-455-5020, or by email at sydorn@d83.org.

Appendix B - Continued
S A I N T •X A V I E R •U N I V E R S I T Y
I n s t i t u t i o n a l R e v i e w B o a r d

If you agree to participate in the project, please sign below and return both pages to me no later than September 11, 2009. I will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Natalie D. Sydor
Mannheim Middle School
7th & 8th grade Bilingual/ESL teacher

_____
PRINT YOUR NAME

_____
SIGN YOUR NAME

PLEASE RETURN THE ATTACHED STATEMENT TO ME BY SEPTEMBER 11, 2009.

Appendix B - Continued

S A I N T •X A V I E R •U N I V E R S I T Y
I n s t i t u t i o n a l R e v i e w B o a r d

Consent to Participate in a Research Study
The Effects of Differentiation and Motivation on Students' Performance

September 1, 2009

Dear Students:

I am currently enrolled in a master's degree program at Saint Xavier University. This program requires me to design and implement a project on an issue that directly affects my instruction. I have chosen to examine the effects of differentiation and motivation on student performance.

The purpose of this project is to gather data on how differentiation and motivation can enhance your proficiency in science by using hands-on science activities. It may help gain insight into your individual learning styles, as well as provide you with differentiated assignments to support those styles.

I will be conducting my project from September, 2009 to April 2010. The activities related to the project will take place during regular instructional delivery. This research will be conducted during my 8th grade science classes. It will involve parental, student, and instructional surveys. Students will receive individualized instruction that will aid in identifying student learning styles and motivation when conducting at-level, hands-on science through using differentiated lessons. The participants who volunteer for this study will be given allocated time during scheduled classes, which will encompass the regular curriculum adopted by Mannheim Middle School. The gathering of information for my project during these activities offers no risks of any kind to you.

Your permission allows me to include the reporting of information for my project. All information gathered will be kept completely confidential, and information included in the project report will be grouped so that no individual can be identified. The report will be used to share what I have learned as a result of this project with other professionals in the field of education.

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about you will not be included in the report.

If you have any questions or would like any further information about my project, please contact me at Mannheim Middle School at 847-455-5020, or by email at mansours@d83.org.

Appendix B - Continued
S A I N T •X A V I E R •U N I V E R S I T Y
I n s t i t u t i o n a l R e v i e w B o a r d

If you agree to participate in the project, please sign below and return both pages to me no later than September 11, 2009. I will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Sueha Kayyal Mansour
Team 8-1
8th grade Science Teacher

_____
PRINT YOUR NAME

_____
SIGN YOUR NAME

PLEASE RETURN THE ATTACHED STATEMENT TO ME BY SEPTEMBER 11, 2009.

Appendix C

Student Survey

Student Motivation Survey Self-Assessment

This survey is designed to help you identify your student motivation quotient on a scale of 1-100. You will rate all of the statements on a scale of 1-5, with 5 being highest. Take your time and give honest answers.

I am very well organized.
Less True - 1 2 3 4 5 - More True

I have good work habits and study habits.
Less True - 1 2 3 4 5 - More True

I have never had a violent outburst or gotten into a fight at school.
Less True - 1 2 3 4 5 - More True

I feel I am working up to my full potential.
Less True - 1 2 3 4 5 - More True

I don't let my friends distract me from doing my schoolwork and homework.
Less True - 1 2 3 4 5 - More True

I always do my homework without my parents or teachers having to remind me.
Less True - 1 2 3 4 5 - More True

I like to put a lot of thought and effort into my work.
Less True - 1 2 3 4 5 - More True

I have never repeated a grade in middle or high school
(grades 6-12).
Less True - 1 2 3 4 5 - More True

I would rather be seen as 'school smart' than 'street smart.'
Less True - 1 2 3 4 5 - More True

I wake up in the morning feeling refreshed and ready for school.
Less True - 1 2 3 4 5 - More True

Appendix C - Continued

I rarely complain about school.
Less True - 1 2 3 4 5 - More True

I work hard in school even when I don't like the teacher.
Less True - 1 2 3 4 5 - More True

I have a positive attitude and positive beliefs about school.
Less True - 1 2 3 4 5 - More True

In the past two years, I have never been suspended from school.
Less True - 1 2 3 4 5 - More True

I have never been expelled from school for my behavior.
Less True - 1 2 3 4 5 - More True

On my last report card, I had A's and B's in all of my classes.
Less True - 1 2 3 4 5 - More True

Over the past two years, I have never attended mandatory summer school for a failing grade.
Less True - 1 2 3 4 5 - More True

Your Name:

Your Email:

Website:
http://www.assessmentgenerator.com/H/cRboslearn1171904074.html

Appendix D

Parent Survey

Student Motivation Survey for Parents

This survey is designed to help you identify your child's student motivation quotient on a scale of 1-100. For best results, have your child also take the Student Motivation Survey Self-Assessment.

You will rate all of the statements on a scale of 1-5, with 5 being highest. Take your time and give honest answers.

Please note that this assessment was specifically designed for middle and high school students (grades 6-12), but it can be used for all ages.

My child is very well organized.
Less True - 1 2 3 4 5 - More True

My child has good work habits and study habits.
Less True - 1 2 3 4 5 - More True

My child has never had a violent outburst or gotten into a fight at school.
Less True - 1 2 3 4 5 - More True

My child is working up to his full potential.
Less True - 1 2 3 4 5 - More True

My child does NOT let his friends distract him from doing his schoolwork and homework.
Less True - 1 2 3 4 5 - More True

My child always does his homework without me having to remind him.
Less True - 1 2 3 4 5 - More True

My child likes to put a lot of thought and effort into his work.
Less True - 1 2 3 4 5 - More True

Appendix D - Continued

My child has never repeated a grade in middle or high school (grades 6-12).
Less True - 1 2 3 4 5 - More True

My child would rather be seen as 'school smart' than 'street smart.'
Less True - 1 2 3 4 5 - More True

My child wakes up in the morning refreshed and ready for school.
Less True - 1 2 3 4 5 - More True

My child rarely complains about school.
Less True - 1 2 3 4 5 - More True

My child works hard in school even when he doesn't like the teacher.
Less True - 1 2 3 4 5 - More True

My child has a positive attitude and positive beliefs about school.
Less True - 1 2 3 4 5 - More True

In the past two years, my child has never been suspended from school.
Less True - 1 2 3 4 5 - More True

My child has never been expelled from school for his behavior.
Less True - 1 2 3 4 5 - More True

On his last report card, my child had A's and B's in all of his classes.
Less True - 1 2 3 4 5 - More True

Over the past two years, my child has never attended mandatory summer school for a failing grade.
Less True - 1 2 3 4 5 - More True

Your Name:

Your Email:

Website: http://www.assessmentgenerator.com/H/cRboslearn1171904074.html

Appendix: E

Pretest

Pre-Assessment Quiz

Name:_____

Date: _____

Period: _____

Please circle the best answer.

1. Always assume pots & pans are

    a. Cold
    b. Hot
    c. Warm
    d. None of the above

2. What is the first thing you should do in case of a grease fire on the stove top?

    a. Turn off the burner
    b. Cover the pan with a lid
    c. Sprinkle flames with baking soda
    d. Use a fire extinguisher

3. When cooking on the stove top. The handles of pots should be turned

    a. Toward the front of the range
    b. Toward the inside or middle of the range
    c. Toward the outside of the range
    d. None of the above

4. How many wet paper towels are used to clean up tiny shards/pieces of broken glass

    a. 2
    b. As many as it takes
    c. 4
    d. 7

5. To get rid of broken glass safely

    a. Throw it in the garbage
    b. Place it in a wet paper towel
    c. Place it in a double paper bag
    d. None of the above

Appendix E – Continued

6. If a knife falls when you are cutting

   a. Let it drop and step back
   b. Try to catch it so your foot doesn't get cut
   c. Catch it with a potholder or kitchen towel, so you do not cut yourself.
   d. None of the above

7. When using a knife and cutting food you must have

   a. A damp towel to anchor your cutting board
   b. A cutting board
   c. Both a and b
   d. None of the above

8. In the lab I should dry dishes with

   a. dish rag
   b. dish towel
   c. paper towels
   d. none of the above

Please write out TRUE or FALSE in the blank provided. If I cannot read your writing the answer will be marked wrong.

_____ 9. It is okay to taste from a stirring spoon or your finger, adjust your seasonings and taste again if you are checking your seasonings.

_____ 10. Because oil does not catch fire easily, there is no need to watch it closely when cooking.

_____ 11. A dull knife is more dangerous than a sharp one.

_____ 12. I should never touch an electrical appliance with wet hands.

Appendix E – Continued

Please fill in the blank with the best answer.

13. You should never try to put a grease fire out with what?

    _____

14. Salt's function in a recipe is to add

    _____

Directions: Match the following measurement with the correct equivalent. You will only use each answer one time.

15.	_____	3 teaspoons	A.	1 cup
16.	_____	1 pound	B.	1 tablespoon
17.	_____	8 ounces	C.	16 ounces

Short Answer. Please give a short explanation to the following questions.

18. You have just dropped a glass-measuring cup, what precautions do you take in cleaning up the broken glass?

19. What type of food is likely to spread germs or cause cross contamination?

20. Please give an example of a pathogen?

Appendix E – Continued

21. Please define sanitation

Please explain the correct measuring procedure for the following ingredients

22. Granulated sugar

23. Brown sugar

24. Flour

Please fill in the blank with the correct abbreviation for the following terms.

25. Cup _____

26. Pound _____

27. Quart _____

28. Liter _____

29. Fahrenheit _____

30. Tablespoon _____

31. Teaspoon _____

Appendix E - Continued

Match the letter of the kitchen tool with the correct name.

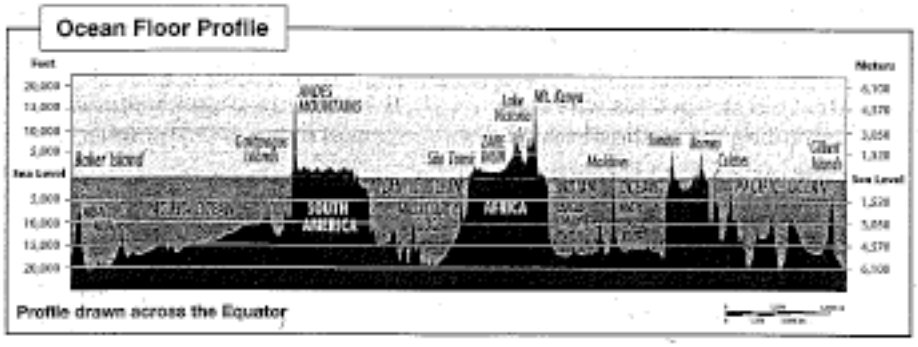
			QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
32.	_____	Colander	A.
			QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
33.	_____	Dry Measuring Cups	B.
			QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
34.	_____	Grater	C.
			QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
35.	_____	Liquid Measuring Cup	D.
36.	_____	Measuring Spoons	E. 
			QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
37.	_____	Mixing Bowls	F.
			QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
38.	_____	Sifter	G.
			QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
39.	_____	Rubber Scraper	H.

Appendix E - Continued

Name _____ Class _____ Date _____

Test 1—Geographic Literacy

Directions: *Use the map below to answer questions 1–4.*



1. What area of the world is shown on this map?
   - A the ocean floor below South America and Africa
   - B the ocean floor below all of Earth
   - C the ocean floor along the Equator
   - D the ocean floor along the Eastern Hemisphere of Earth

2. According to this diagram, what do Baker Island, the Galápagos Islands, and the Maldives have in common?
   - A They are below sea level.
   - B They are at sea level.
   - C They are in the Pacific Ocean.
   - D They are surrounded by land.

3. On this profile of the ocean floor, where are the lowest points on Earth located?
   - A in the Pacific Ocean
   - B in the Indian Ocean
   - C on the coast of South America
   - D in the Atlantic Ocean

4. Based on the information in the diagram, which of the following is a true statement?
   - A Mt. Kenya is the highest point on the South American continent.
   - B Celebes and Borneo are higher than Sumatra.
   - C Most of South America is at or near sea level at the equator, and most of Africa is above sea level at the equator.
   - D Lake Victoria is located at sea level.

Appendix E - Continued

Name _____ Class _____ Date _____

Test 1—Geographic Literacy *(continued)*

Directions: *Use the map below to answer questions 5–8.*

5. What is the capital city of Italy?
   - A Rome
   - B Milan
   - C Naples
   - D Paris

6. Which of the following cities is the closest in distance to Vienna, Austria?
   - A Lisbon
   - B Helsinki
   - C Athens
   - D Dublin

7. Which country is located west of Spain?
   - A Portugal
   - B France
   - C Finland
   - D Italy

8. Which body of water separates the United Kingdom and France?
   - A Bay of Biscay
   - B English Channel
   - C North Sea
   - D Mediterranean Sea

Name _____ Class _____ Date _____

Test 1—Geographic Literacy (continued)

Directions: *Use the map below to answer questions 9–12.*

9. Which route would a gold prospector follow from Independence, Missouri, to Sutter's Fort?
   - **A** Santa Fe Trail and California Trail
   - **B** Oregon Trail and Santa Fe Trail
   - **C** Butterfield Overland Mail Trail
   - **D** Oregon Trail and California Trail

10. What major geographical feature would pioneers have to cross on the Oregon Trail?
    - **A** Sierra Nevada Mountains
    - **B** Great Salt Lake
    - **C** Rio Grande River
    - **D** Rocky Mountains

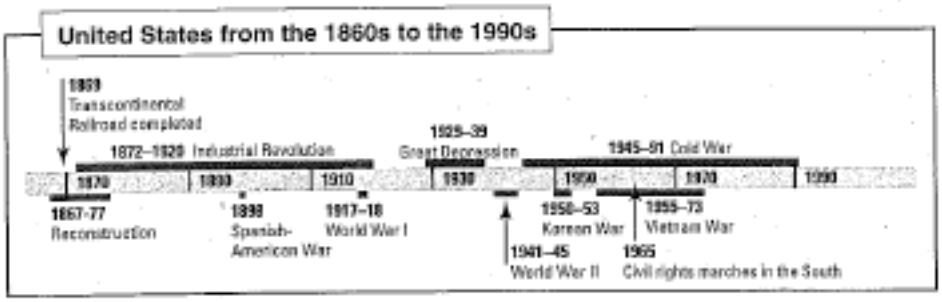
11. What is the approximate length of the California Trail from Ft. Laramie to Sacramento?
    - **A** about 1,000 miles
    - **B** about 1,900 miles
    - **C** about 500 miles
    - **D** about 2,500 miles

12. Based on the information included, which of the following is the best title for this map?
    - **A** Geographical Features of the American Southwest
    - **B** Trails to the West
    - **C** The New Mexico Territory
    - **D** The United States, 1840

Name _____ Class _____ Date _____

Test 2—Visual Analysis

Directions: *Use the timeline below to answer questions 1–5.*



1. According to the timeline, which sequence of events is correct?
   - A Spanish-American War; Industrial Revolution; World War II; Great Depression
   - B Reconstruction; Great Depression; Korean War; Vietnam War
   - C Great Depression; World War I; Cold War; Industrial Revolution
   - D World War I; World War II; Great Depression; Korean War

2. Which of the following statements is true, based on the information in the timeline?
   - A Between 1910 and 1970, the United States experienced six wars.
   - B The end of the Great Depression was marked by the beginning of World War I.
   - C At the end of World War I, the Industrial Revolution had nearly ended.
   - D The Korean War and the Vietnam War overlapped by two years.

3. Which of the following events occurred during the Cold War?
   - A World War II
   - B the Great Depression
   - C the Vietnam War
   - D the Industrial Revolution

4. During which of the following periods did civil rights marches in the South occur?
   - A Reconstruction
   - B World War I
   - C the Great Depression
   - D the Cold War

5. Which event on the timeline spans the *greatest* amount of time?
   - A Great Depression
   - B Transcontinental Railroad completed
   - C Industrial Revolution
   - D Korean War

Name _____ Class _____ Date _____

Test 2—Visual Analysis *(continued)*

Directions: *Examine the cartoon below, and answer questions 6–10.*

6. Who or what do the people in the water represent?
   - A people who have jumped in before knowing how to swim
   - B Russians invading U.S. shorelines
   - C immigrants coming to the United States
   - D big business in America

7. Who or what does the lifeguard represent?
   - A the European Union
   - B the United States Coast Guard
   - C American immigrants
   - D the United States government

8. Which of the following would be the *best* caption for this cartoon?
   - A "Who taught these people how to speak English?"
   - B "Uncle Sam can't swim."
   - C "Can America save anyone?"
   - D "The war against terrorism comes to America's shores."

9. Which scene presents the message *most* like the one in the cartoon?
   - A A woman dressed as the Statue of Liberty looks sadly at a long line of children with empty bowls as she serves the last oatmeal to the first child in line.
   - B The president of the United States shakes hands with the president of another nation.
   - C An older man and woman sit on a park bench tossing bread to a flock of hungry pigeons.
   - D A well-dressed man and woman look away as they walk past a long line of homeless people begging for money.

10. Which statement best explains the symbolism in this cartoon?
    - A The umbrella represents the sky.
    - B The chair represents big business.
    - C The word *Help* represents English-speaking immigrants.
    - D The life preserver represents American aid.

Name: _____ Date: _____

The Nature of Light
Test 3

Word Bank:
A. Electromagnetic Wave **C.** Radiation **E.** Reflection **G.** Absorption **I.** ROYGBIV
B. Transmission **D.** Opaque **F**. Pigment **H.** 300,000,000 **J**. Interference

Circle the best response: -In-The-Blanks

1. **I , B, C** Colors of the Light Spectrum.

2. An _**A, B, C**_ is a wave that can travel through space or matter and consists of changing electric and magnetic fields.

3. In the near vacuum of space, the speed of light is about

   _**F, G, H**___m/s.

4. The transfer of energy carried by light waves to particles of matter is called

   __**A, B, C**____.

5. Matter that does not transmit any light ___**B, C, D**_____.

6. The overlapping of two waves _____**F, H, J_____.**

7. A ___**C, F, G**___ is a material that gives a substance its color.

8. **_C, E, G**____ occurs when light or any other wave bounces off an object.

Matching:

Match these objects with **Transparent; Translucent; or Opaque**.

9. _____ Window

10. _____ Paper

11. _____ Wax Paper

12. _____ Floor

13. _____ Mirror

Appendix E - Continued

True or False:

14. _____ Radiowaves include television stations

15. _____ Infrared means objects that generate heat.

16. _____ Ultraviolet rays do not damages skin cells.

17. _____ Gamma Rays carry low amounts of energy.

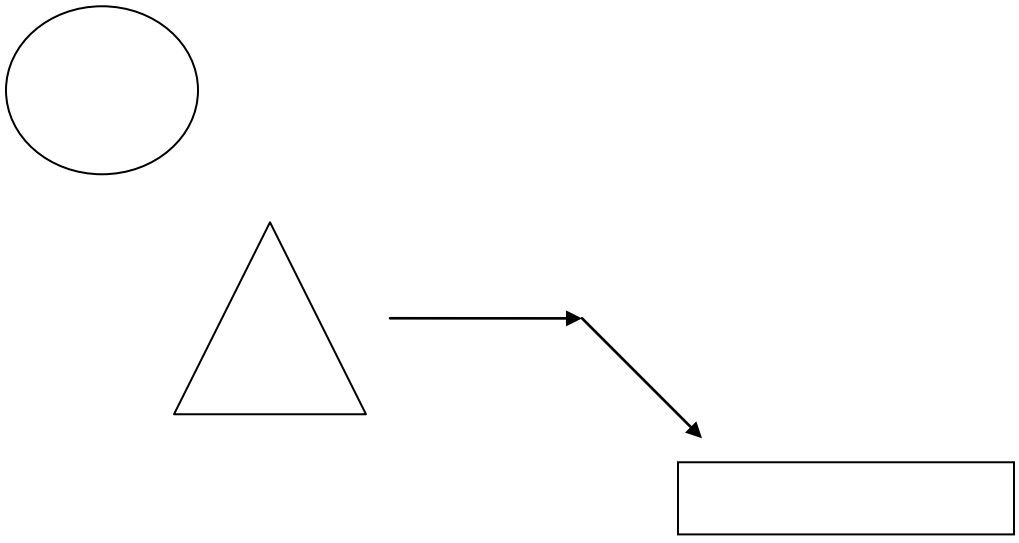
18. _____ The visible light spectrum includes Cyan, Magenta, and Yellow.

19. _____ Mirrors can be used to create Law Of Reflection

20. _____ Prisms diffract light.

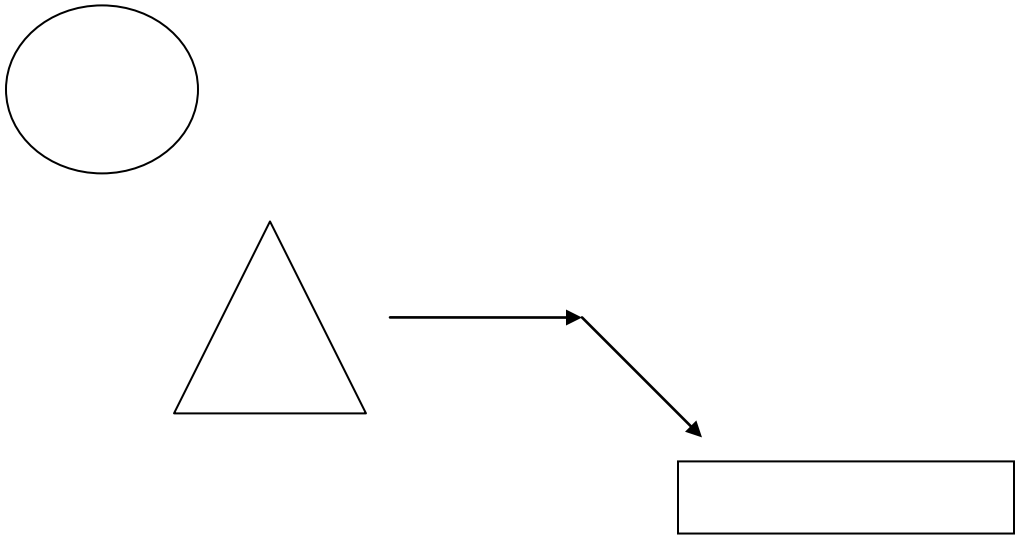
Diagram of Prisms:

Sunlight is shining through a **green prism** and onto a **white surface**.



Appendix E - Continued

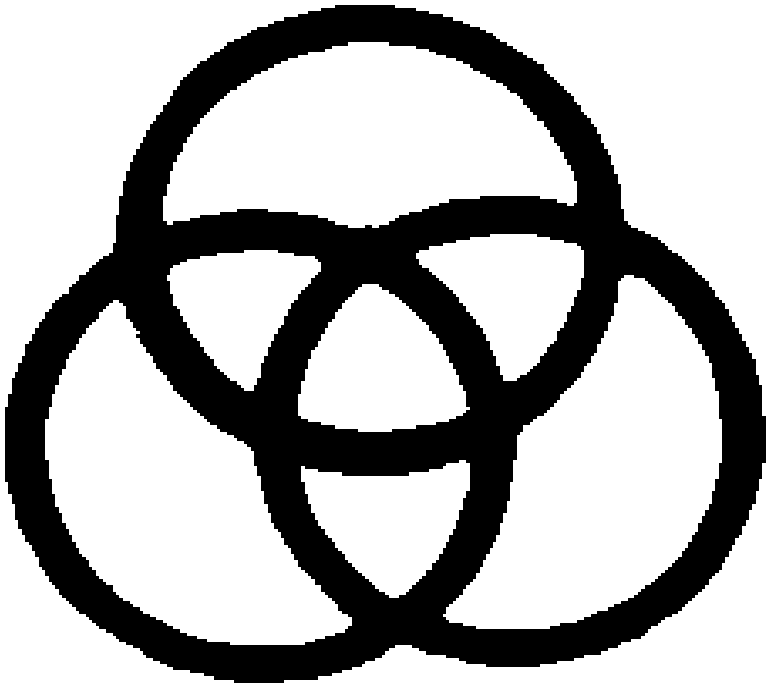
Sunlight is shining through a **colorless prism** and onto a **black surface**.



Fill in this Diagram according to the Primary colors and Secondary colors of light.

Word Bank:

Red, Magenta, Yellow, White, Blue, Green, Cyan



Appendix E - Continued

Electromagnetic Spectrum:

List the Seven Spectrums of THE EM Spectrum from **Lowest to Highest**
Also, List the Colors of Visible Light from: **Lowest to Highest**.
(HINT: THE SAME ORDER!)

GREEN, ORANGE, RED, BLUE, INDIGO, VIOLET, YELLOW

Electromagnetic Spectrum	**Visible Light**
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Appendix: F

Posttest

Posttest-Assessment Quiz

Name:_____

Date: _____

Period: _____

Please circle the best answer.

9. Always assume pots & pans are

   a. Cold
   b. Hot
   c. Warm
   d. None of the above

10. What is the first thing you should do in case of a grease fire on the stove top?

    a. Turn off the burner
    b. Cover the pan with a lid
    c. Sprinkle flames with baking soda
    d. Use a fire extinguisher

11. When cooking on the stove top. The handles of pots should be turned

    a. Toward the front of the range
    b. Toward the inside or middle of the range
    c. Toward the outside of the range
    d. None of the above

12. How many wet paper towels are used to clean up tiny shards/pieces of broken glass

    a. 2
    b. As many as it takes
    c. 4
    d. 7

13. To get rid of broken glass safely

    a. Throw it in the garbage
    b. Place it in a wet paper towel
    c. Place it in a double paper bag
    d. None of the above

Appendix F – Continued

14. If a knife falls when you are cutting

    a. Let it drop and step back
    b. Try to catch it so your foot doesn't get cut
    c. Catch it with a potholder or kitchen towel, so you do not cut yourself.
    d. None of the above

15. When using a knife and cutting food you must have

    a. A damp towel to anchor your cutting board
    b. A cutting board
    c. Both a and b
    d. None of the above

16. In the lab I should dry dishes with

    a. dish rag
    b. dish towel
    c. paper towels
    d. none of the above

Please write out TRUE or FALSE in the blank provided. If I cannot read your writing the answer will be marked wrong.

_____ 9. It is okay to taste from a stirring spoon or your finger, adjust your seasonings and taste again if you are checking your seasonings.

_____ 10. Because oil does not catch fire easily, there is no need to watch it closely when cooking.

_____ 11. A dull knife is more dangerous than a sharp one.

_____ 12. I should never touch an electrical appliance with wet hands.

Appendix F – Continued

Please fill in the blank with the best answer.

32. You should never try to put a grease fire out with what?

_____

33. Salt's function in a recipe is to add

_____

Directions: Match the following measurement with the correct equivalent. You will only use each answer one time.

34.	_____	3 teaspoons	A.	1 cup
35.	_____	1 pound	B.	1 tablespoon
36.	_____	8 ounces	C.	16 ounces

Short Answer. Please give a short explanation to the following questions.

37. You have just dropped a glass-measuring cup, what precautions do you take in cleaning up the broken glass?

38. What type of food is likely to spread germs or cause cross contamination?

39. Please give an example of a pathogen?

Appendix F – Continued

40. Please define sanitation

Please explain the correct measuring procedure for the following ingredients

41. Granulated sugar

42. Brown sugar

43. Flour

Please fill in the blank with the correct abbreviation for the following terms.

44. Cup _____

45. Pound _____

46. Quart _____

47. Liter _____

48. Fahrenheit _____

49. Tablespoon _____

50. Teaspoon _____

Appendix F - Continued

Match the letter of the kitchen tool with the correct name.

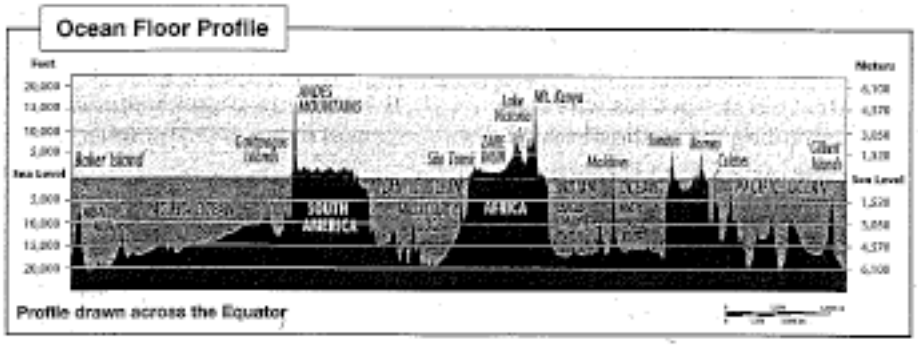
40.	_____	Colander	A. QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
41.	_____	Dry Measuring Cups	B. QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
42.	_____	Grater	C. QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
43.	_____	Liquid Measuring Cup	D. QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
44.	_____	Measuring Spoons	E. 
45.	_____	Mixing Bowls	F. QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
46.	_____	Sifter	G. QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
47.	_____	Rubber Scraper	H. QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.

Appendix F – Continued

Name _____ Class _____ Date _____

Test 1—Geographic Literacy

Directions: *Use the map below to answer questions 1–4.*



1. What area of the world is shown on this map?
   - A the ocean floor below South America and Africa
   - B the ocean floor below all of Earth
   - C the ocean floor along the Equator
   - D the ocean floor along the Eastern Hemisphere of Earth

2. According to this diagram, what do Baker Island, the Galápagos Islands, and the Maldives have in common?
   - A They are below sea level.
   - B They are at sea level.
   - C They are in the Pacific Ocean.
   - D They are surrounded by land.

3. On this profile of the ocean floor, where are the lowest points on Earth located?
   - A in the Pacific Ocean
   - B in the Indian Ocean
   - C on the coast of South America
   - D in the Atlantic Ocean

4. Based on the information in the diagram, which of the following is a true statement?
   - A Mt. Kenya is the highest point on the South American continent.
   - B Celebes and Borneo are higher than Sumatra.
   - C Most of South America is at or near sea level at the equator, and most of Africa is above sea level at the equator.
   - D Lake Victoria is located at sea level.

Appendix F - Continued

Name _____ Class _____ Date _____

Test 1—Geographic Literacy *(continued)*

Directions: *Use the map below to answer questions 5–8.*

5. What is the capital city of Italy?
   - A Rome
   - B Milan
   - C Naples
   - D Paris

6. Which of the following cities is the closest in distance to Vienna, Austria?
   - A Lisbon
   - B Helsinki
   - C Athens
   - D Dublin

7. Which country is located west of Spain?
   - A Portugal
   - B France
   - C Finland
   - D Italy

8. Which body of water separates the United Kingdom and France?
   - A Bay of Biscay
   - B English Channel
   - C North Sea
   - D Mediterranean Sea

Appendix E - Continued

Appendix F - Continued

Name _____ Class _____ Date _____

Test 1—Geographic Literacy *(continued)*

Directions: *Use the map below to answer questions 9–12.*

9. Which route would a gold prospector follow from Independence, Missouri, to Sutter's Fort?
   - A Santa Fe Trail and California Trail
   - B Oregon Trail and Santa Fe Trail
   - C Butterfield Overland Mail Trail
   - D Oregon Trail and California Trail

10. What major geographical feature would pioneers have to cross on the Oregon Trail?
   - A Sierra Nevada Mountains
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   - C Rio Grande River
   - D Rocky Mountains

11. What is the approximate length of the California Trail from Ft. Laramie to Sacramento?
   - A about 1,000 miles
   - B about 1,900 miles
   - C about 500 miles
   - D about 2,500 miles

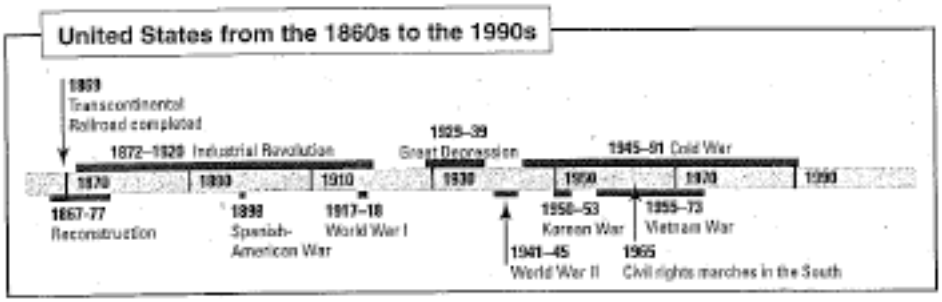
12. Based on the information included, which of the following is the best title for this map?
   - A Geographical Features of the American Southwest
   - B Trails to the West
   - C The New Mexico Territory
   - D The United States, 1840

Appendix F - Continued

Name _____ Class _____ Date _____

Test 2—Visual Analysis

Directions: *Use the timeline below to answer questions 1–5.*



1. According to the timeline, which sequence of events is correct?
   - A Spanish-American War; Industrial Revolution; World War II; Great Depression
   - B Reconstruction; Great Depression; Korean War; Vietnam War
   - C Great Depression; World War I; Cold War; Industrial Revolution
   - D World War I; World War II; Great Depression; Korean War

2. Which of the following statements is true, based on the information in the timeline?
   - A Between 1910 and 1970, the United States experienced six wars.
   - B The end of the Great Depression was marked by the beginning of World War I.
   - C At the end of World War I, the Industrial Revolution had nearly ended.
   - D The Korean War and the Vietnam War overlapped by two years.

3. Which of the following events occurred during the Cold War?
   - A World War II
   - B the Great Depression
   - C the Vietnam War
   - D the Industrial Revolution

4. During which of the following periods did civil rights marches in the South occur?
   - A Reconstruction
   - B World War I
   - C the Great Depression
   - D the Cold War

5. Which event on the timeline spans the *greatest* amount of time?
   - A Great Depression
   - B Transcontinental Railroad completed
   - C Industrial Revolution
   - D Korean War

Appendix F - Continued

Name _____ Class _____ Date _____

Test 2—Visual Analysis *(continued)*

Directions: *Examine the cartoon below, and answer questions 6–10.*

6. Who or what do the people in the water represent?
   - A people who have jumped in before knowing how to swim
   - B Russians invading U.S. shorelines
   - C immigrants coming to the United States
   - D big business in America

7. Who or what does the lifeguard represent?
   - A the European Union
   - B the United States Coast Guard
   - C American immigrants
   - D the United States government

8. Which of the following would be the *best* caption for this cartoon?
   - A "Who taught these people how to speak English?"
   - B "Uncle Sam can't swim."
   - C "Can America save anyone?"
   - D "The war against terrorism comes to America's shores."

9. Which scene presents the message *most* like the one in the cartoon?
   - A A woman dressed as the Statue of Liberty looks sadly at a long line of children with empty bowls as she serves the last oatmeal to the first child in line.
   - B The president of the United States shakes hands with the president of another nation.
   - C An older man and woman sit on a park bench tossing bread to a flock of hungry pigeons.
   - D A well-dressed man and woman look away as they walk past a long line of homeless people begging for money.

10. Which statement best explains the symbolism in this cartoon?
    - A The umbrella represents the sky.
    - B The chair represents big business.
    - C The word *Help* represents English-speaking immigrants.
    - D The life preserver represents American aid.

Appendix F – Continued

Name: _____ Date: _____

The Nature of Light
Test 3

Word Bank:
A. Electromagnetic Wave **C.** Radiation **E.** Reflection **G.** Absorption **I.** ROYGBIV
B. Transmission **D.** Opaque **F**. Pigment **H.** 300,000,000 **J**. Interference

Circle the best response: -In-The-Blanks

21. **I , B, C** Colors of the Light Spectrum.

22. An **A, B, C** is a wave that can travel through space or matter and consists of changing electric and magnetic fields.

23. In the near vacuum of space, the speed of light is about

F, G, H m/s.

24. The transfer of energy carried by light waves to particles of matter is called

A, B, C.

25. Matter that does not transmit any light **B, C, D**.

26. The overlapping of two waves **F, H, J**.

27. A **C, F, G** is a material that gives a substance its color.

28. _____ occurs when light or any other wave bounces off an object.

Matching:

Match these objects with **Transparent; Translucent; or Opaque**.

29. _____ Window

30. _____ Paper

31. _____ Wax Paper

32. _____ Floor

33. _____ Mirror

Appendix F – Continued

True or False:

34. _____ Radiowaves include television stations

35. _____ Infrared means objects that generate heat.

36. _____ Ultraviolet rays do not damages skin cells.

37. _____ Gamma Rays carry low amounts of energy.

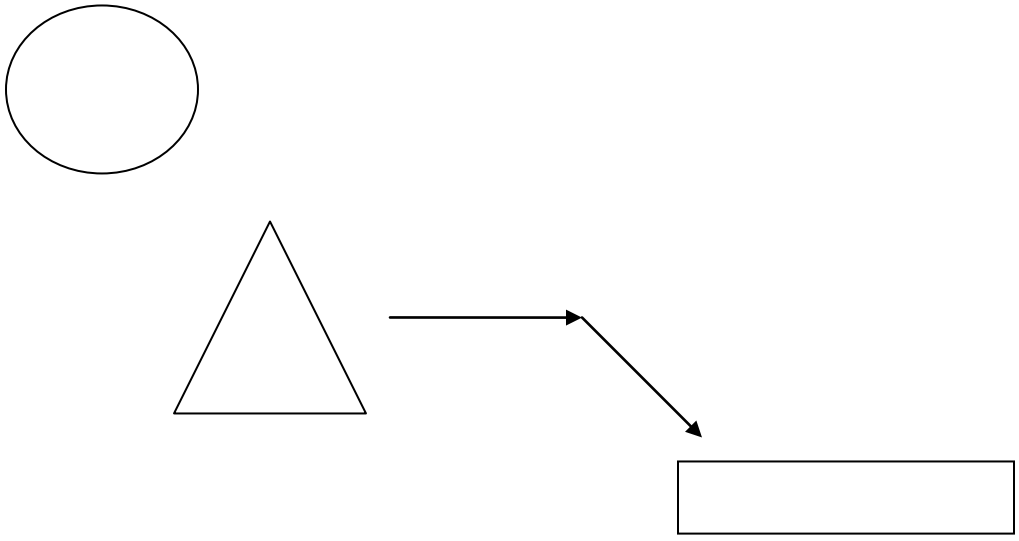
38. _____ The visible light spectrum includes Cyan, Magenta, and Yellow.

39. _____ Mirrors can be used to create Law Of Reflection

40. _____ Prisms diffract light.

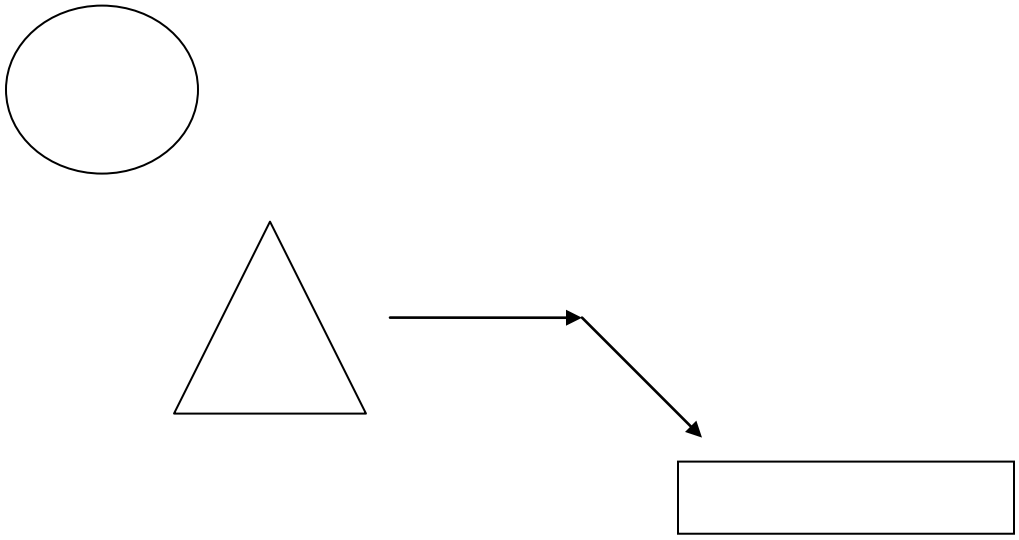
Diagram of Prisms:

Sunlight is shining through a **green prism** and onto a **white surface**.



Appendix F – Continued

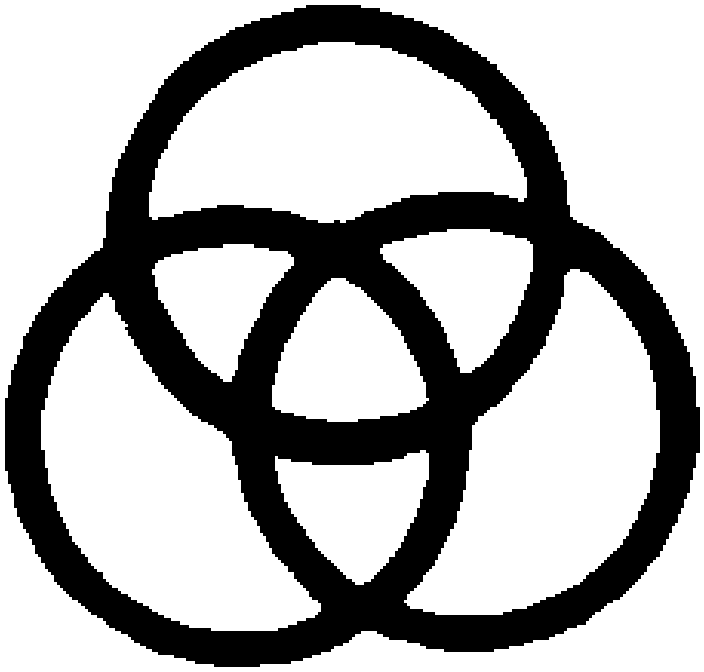
Sunlight is shining through a **colorless prism** and onto a **black surface**.



Fill in this Diagram according to the Primary colors and Secondary colors of light.

Word Bank:

Red, Magenta, Yellow, White, Blue, Green, Cyan



Appendix F – Continued

Electromagnetic Spectrum:

List the Seven Spectrums of THE EM Spectrum from **Lowest to Highest**
Also, List the Colors of Visible Light from: **Lowest to Highest**.
(HINT: THE SAME ORDER!)

GREEN, ORANGE, RED, BLUE, INDIGO, VIOLET, YELLOW

Electromagnetic Spectrum	**Visible Light**
8.	
9.	
10.	
11.	
12.	
13.	
14.	

Appendix G

Exit Slip

Name _____
Date _____
Grade _____

EXIT SLIP

A. List <u>two</u> interesting things that you learned from our lesson today. Explain why each of these points was interesting.

1._____
_____
_____
_____
2._____
_____
_____
_____

B. Give an example of how you can use what you learned today in your everyday life.

_____
_____
_____
_____

C. List <u>one</u> thing that you would have liked to do differently today.

_____
_____
_____
_____

D. What was the <u>best</u> part of today's lesson?

_____
_____
_____
_____

Appendix G - Continued

*** Using a scale from 1-5, answer the following questions.**

1. How interesting was today's lesson?

Not interesting 1 2 3 4 5 *Very interesting*

2. Using computers would have made the lesson more interesting.

Not really 1 2 3 4 5 Definitely

3. I prefer working with a partner.

Not really 1 2 3 4 5 Definitely

4. I prefer working in a small group.

Not really 1 2 3 4 5 Definitely

5. I like having the teacher explain most of the lesson.

Not really 1 2 3 4 5 Definitely

6. Seeing pictures helps me remember information.

Not really 1 2 3 4 5 Definitely

7. I like working on projects.

Not really 1 2 3 4 5 Definitely

8. How motivated are you to learn more about today's topic?

Not motivated 1 2 3 4 5 *Very motivated*

Appendix G - Continued

Multiple Intelligence Test

Name _____
Date _____
Grade _____

EXIT SLIP

A. List <u>two</u> interesting things that you learned from our lesson today. Explain why each of these points was interesting.

1._____
_____
_____

2._____
_____
_____
_____

B. Give an example of how you can use what you learned today in your everyday life.

_____
_____
_____
_____

C. List <u>one</u> thing that you would have liked to do differently today.

_____
_____
_____
_____

D. What was the <u>best</u> part of today's lesson?

_____
_____
_____

*** Using a scale from 1-5, answer the following questions.**

1. How interesting was today's lesson?

Not interesting 1 2 3 4 5 *Very interesting*

2. Using computers would have made the lesson more interesting.

Not really 1 2 3 4 5 Definitely

3. I prefer working with a partner.

Not really 1 2 3 4 5 Definitely

4. I prefer working in a small group.

Not really 1 2 3 4 5 Definitely

5. I like having the teacher explain most of the lesson.

Not really 1 2 3 4 5 Definitely

6. Seeing pictures helps me remember information.

Not really 1 2 3 4 5 Definitely

7. I like working on projects.

Not really 1 2 3 4 5 Definitely

8. How motivated are you to learn more about today's topic?

Not motivated 1 2 3 4 5 *Very motivated*

Appendix H

Multiple Intelligence Test

MULTIPLE INTELLIGENCES TEST

Where does your true intelligence lie? This quiz will tell you where you stand and what to do about it. Read each statement. If it expresses some characteristic of yours and sounds true for the most part, jot down a "T." If it doesn't, mark an "F." If the statement is sometimes true, sometimes false, leave it blank.

1. _____ I'd rather draw a map than give someone verbal directions.
2. _____ I can play (or used to play) a musical instrument.
3. _____ I can associate music with my moods.
4. _____ I can add or multiply in my head.
5. _____ I like to work with calculators and computers.
6. _____ I pick up new dance steps fast.
7. _____ It's easy for me to say what I think in an argument or debate.
8. _____ I enjoy a good lecture, speech or sermon.
9. _____ I always know north from south no matter where I am.
10. _____ Life seems empty without music.
11. _____ I always understand the directions that come with new gadgets or appliances.
12. _____ I like to work puzzles and play games.

13. _____ Learning to ride a bike (or skates) was easy

Appendix H - Continued

14. _____ I am irritated when I hear an argument or statement that sounds illogical.
15. _____ My sense of balance and coordination is good.
16. _____ I often see patterns and relationships between numbers faster and easier than others.
17. _____ I enjoy building models (or sculpting).
18. _____ I'm good at finding the fine points of word meanings.
19. _____ I can look at an object one way and see it sideways or backwards just as easily.
20. _____ I often connect a piece of music with some event in my life.
21. _____ I like to work with numbers and figures.
22. _____ Just looking at shapes of buildings and structures is pleasurable to me.
23. _____ I like to hum, whistle and sing in the shower or when I'm alone.
24. _____ I'm good at athletics.
25. _____ I'd like to study the structure and logic of languages.
26. _____ I'm usually aware of the expression on my face.
27. _____ I'm sensitive to the expressions on other people's faces.

Appendix H - Continued

28. _____ I stay "in touch" with my moods. I have no trouble identifying them.

29. _____ I am sensitive to the moods of others.

30. _____ I have a good sense of what others think of me.

MULTIPLE INTELLIGENCE SCORING SHEET

Place a check mark by each item you marked as "true." Add your totals. A total of four in any of the categories A through E indicates strong ability. In categories F and G a score of one or more means you have abilities as well.

A	B	C	D	E	F	G
Linguistic	Logical-Mathematical	Musical	Spatial	Bodily-Kinesthetic	Intra-personal	Inter-personal
7	4	2	1	6	26	27
8	5	3	9	13	28	29
14	12	10	11	15		30
18	16	20	19	17		
25	21	23	22	24		
Totals						

Appendix H - Continued

CHECKLIST FOR ASSESSING STUDENTS' MULTIPLE INTELLIGENCES

Name of Student: _____

In each of the following categories, check all items that apply.

Linguistic Intelligence

_____ writes better than average for age

_____ spins tall tales or tells jokes and stories

_____ has a good memory for names, places, dates, or trivia

_____ enjoys word games

_____ enjoys reading books

_____ spells words accurately (preschool: does developmental spelling that is advanced for age)

_____ appreciates nonsense rhymes, puns, tongue twisters, etc.

_____ enjoys listening to the spoken word (stories, commentary on the radio, talking, books)

_____ has a good vocabulary for age

_____ communicates to others in a highly verbal way

Appendix H - Continued

Other Linguistic Strengths:

MULTIPLE INTELLIGENCES: STRATEGIES IN THE CLASSROOM

The following list provides a survey of the techniques and materials that can be employed in teaching through the multiple intelligence. Linguistic Intelligence

* lectures, debates
* large- and small-group discussions
* books, worksheets, manuals
* brainstorming
* writing activities
* word games
* sharing time
* storytelling, speeches, reading to class
* talking books and cassettes
* extemporaneous speaking
* journal keeping
* choral reading
* individualized reading
* memorizing linguistic facts
* tape recording one's words
* using word processors
* publishing (e.g., creating class newspapers)

Appendix H - Continued

Logical-Mathematical Intelligence

* mathematical problems on the board
* Socratic questioning
* scientific demonstrations
* logical problem-solving exercises
* creating codes
* logic puzzles and games
* classifications and categorizations
* quantifications and calculations
* computer programming languages
* science thinking
* logical-sequential presentation of subject matter
* Piagetian cognitive stretching exercises
* Heuristic

Appendix H - Continued

Spatial Intelligence

* charts, graphs, diagrams, and maps
* visualization
* photography
* videos, slides, and movies
* visual puzzles and mazes
* 3-D construction kits
* art appreciation
* imaginative storytelling
* picture metaphors
* creative daydreaming
* painting, collage, visual arts
* idea sketching
* visual thinking exercises
* graphic symbols
* using mind-maps and other visual organizers
* computer graphics software
* visual awareness activities
* optical illusions
* color cues
* telescopes, microscopes, and binoculars
* visual awareness activities
* draw-and-paint/computer- assisted-design software
* picture literacy experiences

Appendix H - Continued

Bodily-Kinesthetic Intelligence

* creative movement, mime
* hands-on thinking
* field trips
* the classroom teacher
* competitive and cooperative games
* physical awareness and relaxation exercises
* all hands-on activities
* crafts
* body maps
* use of kinesthetic imagery
* cooking, gardening, and other "messy" activities
* manipulatives
* virtual reality software
* kinesthetic concepts
* physical education activities
* communicating with body language/ hand signals
* tactile materials and experiences
* body answers

Appendix H - Continued

Musical Intelligence

* musical concepts
* singing, humming, whistling
* playing recorded music
* playing live music on piano, guitar, or other instruments
* group singing
* mood music
* music appreciation
* playing percussion instruments
* rhythms, songs, raps, chants
* using background music
* linking old tunes with concepts
* discographies
* creating new melodies for concepts
* listening to inner musical imagery
* music software
* supermemory music

Appendix H - Continued

Interpersonal Intelligence

* cooperative groups
* interpersonal interaction
* conflict mediation
* peer teaching
* board games
* cross-age tutoring
* group brainstorming sessions
* peer sharing
* community involvement
* apprenticeships
* simulations
* academic clubs
* interactive software
* parties / social gatherings as context for learning
* people sculpting

Appendix H - Continued

Intrapersonal Intelligence

* independent study
* feeling-toned moments
* self-paced instruction
* individualized projects and games
* private spaces for study
* one-minute reflection periods
* interest centers
* personal connections
* options for homework
* choice time
* self-teaching programmed instruction
* exposure to inspirational/ motivational curricula
* self-esteem activities
* journal keeping
* goal setting sessions

Excerpted from Armstrong, T. Multiple Intelligences In The Classroom. Alexandria, VA: Association for Supervision and Curriculum Development (1994).

"If we are to achieve a richer culture... we must weave one in which each diverse human gift will find a fitting place."

- Margaret Mead

Website: http://www.spannj.org/BasicRights/appendix_b.htm