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ABSTRACT

This practicum was designed to improve critical thinking skills and reading abilities in fourth-grade students in a rural elementary school. A test administered prior to implementation of the practicum revealed that students' reading ability ranged from primer to third grade level. During the practicum, 15 students who were members of an alternative education class, read children's books and developed questions and answers for each level of Bloom's Taxonomy. Evaluation of the practicum and teacher observations revealed that the program was successful. Students spent more time on-task to the degree that one student completed only one level, five students completed all six levels, and the remaining students completed levels three through five. An added benefit was an overall improvement in students' attitude toward school. Social skills were also developed as students interacted with each other during the practicum. (Twelve appendices include a problem-solving diary, student activity checklist, teacher evaluation checklist, story cards and puzzles, and a taxonomy chart. Contains 41 references.) (AP

Promoting Critical Thinking Skills For Fourth Grade Students Through the Use of Children's Books

By

Sharon R. Patterson

Cluster 47

A Practicum I Report Presented to the Ed.D. Program in Child and Youth Studies in Partial Fulfillment of the Requirements for the Degree of Doctor of Education

Nova University

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Promoting Critical Thinking Skills For Fourth Grade Students Through the Use of Childrens' Books. Patterson, Sharon R., 1993: Practicum Report, Nova University, Ed.D. Program in Early and Middle Childhood. Critical Thinking/Elementary Education/Blooms Taxonomy/Thinking Skills/Rural Elementary Schools/Critical Reading.

This practicum was designed to improve critical thinking skills in fourth grade students. Students read childrens' books and developed questions and answers for each level of Bloom's Taxonomy.

Participants were members of an Alternative Education class. A test administered prior to the implementation of the practicum revealed that students' reading ability ranged from primer to third grade. As a result, modifications were made when necessary throughout the practicum. A parent of one of the student who had been certified emotionally handicapped, received special permission for him to become a member of the class. Prior to the culmination of the practicum, one student was placed in a school for disturbed students.

Analysis of the data and teacher observation revealed the program to be successful. Students spent more time on-task. One student completed only one level. Five students completed all six levels. The remaining students completed levels three through five. An added benefit of the practicum was an overall improvement in students' attitude toward school.

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CHAPTER I

INTRODUCTION

Description of Work Setting and Community

This practicum was implemented at a school located in a rural section of the city. The school is predominantly Black with a population of 477 students and 65 staff members. Most of the students resided in the neighborhood and were of low social economic status. Other students, almost all white and/or Hispanic, with a few Asians, from similar neighborhoods were bussed into the school. More than eighty percent of the school's population received free or reduced breakfast and lunch.

The school was in transition. In January of 1992, the principal of twenty-one years retired. During the last work days of the retiring principal, members in the community petitioned for a male principal replacement to be appointed. A majority of the staff also expressed a desire to have the position held by a male. When it was learned that a female would be principal, much discontentment was expressed. It must be noted that the discontentment was not directed at the incoming principal, but rather a desire to provide students with a positive black male role model in this predominantly black school and community.

During the fall of 1991-92 term, the school was

designated to become a "full service" school. Services to be provided included medical care, parenting classes, before and after school programs and a variety of social services programs.

Through the joint efforts of the school board and a nationally known group, the school provided an after school program for its' students and students in middle school through age twelve. Activities included in this program were homework assistance, various clubs, field trips, health and safety related programs and recreational activities.

As a joint effort of one of the county's counseling centers and the school board, the school also provided counseling to some of the students enrolled in one of the alternative education (Alt Ed) programs. The Alt Ed program was staffed with a teacher and a full-time counselor. Students spent seventeen weeks in the program, and were then mainstreamed back into the regular classroom.

Once weekly, a Student Teacher Assistant Team (STAT) met to discuss potential problem students. The team provided support to teachers, made recommendations and suggested interventions for students and families before referrals were made to the Student Study Team (SST) or other appropriate agencies.

The school also conducted a full-time computer lab. Services were provided for grades two through five. In

addition, were three classes of exceptional education students. One class had profoundly mentally retarded and two classes have educable retarded students. Pre-school education was provided by three PRE-K classes, and a Head Start center which was located on campus.

The school was located in a predominantly Black community situated in the rural northeastern section of the city. It was a community which has and continued to be the target of many controversies. The school has received many negative reviews from the local media. Just recently (December 1991) it was the target of a magazine published in an adjacent county. This review prompted the writer of this proposal to write a letter to the editor. Moreover, the community had all the signs of a community neglected by it's governmental agencies.

According to the Strategic Planning Group, Inc. (SPGI) Target Area Study (1987) the community was classified as residential although there were some agricultural as well as a few commercial businesses in the area. The average house was valued at approximately $15,000, and was considered substandard. The Strategic Planning Group, Inc. (1989. p. 6) cited that in 1980 "Census data shows that over 81 percent of the population was below the low and moderated income threshold of $14,650 for families and $10,250 for unrelated individuals." Approximately half of the residents employed had service jobs and the other half

were farmers.

The educational status of the residents according to SPGI was very limited. In 1987, only two percent of the resident's population over 25 had completed four or more years of college, fifty-five percent completed elementary school and only twenty percent graduated from high school.

Just as the community varies, the target group which the writer teaches varied in abilities. One student was classified as an enrichment student, two were classified as "at risk," while one student was staffed in a full-time Specific Learning Disabilities (SLD) class. The other thirteen students abilities ranged from low average to average. Learning styles of the students were also varied.

Writer's Role

The writer of this proposal was a fourth grade teacher who had been involved in education for twenty-two years. This was the writer's third year as a fourth grade teacher. Previously, the writer taught first and second grades. The writer also had a ten year tenure with a Head Start program. The last five years of the tenure, the writer served as the center's director. Aside from teaching fourth grade, the writer also served on the following in-school committees: Public Relations, Effective School Improvement Committee, Science Coordinator, Math Science Teacher Training Committee, STAT Committee, Teacher Advisory Committee to the

Superintendent, and Blueprint 2001 School Improvement Committee.

The writer was also the director of the after school program. This position enabled the writer to engage in interviews and conferences with teachers of students between the ages of six through twelve. As a result, the writer heard first hand concerns of both teachers and students.

The writer has an associate of arts degree from Seminole Community College, a bachelor's degree in Elementary Education from the University of Central Florida, and a master's degree in Educational Leadership from Nova University. Other training included Drug Education, English as a Second Language (ESOL), Interaction Management, Middle Grades Training, Team/Lazotte, Improvement Through FPMS, and Targeted Selection.

CHAPTER II

STUDY OF THE PROBLEM

Problem Description

Classroom data and school records revealed the following problems that needed to be corrected. First, students responded orally and on written assignments on a concrete level. Secondly, students needed guidance in critical thinking skills. Thirdly, Comprehensive Test of Basic Skills results and the Test of Cognitive Skills (1991) revealed that students were not performing to their potential due to a lack of higher level thinking. The problem was students were performing below their potential abilities due to their inabilities to think cognitively using higher level thinking skills.

Problem Documentation

Several factors authenticated the existence of the problem. Students' written assignments in language arts and science indicated a need for lessons in critical thinking skills. Also, teacher observations during discussions of subject matter in the different domains indicated a need for developing higher level thinking. Furthermore, more evidence that the problem existed was revealed at the first staff meeting conducted by the

school's new principal. At this meeting, the staff was advised that the school had a serious problem and improvement could not wait until the next school term. An explanation of how more than one half of the school's population was failing academically was delineated. All employees were advised to work collectively to ensure students' academic success. The staff was further advised that unless test scores improved over last school term's scores, the school would lose it's computer lab, one custodian, four teachers and one teacher assistant. Consequently, the loss would result in larger class size for the upcoming school term.

The principal cited (1992) a need for improvement in the area of higher order thinking skills. She also emphasized the fact that the Comprehensive Test of Basic Skills and the Test of Cognitive Skills revealed a need for teachers to design lessons which would promote higher level cognitive thinking. Furthermore, two challenges were presented during this meeting. First, teachers were to improve instruction so students would become academically prepared to meet challenges of today's society. Second, the goal of all educators should be what best works for students. Educators who were unable to work for the betterment of students were warned that their position would be held by someone else next school term.

The following month, the district's testing coordinator

conducted an in-service and presented detailed test results by grade level. The school's test results were compared to other elementary schools in the district. All grades with the exception of grade four depicted poor test results.

The coordinator expressed areas of concern as indicated by Bloom's hierarchy. They were application, analysis, synthesis and evaluation. The test of Cognitive Skills which was administered along with the CTBS indicated that some students performed as low as forty percent below their potential. An example of the problem follows.

The subjects were twenty-two students with a cognitive skill intelligence of 96 - 104. The results, taken from the "reading total scores" were as follows. CTBS results show an anticipated mean scale score for students with an intelligence of 96-104 to be 578.8. However, according to test results the mean of achievement scale score shows students performing at 537.0. The difference between the achievement and anticipated scale scores was 41.1. This indicated that the students' potential greatly exceeded their performance.

The writer of this proposal held several conferences with the principal in regards to the problem. At the final conference, the writer offered to develop critical thinking activities that could be used to improve higher level thinking skills.

Students were performing below their potential

abilities due to their inabilities to think cognitively using higher level thinking skills. This was validated by the results given above.

Causative Analysis

There were several reasons for the existence of the problem. First, students had not been challenged nor instructed to think beyond the levels of knowledge and comprehension. The second reason was low teacher expectations. Teachers have expected and accepted little in regard to students' abilities and performances. Third, emphasis on the teaching of the thinking process was not one of the goals of all educators (Costa, 1989). The fourth reason was the failure of teachers to teach to the strength of students. In preparing lessons, little to no consideration was given to learning situations and strategies that provided experiences for the concrete sequential learner, the abstract sequential learner, the abstract random learner, and the concrete random learner. Rather, teachers usually prepare lessons based upon how the teacher learns best. The information below cited by Butler (1988) shows a listing of learning styles of students and their mode of learning. When consideration to learning styles becomes a part of instructional planning, the benefits are realized by both the teacher and students.

Concrete Sequential Learners

Students who are concrete sequential learners need organization. They are unable to function at their best without structured activities. They must also be given details. They are most comfortable with hands-on activities, such as sorting, labeling collecting, classifying, building, and measuring.

Abstract Sequential Learners

Children who fall into this category need to be left alone to read and have time to think. They need to be allowed to make their own conclusions through investigations and expert views, They learn best by reason and logic. They like to analyze and evaluate.

Abstract Random Learners

Students who are abstract random learners learn best when expressing ideas and feelings in a group setting. They learn well from peer tutors, illustrations, and communication.

Concrete Random Learners

Concrete random learners learn best when experimenting with new ideas. They are risk takers learning by trial and error. They work well with inventions, games, experiments, and love exploring. These are students who are divergent and self-reliant.

Consideration must be given to the learning styles of individual students when preparing lessons if these students are to be successful in school.

Relationship of the Problem to the Literature

Preliminary literature cited several reason for students' inability to think critically. Reasons cited included the failure of teachers to provide proper channels for developing critical thinking. Furthermore, some educators see the teaching of critical thinking as an exhausting requisite added to the already overcrowded curriculum (Wood, Biraimah, Kysilka, and Miller, 1990). As a result, teachers have accepted recall responses from students. Whimbey (1990) cited that since the fifties, there has been a problem in the teaching of problem solving. He further suggested that the problem continues because teachers do not give students enough wait time to mentally process answers before responding to questions. Moreover, some educators believe thinking is of innate intelligence (de Bono, 1990) As a result students are written off as not being intelligent enough to use higher order thinking.

Lehr (1982) cited a lack of enough class discussion. More class discussions with "wait time" would allow students the time needed to organize, expand, and synthesize, prior to stating their thoughts. This kind of activity allows a teacher to model the thinking process (Johnson & Johnson, 1979).

Researcher Bloom and Broder, (1990) suggested that the

problem exists because of mankind's inability to see the mechanism of the thought process. Because of this, some educators interpret students' pauses prior to answering, as a lack of knowledge and move on to other students. Students who are the recipients of this treatment soon recognize little is expected from them. Consequently, they soon stop trying.

Nordberg (1982) in Lehr, also found in references to the cause of the problem, the failure of teachers to provide instruction "in the transition from one type of reading to the other... make meaningful writing assignments, and to fall back on sort answers, true-false, multiple choice task ... and devising lessons that build critical thinking skills" (pp. 804).

Literature search further revealed that across all domains, critical thinking takes place. For instance, critical thinking is used in mathematics during reasoning and problem solving activities. It is also used when students interact with computers. Furthermore, thinking skills are required in invention and all technological endeavors (Resnick & Klopfer 1989).

Moreover, Borrows (1979). cited by Whimbey, feels that problem solving by physicians is essential to their duties. Other professions, businesses and institutions are dependent upon the mental process of critical thinking in order to succeed.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goal and Expectations

The following goal and expected outcomes were projected for the practicum. The goal of the practicum was students' skills in critical thinking would improve.

Expected Outcomes

1. Nineteen out of the 23 students will maintain a Problem Solving Diary. This will be measured by Appendix A. The standard for success will be the students' ability to identify a problem(s), generate solution(s), and identify the thought processes used in solving the problem(s).

2. Nineteen of 23 students will participate in a Problem Activity Packet. This will be measured by Appendix B. The standard for success will be the completion of 17 of the 22 activities.

3. Nineteen out of 23 students will achieve the ability to transfer concepts to prior knowledge. This will be measured by Appendix C. The standard for success will be students answering four of the questions positively.

Measurement of Outcomes

Students will be required to maintain a diary which requires them to assess their thinking skills when confronted with problems in other subject areas. The teacher, who is the writer of this proposal, will also make observations to see if students were transferring skills. Students will be required to write the following information in their diary. They (1) identify the problem, (2) list steps for solving the problem, (3) choose a strategy (s), and implement, (4) write an essay reflecting thoughts before, during, and after the process (Appendix A). This activity enables students to become aware that skills learned during the critical thinking activities using childrens' books, can be transferred to other subjects in the curriculum. In addition, they are also useful in solving problems in their daily life. Students who correctly responded to four of five of the items will be determined to have mastered the activity. Each item will have a weight as follows. Item one (10 points); item two (10 points); item three (20 points); item four (30 points); item five (30 points). This item was omitted. See Chapter V for further discussion.

Moreover, each student was to be given a folder containing an activity checklist. As students completed an activity, a check would be placed on the list indicating the activity completed. The teacher, who is the writer of this proposal, would also make observations to see if students

were transferring skills.

This activity enabled students to keep a record of activities completed. It also gave them a tool of measurement for the activities that needed to be completed. This method of record keeping further permits a system of time management.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Solution

The abundance of critical thinking programs demonstrates, historically, there has existed a necessity to teach higher level thinking. This need continues to challenge educators of academics from grade school to university and colleges. For those educators who would meet the challenge of helping students to become thinking citizens, there are manifold programs of diverse strategies available. A few of those programs along with a brief description follows.

Cognitive Research Trust (CoRT), is a program designed by de Bono. It consists of six units with ten lessons each. The lessons are designed for the purpose of direct teaching of critical thinking and can be used with students ages nine through eleven. However, younger students and adults can also benefit from the program (de Bono, 1983).

Another program, Structure of Intellect (SOI) by Guilford (cited by Meeker, 1985), was initially designed to identify intellectual abilities that distinguish gifted students from other students. One objective of the program is to help students organize their thinking into arguments, laterally or creatively, effectively applying

values and emotions. Another objective is for students to develop to the point that they become involved in the process of planning their education (Kester, 1982).

Odyssey: A Curriculum for Thinking, uses information from cognitive research with methods of direct teaching. The program is designed to enhance students' abilities intellectually in all facets of education. The program has 100 lessons divided into four sections and covers Foundations of Reasoning, Understanding Language, Verbal Reasoning, Problem Solving, Decision Making, and Inventive Thinking (Wright, 1985).

Bloom's Taxonomy, a program with six objectives of classifications, can be used to develop questions which promote critical thinking. Objectives in Bloom commence with the very concrete skill of knowledge and progress to a more complex skill of evaluation.

Cotton (1982) suggested using childrens' books and asking questions based on Bloom's Hierarchy to help develop critical thinking. Below is a brief description of Bloom's Taxonomy.

Level one: **Knowledge**

Students at this level can recall facts from memory.

Level two: **Comprehension**

Students understand information, can paraphrase, compare, contrast and

identify the main ideas in a passage.

Level tree: **Application**

Students use prior knowledge to solve problems, classify, sort and write an example of.

Level four: **Analysis**

At this level, students can draw conclusions and understand cause and effect relationships.

Level five: **Synthesis**

At this level students can make predictions, conceptualize prior information, and use it in new situations. Students can design, develop, create and improve upon.

Level six: **Evaluation**

At this level, students state opinions, form judgements, argue, evaluate, and authenticate (Sadker, & Sadker, 1977).

Controversy in the Classroom, cited by Johnson & Johnson (1979) offers an instructional model which uses controversy in the classroom. de Bono (1983) suggested the direct teaching of thinking skills. Researchers McTighe, and Lyman, Jr. (1990), suggested using cueing. Piaget (1958), Ennis (1962) and Winocur (1981) cited in Winocur (1985) suggested that teaching of critical thinking

skills should be done in all content areas. Hyde and Bizar (1989), recommended the technique of internal conversation with self. Thus allowing for self inquisition, reflecting upon what one has done, and making modifications as needed. Barell (1991) recommended using a thinking journal to help students become aware of the metacognitive process.

Thinking skills can be effectively taught by using databases. Elder, & White (1989) suggested teaching information processing skills by combining direct and indirect instruction.

Bacig, Evans, & Larmouth (1991) recommended using standard essay models and computer-assisted instruction to assist in teaching higher level thinking. Using the process/model program, students realizes remarkable reasoning capability.

The writer of this proposal used the following methods; (1) Use journal writing assigning specific topics; (2) Students use expository and persuasive writings; (3) Students write plays and perform them for students in the primary level; (4) book writing; (5) Develop a reading program using story books as texts and ask questions based on Bloom's six levels of thinking skills.

Description of Selected Solution

A search of related literature suggested several solutions to the problem. The writer chose to use

childrens' books because they offered opportunities for high interest activities. Childrens' books are non-threatening material and remove the threat of embarrassment for students with reading deficits.

Results of Action Taken

This proposal was designed and implemented over a 12 week period to help students become critical thinkers. The plan of implementation had to be modified in order to meet the needs of students with reading deficits. The reading ability of the students ranged from primer to third grade. Most of the students fell within the primer to second grade range. As a result, the author of this practicum chose to pilot a program that would help poor readers develop critical thinking skills. In order to accomplish this, the author recognized that much flexibility was necessary. The word flexibility became an important term during the implementation process. The author also had to visualize what changes could be made that would positively affect the project and its goal. For example, while developing critical thinking skills, the writer had to also provide activities which would help improve sight vocabulary and reading comprehension skills.

Month One - Week One

1. The writer sent letters home to parents which explained the program's objective and invited them to come

take part in the activities.

2. The writer introduced the unit by explaining the goal of the program and the two stages of implementation.

3. The writer conducted a discussion of Bloom's Taxonomy and explained how the chart would be used to help students become better thinkers.

4. The writer read the story How Maui Slowed the Sun to the class and shared a folderbook previously prepared by the teacher. Afterward, questions from the story developed for the level of knowledge were presented on a chart. Answers to the questions were elicited from students. Next, volunteers were asked to ask questions and provide answers. This process was continued as long as volunteers were willing to try the questioning and answering techniques.

5. The following day, after a review of the previous activities, the questioning and answering technique continued for the level of comprehension. This method of eliciting questions and answers continued systematically for four days. By Thursday, students had worked up Bloom's hierarchy to the level of analysis. A recording of the questioning and answering periods was placed in the listening centers so student could have the benefit of reviewing the process. Friday was set aside for the writer to make any adjustments that were required for successful implementation.

Month One - Week Two

This week's activities started with a review of last's week's activities. Afterward, the level of synthesis through the level of evaluation were discussed. Time was allowed for students to practice asking and answering questions on this level. The writer had to do a lot of role modeling. Much repetition of explaining levels of the Taxonomy was necessary. Repetition became a key word for the success of both the students and the project.

Month One - Week Three

During the third week, the teacher explained to the class how to create a folderbook for the book, How Maui Slowed The Sun. Instructions were also placed in the reading center.

Each student was given two manila folders and six library pockets to be glued inside his/her folderbook. The writer modeled making a folderbook by gluing two folders together to form a book and gluing six library cards inside. Students were instructed to use questions and answers which had been recorded on the chart or use their own questions and answers. Three of the students decided to try writing their own questions without using the questions on the chart. The teacher guided this process by conducting conferences with individual students prior to them transferring the information onto index cards. While

students waited their turn to confer with the teacher, they used this time decorating folderbooks and/or completing the lists of words for the vocabulary word search puzzle for stories which had been placed in the reading center. Some of the students were not finished at the end of the week and carried the activity over into week four.

Month One, Week Four - Month Two Week Five

These two weeks were quite involved. Some of the students still had not finished the first folderbook. Fortunately, a parent came in and assisted with the project.

The inability to read fluently became a major roadblock throughout the project. Monitoring of comprehension of the process involved and reading was on going. Baker & Brown (1984) in Pearson (1985), suggested comprehension monitoring as an important strategy to help students become better readers.

In addition, students became upset because of their limited spelling ability. They did not like the idea of using invented spelling, especially since they were to share their book with others. Once they were assured that during the conference stage, spelling would be corrected, they became less anxious and proceeded to write questions and answers using the invented spelling method. Ehri & Wilce (1987), Tierney (1990), cited in Smith (1992) suggested invented spelling to improve orthographic comprehension.

Month Two - Week Six

On Monday of the fourth week, students listened to the story, How Maui Slowed Down the Sun. Afterward, the teacher guided students through the questioning and answering process using Bloom's Taxonomy chart as a guide. Questions and answers were recorded on a chart so students could have something to refer to when working independently. The discussion was recorded and placed in the listening center. Students were eager to listen to the discussion because they wanted to hear their contribution that they had made during the discussion.

Next, the teacher gave each student two manila file folders and six library jackets. They were instructed to prepare their second folderbook referring to the steps outlined on the chart in the reading center. For the construction of the second folderbook, students were given an option as to which activity they would begin first. They could either write rough draft questions and answers or decorate their file folder. This proved to be a wise choice because not all of the students were in the writing stage at the same time. Consequently, the teacher was able to spend more time individualizing.

Month Two - Week Seven

The teacher decided to modify the proposal at this point. This decision was based on the reading ability of the students. Instead of sharing the book, The Heavenly

Zoo, the writer decided to have students select their favorite story and begin practice reading.

In the meantime, the teacher recorded the stories students selected and placed the recordings in a read along center. Using this method allowed students an opportunity to memorize names of characters, events, and improve sight vocabulary. It also became a convenience as students no longer had to wait for someone to listen to them read. By mid-week one student emerged as peer helper, listening to classmates read and helping with the initial writing of questions and answers. Daily, students demonstrated excitement as they took advantage of opportunities to read. Much learning was taking place!

Students teamed with a classmate using the buddy system to practice reading. The entire week was dedicated to reading. The writer felt it was necessary to develop oral reading skills prior to the writing stage. Moreover, Koskinen & Blum 1984, cited in Sanacore (1990), stated this method of repeated reading helps improve students' oral reading ability as well as comprehension.

Students kept a list of words that were difficult for them to pronounce. Some familiar words were included on the list also. Each word list was used by the teacher to create a word search puzzle on the computer. The puzzle later become a part of the students folderbook. The teacher chose to type the puzzle instead of having the

students type. Students needed each free moment to reread their selected stories.

Month Two - Week Eight - Month Three - Week Nine

Students came to class eager to commence with the task of writing questions for their story. Once again, students were given options as to which activity would be worked on first. As before, some chose to write first, while others chose to decorate their folderbook.

All materials needed to complete folderbooks were placed in the reading center except index cards. Students were given index cards at the end of each conference session. Conferences were held after questions and answers for each level were completed. During the conferences sessions spelling and English usage were corrected.

All but two students completed their folderbook by the ninth week. These students were allowed to practice using the buddy system in preparation for sharing with other students in another class. During an observation of two students sprawled together sharing each other's story, one of the students asked, "What do you think..." The partner responded, "I know what you would say you think..." To this comment came the response, "No, my question is what do you think..." The teacher immediately offered praise to the student for the way the situation was handled and the method used for keeping the response focused on the question.

Month Three - Week 10, Month Three - Week 11

Phase II

The teacher decided to eliminate the Thinking Diary activity. The decision was based on the reading level of the students enrolled in the project. Another factor was the amount of time spent explaining and reviewing the taxonomy, the amount of help required of the teacher when students wrote questions and answers and the concern that the activity would be too cumbersome for them to complete. Arrangements were made with several teachers to allow students to share their favorite stories and folderbooks to students in their class. The invitations were readily accepted. Teachers had already expressed interest in the project.

Month Three - Week 12

The final week of the project, the teacher conducted a "rapping it up" session using the following guide.

Question: When asked a question, do you think you can identify which of the six levels questions are based upon? Only four of the students felt they could identify all of the levels. Fourteen students felt that they could identify four of the levels and five said they were not sure. When asked why they felt this way, students responded that working on the folderbooks helped them remember the levels.

Question: What are some key words that will help you recognize knowledge questions? Most of the students stated

the keys words were "who, what, when, and where." The class agreed that almost anyone can answer simple questions like those.

Question: What are some key words that will help you recognize comprehension questions? The general consensus of the class was "main idea." For an explanation, one student responded that if you know what the main idea of something is, you know what the story or anything you are reading is about. If you do not know that, then you do not know what you read.

Question: How can you tell when the questions asked of you require the skill of **application**? Students stated that for this level, they had to either write an example of something or tell how many times some event took place.

Question: What key words help you know if you should use **analysis** or **synthesis**? Key words chosen by the student for the level of **analysis** were why and separate. Students gave an explanation similar to this: Before we started learning about critical thinking, each time you asked us a question and we gave an answer, you always asked, "why". We did not know what we were doing then, but we know now. For the level of synthesis, students replied that the key words that helped them were write and design.

Question: If you were given a situation to judge, do you think you are better prepared to make a decision than you were when we started the critical thinking project? Only

four students responded in the affirmative. The other students were not sure.

Students were also asked to write a statement expressing feelings about the activities completed. Some of the comments follows. One student wrote "I feel happy about the critical thinking. The critical thinking helped me a lot. It helped me to read and write." Another student wrote, "I think I know what comprehension means." Another student wrote, "I feel happy about the activities, but when am I going to get the book?" "I feel good because it helped me. It helped me to think. Finally, a student wrote, "I feel great about my journal. That was a good idea to think of."

When asked to respond to the statement, This is how I feel about my own critical thinking ability, comments were written such as, "I feel smart and very happy that I can think critically." "I feel I know everything about critical thinking. I can go home and share it." Lastly, "It is good to have my own critical thinking ability."

CHAPTER V

RESULTS, DISCUSSION, AND RECOMMENDATIONS

Results

Data revealed that students were not working to their potential. The data also suggested that this deficit could be eliminated if students thinking abilities exceed the levels of knowledge and comprehension. Students had a need to become critical thinkers. Documents indicated that the students had the potential to do better, however, the potential needed developing. In order to help in eradicating the problem, the writer of this paper chose to help students become critical thinkers through the use of childrens' books.

The projected outcomes had to be revised due to the reading ability levels of the students. As a result, this report presents information about how critical thinking skills can be developed in poor readers. During the initial stage of the project, the class enrollment was 15 students. However, during the last three weeks of implementation, the class size grew to 23. The last enrollees are not part of this report.

The writer projected the following outcomes.

1. Nine of the 15 students will maintained a Problem Solving Diary. This will be measured by Appendix A.

The standard for success will be the students' ability to identify a problem(s), generate solution(s), and identify the thought processes used solving the problem(s).

The writer chose not to implement this portion of the proposal. This decision was based on the reading ability of the students, the amount of time the writer had to spend explaining and reviewing the taxonomy, and the amount of time spent with each student in conferences. In addition the class of students had been identified as "high-risk" students. One of the fifteen had been certified eligible for an emotionally handicapped placement. Initially, the proposal had been written for a group of students who were on grade level and were well adjusted socially.

Another problem the writer of this report inherited with the students in the report, was their inability to listen. At first, the students were unable to physically attend to the discussion of the Taxonomy. Barrel 1991, cited listening as the second essential skill needed to acquire thinking proficiency.

2. Twelve of the 15 students will participate in a Problem Activity Packet. This will be measured by Appendix B. The standard for success will be the completion of 17 of the 22 items.

Thirteen of the 15 students were able to keep the Student Activity Check List-Assessment current. Everyone

omitted item 19 which referred to the Thinking Diary activity.

3. Nine of 15 students will achieve the ability to transfer concepts to prior knowledge. This will be measured by Appendix A. The standard for success will be students answering four of the question positively.

This outcome was omitted. Students did not need to try maintaining a diary at this level. Reading deficits would have prohibited success.

As each student completed their questioning and answering session the teacher recorded the level of the completions on the teacher evaluation checklist (Appendix C). Five students completed level six. One student completed level five. Three students completed level four. Three students completed level three. Two students completed level two. Only one student did not exceed level one.

Discussion

In light of the reading abilities of the students in this project and the modification which had to be made in order to implement the practicum, the practicum is considered successful. The result of this practicum not only help in the improvement of academics, most of the students developed better attitudes toward school. Social skills were also developed as students interacted with each other during the implementing of the practicum.

Five of the students completed all of the activities. All but one student progressed two or more levels. This student was not interested in any school related activities. One of the teachers offered to work with the student individually, however, the student's response was poor. Of the two students who progressed only two levels, one attended specific learning disabilities class in the area of Language Arts. The student had short term memory and prior to the practicum was afraid to take part in many of the class activities. The writer was delighted when the student expressed a desire to be part in the critical thinking project.

One student got into trouble and was out of school more than six weeks of the practicum. The student was eventually assigned to a school for disturbed students. As for the rest of the students, the enthusiasm generated by their accomplishment became a key to modifying behavior. For once, these at-risk students were requesting to do work! Moreover, students who at first could not sit in groups of fours and fives were sharing in each others' learning process and enjoying doing so. See results in Table I.

TABLE I

RESULTS: TEACHER EVALUATION CHECKLIST

Students were able to ask questions in each of the following levels of Bloom's Taxonomy.

Name	Level One	Level Two	Level Three	Level Four	Level Five	Level Six
J. A.	x	x	x			
M. A.	x	x	x	x	x	x
B. B.	x	x	x	x	x	
C. B.	x	x	x	x	x	x
R. C.	x					
T. C.	x	x				
G. D.	x	x	x	x	x	x
L. D.	x	x	x	x	x	
S. H.	x	x	x	x	x	x
A. H.	x	x				
M. L.	x	x	x			
S. Mc.	x	x	x	x		
S. W.	x	x	x			
E. H.	x	x	x	x	x	
T. R.	x	x	x	x	x	x

Note: Bloom's Taxonomy progresses through six sequential levels. Levels one through six are; knowledge, comprehension, application, analysis, synthesis, and evaluation.

Critical thinking skills can be taught to students with reading deficits. Teach critical thinking to students with reading deficits in an atmosphere which is non-threatening. This not only helps develop thinking skills, but is beneficial in developing sight vocabulary and reading comprehension.

Using childrens' books selected by the participants removes the threat of failure and generates success. Teaching thinking skills to students who have reading deficits requires creativity on the part of teachers. In addition, teachers must not be afraid to be a risk taker. More importantly, teachers must remain flexible, modifying instructional plans as the need of students dictates.

Recommendations

1. Use childrens' books to teach critical thinking skills to students with reading deficits. Childrens' books remove the threat of failure from the learning environment.
2. Pre-recording stories for students allows time for students with reading deficits to practice reading without embarrassment.
3. Encourage invented spelling. It will help students remain focused on the goal of the activity. It will also help students to become orthographic spellers.

4. Give specific praise. Students will know exactly what was done correctly and be more inclined to repeat the action.

Dissemination

At the completion of each set of folderbooks, the writer placed them in the school's library along with the correlating story books. Upon the completion of the 12 week implementation, all folderbooks were laminated and left in the school's library to be checked out by teachers and students. An in-service is scheduled near the end of the school term to share the project with the staff. In addition, the author plans to file a copy of the report with the district's Language Arts Department. Finally, the author plans to submit copies to an educational journal for publication.

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APPENDIX A

THINKING DIARY - GETTING ACQUAINTED WITH MY THOUGHTS

THINKING DIARY - GETTING ACQUAINTED WITH MY THOUGHTS

NAME _____

GRADE _____

DATE _____

TEACHER _____

Directions:

You are to use the following information for each diary entry.

1. Identify the problem.
2. Tell if you solved the problem.
3. If you did not solve the problem, why not?
4. If you solved the problem, how did you solve it? Give the thought process you used.
5. Can you think of other situations that you can use the same techniques to solve other problems?

HINTS TO HELP YOU THINK THROUGH PROBLEMS

1. Tell what the problem is that needs solving.
2. Think of as many questions as you can about the problem.
3. Think about the six levels of the Taxonomy and use it as a guide for developing questions.

APPENDIX B

STUDENT ACTIVITY CHECK LIST-ASSESSMENT

STUDENT ACTIVITY CHECK LIST-ASSESSMENT

Name_____

Phase I - Activities Date

1. Listened to the story How Maui Slowed the Sun. _____
2. Took Part in Bloom' Taxonomy discussion. _____
3. Made a folderbook, How Maui Slowed the Sun. _____
4. Listened to the story The Heavenly Zoo. _____
5. Took Part in Bloom's Taxonomy discussion. _____
6. Made a folderbook, The Heavenly Zoo. _____
7. Read _____ _____
8. Made a vocabulary word search puzzle. _____
9. Made a folderbook for _____ _____
10. Wrote questions and answers for my folderbook. _____
11. Held a conference with my teacher/dividend to make necessary correction. _____

12. Read _____ _____

13. Made a vocabulary word search _____
puzzle.

14. Made a folderbook for _____ _____

_____

15. Held a conference with my _____
teacher/dividend to make
necessary corrections.

Phase II

16. Today, I took part in a group _____
reading/folderbook discussion with

_____

_____

17. Today, I took part in my second _____
group reading/folderbook discussion
with_____

_____.

18. I have shared my book/folderbook _____
with the following students.

Name	Grade
_____	_____
_____	_____

19. I recorded an entry in my diary on the following dates. _____

_____

_____

_____

_____

_____

_____

_____

_____

20. I took part in the "rapping it up" discussion. _____

21. This is how I feel about the activities I completed.

22. This is how I feel about my own critical thinking ability.

APPENDIX C

RESULTS: TEACHER EVALUATION CHECKLIST

TEACHER EVALUATION CHECKLIST

Students were able to ask questions in each of the following levels of Bloom's Taxonomy.

Name	Level One	Level Two	Level Three	Level Four	Level Five	Level Six
J. A.						
M. A.						
B. B.						
C. B.						
R. C.						
T. C.						
G. D.						
L. D.						
S. H.						
A. H.						
M. L.						
S. Mc.						
S. W.						
E. H.						
T. R.						

Note: Bloom's Taxonomy progresses through six sequential levels. Levels one through six are; knowledge, comprehension, application, analysis, synthesis, and evaluation.

APPENDIX D

STORY CARDS - A STORY A STORY

STORY CARDS - A STORY A STORY

An African Tale Retold and Illustrated by Gale E. Haley. 1970. A 1971 Caldecott Medal Winner

Card 1 - Knowledge

What are "Spider Stories?"

Sample answer: Spider stories are stories of Africans who crossed the Atlantic Ocean in slave ships. They tell of Africans' struggles and successes.

Card 2 - Comprehension

Compare the way Africans spoke in the story with the way Black people speak today.

Sample answer: When Africans in the st‹ -y spoke they sometimes repeated words and phrases to make the meaning stronger. Today, unless Blacks have a speech problem, they speak without repeating words or phrases.

Card 3 - Application

Choose one character from the story. Write a different part aside from the story for the character to play.

Card 4 - Analysis

What do you think was the motive for Nyame, the Sky God, sending Ananse, the

Spider man to capture (1) Osebo the leopard of-the-terrible-teeth, (2) Mmoatia the fairy whom-men-never-see and (3) Mmboro the honest who-stings-like-fire?

Note: Answers will vary.

Card 5 - Synthesis

Predict what might have happened if Ananse had only been able to return leopard of-the-terrible-teeth and the fairy whom-men-never-see.

Note: Answers will vary.

Card 6 - Evaluation

Would it have been better for Ananse to leave the lid on the golden box of stories or was it better that he opened the golden box: Why or Why not?

Would you recommend this story to a friend? Why or why not?

APPENDIX E

STORY CARDS - HOW MAUI SLOWED THE SUN

STORY CARDS - HOW MAUI SLOWED THE SUN

Written by Suelyn Ching Tune, 1988

Illustrated by Robin Yoko Burningham

This story is a Hawaiian legend.

Card 1 - Knowledge

What does "The sun cross the sky so quickly" means?

Answers: The day is short.

The sun goes down.

Card 2 - Comprehension

Compare Maui's feelings when he first went outside to fly his kite with how he felt when he noticed that the sun was going down.

Sample answers: When Maui first went outside to fly his kite he felt happy. The wind was just right and the sky was pretty and bright. When he noticed that the sun was going down, he became sad.

Card 3 - Application

Write another example of something else that might have been affected by the sun's early sunset.

Sample answer: Animals might hot have enough time to find food.

Card 4 - Analysis

What was the cause of the farmers, fishermen, and women downcast look? What evidence does the story provide for your answer(s).

Sample answer: The farmers, fishermen, and women were looking downcast because the sun was going down too early for them to carry out their chores. The story said the fishermen did not have enough time to get to travel to the best fishing hole and fish before darkness fell. The farmer's crops did not get enough sunshine to grow.

The women were downcast because there was not enough time in the day for their tapa to dry.

Card 5 - Synthesis

Maui Slowed the sun down. How do you know?

Sample answers: Fishermen have time to do their fishing. Farmers have time to grow their crops. Women

have time to dry their tapa.

Children have time to play.

Card 6- Evaluation

In your opinion, do you think Maui performed a heroic act or do you think he was silly to interfere with the sun? Justify your answer.

Note: Answers will vary.

APPENDIX F

STORY CARDS - THE HEAVENLY ZOO

STORY CARDS - THE HEAVENLY ZOO

Written by Alison Lurie, 1979

Illustrated by Monika Beisner

This book contains collections of tales from all over the world.

Card 1 - Knowledge

When ancient men and women looked at the sky, what did they see?

Answer: They saw the sky full of magical pictures.

Card 2 - Comprehension

Compare the following tales.

Tell which tale is sad, heroic, or comical.

s= sad, h= heroic, c= comic

__ The Great Bear
__ The Scorpion
__ The Ram
__ The Dove
__ The Eagle
__ The Lion
__ The Fishes
__ The Crab
__ The Sea-Goat
__ The Whale

Answers

Sad	Heroic	Comic
The Great Bear	The Lion	The Ram
The Whale	The Fishes	The Crab

The Eagle The Seat-Goat

The Dove

Card 3- Application

How many skills did Aesculapius have?

Name them

Answer: Aesculapius had two skills. He was able to heal and raise the dead.

Card 4 - Analysis

What is the function of the gods in the tales.

Answer: The function of the gods is to give magical power.

Card 5 - Synthesis

Choose one of the tales from the book and draw illustrations that will make the story more interesting.

Note: Illustrations will vary.

Card 6 - Evaluation

Why do you think this book is called <u>The Heavenly Zoo</u>?

Sample answers: The main characters either lived in heaven or were taken to heaven.

APPENDIX G

PUZZLE - A STORY A STORY

PUZZLE - A STORY A STORY

S O R A C A R I B B E A N H Z Q H H E
L A N A N S E P J P A K U V G K V I A
A Q C H U N I T E D S T A T E S T I D
V L G A F R I C A N G Z C P J N O T D
E E N Y A M E Q R K C H Z H U M E S S
S O U T H E R N N D O F W P S E W P T
T P X A L N Z P H K M F S T N S I I O
E A M U P B I I V A X M N K E T S D R
R R W T B L N Y I B O A E L S O L E I
R D L F Q G J S P K D L A S B O E R E
I A N Z W U D U Z N P Y E E J L S Y S
B A M I S S P Y E M O L S U C C E E D
L J M G C U Z C A R E O G L D E N V
E O D Z V P S X T S T C H U C K L E D
T G I B P E E I N A S U R V I V E S K
E M W H D K W E E C H I L D R E N F A
E W S T A T F P O U N D E D T P C H M
T R H E U E E R W E Y L Q D U Z U J D
H C W O D R E M A I N E D M Q N M T X

The hidden words are:

AFRICAN
EXAMPLE
ADDS
ISLES
UNITEDSTATES
STOOL
LEOPARD
UNTIE
OSEBO
SPIDER
REPEAT
DEFENSELESS
SURVIVES
CHILDREN
KNEE
TERRIBLETEETH
SORA
STORIES
DESCENDANTS
OUTWIT
SLAVES
GOLDEN
NYAME
CHUCKLED
POUNDED
ANANSE
SUCCEED
CARIBBEAN
SOUTHERNN
ROYAL
SPUN
WEAK
REMAINED

APPENDIX H

PUZZLE - HOW MAUI SLOWED DOWN THE SUN

PUZZLE - HOW MAUI SLOWED DOWN THE SUN

T H C U G H T Y K R J O
P B S H A D O W S S R P
A E M A U I Q H C A W B
D A N C E D N D T R I L
D C H R H N B S E F N O
I H X X U Q X T G S D W
E Q K W Y D S C D O I I
S K V C E A E A A A P N
L K V G F O T U R R P G
F D G S N S A G T E U Q
T U V A U D P H E D M W
T S C G U N A T D P E Y

The hidden words are:

MAUI
FASTER
DARTED
CANOE
TARO
WIND
GUST
TUGGED
BEACH
TAPA
BLOWING
CAUGHT
DANCED
SUN
THOUGHT
SOARED
SHADOWS
PADDIES

APPENDIX I

PUZZLE - THE HEAVENLY ZOO

The Heavenly Zoo

A	S	U	M	E	R	I	A	Z	E	Q	X	X	W
M	B	A	B	Y	L	O	N	M	T	Q	A	N	F
E	E	M	I	L	L	I	O	N	S	S	O	C	H
R	S	E	R	P	E	N	T	N	F	I	O	M	D
I	N	D	O	N	E	S	I	A	T	S	R	A	I
C	Z	S	G	I	C	A	H	A	U	I	I	G	P
A	U	F	I	R	S	Z	L	R	E	T	O	I	P
N	U	J	U	H	H	L	U	L	O	L	N	C	E
S	J	D	N	B	E	A	B	I	L	I	M	A	R
B	B	W	P	T	T	I	R	O	O	E	Y	L	F
R	H	I	S	H	B	A	P	L	O	U	G	H	T
I	T	N	S	K	H	A	Q	U	I	L	A	E	X
I	O	I	R	C	J	E	A	L	O	U	S	V	D
C	F	A	I	N	D	I	A	N	S	S	T	V	J

The hidden words are:

MILLIONS
CONSTELLATION
PLOUGH
BIBLE
JEALOUS

MAGICAL
SUMERIA
INDIANS
AQUILA
CHARIOT
ARK

DIPPER
TAURUS
AMERICAN
APOLLO
ORION

BABYLON
CHARIOT
INDONESIA
SERPENT
FISH

APPENDIX J

TAXONOMY CHART

TAXONOMY CHART

KNOWLEDGE

Repeat from memory

Can tell who, what, when, where,

Can give the definition of.

COMPREHENSION

Can restate in own words.

Can give the main idea.

Can compare two or more.

APPLICATION

Can use what you know to give an answer.

Can classify.

Can solve.

Can tell how many, which.

Can make choice, sort information.

ANALYSIS

Can recognize cause and effect.

Can draw a conclusion.

Can categorize.

Can separate, sort, breakdown.

Can tell why.

SYNTHESIS

Can make predictions, design, improve.

Can write, draw, develop.

EVALUATION

Can judge,

Can offer own opinion.

Can assess.

Can prove.

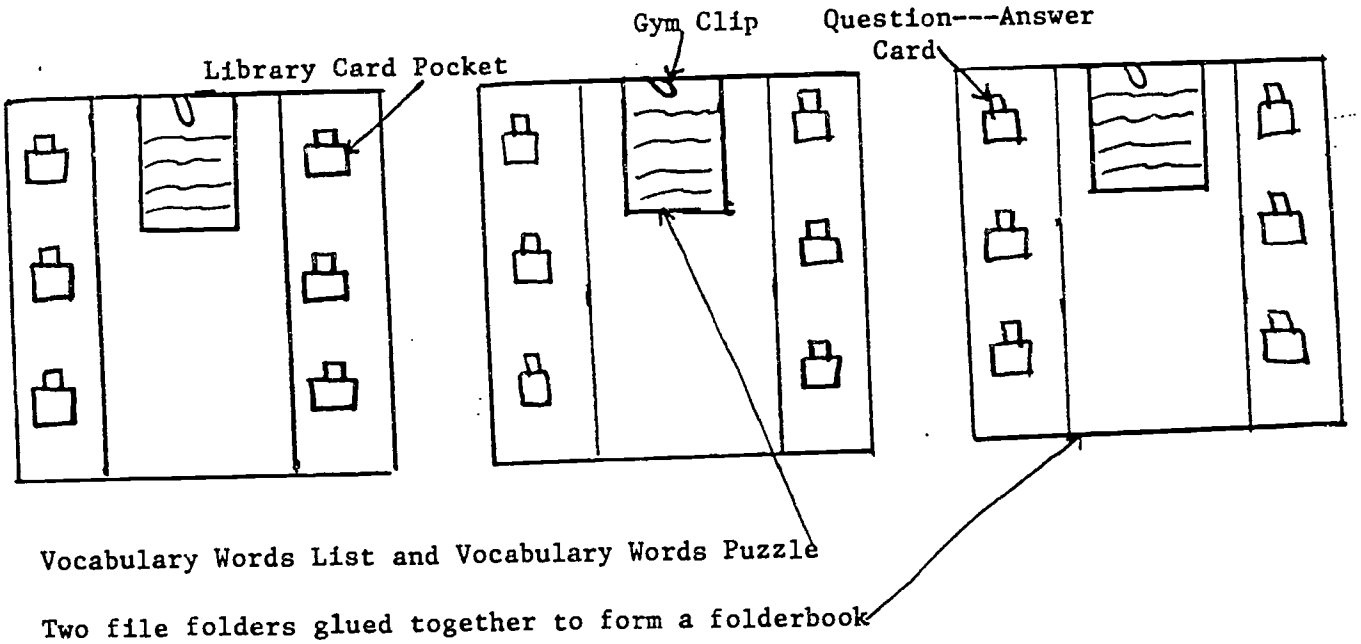
Can say which is better.

APPENDIX K

DIRECTIONS FOR MAKING FOLDERBOOK

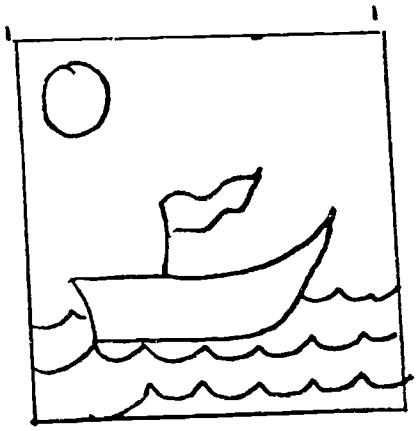
DIRECTIONS FOR MAKING FOLDERBOOK

Top pictures represent inside view of folderbooks. Bottom pictures represent front view.

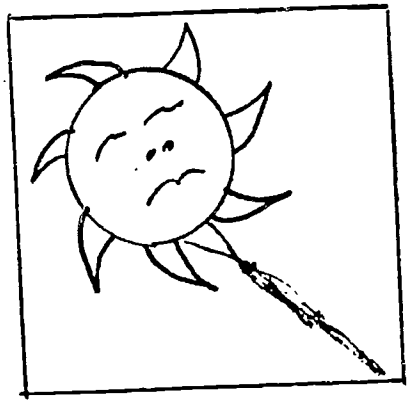


Two file folders glued together to form a folderbook

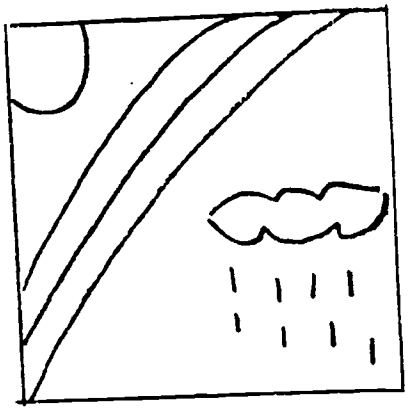
Question/Answer cards are color coded for each level of the Taxonmy to help students keep track of completed levels.



A Story A Story



How Maui Slowed the Sun



The Heavenly Zoo

APPENDIX L

LETTER TO PARENTS

LETTER TO PARENTS

November 3, 1992

Dear Parents,

You are aware that we are living in a highly technological and informational age. An age in which technology is a part of our daily life. Moreover, information dissemination has taken on varied methods and extends globally. This alone, mandates that we do all that is in our power to prepare our students to meet the challenges that will confront them in a technological and informational society. One area that we can give immediate attention to is to help our children become critical thinkers. It will be the thinkers that succeed in the twenty-first century.

Critical thinking skills are required in all walks of life. Our students are called upon to make decisions that you and I never considered when we were growing up. We had to make decisions about our education and future employment. Our children have to make these decisions also and many more. We must do something to help them develop the skills necessary to think critically. As part of my doctoral requirement, I have selected to teach critical thinking through the use of childrens' books. Activities related to this project will be implemented over a period of 12 weeks.

You are invited to come in and share this experience with us.

Remember, critical decisions are already placed upon our children. We must prepare them to make intelligent decisions. Our children will have to live tomorrow with the choices they make today.

Sincerely,

Sharon R. Patterson
Teacher of grade four