DOCUMENT RESUME

ED 434 774 PS 028 055

AUTHOR	Highland, Sara; McNally, Paulette; Peart, Marci
TITLE	Improving Student Behavior through the Use of the Multiple Intelligences.
PUB DATE	1999-04-00
NOTE	55p.; Master's Action Research Project, Saint Xavier University and IRI/Skylight.
PUB TYPE	Dissertations/Theses (040) -- Reports - Evaluative (142) -- Tests/Questionnaires (160)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Behavior Change; Behavior Problems; Change Strategies; Cooperation; Early Childhood Education; Elementary School Students; Grade 1; Kindergarten Children; *Multiple Intelligences; Preschool Children; Program Effectiveness; Program Evaluation; Student Behavior; Student Participation; Time on Task

ABSTRACT

Hypothesizing that young students would exhibit fewer classroom behavior problems when engaged in activities linked to their strengths and interests, this study examined the use of Gardner's multiple intelligences to improve student behavior. Targeted were 20 students in prekindergarten, kindergarten, and first grade classrooms in two suburban Chicago schools. Misbehavior such as talking out, not keeping their hands to themselves, being off-task, not cooperating, and not participating was documented by means of classroom observations and anecdotal records. The intervention was comprised of 16 classroom lessons using each of the 8 intelligences; lessons were implemented in October and November of the school year. Visual aids were used to ensure that students understood the intelligences, and graphic organizers were used to engage students in the learning process. Anecdotal records, progress reports, and report cards were used to document changes in student behavior. To assess the effects of the intervention, classroom observations were completed in September, October, and November, with comparisons made in the number of instances of talking out, not keeping hands to self, being off-task, not cooperating, and not participating. Each student's strongest intelligence was identified, and it was determined if the student was behaving properly during a lesson geared toward that particular intelligence. The results suggested that 77 percent of students showed an improvement in their behavior when working on activities geared toward their strongest intelligence. Behavior improved from September to November. (Twelve appendices include data collection forms and sample materials. Contains 18 references.) (KB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

PS

ED 434 774

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it
☐ Minor changes have been made to improve reproduction quality
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

IMPROVING STUDENT BEHAVIOR THROUGH THE USE OF THE MULTIPLE INTELLIGENCES

Sara Highland
Paulette McNally
Marci Peart

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
Sara A. Highland
Paulette M. McNally
Marci C. Peart
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

A Proactive Research Project Submitted to the Graduate Faculty of the School of Education in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Teaching Leadership

Saint Xavier University & IRI/Skylight

Field-Based Masters Program

Chicago, Illinois

Tinley V

April 1999

BEST COPY AVAILABLE

SIGNATURE PAGE

This project was approved by

J. Timothy Leonard
Advisor

Advisor

Beverly Gulley
Dean, School of Education

ABSTRACT

This report describes the use of Multiple Intelligences to improve student behavior. The targeted population consisted of Pre-Kindergarten. Kindergarten. and First Grade students in suburban Chicago. Misbehavior was documented through observations made by the three researchers.

The researchers observed misbehaviors in students such as talking out. not keeping their hands to themselves. being off-task. not cooperating. and not participating. Teachers wanted to minimize these behaviors through something other than the traditional behavior interventions such as Logical Consequences and Behavior Modification.

Using the theory of Multiple Intelligences to improve student behavior was never documented as a solution strategy. The researchers decided to put this theory into practice and see what effect it had on student behavior.

After implementing the theory of Multiple Intelligences. data indicated a decrease in student misbehavior while engaging in an activity that corresponded with his or her intelligence.

TABLE OF CONTENTS

CHAPTER 1 – PROBLEM STATEMENT AND CONTEXT.....1

General Statement of the Problem.....1

Immediate Problem: Setting A.....1

Description of Community: Setting A.....2

Immediate Problem: Setting B.....3

Description of Community: Setting B.....4

National Context of the Problem.....4

CHAPTER 2 – PROBLEM EVIDENCE AND PROBABLE CAUSES.....7

Problem Evidence.....7

Probable Causes.....8

CHAPTER 3 – THE SOLUTION STRATEGY.....11

Literature Review.....11

Project Objectives and Action Plan.....13

Methods of Assessment.....15

CHAPTER 4 – PROJECT RESULTS.....16

Historical Description of the Intervention.....16

Presentation and Analysis of Results.....18

Conclusions and Recommendations.....21

REFERENCES.....23

APPENDIX A
Anecdotal Record Form.....25

APPENDIX B
Observation Checklist.....26

APPENDIX C
Student Multiple Intelligence Survey.....27

APPENDIX D
Teacher Multiple Intelligence Survey.....28

APPENDIX E
First Grade Progress Report.....29

APPENDIX F
Kindergarten Progress Report.....30

APPENDIX G
First Grade Report Card.....31

APPENDIX H
Kindergarten Report Card.....32

APPENDIX I
MI Visual Aides.....33

APPENDIX J
Multiple Intelligence Unit Plan.....34

APPENDIX K
Graphic Organizers.....35

APPENDIX L
Parent Consent Form.....36

CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of Problem

Multiple Intelligences is a psychological theory which postulates many forms of human intelligence. Many contemporary instructional innovations appear to be based on this theory. In our study, we propose to use the Multiple Intelligence theory in our classrooms and to discover the extent to which it affects student behavior.

> Howard Gardner, (1983) the father of Multiple Intelligences, described the theory: Human cognitive competence is better described in terms of a set of abilities, talents, or mental skills, which we call "intelligences." All normal individuals possess each of these skills to some extent; individuals differ in the degree of skill and in the nature of their combination. (p. 15)

Gardner has described eight intelligences, which are: verbal/linguistic; logical/mathematical; visual/spatial; bodily/kinesthetic; musical; naturalistic; interpersonal; and intrapersonal intelligence. We as educators of Pre-Kindergarten at- risk students, kindergarten students, and first grade students hope to see a decline in behavior problems exemplified by our students while putting the theory of Multiple Intelligences into practice.

Immediate Problem: Setting A

Site A houses Kindergarten through second grades, with a total of 600 students. There are two half-day early childhood special education classes, two special education classes, eight kindergarten classes, eight first grade classes, seven second grade classes, and one primary readiness class. Based on the 1997 School Report Card figures, the

average class size for kindergarten and first grade is 23 children with an attendance rate of 95.2%.

The staff at Site A is comprised of 65 workers, 63 female and 2 male. The average teaching experience for the district is 12 years. The faculty and staff include a principal, teachers, paraprofessionals, art, music, gym, library and computer teachers, speech pathologists, occupational and physical therapists, and a social worker.

The school building consists of one floor. The first wing houses second grade, one primary readiness class, an art class, a music room, and a library. The second wing contains eight first grades, four kindergarten classrooms (eight sessions), an early childhood special education classroom, a special education classroom, and a gymnasium. The main lobby consists of an office and a computer lab.

The district set up a curriculum guide for each subject and the guidelines. At Site A, the children are taught the core subjects Math, Science, Reading, Writing, Social Studies, Music, Art, Computers, and Physical Education.

A new program was implemented in 1997 where children were grouped in three classrooms for clustering in first grade and in second grade. This was to implement additional support services for the children who needed extra help. The district also has a Title I Reading program and a Title I Math program.

Description of community: Setting A

Site A is one of three schools in the district, which is located in Delta, Illinois. The district includes administrators such as a Superintendent, a Business Manager/Assistant Superintendent, and each building has a principal.

As of September 30, 1996, the racial-ethnic makeup reported for Site A was 96.6% white, 0.5% black, 2.2% Hispanic, 0.7% Asian/Pacific Islander, 0.0% Native American (Site A School Report Card, 1997).

The percentage of students receiving public aid, living in institutions for neglect or delinquent children, being supported in foster homes and public funds, or eligible to receive free or reduced-price lunches at Site A (Low Income) is 4.7%. The district percent is 8.6. The students eligible for bilingual education for Site A is 0.2% and for the district it is 0.7%.

A community issue for this district is overcrowding. Land is at a minimum in the district. The district is in the process of looking for land or discussing how to rearrange the grade levels among the three existing buildings since another school cannot be built. Decisions will have to be made in the near future.

Immediate Problem: Setting B

Site B encompasses grades Prekindergarten through fifth with a total student population of 661. 92.9% of the students are caucasian, 2.2% are black, 2.1% Hispanic, and 2.6% are Asian. The average class size is 26 students with an attendance rate of 96% (Site B School Report Card, 1997). The average number of years the teachers have taught in this district is 13.7 years. The faculty and staff include a principal, educational assistant, teachers, paraprofessionals, art, music, and physical education teachers. Speech pathologists, occupational and physical therapists, a social worker and a counselor also make up the staff at Site B.

The school has three main wings and also a portion of the lower level is used for classrooms. One wing includes the music and art rooms and speech offices. Another

wing includes the gymnasium, kindergarten and first grade classrooms. The third wing includes second and third grade, special education classes, and the library. The lower level houses fourth and fifth grade classrooms.

The curriculum for the school was adopted by the school board. General subjects include Mathematics, Science, Social Studies, Reading, Music, Art, and Physical Education. For students who need additional assistance there is a Title I program as well as a learning disability and resource program. Tutoring is also available for reading and math as well as a gifted program for those who excel. There are special education classes which include Early Childhood, Communication Disorders and Hearing Impairment.

Description of Communities: Setting B

Site B is located in Ranger, Illinois, which is a south suburb of a heavily populated city. The population is 40,000 with the average price of a home being $180,000. Site B is one of seven schools in District 140. There are five elementary buildings and two junior high schools. The district is building a sixth elementary building, which will be ready for students in the fall of 1999. Because there are not enough funds for this new school, a local tax referendum will be proposed in the near future.

A superintendent heads the district. The staff also includes an Assistant Superintendent, Director of Special Services and a Superintendent of Finance. Each school has a building principal and educational assistant.

National Context of the Problem

Educators today have experienced discipline problems in the classroom. Behaviors that the students may exhibit include not taking turns when talking, not

keeping their hands to themselves, not staying on task, not cooperating and not participating. There are many theories and management techniques to keep a classroom well managed. It is our sense that if a student in our classes at Site A and Site B are exposed to teaching methods based on Gardner's theory of Multiple Intelligences, problems related to their inappropriate behaviors will be considerably eased.

When looking at Multiple Intelligences, Howard Gardner states that it takes time for teachers to get acquainted with the theory. After experimenting with the ideas and practices of Multiple Intelligences, educators need to ask themselves the reason why they are implementing the theory of Multiple Intelligences. There are different reasons for using the theory of Multiple Intelligences in the classroom. One may be for curriculum, another for behavior management. Gardner (1997A) states that "Multiple Intelligence is not a quick fix. But educators who thoughtfully use the theory to support their larger educational goals find that it is a worthy partner in creating schools of excellence" (p. 20).

Gardner has also done research working with exceptional individuals. These individuals include those with autism, brain damage, and those who are prodigies. Gardner proclaims that autistic children have a unique sparing of one particular human ability against a background of mediocre to highly delayed human performances in other domains (Gardner, 1983B). Therefore, the theory of Multiple Intelligences is relevant in regular education classrooms as well as special education classrooms. All students need a variety of teaching methods as well as a variety of reward systems. Each student is an individual; therefore, the same method may not work for all students. It is the teacher's

responsibility to be sensitive to each child's individuality, making accurate assessment of the student's intelligences.

The concerns of the research team are to improve inappropriate behaviors of our students. Using the theory of Multiple Intelligences to do this is an innovative practice that will be exciting to implement in the classroom.

CHAPTER 2

PROBLEM EVIDENCE AND PROBABLE CAUSE

Problem Evidence

In order to document children in our classrooms exhibiting inappropriate behaviors such as not taking turns when talking, not keeping their hands to themselves, not staying on task, not cooperating with others, and not participating in class activities, anecdotal records (Appendix A), and teacher-observations (Appendix B) were used to report data collected throughout this research project. There were 20 students involved in the project, 15 students were reported in teacher observation in Table 1. Two teachers collected the data in September, while a third teacher took anecdotal records of students in her class in the 1998-99 school year. A summary of the results of the data is presented in the following table.

	Talking Out	Hands to Self	Off Task	Not Cooperating	Not Participating
Classroom 1	6	3	15	4	16
Classroom 2	3	7	18	4	10
Total	9	10	33	8	26

Table 1. September Teacher Observation of Instances of Inappropriate Behaviors

September Teacher Observation

The teacher observation was completed using 15 students. Two teachers observed the same students, and checked each other's ratings until they came to agreement about the meaning of each rating. Table 1 shows the results of the data. The observation

checklist consisted of the following five items and was completed within equal intervals during the lesson two days per week.

Item #1 addressed students' not taking turns when talking within that hour of time. Talking out of turn consists of talking while another teacher or student is talking. Nine instances of talking out of turn were reported.

Item #2 addressed students' keeping their hands to themselves. Keeping hands to himself/herself consists of not hitting, poking, touching, or slapping others. 10 instances of not keeping their hands to themselves were reported.

Item #3 addressed students' staying on task. Staying on task consists of completing work, not daydreaming and not wandering around the room. 33 instances of not staying on task were reported.

Item #4 addressed students' cooperating with others. This consisted of sharing, taking turns, helping others, and being respectful to each other. Eight instances of students not cooperating were reported.

Item #5 addressed student participation in class activities. This consisted of answering the teacher's questions, being involved in the activity, and showing an interest in the activity. 26 instances of students not participating were reported.

Probable Causes

Current literature suggests that there are many more problems with student behavior in school today compared to the way it was years ago. Two conditions that have dramatically changed over the years are the breakup of the family and lack of parental involvement and support in and for the schools. Behavior in the schools has been

adversely affected by these two conditions (Koenig, 1995). However, Koenig takes into account that there are many other maladies that affect behavior and can cause a child to act out in the classroom. A few of these maladies are: ADD and ADHD; child/sexual abuse; poverty; eating disorders; negative peer pressure; loss of hope; television sex and violence; and low self-esteem.

Low self-esteem can be dramatically affected in the classroom without the proper guidance. If punishment is included in guidance, the children have a difficulty understanding how to improve their behavior. It still could cause them to feel like a failure, having a negative self-concept or angry feelings towards others. Wittmer and Honig's study (as cited in Gartrell, 1997) found "Guidance is not just keeping children inline; it is actively teaching them skills they will need for their entire lives" (p. 40). Teachers, parents, and the child should work together as a team for guidance to affect them positively. To maintain guidance, a teacher must create a successful learning environment for each child (Gartrell, 1997).

A teacher can set up a positive learning environment not only using her classroom but by modeling a positive behavior herself. Through modeling, if a student doesn't behave appropriately, the teacher attempts to change the student's behavior by changing her own behavior. According to Brophy (as cited in Levin and Nolan, 1996), the teacher's behavior has great impact upon students:

> The behavior the teacher decides to employ should be one that maximizes the likelihood that student behavior will change in the appropriate way. The probability of choosing the most effective behavior increases when teachers have a professional knowledge of instructional techniques, learning psychology, and

child development and use it to guide the modification of their own behavior. (p.4)

Looking more in depth at different influences (e.g., domestic and personal experiences) can dispose some students to behave inappropriately. They might struggle for attention, power or revenge or use the teacher as a safe target for feelings that they really have towards another person, place or time (McManus, 1989). The behaviors that can affect the students learning, as discerned by the research team include: talking out of turn, not keeping hands to themselves, not staying on task, not cooperating with others and not participating in activities.

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

The theory of Multiple Intelligences as proposed by Howard Gardner has been put into practice in many classrooms today. Gardner defines intelligence as "the ability to solve problems, or to fashion products that are valued in one or more cultural or community settings" (Oliver, 1997, p. 63). There are eight different intelligences. The first is verbal/linguistic. Its main concern is language. The child will be strong in the area of communicating by reading, writing, listening, speaking, and word linking. The second intelligence is musical/rhythmic. This child might grow up to be a composer, singer, or dancer. She is aware or able to use the musical elements, such as pitch, rhythm and tone. She enjoys, understands, and appreciates music. The third intelligence is logical/mathematical. This intelligence involves both mathematical and scientific abilities. These children have the ability to solve abstract problems, and use inductive and deductive reasoning. The fourth intelligence is visual/spatial. This child might become an engineer, surgeon, sculptor, architect, or artist. This child has the ability to visually comprehend the world around him. He can take color, shape, and texture from the mind's eye and produce a work of art on paper. The fifth intelligence is bodily/kinesthetic. This child has control of bodily movement, is able to manipulate physical objects, and to connect their minds and bodies in harmony. The sixth intelligence is naturalistic. These children may become botanists, scientists, park rangers, or gardeners. Children who are strong in this area feel comfortable in nature. They are intrigued with animals, insects, plants, and flowers. The seventh intelligence is

intrapersonal. This person has the ability to understand one's own feelings. The student with a strong intrapersonal intelligence knows herself, recognizes her own strengths and challenges herself. The eighth intelligence is interpersonal. Unlike the intrapersonal intelligence where the child understands oneself, the interpersonal child understands others. These students are able to get along with, interact with, and work with fellow classmates. They prefer to be social (Chapman, 1993).

Howard Gardner's theory is a crucial key to opening the doors of learning. Every child can learn (Gardner, 1991). We as educators need to find how that child learns and use those ways to keep misbehavior to a minimum. After reviewing the literature, research has been done on how the theory affects student achievement. There is not much literature on how the theory of Multiple Intelligences affects student behavior.

After reviewing the literature on behavior, experts state that children's behavior is labeled as problematic when it disrupts students in the environment around it (Goldstein, 1995). All teachers encounter some kind of behavior problem each and every day that they teach. Miltenberger (1995) states "Once you understand the environmental events that cause behaviors to occur, you can change the events in the environment in order to change behavior" (p. 2). Teachers try many techniques to change behavior. These may include Behavior Modification, changing social skills, and using the theory of Multiple Intelligences. Wood and Dorsey conducted a study (as cited in Goldstein, 1995) which found that when working with students with immature behavior, using behavior interventions that were milder in nature rather than aversive were more effective.

The following behavior problems have been most prevalent in the classrooms of the research team. Not taking turns when talking can be an impulsive or spontaneous

reaction. Teachers and students believe it is not courteous to talk out of turn and the behavior should be stopped immediately (Krumboltz and Krumboltz, 1972). Children not keeping their hands to themselves can be bothersome and annoying to fellow classmates. This behavior is often displayed to gain the attention of others (Spaulding, 1992). Students who do not stay on task is another common behavior seen in the classroom. When students are not on task, they create disorder in the classroom. Peers are constantly disturbed by these students (Krumboltz and Krumboltz, 1972). Many teachers feel that when students do not cooperate, the classroom becomes disruptive.

It is important to remember that each student can perform at her comfort level to achieve a common goal (Krumboltz and Krumboltz, 1972). When students are not comfortable in the class, they are less willing to cooperate. Student participation is another behavior that teachers observe. It is important for a child to be actively engaged in classroom activities. Teachers need to assist those students who are not involved by interacting with them to keep them going (Bailey and Wolery, 1992).

As we considered the needs of children to improve their classroom behaviors, the researchers decided to try a different approach. By using the Multiple Intelligence Theory, we realized we could focus on classroom environment rather than on the individual behavior of children. We hoped such an approach might indirectly improve our students' classroom behavior.

Project Objectives and Action Plan

The objective of the project was to improve students' behavior. These behaviors include taking turns when talking, keeping hands to themselves, staying on task,

cooperating with others, and participating in classroom activities. Teacher observations were taken in September 1998 through November 1998. The targeted primary students will show decreased misbehavior as measured by a teacher observation checklist, anecdotal records, teacher surveys, parent surveys, and active participation in multiple intelligences activities.

To begin the study, a parent consent form (Appendix L) was distributed to all of the student's parents. A survey was then created and administered to all parents to determine each student's strongest area of intelligence (Appendix C) at this time. This survey was sent home the first week of September. The teachers also completed a survey on a sample of students to determine their strongest areas of intelligence (Appendix D). The teacher compared the results of each survey and took note of each student's intelligence at this time.

In this study, students were chosen randomly from Classroom 1 and Classroom 2 using a Table of Random Numbers (Mouly, 1978). Sixteen lessons were taught using each of the eight intelligences. During these lessons the researchers used an observation checklist (Appendix B). Observations were taken at three equal intervals during the time of the lesson, two days per week. Researchers 1 and 2 both taught a lesson and observed each other's classes and checked each other's ratings until they came to agreement about the meaning of each rating.

For each of the lessons, the teachers used a unit plan format (Appendix J) to develop lessons for each intelligence. This was used as a tool for the teachers to ensure that all intelligences were covered.

To ensure that the students understood the intelligences, visual aids (Appendix I) were used. The teachers used these aids at the beginning of every lesson and posted them in the learning centers throughout the classroom. Teachers also used graphic organizers (Appendix K) to engage students in the learning process.

Progress reports and report cards (Appendix E,F,G,H) were issued to show progress of behavior. Reports were issued at the mid-quarter and the end of the quarter.

Anecdotal records (Appendix A) were used by Researcher/Classrooms 1, 2, and 3 to focus on behavior of all students in the class.

Methods of Assessment

In order to assess the effects of the interventions surveys and observation checklists were administered by the researchers. The surveys were used to collect data and determine the strongest areas of intelligence for each child. Observation results were collected and recorded in September, October and November. Progress was exemplified through tables and charts.

An additional method of assessment included anecdotal records. This information was used to complement the findings of our study of the sample groups and, perhaps, enrich our findings.

CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

The objective of this project was to improve behavior through the use of Multiple Intelligences in the classroom. Behavior is a major concern of teachers throughout the school day. In order to improve behavior, teachers may use many strategies including behavior modification and logical consequences. As researchers, we decided to use the theory of Multiple Intelligences to improve student behavior in our classrooms.

To begin our study, teachers and parents determined the strongest intelligence of each student at this time using a Multiple Intelligence Survey. In order to assess the behavior of students, teachers observed their behavior using a checklist. The number of instances of talking out of turn, not keeping their hands to themselves, off task behavior, not cooperating and not participating were recorded during specific intelligence lessons. The lessons were taught in September, October and November. Two classroom teachers observed these behaviors on an interval basis while teaching a specific intelligence lesson. The third classroom teacher recorded anecdotal records due to the fact that the students were not in session at the beginning of the study. The anecdotal records showed what the student's behavior was during different lessons throughout the day. Behavior was recorded and analyzed according to the student's intelligence. It was then determined if there was a correlation between a student working in his or her intelligence and with an improvement in behavior.

The researchers found exciting results from the Intelligence lessons. During the Musical/Rhythmic lesson, students had to develop a rhyming poem through the use of music. The students who were observed were not at this time, strong musically. Four out of five students had misbehaviors during this lesson. During the Bodily/Kinesthetic lessons, students were asked to learn their spelling words using their bodies. Students who were labeled bodily/kinesthetic from the survey did not exemplify misbehaviors and the spelling scores increased as well. Students who do not show visual/spatial intelligence exemplified misbehaviors in a lesson, which was learning winter concepts. During an Intrapersonal lesson, students were asked to write in their journals. One student being observed showed misbehaviors during this lesson. This student was not intrapersonally intelligent as determined from the survey.

A Naturalistic lesson was taught where students had to make bird feeders. The teacher led a class discussion about birds and then the students had to make feeders. During this lesson, the student who was labeled naturalistic from the Intelligence survey was on task and did not exemplify misbehaviors. Centers are also set up in the classroom. This is a great opportunity for students to practice their interpersonal skills. Students observed to be interpersonal did not show misbehaviors during this time of the school day. Students who were not observed to be interpersonal from the survey showed signs of being off-task and not participating. During a math lesson that was taught using M&M candy, students had to estimate, sort, and show patterns. The students who were misbehaving were not mathematically intelligent. Students who were behaving appropriately were mathematically intelligent at this time. During a Verbal/Linguistic

lesson, children had to discuss how to carve a pumpkin. The verbal students exemplified behaviors that were appropriate in the classroom.

Researcher/Classroom 3 has found that students act appropriately during their determined intelligence for the majority of the time. Exciting things were seen in the preschool classroom. Learning centers were set up in the classroom to provide for opportunities to learn and explore activities that included the eight intelligences. Small and large group activities were also part of the school day that included the eight intelligences. Anecdotal records were taken during the school day. From those it was determined if there was a correlation between the students intelligence and behavior.

It was observed that a student whose intelligence was musical learned his phone number when it was put to a song. This student also enjoys singing and participates in these types of activities using appropriate behaviors. Another student who has been determined bodily/kinesthetic from the survey was observed behaving appropriately when he had a job to do during the large group activity to keep this child moving. It was also observed that a student who was mathematically intelligent at this time had difficulty expressing that he wanted playdough toys which was during a verbal and interpersonal lesson in the classroom. These activities show that there is a correlation between misbehavior and intelligence.

Presentation and Analysis of Results

The observations were taken again in October and November. The same criteria was used as in September. A summary of the results of the data is presented in the table below (Table 2.).

	Talking Out	Hands to Self	Off Task	Not Cooperating	Not Participating
October	4	1	9	2	10
November	12	7	27	5	5
Average	8	4	18	3.5	7.5

Table 2. October and November Teacher Observation Average

Table 2 shows the average number of instances observed in October and November. It shows a decrease in the number of instances of talking out, hands to self, off task, not cooperating and not participating from September. However, there was not the same number of lessons taught in October as there were in November. Therefore, an average was taken.

	Talking Out	Hands to Self	Off Task	Not Cooperating	Not Part.
Sept Total	9	10	33	8	26
Oct/Nov Average	8	4	18	3.5	7.5

Table 3. Comparison of Results

Table 3 shows the comparison of results. The numbers of instances of misbehaviors have decreased considerably in most areas.

Due to time constraints and teacher responsibilities, some adaptations were made in our study. The same numbers of lessons were not taught in each month. The number of instances was not comparable with each other, therefore, an average was taken. Another factor that affected the study was that two students moved out of district.

The researchers looked at each student's strongest intelligence and determined if the student was behaving properly during a lesson taught in his or her intelligence.

We then recorded if working in his or her intelligence improved student behavior. The following table shows that when students were working in their intelligence, behavior improved among students in the classroom. The summary of the data is presented in Table 4.

Did Working In Their Intelligence Improve Student Behavior?

Student	Yes	No
Student 1		X
Student 2	X	
Student 3	X	
Student 4	X	
Student 5		X
Student 6	X	
Student 7	X	
Student 8	X	
Student 9	X	
Student 10		X
Student 11	X	
Student 12	X	
Student 13	X	
Total	10	3

Table 4.

This chart indicates that 77% of the students showed an improvement in their behavior. From analyzing teacher observation and anecdotal records, the researchers

believe the students behavior improved due to the implementation of the theory of Multiple Intelligences. For the three students whose behavior did not improve, several factors could be the cause. These factors include language barriers, low academic performance, and low self-esteem. It should also be considered that each student is an individual and the theory of Multiple Intelligences was not helpful in working with these children.

Conclusions and Recommendations

The researchers believe that the objective for the project was met based on the analysis of the data. The theory of Multiple Intelligences was beneficial both for the teachers and the students. The benefits for the teachers were that the classroom climate was enjoyable and the classroom was easily controlled. It was enjoyable to teach when the students showed enthusiasm for learning. Classroom management on the whole was not an issue for the teachers. The benefits for the students were that they were comfortable in their learning environment. The students seemed to be more eager to learn and were motivated in the classroom setting. When students enjoy learning and are comfortable their self-esteem can increase.

The researchers recommend that the theory of Multiple Intelligences be used in the classroom. The use of the unit plan helped to include all of the intelligences, which helped provide a variety of ways of teaching the unit, and include all students in the class. The Multiple Intelligence Survey should include both parent and teacher input to ensure that the correct intelligence is identified. We also recommend that an outside observer is used to observe and record behaviors of the students to get accurate observations while the classroom teacher can make better use of classroom teaching time. The results from

this action research project were favorable. It would be interesting to see what the results would be if a larger sample is used. We recommend all student's intelligences be identified and lessons be planned for each of them so they can strive to be the best student they can be.

References

Bailey, Donald., & Wolery, Mark. (1992). Teaching Infants and Preschoolers with Disabilities. Toronto: Maxwell MacMillan .

Chapman, Carolyn. (1993). If The Shoe Fits...How to Develop Multiple Intelligences in the Classroom. Arlington Heights, IL: IRI Skylight.

Gardner, Howard. (1983). Multiple Intelligences: The Theory In Practice. New York: Basic Books.

Gardner, Howard. (1983). Frames of Mind: Theory of Multiple Intelligences. New York: Basic Books.

Gardner, Howard. (1991). The Unschooled Mind: How Children Think and How Schools Should Teach. New York: Basic Books.

Gardner, Howard. (1997). Multiple Intelligences as a partner in school improvement. Educational Leadership, 55, 20-21.

Gartell, Dan. (1997). Beyond Discipline to Guidance. Young Children, v52n6, 34-42.

Goldstein, Sam. (1995). Understanding and Managing Children's Classroom Behavior. New York: John Wiley and Sons.

Koenig, Larry. (1995). Smart Discipline for the Classroom. Thousand Oaks, CA: Corwin Press.

Krumboltz, John., & Krumboltz, Helen. (1972). Changing Children's Behavior. Englewood Cliffs, New Jersey: Prentice Hall.

Levin, James., & Nolan, James. (1996). Principals of Classroom Management. Needham Heights, Mass: Allyn and Bacon.

McManus, Mick. (1989). Troublesome Behavior in the Classroom. New York: Nichols Publishing.

Miltenberger, Rayond. (1997). Behavior Modification: Principles and Procedures. Boston: Brooks/ Cole Publishing.

Mouly, George, J., (1978). Educational Research: The Art and Science of Investigating. Boston, MA: Allyn & Bacon.

Oliver, Anita. (1997). Plugging into Multiple Intelligence. The Education Digest, 61-63.

Site A Elementary School. (1997). School Report Card. 1-13.

Site B Elementary School. (1997). School Report Card. 1-7.

Spaulding, Cheryl. (1992). Motivation in the Classroom. St. Louis: McGraw-Hill.

APPENDIXES

APPENDIX A

Anecdotal Record Form

Student:
Intelligence:
Activity or time of day:

On Task? Yes No

Talking Out? Yes No

Hands to self? Yes No

Participating? Yes No

Cooperating? Yes No

Comments:

APPENDIX B

Observation Checklist

Interval 1

Student Name	TO	HS	OT	NC	NP	Comments	
Total							

Interval 2

Student Name						Comments	
Total							

Interval 3

Student Name						Comments	
Total							

Key
TO: Talking Out of Turn
HS: Not keeping hands to self
OT: Off Task
NC: Not Cooperative
NP: Not Participating

APPENDIX C

Multiple Intelligence Survey

Student:_____Grade: _____

Date:_____

Directions: Circle the level of interest your child appears to have by circling a number in each of the following categories: 1 being the lowest interest / 5 being the highest interest. Please return this survey by:_____

Verbal/Linguistic:

Enjoys words by reading, writing, and/or talking	1	2	3	4	5
Is not too shy to express self orally in public	1	2	3	4	5
Effectively uses and understands age-appropriate humor	1	2	3	4	5
Has a well-developed personal vocabulary	1	2	3	4	5
Uses words carefully in dealing with sensitive situations	1	2	3	4	5

Logical/Mathematical:

Able to see sequence and put random things in order (Example: Small to Large)	1	2	3	4	5
Can recognize and understand patterns (Example: # $ # $)	1	2	3	4	5
Easily solves problems or puzzles	1	2	3	4	5
Can classify objects (Example: Put all red objects here)	1	2	3	4	5
Is capable of higher-order thinking and reasoning	1	2	3	4	5

Visual/Spatial:

Spends large amount of time drawing or doodling	1	2	3	4	5
Learns easily when using visual aids	1	2	3	4	5
Uses paints, clay and other media for creative expression	1	2	3	4	5
Has active imagination and enjoys pretending	1	2	3	4	5
Can create objects by following directions	1	2	3	4	5

Bodily/Kinesthetic:

Expresses self with body movement/gestures	1	2	3	4	5
Shows good coordination and skill in games	1	2	3	4	5
Is good at using hands to create or fix things	1	2	3	4	5
Enjoys showing people how to do things	1	2	3	4	5
Happily takes part in exercise routines	1	2	3	4	5

Musical/Rhythmic:

Works well when listening to music	1	2	3	4	5
Sings or hums while playing and working	1	2	3	4	5
Often taps pencil, ruler, feet or fingers	1	2	3	4	5
Easily remembers advertisement jingles or tunes	1	2	3	4	5
Enjoys a variety of music	1	2	3	4	5

Interpersonal:

Enjoys a meaningful family relationship	1 2 3 4 5
Has friends outside of immediate family group	1 2 3 4 5
Plays fairly and effectively in group situations	1 2 3 4 5
Seems to be a leader in games and activities	1 2 3 4 5
Can involve others in discussion	1 2 3 4 5

Intrapersonal:

Asks many how and why question	1 2 3 4 5
Enjoys working alone in relative quiet	1 2 3 4 5
Does not worry about what others think	1 2 3 4 5
Can express self in many different ways	1 2 3 4 5
Is motivated and has good concentration skills	1 2 3 4 5

Naturalistic Intelligence:

Is in tune with things such as bugs, plants, and flowers	1 2 3 4 5
Concerned about the environment (pollution, saving the rain forest, animal extinction)	1 2 3 4 5
Is an explorer or experimenter (highly developed curiosity and inquiring mind)	1 2 3 4 5
Relates well to animals and likes the responsibility of raising a pet	1 2 3 4 5
Science and social studies information gives him quality enjoyment time	1 2 3 4 5

APPENDIX D

Multiple Intelligence Survey

Student:_____Grade: _____

Date:_____

Directions: Circle the level of interest your child appears to have by circling a number in each of the following categories: 1 being the lowest interest / 5 being the highest interest. Please return this survey by:_____

Verbal/Linguistic:

Enjoys words by reading, writing, and/or talking	1	2	3	4	5
Is not too shy to express self orally in public	1	2	3	4	5
Effectively uses and understands age-appropriate humor	1	2	3	4	5
Has a well-developed personal vocabulary	1	2	3	4	5
Uses words carefully in dealing with sensitive situations	1	2	3	4	5

Logical/Mathematical:

Able to see sequence and put random things in order (Example: Small to Large)	1	2	3	4	5
Can recognize and understand patterns (Example: # $ # $)	1	2	3	4	5
Easily solves problems or puzzles	1	2	3	4	5
Can classify objects (Example: Put all red objects here)	1	2	3	4	5
Is capable of higher-order thinking and reasoning	1	2	3	4	5

Visual/Spatial:

Spends large amount of time drawing or doodling	1	2	3	4	5
Learns easily when using visual aids	1	2	3	4	5
Uses paints, clay and other media for creative expression	1	2	3	4	5
Has active imagination and enjoys pretending	1	2	3	4	5
Can create objects by following directions	1	2	3	4	5

Bodily/Kinesthetic:

Expresses self with body movement/gestures	1	2	3	4	5
Shows good coordination and skill in games	1	2	3	4	5
Is good at using hands to create or fix things	1	2	3	4	5
Enjoys showing people how to do things	1	2	3	4	5
Happily takes part in exercise routines	1	2	3	4	5

Musical/Rhythmic:

Works well when listening to music	1	2	3	4	5
Sings or hums while playing and working	1	2	3	4	5
Often taps pencil, ruler, feet or fingers	1	2	3	4	5
Easily remembers advertisement jingles or tunes	1	2	3	4	5
Enjoys a variety of music	1	2	3	4	5

Interpersonal:

Enjoys a meaningful family relationship	1 2 3 4 5
Has friends outside of immediate family group	1 2 3 4 5
Plays fairly and effectively in group situations	1 2 3 4 5
Seems to be a leader in games and activities	1 2 3 4 5
Can involve others in discussion	1 2 3 4 5

Intrapersonal:

Asks many how and why question	1 2 3 4 5
Enjoys working alone in relative quiet	1 2 3 4 5
Does not worry about what others think	1 2 3 4 5
Can express self in many different ways	1 2 3 4 5
Is motivated and has good concentration skills	1 2 3 4 5

Naturalistic Intelligence:

Is in tune with things such as bugs, plants, and flowers	1 2 3 4 5
Concerned about the environment (pollution, saving the rain forest, animal extinction)	1 2 3 4 5
Is an explorer or experimenter (highly developed curiosity and inquiring mind)	1 2 3 4 5
Relates well to animals and likes the responsibility of raising a pet	1 2 3 4 5
Science and social studies information gives him quality enjoyment time	1 2 3 4 5

APPENDIX E

Progress Report

Date_____ Teacher_____

Student Name_____

(+) identifies strengths (-) identifies weaknesses

_____Attentive in class
_____Works to potential
_____Follows directions
_____Uses time wisely
_____Has good self discipline
_____Participates in class discussions
_____Cooperates in a group
_____Seeks help when needed
_____Completes assignments
_____Completes homework

Grades are indicated as G (Mastered) S (Satisfactory) N (Needs Improvement)

_____Math
_____Science
_____Language Arts
_____Social Studies
_____Reading
_____Spelling
_____Penmanship

Comments:_____

_____

_____

Please cut off lower portion, sign and return by: Friday, December 4

- -

Parent Comments:_____

_____

_____

Date:_____ Parent Signature:_____

APPENDIX F

1ST QUARTER Progress Report

Name _____

SUBJECT	DEVELOPING SKILL	HELP NEEDED
Letter Recognition		
Letter Sounds		
Number Recognition		
Color Recognition		
Color Word Recognition		
Counts to		
Listening & Following Directions		
Fine Motor Skills (handwriting, coloring, cutting)		

COMMENTS _____

2ND QUARTER Progress Report

Name _____

SUBJECT	DEVELOPING SKILL	HELP NEEDED
Letter Recognition		
Letter Sounds		
Number Recognition		
Color Recognition		
Color Word Recognition		
Counts to		
Listening & Following Directions		
Fine Motor Skills (handwriting, coloring, cutting)		

COMMENTS _____

3rd QUARTER

Progress Report

Name _____

SUBJECT	DEVELOPING SKILL	HELP NEEDED
etter Recognition		
.etter Sounds		
Jumber Recognition		
olor Recognition		
olor Word Recognition		
;ounts to		
stening & Following Directions		
ne Motor Skills (andwriting, coloring, cutting)		

COMMENTS _____

4th QUARTER

Progress Report

Name _____

SUBJECT	DEVELOPING SKILL	HELP NEEDED
Letter Recognition		
Letter Sounds		
Number Recognition		
Color Recognition		
Color Word Recognition		
Counts to		
Listening & Following Directions		
Fine Motor Skills (handwriting, coloring, cutting)		

COMMENTS _____

BEST COPY AVAILABLE

APPENDIX G

School

Home of the Wildcats

Student Name

Grade 1

Homeroom

Course	Teacher	Quarter 1st	2nd	3rd	4th	Final
Art	Urbanik					
Computer	Staley					
English	Peart					
Math	Peart					
Music	Armstrong					
P.E.	Squires					
Penmanship	Peart					
Reading	Peart					
Science	Peart					
Social Studies	Peart					
Spelling	Peart					

Quarter	1st	2nd	3rd	4th	Total
Days Absent		0.0	0.0	0.0	
Days Tardy	0.0	0.0	0.0	0.0	0.0

Grade Explanation

G Mastered
S+ Good
S Satisfactory
S- Emerging
N Needs Improvement
Inc Incomplete

_____ Listens and follows directions accurately
_____ Completes work on time
_____ Works independently
_____ Does neat careful work
_____ Follows class/school rules

+ Satisfactory
- Needs Improvement

BEST COPY AVAILABLE

APPENDIX H

Kindergarten Progress Report

Name _____

School Year 19_____ - 19_____

Teacher _____

Attendance

	1	2	3	4
Days Absent				
Times Tardy				

Promoted/Assigned to _____

RECOGNIZES COLORS:

Red ___ Blue ___ Yellow ___ Green ___ White ___
Orange ___ Brown ___ Purple ___ Black ___

RECOGNIZES NUMBERS:

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___
8 ___ 9 ___ 10 ___ 11 ___ 12 ___ 13 ___ 14 ___
15 ___ 16 ___ 17 ___ 18 ___ 19 ___ 20 ___

RECOGNIZES SHAPES:

○ ___ □ ___ △ ___ ▭ ___ ⬯ ___ ◇ ___

KNOWS COLOR WORDS:

Red ___ Blue ___ Yellow ___ Green ___ White ___ Orange ___
Brown ___ Purple ___ Black ___

WORK HABITS:

	1	2	3	4
Uses time wisely				
Listens and follows directions				
Works independently				
Has adequate attention span				
Follows class rules				
Participates in class				

COMMENTS: _____

Grading definitions: S. . . Satisfactory N . . Needs Improvement

+ indicates mastered skill
G indicaRADINS

MATH READINESS:

	1	2	3	4
Counts orally to				
Matches objects to numeral 0 - 10				
Matches objects to numeral 11 - 20				
Addition				
Subtraction				

MOTOR SKILLS:

	1	2	3	4
Cuts smoothly				
Colors neatly				
Prints letters correctly				
Prints numbers correctly				
Prints first name correctly				
Prints last name correctly				

LANGUAGE ARTS:

	1	2	3	4
Uses left to right progression				
Names rhyming words				
Comprehension				
Associates word with given sound				
Sight words				

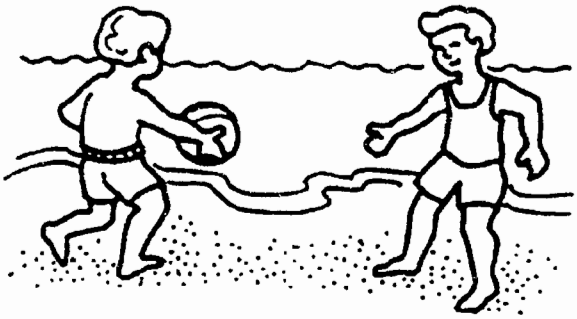
RECOGNITION:

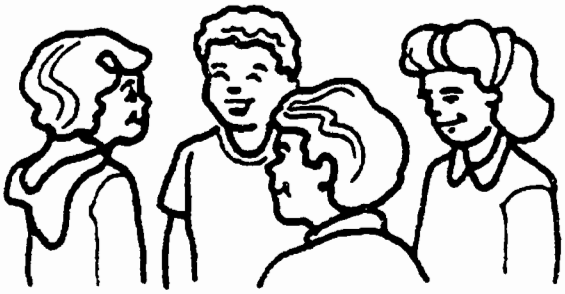
First Quarter			Second Quarter			Third Quarter			Fourth Quarter		
Recognition	Sound		Recognition	Sound		Recognition	Sound		Recognition	Sound	
B			H			C			N		
b			h			c			n		
T			W			E			Q		
t			w			e			q		
M			G			R			Z		
m			g			r			z		
A			O			J			X		
a			o			j			x		
F			P			Y			K		
f			p			y			k		
D			L			U					
d			l			u					
S			I			V					
s			i			v					

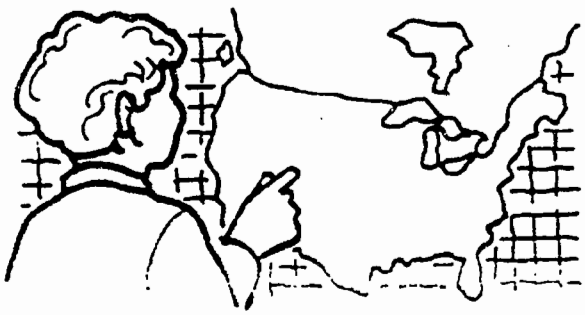
BEST COPY AVAILABLE

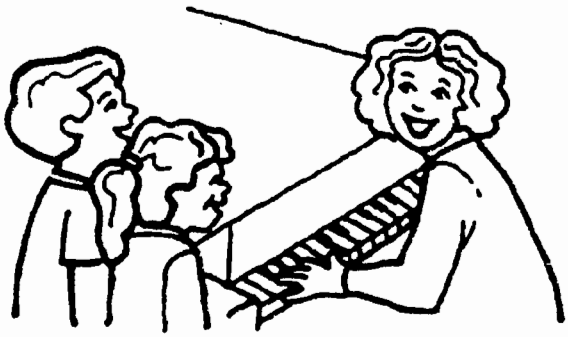
APPENDIX I

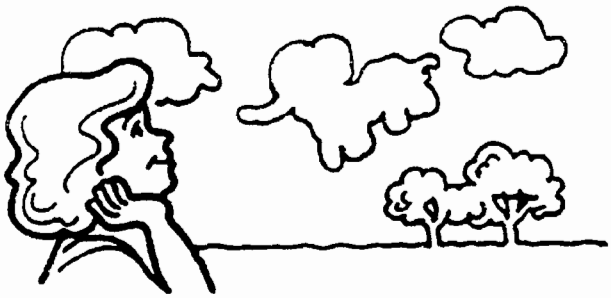
MI Visual Aides











APPENDIX J

ON YOUR OWN

UNIT PLAN USING MULTIPLE INTELLIGENCES GRID

Unit _____ Grade Level _____

Subject Area _____ Timeline _____

Major Goals of Unit: 1 _____

2 _____

3 _____

List at least five learning experiences/assessments under each intelligence.

VERBAL/LINGUISTIC	LOGICAL/MATHEMATICAL	VISUAL/SPATIAL	BODILY/KINESTHETIC

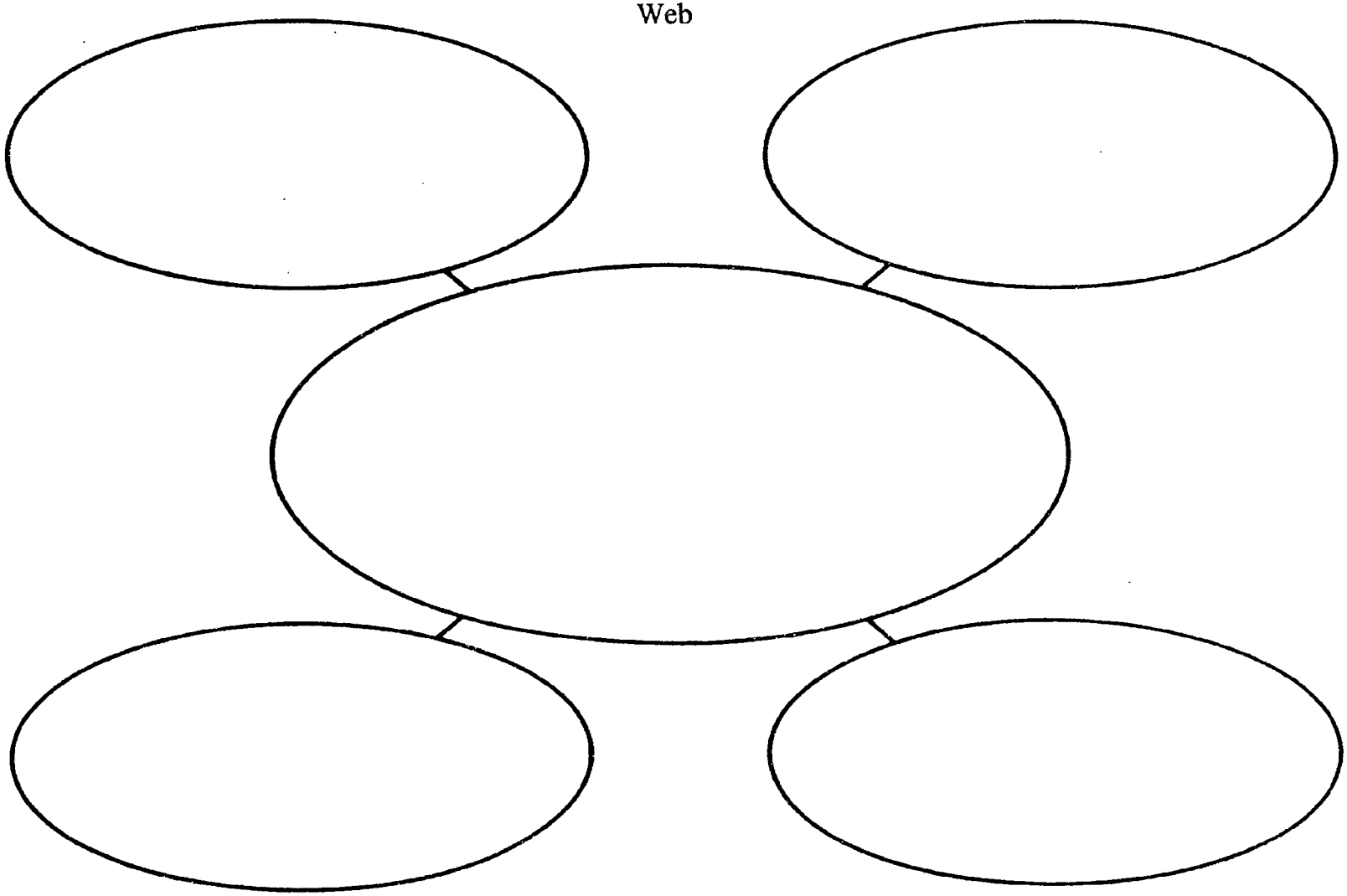
MUSICAL/RHYTHMIC	INTERPERSONAL	INTRAPERSONAL	NATURALIST

1. Whole-class learning experiences:				
2. Whole-class assessments for learning experiences:				
3. Culminating event for unit:				

BEST COPY AVAILABLE

APPENDIX K

Web



Point of View:

Reason	Reason	Reason	Reason

Evidence	Evidence	Evidence	Evidence

Critical Thinking Chart

THE KWL

Topic: _____

K now	W ant to know	L earned

BEST COPY AVAILABLE

APPENDIX L

St. Xavier University
Consent to Participate in A Research Study

"Improving Student Behavior Through The Use Of Multiple Intelligences"

Dear Parents,

I am currently pursuing a Masters Degree from St. Xavier University. This semester I will be doing a study on children's behavior. The study involves using the theory of Multiple Intelligences to improve student behavior. Each individual possesses eight intelligences, two of which I have explained below:

1. Musical/Rhymthic child might grow up to be a composer, singer or dancer. He/She loves music and will learn best throughout the expression of music. He/She is aware or able to use the musical elements, such as pitch, rhythm and tone.

2. Logical/Mathematical involves both mathematical and scientific abilities. These children have the ability to solve abstract problems, and use inductive and deductive reasoning. They may become a scientist, or maybe a mathematician.

Lessons will be taught using the eight intelligences and hope to see an increase in the student's appropriate behavior in the classroom.

There will not be any risks or negative effects to your child during this study. He or she will benefit from the exciting lessons developed for the study. It is important to note that this study will be conducted with complete confidentiality. Names will not be used and records will not be disclosed to any person involved in the study. Participation in this study is completely voluntary. Refusal to participate involves no penalty or loss of benefits to which your child may otherwise be entitled. You may withdraw your child from the study at anytime without penalty. The teacher/investigator also has the right to withdraw the child from the study at anytime. If you consent to have your child a part of the study, please sign and return the bottom of this form to me by _____. If there are any questions, please do not hesitate to contact me. I am looking forward to this study, which should work to the benefit of all children in the classroom.

Sincerely,

I, the parent/legal guardian of the minor named below, acknowledge that the investigator has explained to me the need for this research, identified the risks involved, and offered to answer any questions I may have about the nature of my child's participation. I freely and voluntarily consent to my child's participation in this study. I understand all information gathered during the study would be completely confidential (or anonymous). I also understand that I may keep a copy of this consent form for my own information.

_____
Name of Minor

_____ _____
Signature of Parent/Legal Guardian Date

Witness (Signature)_____