

DR. STIRLING MCDOWELL
Foundation
FOR
RESEARCH INTO TEACHING



**TEACHING AND LEARNING
RESEARCH EXCHANGE**

**Different Minds
Learn Differently**
Multiple Intelligence in
the Classroom

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- 4) encourage organizations as well as individuals to determine and act in areas of research and inquiry; and
- 5) encourage experimentation with innovative ideas and methodologies related to teaching and learning.

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Dedication

This report is dedicated to Ellery Peters and Dave Riddle, leaders in education who inspired us to ask the question "why" and search for the answer. It is also dedicated to the students we teach who give us inspiration each day in the classroom.

Acknowledgements

Research of any kind can be both a challenging and exciting venture. It demands time and attention to information and detail. Our project was a success thanks to the people that were involved in conducting the research as well as supporting it during the 2002-2003 school year. We would first like to thank the McDowell Foundation for its support of this project. We would also like to recognize the roles the following people played in the project:

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Other Support:	St. Gabriel School, Regina Martin Browne School, Lloydminster

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Research Objectives

The teachers involved in this research had as their goal to explore and develop the strength of their teaching methods as well as the gifts of their students. This goal was accomplished by teaching the children in their grade three classrooms about Multiple Intelligences. Howard Gardner developed the theory of Multiple Intelligences. He defined eight basic intelligences that the teachers introduced and taught to the students. The intelligences covered in this research were categorized as “Smarts” for the students at the primary level. The “Smarts” taught were: Word Smart, Music Smart, Body Smart, Picture Smart, Number Smart, Self Smart, People Smart and Nature Smart.

This research had several purposes:

1. For students to discover how each mind learns differently;
2. For students to understand how Multiple Intelligences can help them learn best;
3. For teachers to improve how they instruct, assess and evaluate students in their classrooms; and
4. For teachers to engage and develop each child’s personal gifts so learning becomes lifelong.

It All Began

It all began one day at Minto School, a small rural school in North Portal, Saskatchewan. North Portal is situated on the international border crossing between Canada and the United States. There were twenty-one students in our school, three teachers and one teacher assistant. Two of our teachers came to school inspired by a recent television program about children and education. This program led all of us to sit down and discuss how children learn, what brain chemistry has to do with learning; and how we as teachers teach so our students can learn and be successful. Our questions inspired us to pursue a research project that would help children attain success and help teachers broaden their knowledge, instructional strategies, assessment and evaluation techniques.

It was our desire to study a target group of students in a single school setting. In order for instruction and learning within our multigrade classrooms to be effective, new ideas and strategies need to be constantly incorporated. As a focus of our research we decided to study the theory of Multiple Intelligences. We wanted to grow professionally by finding out how to improve student achievement and by being willing to take instructional risks to better meet the needs of our students.

The Reality of Rural Education

We applied for the Dr. Stirling McDowell Research Grant and our application was approved. We were all very excited and had already begun thinking about the research that would follow the next school year. Shortly after finding out that we had received the research grant, we were informed that our school would close at the end of that school year due to declining enrollments. What a sense of disappointment! Then we became aware that we could keep our research going depending on how it would be altered due to the new circumstances. Two of the teachers involved obtained teaching positions at the grade three level, and one teacher obtained a curriculum coordinator position with the School Division. We decided to continue with the research, but instead of conducting it in a single school setting, we would conduct it at the grade three level. We began to search for a third grade three teacher who would be interested in our research project. Our search led us to our neighbouring school division. We were successful in finding another teacher who had a desire to answer the same questions that we did. How exciting!

The Project As We Know It

The changes to our project were geographical not philosophical. We now had a project that was situated in the Estevan area, in the south eastern portion of Saskatchewan. The researchers involved were from two school divisions: Estevan Rural and Estevan Public. We believed that our research project was still unique because of its ability to study a target grade group of students in two school divisions. Three grade three classrooms were actively participating. Developing specific instructional strategies and materials for multiple-intelligence-based classrooms became a priority for us.

One Month at a Time

We decided to conduct the research by focusing on one Multiple Intelligence (MI) or “Smart” each month. This approach allowed the students to focus on learning one new MI concept at a time. This approach also helped the teachers integrate the Multiple Intelligence of the month into their teaching. Key resources were found that provided the teachers with both background information and a variety of teaching activities to integrate the MI into different subject areas. Focusing on one “Smart” or Intelligence a month also enabled the teachers to gain a greater understanding of how their students learned and then work on transferring that knowledge to improving how they instructed, assessed and evaluated their students.

The monthly breakdown of Smarts or Intelligences was as follows:

September	Self Smart - <i>Intrapersonal Intelligence</i>
October	People Smart - <i>Interpersonal Intelligence</i>
November	Picture Smart - <i>Spatial Intelligence</i>
December	Music Smart - <i>Musical Intelligence</i>
January	Word Smart - <i>Linguistic Intelligence</i>
February	Body Smart - <i>Bodily-Kinesthetic Intelligence</i>
March	Number Smart- <i>Logical-Mathematical Intelligence</i>
April	Nature Smart - <i>Naturalist Intelligence</i>
May	Multiple Intelligence Fair

It was important for the researchers to have the opportunity to share how they were integrating the Multiple Intelligences into the required curriculum areas, discuss successes and frustrations, share new resources and encourage each other. The teachers also found it beneficial to talk about how the students were responding to the newly integrated concept in their teaching. This benefit was achieved by having monthly MI research meetings that were organized by the research coordinator. The meetings proved to be integral to the success of the project, as they became grade level meetings that formed the foundation for professional sharing, learning and growth. Each teacher started this project with different levels of understanding in the theory of MI, so each one learned from the others.

As part of our professional learning and growth, we wanted to visit a school that had Multiple Intelligences integrated into their curriculum instruction. We visited St. Gabriel School in Regina. It was great to find a school close enough to Estevan that we could make a day trip. St. Gabriel School had a school-wide focus for studying Multiple Intelligences with its students. The day that we visited it, the school was having a Heritage Fair, and the student presentations used Multiple Intelligences as the focus for learning. It was very exciting to wander around and listen to the students use their “People Smart” skills to give excellent presentations. The students also had used their other “smarts” to create a visual presentation of their topic. After visiting the Heritage Fair, we had the opportunity to talk with a variety of teachers and see how they shared MI with their students. We noticed many different ways that teachers used their Spatial and Linguistic Intelligences to create dynamic bulletin boards that were instructional and visually appealing. Visiting St. Gabriel School in Regina was definitely a very positive professional development experience. It was inspirational to see a team of educators so motivated! We returned from our day trip excited to plan our culminating event.

To culminate our research with the students, we decided to host a Friendship Fair. The teachers were given a graphic organizer to brainstorm as many activities as they could under each intelligence area. Then, we collected all of the activities and selected the ones that would be the best for our Friendship Fair. After selecting the key activity or activities for each intelligence or smart area, we decided who would be responsible for putting that activity together and collecting all necessary materials. The resulting Friendship Fair Stations were as follows:

Word Smart Station Activity:	Friendship Interview Sheet
Picture Smart Station Activity:	Robotics
Music Smart Station Activity:	Freeze Dancing
People Smart Station Activity:	Friendship Bingo

Self Smart Station Activity:	Name Tags and Bags
Body Smart Station Activity:	Foam Door Hangers
Number Smart Station Activity:	Smartie Estimation Jar, Friendship Measurement Activity
Nature Smart Station Activity:	Terrarium Activity

A Celebration of Learning – The Friendship Fair

We wanted to see how well our students knew the different “Smart” areas and how well they were able to apply their skills creatively to various activities. At the beginning of the project, the students were informed that other grade three classrooms were studying the same concepts and those classrooms would be attending the Fair as well. Getting to know one another was an important part of our afternoon, so we started the Fair by eating lunch together. For lunch we ate pizza. Pizza was an important part of our project as the teachers introduced the concept of Multiple Intelligences through an MI pizza that separated the intelligences into pizza shapes. The students visited with one another while they ate lunch. The visiting allowed them to use their Interpersonal Intelligence or “People Smart” skills.

After lunch, the students were given a colourful “smartie” circle with a string through it. They decorated the smartie piece as their name tag. They also did the same with a paper bag for gathering station materials. These introductory activities illustrated the students’ “Self Smart” or Intrapersonal skills as they were working independently to complete a task. Once the students had finished their paper bags, they were separated into groups based on the colour of their smartie name tags. This division allowed the three classrooms to be blended, so that students could continue using their interpersonal skills.

So that the teachers could be part of the fair, we invited the assistance of the Weldon School Wellness Group, a group of young people that teaches students at Weldon School to make positive and healthy decisions. While the Wellness Group facilitated the stations, the teachers observed the students in action. They observed how the students were interacting with one another as well as considering how the students were using their skills to complete the activities. Students stayed at each of the seven stations for fifteen minutes. The teachers visited the stations to observe the students participating in the activities. We had one guest presenter at the Picture Smart station who challenged the students in a different way. The Multi-Media Consultant for our school division challenged the students to work with Robotics. The students really enjoyed that station because it was a new and exciting experience for them.

As the MI Friendship Fair was coming to a close, we noticed how well the students interacted with each other throughout the afternoon. It was great to see! At the end of the day, each student received a “Smart Award” and a friendship pencil for participation in the MI Friendship Fair. Students took home all the items they had made and/or used to share with their parents. We took some

farewell photos and said goodbye to a great MI year and a fantastic learning experience for both the students and teachers.

ALL KINDS OF LIVES

There are all kinds of jobs to be done in our world. So, it's a good thing that we have all kinds of minds to do them. Luckily, every kind of mind has some kinds of mind work that it can do to make the world a much better place. But first we all need to understand our own minds.

Wouldn't it be great if we could all feel good about our own minds? Wouldn't it be fun if we could all enjoy and respect each others' kinds of minds? Then, we might live in a world where all kinds of minds would be happy and proud to be living all kinds of lives!

(Levine, 1993, p. 275)

What We Learned - Teachers

At the end of this research, the teachers were given four questions to guide their thoughts about the project. Each one considered how instruction and student learning was affected by teaching Multiple Intelligences in their classroom. It is interesting to note how similar their responses are.

1. AT THE END OF THIS RESEARCH DID YOU FIND STUDENTS WERE ABLE TO UNDERSTAND THAT THEY WERE ALL SMART IN DIFFERENT WAYS?

- Students became more aware of how they liked to learn, but I'm not sure if they made the connection with how they learned.
- Individual students were more aware of how they learned.
- Individual students were more aware of how their peers learned.
- Students began catching on to the intelligences very quickly.
- Students began to recognize other situations in which they were using the different intelligences without me having to prompt them.
- Students realize they have all the intelligences.
- As students became aware of the theory, they developed an awareness of how their minds worked when learning.
- Students began to adopt favourite strategies in many curriculum areas.
- Students were empowered to choose strategies that worked best for them.
- Cooperative learning opportunities were integrated into lesson planning so students began to learn from and appreciate each other.

- I realized how much I am doing Multiple Intelligences already. I just didn't know it had a name.

2. DID THE PROJECT IMPROVE HOW YOU INSTRUCTED, ASSESSED AND EVALUATED STUDENTS IN YOUR CLASSROOM? IF SO, HOW?

- It allowed me to have and use a wider variety of instructional approaches while teaching.
- It showed me that I tend to leave music out of my teaching.
- I realized that I was incorporating a lot of the intelligences already without even realizing it. Ex: When doing an ocean theme, I recreated the lyrics to the song, "My Bonny Lies Over the Ocean", and inserted the oceans and continents so that students would grasp the content in a different way. I was using Musical Intelligence without even realizing it.
- The nature of the project allowed for collegial planning among the grade three teachers.
- The sharing of professional energy and enthusiasm strengthened instruction.
- The project required systematic planning and instruction.
- As curricula and professional literature from MI resources were read, lesson plans not only targeted curriculum objectives but also encouraged an enriched and deeper learning experience for students and myself.
- As the project evolved, as many MI concepts as were feasible, were incorporated into lesson planning.
- MI theory encouraged integration of subject areas, which benefited instructional practice.
- Assessment and evaluation were less affected by this project due to the learning of the theory and developing instruction.
- Self-assessment, interviews, pictorial assessments and group assessments were used more than had been in the past.
- Instruction was focused on more than assessment.
- I used parent-teacher conferences as an opportunity to teach parents about the MI profiles of their child and how the profiles may affect their child's future learning.
- I kept portfolios for each child, which included work samples that displayed many of the strategies used throughout the project.
- I offered the portfolios to the grade four teacher for use during the next school year.
- I really tried to use body smart or Bodily-Kinesthetic Intelligence for teaching concepts that I knew would be difficult for students to learn because they would be actively engaged.
- It improved my instruction; however, I realized that at times I combined learning styles and multiple intelligences.

3. BY UNDERSTANDING THE DIFFERENT STRENGTHS OF YOUR STUDENTS THROUGH THE THEORY OF MULTIPLE INTELLIGENCES, DO YOU THINK YOU WERE SUCCESSFUL IN ENGAGING AND DEVELOPING EACH CHILD'S TALENTS IN YOUR CLASSROOM?

- Students were provided with more options as to how they learned concepts.
- Many of the students emerged at the end of the year with more confidence and awareness of their unique talents.
- Students were more tolerant of each other's differences.
- We came to understand together that each of us has a unique profile of talents and we can practice strategies that help reveal intelligences. Ex: A student with weaker reading skills, but strong acting skills, developed a method of "acting out stories" in his/her head and sharing some of these re-enactments with classmates.
- Understanding the theory has given me opportunities to adapt a student activity according to the child's strength when he/she is working in his/her weakness. Ex. When a boy had trouble writing from the white board, I had him draw the picture instead (word smart weakness and a picture smart strength).
- The theory was a great motivator as all students wanted to be "smart" and would practice the new strategies with great diligence to become "smarter" in a particular area.
- There was an increased student willingness to develop co-operative learning skills during our "people smart" month. Whether students worked in literature circles in language arts or lab groups in science, the results were similar.
- Students willingly shared ideas, tried to compliment each other, stayed together and took turns. They were proud of their "people smart" skills.
- I began to plan according to understanding a student's particular strength and/or weaknesses.

4. WHAT HAVE YOU LEARNED FROM THIS PROJECT TO MAKE YOUR TEACHING MORE MEANINGFUL AND RELEVANT?

- At the end of the project we realized that there is a difference between learning styles and Multiple Intelligences and it is important not to assume they are one and the same. Ex: Multiple Intelligences are ways to demonstrate intellectual ability whereas a learning style is an approach or way of learning.
- I gained confidence in that I was already teaching a lot of the intelligences without even realizing it.
- This project gave a confidence boost to the students as they realized they were intelligent in eight different ways, especially the ones who did not think they were smart in even one way.
- I would have enjoyed it more if I wasn't the only teacher in my school participating in this project. I felt isolated and at times, I felt as if no one really cared what I was doing.
- This project really became about me as it changed my teaching. Ex: I started to teach toward students' intelligence areas, which were their areas of strength.

- This project gave me a classroom management technique. Ex: If the students were chatty I would just say “self smart” and they would be quiet.
- I am more aware of how potentially talented each of my students is and I am more confident that I can teach strategies that will help each student realize his/her unique profile of talents.
- I have developed a large repertoire of instructional strategies that can be used at any time to benefit any student. Ex: I have a group of students who appear unmotivated and have weak language and mathematical skills. These reluctant students all happened to be “Body Smart.” I was able to use strategies from this area of talent to help motivate them and increase their language and mathematical skills. Prior to this project, I would not have had sufficient instructional strategies to share with these learners. Now, as I teach them and point out the different Multiple Intelligences, I notice that they are motivated to learn strategies and participate in activities.
- I continue to use this methodology in my classroom and want to develop more systematic assessment and evaluation techniques to accompany the instructional strategies I have developed.
- This project started by being about teaching the students the eight different intelligences and doing activities with them, BUT it ended up being a strong influence on me in looking at how I teach the students.
- I would have liked the parents to be more involved in the project. Their inclusion would have been helpful as they could observe the different ways their child demonstrated how he/she liked to learn. They may have noticed strength areas doing activities at home.

What We Learned - Students

At the end of this research, the teachers gave their students an open-ended questionnaire to guide their thoughts about the MI Fair and the project. Below you will find some of the responses from the students.

SOMETHING I LEARNED TODAY AT THE MI FAIR WAS ...

- You can do different things for different smarts.
- I learned about Robots.
- I learned that to build a robot you have to design, build, program and use teamwork.
- I learned that meeting and having friends is fun.
- I learned that robotics is a type of robot.
- I learned that friends are fun to have around.
- I learned that making new friends is fun.
- I learned about all of the smarts and friendship.
- I learned how to make a terrarium.

- I learned that robots need to be programmed to do what you want them to.
- I learned that the smarts are all different.
- I learned that it is important to treat people nicely.

1. WHAT HAVE YOU LEARNED SO FAR THIS YEAR ABOUT THE DIFFERENT WAYS YOU AND OTHER PEOPLE ARE SMART?

- I have learned lots. We used people smart at the Friendship Fair when we were reading outside we were using our nature and words smarts. Body smarts were used in acting and sometimes spelling.
- I have learned to work in a group better. I learned how to read and write better. I know how to work by myself and with my body. I prefer to work by myself. I love to paint and draw and I really love to play outside.
- I have learned how to work in groups. In picture smart we drew our solar system. I learned how to work by myself and in groups, but sometimes I like working with my body. I like to work by myself. For music smart we put some music on and read. I was relaxing.
- I have learned lots. We used picture smart when we were reading and when we drew out the multiplication stories. For nature smart we made piping plover nests.

2. HOW CAN KNOWING HOW YOU ARE SMART HELP YOU IN SCHOOL AND OUT OF SCHOOL?

- I can make pictures in my head when I study.
- I can read outside and I can read my schoolwork.
- It can help me have fun. You can make pictures, study for your test, work outside and work with music playing.
- It can help me have fun, it helps me study, it helps me in schoolwork and it helps me do crafts.
- I make pictures in my head when I read and for nature smart I research things.
- Books help me when I read, number smart helps me with math and picture smart helps me when I'm reading because I make pictures in my head.
- It can help you do better in lots of subjects.
- Nature smart helps me on the farm, music smart helps me play the piano, people smart helps me study when my mom asks me questions and body smart helps me because when I act things out it can help me to memorize.
- Picture smart helps me to remember things that are in my life.
- I mostly use picture smart because I like to. I make pictures in my head when I use it for counting math.

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Website: <http://cherryweb.com/msippel/smartchart.htm>

Appendix A: Parent Letter and Permission Slip

To: Parents and Guardians of Students in Grade 3 at Weldon, Frobisher and Hillside Schools

From: Miss McKersie, Mrs. Geisel, and Mrs. Kimber Parent

Date: November, 2002

Re: Student Participation in a Research Study called Different Minds Learn Differently

The Grade Three students at Weldon, Frobisher and Hillside Schools are involved in a very exciting research project called Different Minds Learn Differently. The children in the above mentioned grade three classrooms are learning about how each of their minds learns differently and how that knowledge can help them to understand how they learn best. This has begun by teaching the children about Multiple Intelligences. We have obtained funding for this project from the Dr. Stirling McDowell Foundation and are very excited that the Foundation is supporting us in learning more about the area of Multiple Intelligences in the classroom. We believe that the activities we participate in will be valuable to improve the quality of teaching and learning for our students.

Over the past couple of months, your child has been participating in this project, through a variety of classroom activities, which have been introduced through regular classroom instruction. The activities that the children participate in have been incorporated into the grade three programs and have not taken away from what students normally learn at this grade level in accordance with Saskatchewan Learning curricula.

To document what works in terms of seeking and using student input into the project's development, information is being gathered from students in a variety of ways: samples of student work are being studied; activities are being noted; classroom observations are being recorded; notes are being made during individual interviews; and tapes may be made of classroom discussion and meetings. It is important to note that all information obtained from student activities will remain confidential with no student names attached to any correspondence. The information will be compiled, discussed and analyzed to produce a report for the McDowell Foundation that will be published and made available to the general public as both a printed document and an electronic document posted on the Foundation's web site. A summary of the report will be given to the parents of the students involved in the project. In addition, our findings will be shared through research, educational conferences and publications. When this research is presented, the report will be written in generalities, for example, describing where the students were when they first learned about Multiple Intelligences and where they are at the end of the school year when they discover where their strengths in learning lie.

As a formality, we are required to have permission for your son/daughter to continue to participate in this project. It is important to understand that this

research study is about understanding, from the teachers' and individual student's point of view, how your child learns best. It has been exciting for the teachers and children to identify their strengths and weaknesses in the classroom and select activities that highlight their strengths. Our goal is for children to achieve success and for teachers to improve how they teach and for students to become life long learners.

PARENT/GUARDIAN INFORMED CONSENT FORM

I, _____, the parent/guardian of
(print name here)

_____ have read the attached information
(print child's name here)

provided by _____ about the research study to be conducted in
(teacher's name)

_____ School.

I understand the information provided and hereby:

Agree that my child _____, may participate in
(print child's name here)

the study under the terms and conditions outlined in the provided information.

(sign your name here) (date)

My child _____, may not participate in the
(print child's name here)

study under the terms and conditions outlined in the provided information.

(sign your name here) (date)

Appendix B: Friendship Fair Stations

BODY SMART

Activity: Door Hangers

Body smart people are very good at sports. Moving around is fun for them! Body Smart people like to take things apart and put things back together. They also like to make things with their hands such as doing crafts or painting

At this station you will be using your “Body Smarts” to make a craft with your hands. You will receive a foam door hanger and you will decorate it any way you like. Your door hanger should show us all about you, how you invent a design and how you work with a craft to make it your own.

Have Fun!

MUSIC SMART

Activity: Freeze Dance

Music smart people like to listen to music. They have a good singing voice and enjoy playing an instrument. You will catch music smart people humming and tapping their toes to rhythms.

At this station you will be using your “Music Smarts.” Spread out and find yourself a home. When the music starts, dance to it! As soon as the music stops, FREEZE! The last person to freeze is out and must sit on the side and watch. You will continue until there is only one player left dancing. After the winner is declared, the game starts over again.

Have Fun!

NATURE SMART

Activity: Making a Terrarium

People who are nature smart enjoy nature. They like exploring different plants and animals and being outdoors. Pets, flowers, bugs and leaves are their friends!

At this station you will be using your “Nature Smarts” to make a terrarium. You will receive a plastic pop bottle. It is already cut at the top to make a “hinged” lid. Here are the steps to follow to make your terrarium:

1. Put gravel into the bottle first, just enough to cover the bottom.

2. Then add the sand, about 5cm thick.
3. The last layer is the potting soil. It should be about 7cm thick.
4. Now it's time to add the plant. Push a bean seed into the soil and plant the radish seeds.
5. Add water, moist but not drowning!
6. Seal the terrarium. Put the top of the soda bottle back on and seal it shut with tape. The lid should also be screwed on tight. When you take your terrarium home, place it in the sun.
7. Check it each day for any growth and also to see if it needs water. If there is a little cloud at the top, with condensation on the sides, everything is fine. If the whole bottle is full of cloud, the lid should be taken off for a few seconds to let some of the moisture escape. If there is no cloud or condensation, a bit more water will have to be added.

Have Fun!

NUMBER SMART

Activity 1: How Are We Different?

Number smart people like numbers. Math class and strategy games are their favorite. Number smart people also enjoy ordering things and finding patterns.

At this station you will be using your “Number Smarts” to measure how you are growing every day. You will find how many ways you are the same and/or different from your friend.

Prediction: (Check one.)

- I am different from my friends in many ways.
 I am the same as my friends.

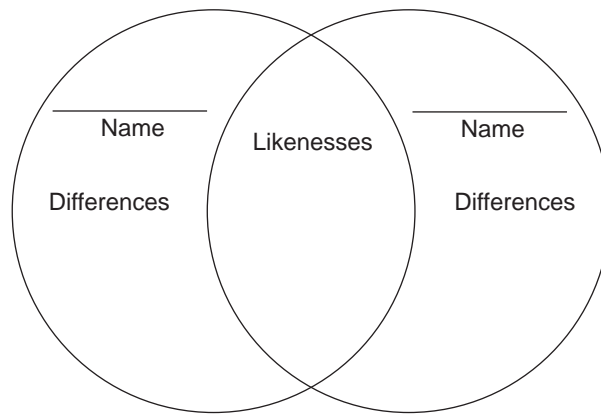
What to Do:

Fill in the chart after using the correct measuring method or tool.

What to Measure	My Name		My Friend		Measuring Method/Tool
	Estimate	Actual	Estimate	Actual	
Length of arm from elbow to fingertips					Counting cubes
Height of body from head to heel					Tape measure (cm)
Measure your pulse. How many beats in one minute?					Watch
Length of foot from heel to toe					Pennies
Weight of your shoe					Weigh scale (gm)
Length of your longest stride (one giant step)					Ruler (m)

What We Found Out:

Draw a Venn Diagram with two overlapping circles, one for you and one for your friends. Use your chart to complete a Friend Venn Diagram showing how you are different and how you are the same.



Evaluation

- ☺☹ Did we do our jobs?
- ☺☹ Did we work together to solve problems?
- ☺☹ Did we work quietly together?
- ☺☹ Did we stay together until all the jobs were done?

Activity 2: Estimation Jar

At this station you will be using your “Number Smarts” to estimate how many Smarties are in the Smartie Jar. Take a good look at the jar, spin it around, and take a guess! Good Luck!

Have Fun!

PEOPLE SMART

Activity: Friendship Bingo

Those who are people smart enjoy the company of other people. They have more than one close friend. They like to join clubs and playing games with others.

At this station you will be using your “People Smarts” to play a game of Bingo with the people in your group. You will walk around your People Smart space and try and find a friend who matches the statements on your Bingo card. When you find a match, ask your new friend to sign his/her name in the Bingo square.

Have Fun!

PICTURE SMART

Activity: Robotics

Picture smart people enjoy drawing and are good at doing art activities. They like building 3 Dimensional things, doing mazes and completing puzzles. They also enjoy watching movies and are good at reading maps and charts.

At this station you will be using your “Picture Smarts” to answer some questions about robotics and the use of robots in our lives. You will learn the steps it takes to create a robot such as designing, building and programming. You will then see a robot being programmed using a computer and watch the robot moving around. After that observation, you will help to reprogram the robot and see if your new changes produced new results.

Have Fun!

SELF SMART

Activity: Name Tags & Bags

Self smart people like to work alone. They are people who are independent and like to be left alone when playing or studying.

You will receive a colourful “smartie” circle with string through it. Decorate the smartie piece with your name on it. Then, decorate a paper bag with your name on it.

Have Fun!

WORD SMART

Activity: Friendship Interview

Word smart people enjoy reading and writing. Playing word games and telling jokes are fun for them! They enjoy listening to stories and can spell very well.

At this station you will be using your “Word Smarts” to interview someone from a different school. You will take turns interviewing each other and completing the interview form. After you are finished interviewing one another, look for the similarities and differences between you. Then fill out the back of your interview sheet.

Have Fun!

Appendix C: Monthly Activity Log

At the monthly meetings the teachers discussed the intelligence of the month and how it was being integrated into curriculum instruction. We talked about what teaching strategies, activities and projects worked well to highlight different intelligence areas. Following is a log of ideas created out of the discussion meetings.

SEPTEMBER – SELF SMART

- The project was not introduced to students in September as the teachers were very busy with everything that involves the start of the new school year. However, since many beginning of the year activities have to do with the theme “All About Me”, teachers integrated self smart activities and projects into their plans.
- Allowed students time to work independently.
- Asked students to quietly reflect on their interests, likes and dislikes.
- Asked students to brainstorm their favorite books to read.
- Each student developed a personal word bank or dictionary for words commonly used in their writing.
- Introduced DEAR time to students – **D**rop **E**verything **A**nd **R**ead.
- Introduced personal journal time for students to share written ideas with the teacher.
- Used poetry to introduce how interpretation differs from student to student.

OCTOBER – PEOPLE SMART AND INTRODUCTION

- Introduced MI pizza to students
- Used example provided in Thomas Armstrong’s *Multiple Intelligences in the Classroom* book.
- Created a bulletin board visual of a pizza and separated it into eight pizza slices or “smart” areas.
- Sent home monthly letters to parents to tell them about each intelligence.
- Started a duotang where students put their daily MI activities. Students brainstormed the title for their new book.
- Used group work to brainstorm ideas about the People Smart learner.
- Created a classroom contract about how to work together while in a group.
- Used an audio version of a story during language arts time.
- Gave oral spelling tests.
- Provided time for students to pair and share science and social studies concepts.
- Listened to students in the class read their writing aloud.
- Provided time for students to peer teach problem solving in math.

NOVEMBER – PICTURE SMART

- Introduced a writing project about weather using the game Pictionary for students to brainstorm and illustrate the kinds of weather we experience.
- Used graphic symbols and drawings to teach concepts to students.
- Asked students to use their imagination to picture a read-aloud story in their minds.
- Taught students to put a shape around their spelling words to help them remember how to spell the word.
- Used pictures rather than words to help students remember information from a story.
- Used charts, maps and diagrams while teaching.
- Students used the computer to illustrate stories.
- Taught students how to web ideas before writing a story.

DECEMBER – MUSIC SMART

- Used lummi sticks in spelling to tap out the syllables in words.
- Used songs and chants to teach concepts in different subject areas.
- Used rhyme and rhythm to present information to students.
- Used voice tone while reading aloud stories to students.
- Played different types of music and asked children how they felt when listening to the music.
- Created rhymes and rhyming couplets in language arts.
- Listened to music while reading, writing and drawing.
- Moved to music in physical education class.
- In spelling, focused on the sounds that words make.
- Researched famous musicians in arts education.
- Experimented with various musical instruments in arts education.
- Performed musical theatre in language arts.
- Performed a musical production for Christmas presentation.

JANUARY – WORD SMART

- Used crossword puzzles and word searches with students.
- Used alpha bits to spell out weekly spelling words then students ate their words after the lesson.
- Used choral speaking with poems and skits.
- Students had silent reading time during the day.
- Used literature circles when studying a novel in language arts.
- Completed a research project on the food chain in science.
- Completed dictionary scavenger hunt.
- Used mnemonics to remember concepts.
- Learned how to use a thesaurus in writing.
- Used word families to help remember associations in words.
- Read books from more than one genre.
- Listened to books on tape.
- Used Boggle and Scrabble games to build words.
- Wrote regularly in a journal.
- Writing out the steps to solving a math problem.

FEBRUARY – BODY SMART

- Used a hop and spell strategy for students to learn their spelling words.
- Wrote spelling words in the air with different parts of the body.
- Dropped water on a laminated maze card and students manipulated the card with their hands to work the drop through it.
- Students wrote their name and spelling words in pudding.
- When numbering students into groups students were asked to hold up one, two, three or four fingers.
- Asked students to use thumbs up/down/sideways when assessing an activity.
- Mimed the story “Little Red Riding Hood” to illustrate reading comprehension.
- Students were asked to take on the role of a character in a story.
- Students were asked to create a frozen sculpture of characters in a story. Once they were tapped alive, they had to explain who their character was.
- When studying matter in science, students were asked to bounce around to illustrate how atoms move.
- Students hopped, bounced and moved around to number facts in physical education.
- Created a variety of art projects in arts education.
- Participated in activity breaks between lessons.
- Demonstrated math problems on the board.
- Clapping syllables in spelling words.
- Learned about Terry Fox.

MARCH – NUMBER SMART

- Read, acted out and drew multiplication stories.
- Students hopped, bounced and moved around to number facts in physical education.
- Read different folk tales where things typically happen three times.
- Studied patterning and logic in math.
- Students were asked to finish, figure out and create their own patterns in math.
- Used graphs and venn diagrams in many subject areas.
- Counted out how many letters, vowels and consonants make up different words in spelling.
- Brainstormed ideas from a story then sequenced them.
- Used a calculator in math.
- Created a timeline of a character’s life in language arts.
- Kept an agenda to record daily activities.
- Listed all of the ingredients to make a recipe.
- Organized student’s desks and work spaces.
- Made a number grid to study multiplication tables.

APRIL – NATURE SMART

- Listened to nature music during curriculum study times.
- Completed a novel study titled *Strange Lake Adventures*. Novel contained a great deal about nature.
- Students practiced their spelling words in the sand outside by using their fingers and/or popsicle sticks.

- Students read and did activities outside.
- Students did their journal writing outdoors.
- Students held a virtual science fair on piping plovers, which are relative to killdeer.
- Students made nest scrapes in the sand as piping plover's don't make nests out of sticks.
- Students studied various landscapes, geography and planets to see what the land was like.
- Students learned about the weather.
- Brainstormed activities to do in nature.
- Completed physical education lessons outdoors.
- Wrote letters to acquire environmental information then walked to Post Office to mail letters.
- Practiced action words or verbs outside.
- Students completed an endangered animal report.
- Learned about weather patterns.
- Looked at a rock collection.
- Planted flowers and trees in school yard.
- Used natural things as topics for story writing.
- Learned how to spell nature words.
- Learned about parks in our area.
- Tabulated days of sunshine during the month of May.
- Observed moon phases.

SPECIAL PROJECTS DURING THE YEAR

EDUCATION WEEK:

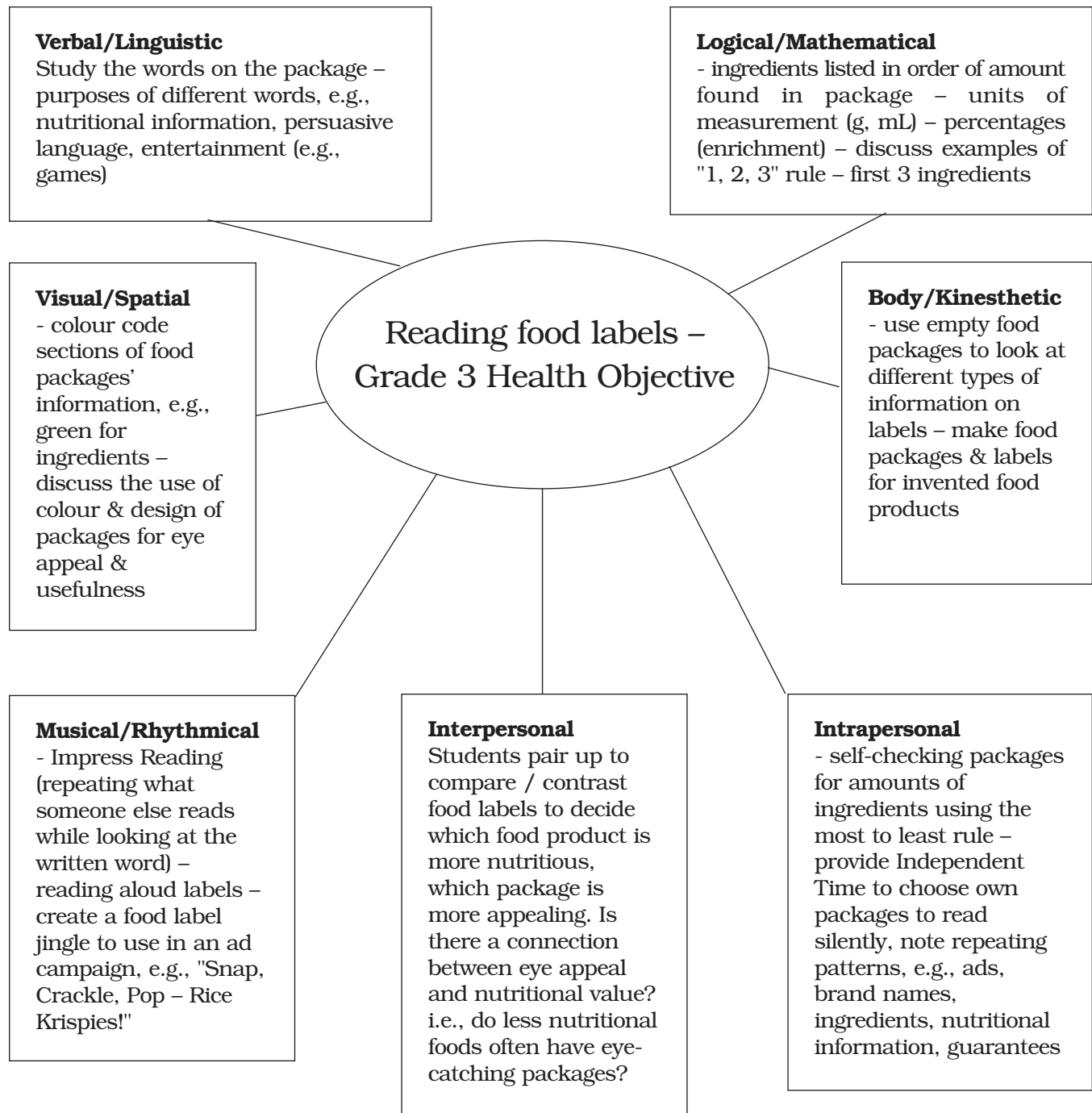
During Education Week one of the schools involved in the project decided to focus on strands of the revised English Language Arts curriculum. The first day of Education Week was for highlighting the strands viewing and representing. Each classroom of students was asked to create products to hang on a bulletin board for the rest of the school to see. The class studying MI made a people smart bulletin board. They talked about the five aspects of being people smart. Then students were divided up into five groups, one for each aspect. Students were given an 11x17 piece of paper and were asked to fold it into four parts, one for each member of the group. Each person was responsible for one of the parts. The visual had to illustrate what their aspect of people smart was, a picture of using it, an example or situation where it is used and a sentence claiming how they are all people smart. All five products were hung in the hall.

100 DAY PARTY:

To acknowledge the 100th day of school, one of the schools involved in the project decided to plan an MI 100 Day Party. The teacher started by creating eight stations, one for each smart. At each station students had to complete two activities using the number 100. After going to each station, students were asked to write in a journal. They were also video taped completing the activities. Although the 100 day party was clearly number smart, students were very aware that they were also using other smarts while completing the activities. What a great party!

Appendix D: Multiple Intelligence Lesson Planning Organizer

Directions: Use this lesson matrix to make sure all learners' needs are met.



Appendix E: Multiple Intelligence Fair - Reflection Sheet

MI Fair - Reflection

Today we _____,

it was _____.

The best part of the day was _____

because _____

I would like to tell you about _____

Something I learned today was _____

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