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Infusing the Multiple Intelligences into Fifth Grade Curriculum

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ABSTRACT

INFUSING THE MULTIPLE INTELLIGENCES

INTO FIFTH GRADE CURRICULUM

by

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Howard Gardner's theory of Multiple Intelligences involves eight different

ways to learn (linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical,

naturalistic, interpersonal and intrapersonal). These categories of intelligence, along with

the guidelines of Washington State's Essential Academic Learning Requirements, were

applied to thirty lessons that were derived from the fifth grade curriculum at Tieton

Middle School in Tieton, Washington. The lessons reflect the fields of reading, writing,

mathematics, science, social studies and health/fitness.

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CHAPTER I

BACKGROUND

Introduction

The people who make-up our diverse world represent a spectrum of different

ethnic origins, languages, customs, life styles, experiences, talents and aspirations. As a

result, many different methods of processing and expressing information exist. To

promote development within these individual differences, many educators have

implemented a tailored academic program which utilizes a diverse format that integrates

one's background and talents with the requirements of society (Gardner, 1997). This can

be done by identifying a student's methods of learning in a meaningful manner and

incorporating these methods into his/her academic environment. Howard Gardner's

Multiple Intelligences (MI) theory is built upon the premise that no two people learn and

develop in the same exact fashion (Lee, 1996). He believes that his theory "…can be an

extremely useful tool – or better, partner – in the process of creating excellent schools."

(Gardner, 1997, p.20).

Gardner defines intelligence as the ability to solve problems that one

encounters in life, generate new problems to solve and make something or offer a service

that is valued within one's culture (Campbell, L., Campbell, B. & Dickinson 1996). He

identified eight categories of intelligence that encompass at least one segment in all

people's repertoire of experiences and talents. The eight categories include: (a) linguistic

intelligence, (b) logical-mathematical intelligence, (c) visual-spatial intelligence, (d)

bodily-kinesthetic intelligence, (e) musical intelligence, (f) naturalistic intelligence, (g) interpersonal intelligence and (h) intrapersonal intelligence. Each intelligence category has its own developmental sequence. For instance, the musical intelligence is usually the first to emerge (requiring no previous experience to appreciate it) and the interpersonal and intrapersonal intelligences are usually the last (needing in-depth interaction with and feedback from others) (Campbell, L., Campbell, B. & Dickinson, 1996).

Although these eight only represent a fraction of the existing intelligences in the world they are believed to be the most common. By infusing these elements into the curriculum and assessment processes, educators may have a greater assurance that they are reaching students in a manner that will enhance their academic success (Campbell, L., Campbell, B. & Dickinson, 1996).

Statement of the Problem

Many children, because of the wide spectrum of learning strategies and talents, are denied a fair and adequate opportunity to develop academically in some schools. Many school districts traditionally emphasize the linguistic and mathematical-logical intelligences in the classrooms. Students who find it difficult to comprehend concepts through these two facets may be misdiagnosed as "slow," "unenthused," "distracted" or having a learning disability. Instead of focusing on individual strengths, some educators target a generalization of their students' characteristics (traits and strengths that are the most apparent) which involves a limited exposure to intelligences in their learning environment. This can cause the stunting of the development of skills that could have eventually led the student to academic involvement and improvement (Campbell, L., Campbell, B. & Dickinson, 1996).

This absence of focusing on diverse intelligences not only occurs in the curriculum but in assessment as well. From my experiences, students are often asked to express information in forms that prohibit them from demonstrating an accurate account of the knowledge that they possess. This may cause students to fail, to be wrongly classified as a poor student, to become increasingly frustrated with their educational experience or to develop a low self-esteem in terms of their deemed incompetence.

Purpose

The purpose of this project is to (a) develop a series of fifth grade lesson plans that incorporate MI and to (b) highlight tools and ideas that can facilitate the process of implementing MI into a school's practices. These eight intelligences are geared to promote a learning environment that stimulates intellectual growth, creates enthusiasm about the involved subject matter and makes the learning experience a more meaningful and successful endeavor.

Scope and Limitations

The scope of this project involves five MI-based lessons that apply to each of the eight categories that make-up the Washington State Essential Academic Learning Requirements (EALRs): Reading, Writing, Communication, Mathematics, Science, Social Studies, Arts and Health/Fitness.

Three basic limitations apply to this project. First, the lesson/unit plans are associated with the EALRs and fifth grade curriculum. Although the formats and patterns of application may relate to other grade levels, the material is mainly focused on that group. Secondly, students will react differently to exposure of methods directed at specific intelligences. Finally, the proposed forms of intelligence identification,

although thorough, are not comprehensive enough to pinpoint all strengths of an individual. Other intelligences outside of Gardner's eight (e.g. specific cultural or religious traits) are not included in the instruments.

Definition of Terms

Campbell, L., Campbell, B., & Dickinson (1996) adapted the following definitions of terms from Gardner:

Analogies: Two pairs or sets of words both revealing a similar relationship.

Bodily kinesthetic intelligence: Enables one to excel while manipulating objects and using fine-tune physical skills (athletes, dancers, surgeons, etc.).

Choral reading: Reading a passage together as a group.

Clustering: An open-ended process for generating creative ideas by placing the main concept at the center of the page, circling it, and surrounding it with connected ideas.

Concept map: Tree-like shaped graphs that have the key concept at the top, its most general concepts just below it, connected concepts below them and so on.

Flow chart: A chart that describes the structure of concepts and symbolizes the direction of flow between ideas.

Intelligences: Languages that all people speak and are influenced, in part, by the culture into which one is born; tools for learning, problem solving, and creating that all human beings can use.

Interpersonal intelligence: Enables one to understand and interact with others effectively; can adjust to situations and environments (teachers, politicians, social workers, etc.).

Intrapersonal intelligence: Enables one to construct an accurate image of one's self; excels in planning and directing own life (theologians, psychologists, philosophers, etc.).

Linguistic intelligence: Enables one to think in words and use language to express and appreciate complex meanings (authors, speakers, newscasters, etc.).

Logical-mathematical intelligence: Enables one to calculate, quantify, consider hypotheses and carry out complex math operations (scientists, engineers, computer programmers, etc.).

Manipulatives: Tangible items that a student can manipulate to enhance comprehension.

Metacognition: The ability to think about one's thinking.

Mindmapping: Displaying related elements to a key concept in a tree formation graph.

Musical intelligence: Enables one to possess a sensitivity to pitch, melody, rhythm and tone; can read, play, sing and/or appreciate music (conductors, musicians, composers, etc.).

Naturalistic intelligence: Enables one to recognize species of plants and animals in his/her environment; can classify various things into categories (botanists, organic chemists, zoologists, photographers, etc.).

Series of events chain: A visual chart that chronologically reveals steps, events, goals or stages of a life.

Syllogism: A word puzzle that teaches about establishing premises and determining logical or illogical conclusions.

Task cards: A notecard that is cut in half in a jigsaw method; the pair can involve

a question and its answer or a vocabulary term and its definition.

Venn diagram: Use of intertwined circles to list similarities and differences between two or more concepts.

Visual-spatial intelligence: Enables one to perceive external and internal imagery; can decode graphic information; good sense of direction (sailors, painters, architects, etc.).

Overview of Project

The remainder of this project will reveal literature that supports and challenges reliance on materials and methods coordinated around MI. MI is important in the classroom if all children are to receive an impacting and meaningful education. Examples of effective implementation will also be provided. Chapter Two reviews related literature that supports this issue. Chapter Three explains the methodology and procedures used to construct the project. Chapter Four consists of complete lesson/unit plans that infuse MI into fifth grade curriculum with the influence of the EALRs. Chapter Five contains a summary of the study, as well as conclusions and recommendations.

CHAPTER II

LITERATURE REVIEW

The purpose of this project is to (a) develop a series of fifth grade lesson

plans that incorporate Gardner's MI theory and to (b) highlight tools and ideas that can

facilitate the process of implementing MI into a school's practices. These eight

intelligences are geared to promote a learning environment that stimulates intellectual

growth, creates enthusiasm about the involved subject matter and makes the learning

experience a more meaningful and successful endeavor. This chapter encompasses (a) an

introduction into MI theory of the intelligences, (b) a closer look at the intricate details of

the eight main intelligences and others that are recognized, (c) effective methods of

intelligence identification, (e) examples of assessment methods, (f) negative viewpoints
in

regards to this theory and ideas, examples of successful implementation and (g) a

reflection on Gardner's views on the expansion of MI usage.

Introduction to M.I. Theory

"Did you know that you are smart in all sorts of different ways?" (Collins, 1998,
p.94).

This quotation used by a kindergarten teacher in Colorado during one of the first

days of the school year is an example of MI at work. First revealed in the 1983 book,

"Frames of Mind," the MI theory slowly made its way into school systems thanks to the

insight of Gardner. His theory challenges the standard belief that intelligence is

something that you have only a certain amount of; you cannot do much about how much

of that intelligence you have; tests exist that can tell you how smart you are. MI theory

instead asks: "Given what we know about the brain, evolution, and the differences in

cultures, what are the sets of human abilities we all share?" (Checkley, 1997, p.9).

The basic premise of the MI theory (based on Gardner's cross-cultural perspective of human cognition) has serious educational implications. If everybody is taught in the same manner, we would be catering to one particular profile of intelligence. This method works for those who possess that particular intelligence, but the vast majority of human beings who exhibit other forms of intelligence would be left behind (Checkley, 1997).

Gardner, whose books have been translated into 20 languages (Traub, 1998), defines intelligence as the ability to solve problems that the student faces in life, the ability to generate new problems to solve and the ability to make something or offer a service that is valued in one's culture. These are the prerequisites of an intelligence. They are a way of ensuring that a human intelligence is important and genuinely useful, at least in particular cultural settings. The ability to recognize faces, for instance, would not be regarded as an intelligence. Although it is relatively autonomous, linked to a specific area of the nervous system and has its own developmental stages, Gardner believes that it's not highly valued by cultures (Gardner, 1983).

For something to be regarded as an intelligence, it needs to reflect a number of signs or criteria set forth by Gardner. A possible candidate is not accepted if it only displays a few of these criteria, nor is it dismissed if it fails to reflect each sign. Those that fare the best are chosen. The criteria (in unordered fashion) are (Gardner, 1983):

1. Potential isolation by brain damage

2. The existence of idiots savants, prodigies, and other exceptional individuals

3. An indifference core operation or set of operations

4. A distinctive developmental history, along with a definable set of expert "end-state" performances

5. An evolutionary history and evolutionary plausibility

6. Support from experimental psychological tasks

7. Support from psychometric findings

8. Susceptibility to encoding in a symbol system

Recent scientific findings have also supported Gardner's premise. A published study on the physical make-up of Albert Einstein's brain coincides with the themes of modern cognitive neuroscience. Despite finding unusual configuration in his inferior parietal lobes (particularly supports mathematical and spatial reasoning) the study suggests that the brain is a modular system comprising multiple intelligences, most nonverbal. This contradicts the widespread belief that we think exclusively in language (Pinker, 1999).

Intelligence Breakdown

Gardner's theory posits that there are eight main categories of intelligence. These intelligences are languages that all people speak and are influenced by. They are tools for learning, problem solving and creating that all people use. Gardner identified eight separate intelligences that are possessed by everyone except in different proportions (Cathcart, 1999).

Divided into three categories, the object-related group, the object-free group and the person-related group, each intelligence displays separate characteristics and time lines that distinguish themselves from one another (Campbell, L., Campbell, B. & Dickinson, 1996). The first category is the "object-related" group that

includes the visual-spatial, logical-mathematical, bodily-kinesthetic and naturalistic

intelligences. This group focuses on capacities of learning that are controlled and shaped

by the objects which individuals encounter in their environments.

The visual-spatial intelligence involves the ability to think in three-dimensional

ways, to perceive external and internal imagery, to recreate, transform or modify images,

to navigate oneself and objects through space and to produce or decode graphic

information (Campbell, L., Campbell, B. & Dickinson, 1996). Other characteristics of

this intelligence involve learning by observing, showing interest in reproducing objects in

visible forms and having perception with patterns. Application examples of the visual-

spatial intelligence are sailors, pilots, painters, architects and sculptors. Visual-spatial

students respond well to classroom stimulants like charts, art-related activities, visual

memory techniques, board/card games and technology (Campbell, L., Campbell, B. &

Dickinson, 1996).

The logical-mathematical intelligence encompasses the ability to calculate,

quantify, consider propositions and hypotheses and carry out complex mathematical

tasks. Other traits include an understanding of cause and effect, time, patterns and

quantity, an ability to estimate, a perception of objects and their function in the

environment and an interest in problem solving. Application examples of the logical-

mathematical intelligence are computer programmers, engineers, accountants,

mathematicians, chemists and lawyers. Logical-mathematical students respond well to

classroom tools like sequencing, all number related areas (geometry, measurement,

calculation, etc.), logical exercises like analogies and Venn Diagrams and pattern related

tasks (codes, graphs, etc.) (Campbell, L., Campbell, B. & Dickinson, 1996).

The bodily-kinesthetic intelligence involves the ability to manipulate objects and fine-tune physical skill. Other elements of this intelligence include a development of coordination, a sense of timing, exploration of an environment and objects through touch and movement, learns by what was done rather than what was said or observed, demonstrates a sense of dexterity and enjoys and excels in physical activities. Application examples of the bodily-kinesthetic intelligence include athletes, surgeons, dancers, builders and craftspeople. Students who posses this intelligence respond to role playing/simulating, games, assembling objects, field trips, use of manipulatives and any other active-based format (Campbell, L., Campbell, B. & Dickinson, 1996).

The naturalistic intelligence, one of the latest additions to Gardner's list, includes the capabilities of making distinctions in the natural world and observing, identifying and classifying plants and animals. Other traits include mathematical tendencies (recording, organizing, analyzing), an interest in hands-on experiments, an appreciation of touching and exploring "yucky things," the ability to hypothesize about relationships between living things, an interest in nature-linked collections (rocks, leaves, shells, flowers, etc.) and a feeling comfort outside. Application examples of the naturalistic intelligence are biologists, explorers, authors, florists, hunters and farmers. Students who possess this intelligence respond to nature walks, charts that involve classifying and organizing, activities that involve patterns, animal and plant connections to content, hands-on tasks and various exploring/analyzing duties (Hoerr, 1997).

The next category of intelligences is the "object-free" group that includes the linguistic and the musical intelligences. Instead of being shaped by the physical world, they are dependent upon language and musical systems (Campbell, L., Campbell, B. &

Dickinson, 1996). The linguistic intelligence consists of the ability to think in words and to use language to express and interpret complex meanings. Other qualities include the capacity to listen and respond to the spoken word, the ability to absorb information through listening, writing, reading and discussing, the understanding of editing (grammar, spelling, punctuation, etc.), the competency to learn other languages, the ability to write for a variety of purposes (persuasion, description, etc.) and the capability to comprehend what one reads and hears. Application examples of this intelligence include poets, newscasters, authors, journalists and speakers. Tools in the classroom that stimulate the linguistic student are listening, writing, reading and responding activities like storytelling, classroom discussions, memorizing games, reports (both oral and written), journals and interviews (Campbell, L., Campbell, B. & Dickinson, 1996).

The musical intelligence, usually the first of the intelligences to develop in a person, is evident in individuals who posses a sensitivity to pitch, rhythm and tone. Other characteristics of people who exhibit this intelligence include an interest in listening to various environmental sounds and music, a kinesthetic response to music (dancing, conducting, tapping a foot to the tempo, etc.), a recognition of different genres and cultural versions of music, an ability to sing or play a musical instrument and the competence to create original musical compositions. Sound engineers, conductors, singers, instrument players and musical composers are examples of this intelligence at work. Teaching strategies that stimulate the musically inclined pupils include the use of musical instruments, a variety of musical selections, songs that are linked to content areas and the writing of song lyrics (Campbell, L., Campbell, B. & Dickinson, 1996).

The last category of intelligences is the "person-related" group that involves the

interpersonal and intrapersonal intelligences. Usually the last of the intelligeces to develop because of the need for in-depth interaction and feedback from others, this group reflects on the opposite extremes of personality (Campbell, L., Campbell, B. & Dickinson, 1996).

A person who displays the interpersonal intelligence has the capacity to understand and interact effectively with others. Someone with this intelligence may also be skilled at maintaining social relationships, using a variety of ways to relate to others, perceiving feelings, motivations and behaviors of others, influencing others' opinions and adapting behavior to fit in various environments. Social workers, counselors, politicians, managers and teachers are examples of the interpersonal intelligence in society. Practices that involve the interpersonal child in the classroom are collaborative learning activities, service projects, multicultural themes and investigations on perspectives (Campbell, L., Campbell, B. & Dickinson, 1996).

The intrapersonal intelligence is found in those who can construct an accurate perception of themselves and use such knowledge to plan and direct their lives. They also are aware of the range of their own emotions and ways of thinking (metacognition), normally choose to work independently, manage and monitor ongoing personal growth, motivated to pursue own goals and choose to empower others. Examples of those that posses this intelligence are philosophers, theologians and psychologists. Classroom practices that are meaningful to the intrapersonal child are self-esteem activities, journal writing, opportunities to personally connect to content-area matter, independent work and projects that correlate with feelings (Campbell, L., Campbell, B. & Dickinson, 1996).

Additional Intelligences

Along with these eight categories of intelligence that encompass all people in some degree, additional categories of "smarts" have been recently identified by Gardner. One is called the religious intelligence or "the moralist." It includes people who demonstrate sensitivity to ethical standards and concerns. Another potential intelligence is called the existential intelligence. It includes those that excel in the human proclivity to ask questions (e.g. Why are we here?) (Sharratt, 1997). Other potential intelligences deal with sexuality, humor, intuition, creativity, culinary (cooking) ability, olfactory perception (sense of smell) and an ability to synthesize the other intelligences (Armstrong, 1994).

A middle school teacher from Vermont listed seven other intelligences that reflected the hidden talents of her students. Some included the anti-gravity intelligence (students who lean in their chair while working) and the self-oblivious intelligence (those who unknowingly fidget with things while thinking) (Chase, 1998).

How to Identify Intelligences

Intelligence identification points out the intellectual strengths that a person uses to absorb and express knowledge. For example, physicist Albert Einstein possessed strong logical-mathematical and spatial intelligences. His visual capacity is credited for the development of his Gedanken, or "thought" experiments that resulted in discoveries like his "principle of relativity" (Newbold, 1999). It's necessary for the student, as well as the teacher, to be aware of his/her strengths. Sweet, a high school teacher said, 'I now understand that what I know about my students' intelligences is less important than what they know about how they learn best" (Sweet, 1998, p.51).

There are several MI identification methods and tools that can be utilized. First of all, derive information of personal interests, strengths, weaknesses and goals from the students themselves. This can be done with checklists/inventories, journal entries, autobiographies, art activities, discussion groups, projects, questionnaires or one-on-one interviews (Gifford, 2000). A high school teacher in Pennsylvania who uses inventories to pinpoint intelligences finds it valuable for reasons outside of lesson/unit planning. She says the information gives students personal insight and can be used as a diagnostic instrument in team meetings, parent conferences and discussions with individual students. She's also used it to find "uniqueness" of students who don't have I.E.P. documents (Emig, 1997).

Other methods are more teacher-oriented. Interviews with school personnel who are familiar with the child, conferences with parents or guardians, observations of the child in the school environment, documents of performances in the classroom, interactions of the child with particular teaching strategies (musically inclined, linguistically inclined, etc.) and reviews of past grades and test scores all give information of intelligence mastery and deficiency (Gifford, 2000). Another strategy is teaching the concept of MI to the students. A New York City educator feels that by learning theories with your students, you're putting them into the driver's seat. They understand how they learn best, and they are in charge of learning. This leaves them better prepared to learn even more (Stuart, 1997).

MI Assessment Methods

Similar to the diverse format of the intelligences themselves, their assessment

practices are equally assorted. The following assessment ideas were all derived from

Bellanca, Chapman & Swartz, 1997.

1. One method of MI assessment involves the use of portfolios. A tool used by

artists for some time, the portfolio can contain a wide range of work (art projects, written

work, observations, etc.) that can be used to score with a set of criteria.

2. Other methods of MI assessment deal with exhibitions. Ranging from "show

and tell" to a defense of a Master's project, this method involves a single person or a

group. Grades are determined by what degree a reviewer thinks the performance met

certain criteria. The evaluation is registered on an observation checklist.

3. Projects are another form of assessment. Involving things like videos, slide

shows and murals, a teacher grades them on a criteria check-off list or a written

summary.

4. Logs and journals are other common MI assessment tools. Designed to allow

students to reflect on the taught material, they ask what the material is, why it's important

and what can be done with it.

5. Demonstrations also show absorbed knowledge. Especially helpful for learning

mathematics, science, fine arts and health topics, they challenge students to take factual

material and turn it into a presentation that the must organize and explain. Getting

industrial arts students to design, build and sell a house is an example of this assessment

method at work.

6. The use of performances is also used to determine students' knowledge.

Performing a skill for their teacher, peers, parents or any other audience demonstrates

their mastery level.

7. Producing a product helps show comprehension. An end result or product outcome connected to a learning unit, products are especially helpful in challenging students to make cross-disciplinary connections. Creating storybooks and carving wood sculptures reflect this assessment method.

8. Open-ended questions also give the teacher an idea of what the students have retained. Allowing three to ten seconds for serious reflection, this method is especially effective with the intrapersonal student (What would you do if...?).

9. A visual-based assessment is called a graphic organizer. Students use visual formats to gather, analyze and evaluate information. Flow charts and concept maps are examples of this kind of knowledge showcase. This approach works well with cooperative groups.

10. Lastly, the use of problem-solving processes is an example of an M.I. assessment. Regarded as the basic tool for all children that emphasizes a process, instead of information, students apply particular problem-solving tactics to derive answers. Using blocks to explain a sum is an example.

Negative Viewpoints of MI

There are negative views about Gardner's MI theory that target its validity and effectiveness. One of the main concerns about MI is that it doesn't correspond to scientific research and beliefs. While Gardner's view of intelligence is one of various categories, psychometricians support a broad consensus around the idea that "...intelligence is a single entity that can be measured with fairly great accuracy." George Miller, an esteemed psychologist credited with discovering the components of short-term memory wrote: "Gardner's argument boiled down to "hunch and opinion." Steve Ceci, a

developmental psychologist at Cornell University, praises Gardner as "a wonderful communicator" but criticizes his theory because "...constructing criteria and then running candidate intelligences through them...provides no hard evidence – no test results, for example that his colleagues could evaluate." He goes on to argue that although neurological data reveals that the brain is modular, it doesn't mean that all these things are related (Traub, 1998, pp.20-21).

Other negative views relate to the schools that use the MI theory. James Collins questions the effectiveness of MI in the schools. While pointing out that evidence relating to the theory's capabilities is weak, its mere usage is dangerous to educators because of wasted time, an emphasis on insignificant skills and a false sense that learning is taking place when it is not (Collins, 1998). Another school-related concern centers around the neglecting of the linguistic and logical-mathematical skills. Seen as the foundation of learning and of the other intelligences, these two fundamental aspects of education could be ignored if too much focus is given to the other intelligences (White & Breen, 1998).

<u>Examples of MI Implementation</u>

"Do not then train youths to learning by force and harshness, but direct them to it by what amuses their minds so that you may be better able to discover with accuracy the peculiar bent of the genius of each"(Campbell, 1997, p.14). This quotation from Plato highlights rational for the implementation of MI in the classroom. The following examples of MI usage and results of conducted studies all promote Gardner's theory as a beneficial element in the learning environment.

At the New City School in St. Louis, students in preschool to sixth grade have been exposed to MI usage since 1988. The school sees it as more than a theory of

intellect, but as a philosophy of education that affects how the curriculum is designed, how the students are assessed, how parents are communicated with and how the staff of the school works together (Hoerr, 1997).

Evidence of MI in the classrooms is abundant. A primary teacher activated the bodily-kinesthetic and musical intelligences while teaching about the life cycle of a frog. Children eventually created and performed their own frog ballet by infusing some simple ballet moves (plie, pas de deux) and applying their knowledge of a frog's life from a tadpole to adulthood (Hoerr, 1997).

An intermediate grade teacher uses the musical intelligence to teach fractions to her students. Six pupils, each holding a different kind of percussion instrument, form a small circle on the floor. While the rest of their classmates sit around them with their eyes closed, the teacher holds a sign that displays a fraction to the students armed with the instruments (1/6, 2/6, 3/6, 4/6. 5/6 or 6/6). The numerator dictates the number of children who play their drum, tambourine, shaker, etc. This challenges the listening students to rely on the musical element to derive the given fraction. Two or more students can use the same instrument to illustrate 2/6 = 1/3 (Hoerr, 1997).

Many teachers also incorporate centers into the curriculum. A teacher, who is helping her students learn about the fifty states, has a bulletin board with various activities listed under a list of intelligences. Students are asked to participate in all activities. They include tasks like crossword puzzles (linguistic) and hand-clap jingles (bodily-kinesthetic and musical). Throughout these activities, they work as individuals (intrapersonal) and in groups (interpersonal) (Hoerr, 1997).

The library and auditorium occasionally act as the "living museum." Students attired, performing or posing as people they have studied and displays of plants and insects are featured activities (Hoerr, 1997).

Although this method of teaching has placed increased demands on the time and energy invested by the teachers, its value has been easily observed. After a decade of implementation, the school sees itself as a new institution that produces high standardized test marks, parents that are informed and involved and a staff that has a common vision (Hoerr, 1997).

Another school that incorporates the use of MI centers is located on the Tulalip Indian Reservation in Marysville, Washington. The elementary students spend mornings rotating through the stations that are linked by a common theme. For instance, when dealing with photosynthesis, students might act out the process at one station and read about it at another. Other stations may include singing about it, charting its processes, reflecting on events that have transformed their lives (as chloroplasts transform the life cycle of plants), and discussing a comparison between plant and human life cycles (Campbell, 1997).

Two first grade teachers at Barber Elementary School in Phillipsburg, New Jersey have also found MI to be a positive instrument in the learning process. "The question that guides us is not 'How smart are you?' but 'How are you smart?'" says Darlene Eger ("Hot on MI," 1997, p.19). She and Diane Keenan have discovered that exposing their students to information with an MI format not only helps their pupils absorb the subject matter in a meaningful manner but also better prepares them for the future. Second grade teachers at Barber who work with Eger and Keenan's ex-studets have reported that the

children are egar to learn, uncommonly cooperative and extremely adaptable ("Hot on MI," 1997).

Both women feel that each lesson should involve a spectrum of intelligences. "This makes it possible for us to help students use their strongest intelligences to strengthen their weakest intelligences," says Keenan ("Hot on MI," 1997, p.19). A typical math lesson in their class requires the students to listen to song lyrics, count the number of words that rhyme, play a rhyming game with each other and draw a picture of something that resembles one of the rhyming words. In this lesson alone, five of the eight intelligences (musical, logical-mathematical, interpersonal, linguistic and visual-spatial) are addressed ("Hot on MI," 1997).

While carrying out these lessons, parent volunteers, the reading specialist and the teacher aid are responsible for most of the interaction with the children. This allows Eger and Keenan to observe and assess the children at work, thus giving them a clearer understanding of their students' intelligence characteristics. "Multiple intelligences teaching can succeed only if you know, for every student, which of their intelligences are getting stronger and which really need strengthening" ("Hot on MI," 1997, p.19).

To ensure that their students fully understand the ideals of the intelligences, both teachers refer to terms that the children understand. For example, a child with visual spatial intelligence is "art smart", linguistic intelligence is "word smart", interpersonal intelligence is "we smart", and intrapersonal intelligence is "me smart" ("Hot on MI," 1997, p.19).

Nicholson – Nelson, an elementary language arts teacher, infuses MI into her curriculum. "The multiple intelligence theory... didn't change what I taught in language

arts – it changed how I taught" (Nicholson – Nelson, 1998, p.65). After several years of

only involving the linguistic intelligence in her classroom, she noticed that the students

who needed to draw off of other intelligences were still struggling with language

acquisition. She then began to incorporate a range of activities into her daily lessons that

addressed each intelligence. As a result, she found that this new approach generated

motivation within her students and gave her lessons a sense of uniqueness and variety

(Nicholson – Nelson, 1998).

To assist her with this endeavor, Nicholson – Nelson proceeded to fabricate

categorical lists of language arts based activities that pertained to seven intelligences

(excluding naturalistic from the list). The linguistic intelligence list revealed the use of

flash cards, echo reading (students repeat what is read by the teacher) and pre-reading

skills (holding books, turning pages and reading from left to right) as meaningful

practices (Nicholson – Nelson, 1998).

The intelligences that were previously being ignored in her class were also

included. The bodily-kinesthetic intelligence included activities like constructing letters

with clay, sand and flour, asking students to touch each word as it's read and playing

Simon Says with letters (Simon says, write a B in the air). The mathematical intelligence

involved activities like making and using dice with letters instead of dots on them and

using a flannel board with cloth letters or a metal board with magnetic letters to show

students how words are formed by changing one letter at a time (fine, dime, line). The

musical intelligence incorporated the singing of word sounds, using tongue twisters to

practice sounds and using simple poems and rhythmic, repetitive stories. The visual-

spatial intelligence entailed the construction of "word pictures" to show comprehension

(the word *tall* would be written with tall letters), the circling of the same word on each page and the usage of different colors on bulletin boards to represent specific sounds. The interpersonal intelligence list cited, along with making reading a social event in the classroom, choral reading and partner reading as valuable tools. The intrapersonal intelligence included the opportunity to read silently, the availability of a cozy, quiet reading spot in the room and having the students read aloud to a stuffed animal (Nicholson – Nelson, 1998).

To ensure that each student's potential is being maximized, Nicholson – Nelson developed an MI lesson assessment. It includes seven reflective questions that help her determine what combination of activities works best for particular students (Nicholson – Nelson, 1998).

Another example of MI implementation exists in an elementary school in Maryland. Facing a rigorous challenge from a statewide test (the Maryland School Performance Assessment Program) that required students to apply knowledge to solve difficult, real-life problems, the school decided it was time to try something new. Despite early disapproval from some parents (fun stuff getting in the way of the basics) and teachers (too much planning time involved), proponents of the MI theory rebutted that it would improve test scores. This would be done by 1) helping students understand their abilities and those of others, 2) showing them how to use their strengths both to learn and work on their weaknesses, 3) bolstering students' self confidence, 4) providing "unforgettable learning" experiences and 5) assessing more accurately (Greenhawk, 1997).

The process began with educating the students about the various intelligences. The children assessed and tested their own strengths through surveys and other activities. Eventually, the students not only referred to their own intelligences, but also to those of others. A second grader was heard saying, "William, you're using your linguistic skills real good." Another student said, "I'm not so good in my logical-mathematical intelligence, but I am strong in my visual intelligence. So, I draw pictures and diagrams when I do math" (Greenhawk, 1997, p.63).

Once the implementation had been in operation for a year, students demonstrated stronger retention of knowledge. For example, students in a fifth grade class who had created their own business as fourth graders could still quickly and accurately explain the effect of economic concepts like supply and demand.

Lessons were taught in a variety of ways. Some teachers conducted lessons by exposing students to a variety of intelligences. One teacher taught the multiplication tables using the African-American tradition of "ham bone," a chant accompanied by rhythmic knee slapping. She found that students not only enjoyed the practice but also found that recalling multiplication facts was now easier for them.

Other educators empowered their students by allowing them to choose their method of learning. A fifth grade class created a museum of famous people. Methods of research on the person they chose involved watching videotapes, using the Internet and reading books. Given choices seemed to increase their self-confidence and their enthusiasm to do the work.

In response to continued parent concern that these activities were not preparing their children for the real world, the school asked itself three questions: (1) How can we

make sure students have the skills they need to prepare quality products that call for visual, bodily-kinesthetic, interpersonal and musical intelligences? (2) How can we set reasonable yet rigorous standards for these products? And (3) How can we help our students complete the state assessments successfully (Greenhawk, 1997)?

To answer these questions, the school consulted literature and local professionals/specialists. Together, brainstorming sessions helped produce the answers they needed. For example, in reference to standards, the local professionals and specialists emphasized the importance of setting higher standards with activities like plays, songs and paintings (all artwork and oral presentations). This would better reflect the competitive nature of the arts fields in today's world. Once this was applied to the classroom, teachers found that once the students understood that high quality work was expected, they became more skilled in their crafts (Greeenhawk, 1997).

To better prepare the students for the standardized exams, several strategies were utilized. For example, students were allowed to "pair" their strong intelligences to traditional pencil-and-paper tests. A student could create a model of a wetland environment and use it when taking their test. Another example reflected the time limits that came with the state tests. Students were taught how to organize information in formats like graphic organizers, time lines, mind maps and even silly songs (Greenhawk, 1997).

The results of this effort exceeded the school's expectations. In one year, scores on the Maryland School Performance Assessment rose by 20 percent. Other benefits included a rise in student confidence when it came to problem solving (using a flexible approach), an increase in competence when it came to working with graphs and

manipulatives, better group work, the ability to apply their strong intelligences to pencil-and-paper tests and the improvement of reading and writing abilities (Greenhawk, 1997).

A different kind of MI implementation exists at Kent Gardens, a K-6 school in Virginia. The school uses a room called the "Think Tank" that acts as an M.I. center. Its purpose is to give students a place to learn through particular intelligences. It's a large room with a light and open atmosphere. A wall of windows, a plethora of shelved boxes containing project materials, scattered rugs, pillows and plants and music being played on the speakers collaborate to create this enriching atmosphere. "I wish I lived here," said a nine-year-old student. All 620 students at the school have access to the Think Tank for at least one hour every other week. To ensure consistent personal direction, 20-30 trained volunteers from the community help supervise the activities. Its materials have the capacity to compliment a lesson on everything from animal footprints to robotics (Knodt, 1997, p.35).

The "Think Tank" concept evolved from the school principal's desire for student-directed, hands-on learning and creative and critical thinking. "It has 'flow' as it offers children a choice of diverse, challenging activities and opportunities to develop the practice process-oriented skills and the capacity for sustained absorption in an activity." All activities that are conducted are linked to current coursework (Knodt, 1997, p.36).

In contrast to other MI programs, Kent Gardens feels that to identify a child's intelligences is to label and thus limit him/her to the traits that he/she currently possesses. Although they do teach students to recognize the intelligences, the school feels that since intelligences are always developing it wants to nurture all intelligences in the hope that all will continue to grow. For example, in the architectural drawing center of the Think

Tank, students learn to make drawings (visual-spatial), first mastering the idea of a bird's-eye view (logical-mathematical). As detail is added to the drawing, labels are placed on the parts (linguistic). Additional ideas for drawings can be generated from group brainstorming (interpersonal), and a three-dimensional representation of the drawing is eventually constructed (bodily-kinesthetic) (Knodt, 1997).

To reinforce the critical thinking aspect of the Think Tank, students are asked challenging questions as they work. For example, in the Strawberry Basket Center, the used questions have links to the involved grade level. While students stack baskets to form towers, they are asked to estimate ("Can you predict how many groups of twenty there are?") and calculate ("Well, if each basket were holding eight strawberries, how many...?") (Knodt, 1997, p.37).

The use of MI is not limited to elementary and middle school levels. "Teaching for multiple intelligences is limited only by your imagination" (Okula, 1997, p.1). Many business instructors offered tips on how to implement MI to their subject matter and personnel. First of all, when orally presenting lessons, Janet Scaglione (University of South Florida) noticed that only the interpersonal students were responding to her questions. To correct this, she started asking the students to write their response on paper and reflect on it (linguistic and intrapersonal). Next, they shared it with a few fellow classmates (interpersonal). Then, each student ranked the answers they heard in order of importance (logical-mathematical). Lastly, they attempted to convince a classmate that their order was valid (interpersonal) (Okula, 1997).

Another business related application to the MI theory deals with computers. Scaglione suggests that the compute can be a tool that reinforces many intelligences. For

example, creating and formatting documents (linguistic and visual-spatial), performing

spreadsheet and database analyses (mathematical) and creating multimedia presentations

(musical, linguistic, visual-spatial) all involve various intelligences (Okula, 1997).

One of the toughest intelligences to infuse into business curriculum is the musical

intelligence. Jeri Battaglia, who teaches high school keyboarding in Illinois, believes that

music can help establish rhythm that can enhance her students' skill. After they have

learned the keyboard, she has them produce material to the rhythm of a particular

selection of music that lasts for two minutes. Songs of varied tempos are available. "The

advantage is that it does really show them that there can be a rhythm in their typing if

they work at it and if the rhythm is fast it can add speed," she commented (Okula, 1997,

p.5).

Evidence of MI can also be found in business assessment. Asking students to

complete a project that requires knowledge and involves many intelligences (i.e. a

marketing assignment) and allowing students to self-evaluate finished documents are

examples of MI assessment at work (Okula, 1997).

In an effort to improve their school system, Australia now provides a wealth of

MI implementation examples. From initiating the use of student learning centers to

altering methods of presenting information, institutions from the preschool to the

university levels have participated in this movement. Schools are finding that their

programs are thriving after five years of MI (Vialle, 1997).

After visiting thirty classrooms and interviewing one hundred fifty teachers across

the country, Vialle came to many conclusions. First of all, she noticed that teachers were

"teaching to" and "teaching through" the multiple intelligences. The most effective

teachers seemed to use a combination of both approaches. In "teaching to" the intelligences, each intelligence is linked to a particular discipline. For example, Teachers at Cook Primary School develop thematic units in which they give each intelligence equal emphasis. "Teaching through" develops students' skill in certain disciplines by presenting new concepts or providing activities through a number of intelligences. An example of this was presented at Cook where a teacher reinforced the mathematical concepts of ascending and descending by having the children perform a wave (as fans do at sporting events) (Vialle, 1997).

The most common approach to infusing MI into the curriculum in Australia is through integrated units. By offering a wide range of activities and promoting the connections across disciplines, learning has been made more meaningful. Teachers at Cook use a grid to plan a unit around an appropriate theme. Educators at Sacred Heart in Cabramatta use mind mapping to plan daily activities for upcoming integrated units. The middle of the map reveals the theme and the related skills or experiences that the students are to develop through each intelligence are listed around it (Vialle, 1997).

Another facet of Australia's MI implementation that was noted by Vialle was its link to television. "Lift Off," an MI based television show that is broadcasted by the Australian Children's Television Foundation, is a series that exposes children to all intelligences through its celebration of diversity and education segments. It covers topics from thinking to the environment (Vialle, 1997).

Using the MI theory in education has brought big changes to gifted students and special education in Australia. In contrast to the past practice of focusing on childrens' deficits, teachers now acknowledge that learning problems can coexist with intellectual

strengths. Special educators now seek and build upon students' strong suits instead of sacrificing curriculum for remedial techniques. In terms of dealing with the gifted, M.I. has made it easier to identify those who are in need of more challenging work (Vialle, 1997).

Another positive outcome linked to the addition of MI to the educational atmosphere in Australia was the transformation of the parent-school relationship. Parents are now regularly included in the school atmosphere. They are asked to share their observations of their children, participate in professional development activities and attend celebrations of student work in all the intelligences. One of the most significant changes was the involvement of parents in the redesigning of assessment reports. At Cook Primary School, parents and educators negotiated a list of elements that should be included in a report: reporting should reflect each teacher's classroom practice; indicate areas for students' future development; include a student self-assessment; and, along with academic progress, provide information on social development and personal growth. This information could be transmitted via phone call, visit, written report, checklists, photographs, displays or audiotapes (Vialle, 1997).

Although these accomplishments seem noteworthy, the most significant change that MI has brought to Australian education was a shift from teaching and learning as a teacher-centered task to teaching and learning as a student-centered activity. This more dynamic model involves teachers and students in a partnership of planning, implementing, observing and reflecting on their mutual work. Along with that, teachers have bought into this philosophy because they can defend it from a social justice

perspective, it's compatible with other recent educational philosophies and it reaffirms the importance of the teacher-student relationship (Vialle 1997).

Along with academic attributes, MI can also promote emotional growth and healing. By utilizing facets of the intelligences to assist students in exploring their inner-selves, advancements can be made to upgrade one's self-concept and understanding of the world around him/her. In a study conducted by Nugent, 20 gifted eighth grade students (10 girls and 10 boys) were randomly placed into two groups. The students in the treatment group were allowed to participate in regular sessions of bibliotheropy (linguistic, interpersonal intelligences) which exposed them to books that related to current personal problems or questions that they had. The control group did not participate in the sessions. The researchers found that the members of the treatment group developed a higher level of self-concept over the observed period than the control group (Nugent, 1997).

Another study showed that MI has value when teaching vocabulary. Approximately one hundred seventh and eighth grade Latin students were involved in the experiment. Poor performances by the students in the class were evident through their teacher's observations, student questionnaires and test scores. Vocabulary and comprehension quiz scores were regularly poor. Lack of student retention of the material read or learned in this foreign language class seemed to be the problem (Anderson, 1998).

From September 1997 to January 1998, the students were taught the same curriculum but with the influence of memorization techniques, adequate reinforcement and the multiple intelligences. Kinesthetic students participated in activities like making vocabulary mobiles, playing games that involved moving around and performing skits

that centered around target words. Linguistic students completed crossword puzzles, word searches and memory games that included the vocabulary. Visual-spatial learners studied their Latin by drawing pictures, using flashcards and playing Pictionary. Interpersonal students participated in various activities as a group (Anderson, 1998).

A significant rise in quiz scores led to many conclusions. First, using MI in the classroom proved to be a positive element not only for its impact on the scores but on the wide range of students who found the activities attractive: "Students of all abilities, but especially the low-average students, benefited from learning in different styles." Secondly, students who were unaware of their special method of learning found that "the activities were eye-opening." Lastly, the report recommended that "teachers should make every effort to employ the skills of the various intelligences – it matters not which ones – in their teaching of vocabulary. The more the students are actively involved in the lessons, the greater the benefits" (Anderson, 1998, p.34).

Educational organizations outside the public realm are also utilizing the MI theory. A group in Stone Mountain, Atlanta is attempting to obtain a charter to open a school that would use the arts to teach academic subjects. Since the new Georgia charter school law allows individuals to create a charter school from scratch (develop own curriculum and rules), Kathy Moss, a certified a elementary teacher, and a group of community members hope to run their school within the influence of MI The mission of the Stone Mountain Charter School, is to "provide an integrated arts and academic curriculum that allows for individual learning, growth, development, and assessments in environments that promote freedom of movement, individualism, creativity, and safety for students." Student goals include the emphasis of a strong student–teacher relationship,

the mastery of subject matter within their own personalized program, achievement on the

Georgia Writing Assessment, the maintenance of an assessment portfolio and the

participation on intelligence-related activities (Loupe, 1998, p.JJ;4).

Evidence of MI implementation is also finding its way to the university level. In a

proposal by Louise M. Soares, she challenges the effectiveness of the traditional

sequence that education students follow in universities. By completing the routine of 1) a

background of liberal arts, sciences and a major discipline, 2) foundation of education

courses, 3) methods of teaching, assessment and curriculum planning and 4) field

experiences and student teaching, the quality of students' performances (both academic

and practicum) is measured in terms of similarity to the faculty's theoretical beliefs,

teachings and instructional advice. She also cites that, "most of the connection that is

made between the theoretical world in the university classroom and the real world of the

public school classroom is achieved in the first year of teaching" (Soares, 1998, p.217).

To extend beyond the "traditional hold on the theories and practices of teacher

training," Soares suggests that a combination of three elements be included in teacher

training programs. The three include the Copernican Plan (block scheduling patterns), the

M.I. Theory and John Dewey's philosophy that students in training should teach

throughout their period of preparation, thus learning directly how to teach in ways that

are consistent with their own strengths, experience and philosophy. By combining these

perspectives, Soares believes that "we would have a model of structure, content and

process that improves the delivery of instructional services" (Soares, 1998, p.219).

Soares believes that MI should be applied to teacher education programs for

several reasons. She feels that it creates more opportunities for developing strengths and

achieving mastery, it offers more time to connect to the content areas and it improves

assessment (Soares, 1998).

Since teaching students about the MI theory is an important starting point in many

MI programs, presenting the information in a meaningful manner should be important.

Rosie Reissman, who teaches at an elementary school in New York City, does just that.

After distributing newspapers to her students, she asks them to choose the elements that

interest them most (comics, pictures, graphs, articles, etc.). Next, working alone or in

small groups, students are assigned a current-events project based on the clippings in

their newspaper. Their presentation style (speech, skit, collage, written report, etc.) is

entirely up to them. After the projects are finished, students are asked to present their

final product to the class. When all presentations are concluded, Reissman engages her

pupils in a discussion about the variety of presentation formats and how they reflect an

intelligence that the presenter(s) obtain. Finally, she introduces the MI terminology and

various examples of each (Stuart, 1997).

Students quickly realize that some activities incorporate more than one

intelligence and that it might be wise to occasionally select a project that involved an

intelligence that wasn't one's strength. "It's like exercising your pitching arm,

commented one student. "You can work it and get really good, or you can never use it

and not be able to pitch at all" (Stuart, 1997, p.54).

A school in Australia also puts a creative spin on introducing the intelligences to

children. Sacred Heart School conducts a Multiple Intelligence Olympics that involve

each class working on a particular intelligence on a rotating basis. Each Olympic session

is viewed as a celebration of students' diverse abilities and characteristics (Vialle, 1997).

Gardner's Views

To conclude this chapter, it seems fitting to reflect on some of Gardner's thoughts

involving the expanding usage of his theory. First of all, he has faced many people filled

with confusion and doubt since he published his theory in 1983: "Not another fad, please.

Will it take time-particularly time that I don't have? Is there anything really new here?"

(Gardner, 1997, p.20).

Condemning MI as "old wine in a new bottle" hasn't changed Gardner's stance

on education. He understands that it's not possible to fully comprehend and effectively

infuse MI during initial implementation, "It takes time to absorb the full implications of

the theory, because it is more radical than most educators initially appreciate. It takes

time for educators to work out specific practices whether they focus on curriculum,

assessment, pedagogy, or some combination. MI may be appealing, but it is not for the

faint-hearted, nor for those in search of a quick fix" (Gardner, 1997, p.20).

Secondly, Gardner offered advice for educators who are planning on infusing MI

into their program. He emphasized the importance of establishing goals and values before

implementation. Having an understanding of the importance of teaching for

comprehension, preparing children for the outside world, developing each student's full

potential and ensuring student mastery of knowledge is necessary before considering

whether using MI can help. If it is decided that it can be an effective tool, it has to be

determined how MI is to be implemented (Gardner, 1997).

Gardner has also reflected on the versatility and limitations that his theory

exhibits. It can be "an extremely useful tool" that can help create excellent schools.

Although MI can't bear the effectiveness of education, it does have the capacity to

engage children, develop deeper understanding and prepare students for work in the outside world. Educators, however, must be cognizant of the fact that MI is never complete and must correspond to the transformation that the disciplines undergo. Also, because of the vast differences that children display, there can never be a teaching formula that reaches everybody. However, "'Multiple Intelligences' fits comfortably with an open approach to education, and such a stance hungers for continuing renewal, rather than perspective closure" (Gardner, 1997, p.20).

CHAPTER III

METHODS

Background

I was exposed to MI during my initial year of teaching. Our principal

at St. Joseph/Marquette School in Yakima revealed its many facets to our faculty through

lectures and activities. It caught my attention because it rationalized some of the practices

in my classroom, but, more importantly to me, described an educational theory that

portrayed a meaningful transference of knowledge from curriculum to student. Since

then, I have tried to add an element of MI to my classroom's environment every year.

This project has helped me complete that task.

Purpose

The purpose of this project is to (a) develop a series of fifth grade lesson plans

that incorporate Gardner's MI theory and to (b) highlight tools and ideas that can

facilitate the process of implementing MI into a school's practices.

Procedure

The research process involved the use of the Educational Resources Information

Center (ERIC), investigation of other published resources in the Central Washington

University Library, the use of purchased literature and the use of resources at Tieton

Middle School.

The Multiple Intelligence lessons were developed around the components of the

Washington State Essential Academic Learning Requirements (EALRs): Reading,

Writing, Communication, Mathematics, Science, Social Studies, Arts and Health/Fitness.

The components were linked to subject matter that is compliant with the fifth grade

curriculum at Tieton Middle School. Each lesson involves a segment of the school's

curriculum and its connections to the EALRs. Components of Benchmarks 1 (forth grade) and 2 (seventh grade) were used because of their relation to the involved content and grade level. Of the thirty lessons, groups of five are dedicated to one of the EALR components with the exception of Communication and Arts which are infused into the others.

The lesson format was adapted from a similar one found in "Teaching and Learning Through the Intelligences." Lesson sequencing was omitted while lists of addressed EALRs, key vocabulary terms, specific needs for each intelligence, the Naturalistic Intelligence and an original design to the appearance of the format were added.

CHAPTER IV

LESSONS

<u>Suggestions</u>

The following lessons were designed to comply with fifth grade curriculum and to follow teacher-led instruction. Subject introduction, clarification of its elements and explanation of related vocabulary should precede these lessons.

<u>Chapter Contents</u>

This chapter contains thirty lessons that infuse MI emphasis with fifth grade curriculum and guidelines of Washington State's Essential Academic Learning Requirements (EALRs). There are five lessons for each of the following disciplines: reading, writing, mathematics, science, social studies, health and fitness. Resources (work sheets, activities, etc.) follow the lesson that their involved in. Additional materials like texts and music are listed at the end of this chapter.

<u>Lesson Procedures</u>

The following lessons can be implemented in a number of ways. First, they can be delivered on an individual basis. The teacher can reveal the eight options and allow each student to choose one. Next, a teacher can strategically choose a particular option or fuse some together for the whole class to complete. These lessons can target the most common intelligences. A third implementation strategy is grouping. Gathering students according to common connections to a particular intelligence can be effective especially with the interpersonal and bodily-kinesthetic options. Lastly, having the students rotate through a station set-up allows them to briefly experience the concept through all eight intelligences.

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Reading: Noun Suffixes</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to identify and apply noun suffixes through the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Reading 1.1, 2.1, 2.2, 4.1 Arts 1.1, 1.3, 4.1, 4.2 Communication 1.1, 2.2, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>suffix, noun, -ion, -ship, -ity, -ment</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Use a practice sheet that involves suffixes attached to nouns in sentences. Using a select group of nouns with suffixes, apply them to a story based on a chose theme. Complete the musical lesson. NEED: * practice sheet	Compare/contrast the meaning of a noun and the meaning it has with a suffix (-ion, -ship, -ity, -ment) using a Venn diagram. Write out word puzzles (ex. intern + -ship = internship).
Visual-Spatial Split 3"x5" cards into two puzzle pieces. Each piece has a noun or a noun suffix. After mixing them up and turning them over, play a memory game that also involves orally using the new word correctly in a sentence. NEED: * 3"x5" cards, scissors, black markers	Bodily-Kinesthetic Tape a noun or noun suffix on the chests of students. Determine who is the quickest to correctly pair up. Continue to form new words as the game continues. NEED: * Post It notes
Musical Write a limerick that contains several nouns with suffixes.	NATURALISTIC Categorize words that will fit with particular suffixes (-ion, -ship, -ity, -ment).
INTERPERSONAL Complete the bodily-kinesthetic lesson. Complete the visual-spatial lesson.	Intrapersonal Write about what is important in a <u>relationship</u>.

*Resources/Materials for all Options: <u>Provide reading text, dictionary</u>

*Assessment Procedures: <u>Grade practice sheet, word puzzles, limericks and categorizations for accuracy</u>

Name

Winking and Blinking

(Houghten - Mifflin, 1996, p.91)

Please note: Content on this page was redacted due to copyright concerns.

Try to See It My Way

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Reading: Adjectives

*Lesson Objective(s)/Outcome(s): Students will use and identify adjectives in the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Reading 1.1, 1.2, 2.1, 4.1   Arts 1.1, 1.3, 2.1, 3.2, 4.1, 4.2
Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2

*Key Vocabulary: adjectives, articles, demonstrative

*Lesson Options:

Linguistic	Logical-Mathematical
After reading a newspaper article, underline all adjectives including articles and demonstrative adjectives. Translate a list of English adjectives to Spanish. NEED: * newspaper article, English-Spanish dictionary	Construct analogies to compare adjectives to their synonyms. Use adjectives in syllogisms (ex. All men are mortal; Socrates was a man; Therefore, Socrates was mortal).
Visual-Spatial Given photographs of particular things, write a list of adjectives that apply. Create images out of clay that represent particular adjectives. NEED: * photographs, clay	Bodily-Kinesthetic Given a list of adjectives that describe human behavior (ex. ecstatic, depressed, confused), demonstrate each through miming. Perform for the class. NEED: * lists of adjectives
Musical Listen to the song "Unpack Your Adjectives" and list the adjectives that are heard. NEED: C.D – School House Rock! Rocks	Naturalistic Choose elements of nature and connect them to adjectives that apply.
Interpersonal Complete the bodily-kinesthetic lesson. In groups, generate adjectives that pertain to presented grocery items. NEED: * various grocery items	Intrapersonal With a sheet of paper revealing feelings through facial expressions, write adjectives that describe each. NEED: * feelings sheet

*Resources/Materials for all Options: Provide reading text, dictionary, thesaurus

*Assessment Procedures: Grade article, analogies and musical lists for accuracy

How Are You Feeling Today?

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Reading: Synonyms and Antonyms

*Lesson Objective(s)/Outcome(s): Students will be able to tell the difference between and apply synonyms and antonyms to the following lessons.

*Addressed EALRs: (Benchmarks 1 and 2) Reading 1.2, 2.1, 2.2, 4.1   Arts 1.1, 1.3, 1.4, 2.1, 4.1, 4.2 Communication 1.2, 2.1, 2.3, 2.4, 2.5, 3.1, 3.2

*Key Vocabulary: synonym, antonym, thesaurus

*Lesson Options:

Linguistic	Logical-Mathematical
Given a list of adjectives, write a synonym and an antonym for each.	Use word analogies to pair synonyms and antonyms (ex. happy: sad :: glee: depressed).
Visual-Spatial Create a collage of pictures that pair similar themes (synonyms) or opposite themes (antonyms). NEED: * construction paper, magazines, scissors, glue	**Bodily-Kinesthetic** Reenact emotions that are synonyms and antonyms of each other. NEED: * props (clothes, etc.)
Musical List names of musical artists who reflect the same genre of music (synonym) and a list of those who belong to an opposite kind (antonym). Example: Robert Plant, Sammy Hagar, Vince Neil (rock and roll); Pavorotti (classical).	**NATURALISTIC** List names of animals that reflect the same status in the wild (synonym) and a list of those belong to an opposite status (antonym). Example: lilac, cactus, grass (producers); giraffe (first order consumer). Complete musical lesson.
INTERPERSONAL In teams of three, play a synonym/antonym game. Given an adjective out of a thesaurus, students brainstorm a synonym and antonym for the word that is listed in the thesaurus as such. One point is awarded to a team with a correct response.	**Intrapersonal** Given a sheet that shows a list of feelings with faces to compliment them, write an antonym for each. NEED: * feelings sheet

*Resources/Materials for all Options: Provide dictionary, thesaurus

*Assessment Procedures: Grade lists, analogies, collages, and feelings sheets

How Are You Feeling Today?

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Reading: Vocabulary Development

*Lesson Objective(s)/Outcome(s): The students will comprehend and apply the meaning of the reinforced vocabulary words in the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Reading 1.1, 1.2, 2.1, 4.1 Arts 2.1, 4.1 Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2

*Key Vocabulary: tribute, memorial, shocked, disbelief, tragedy, disaster, grief, mourn

*Lesson Options:

Linguistic Read the story "Challenger Disaster" and use context clues to determine the meaning of the eight words. Write a eulogy about a family goldfish that just perished by including the eight words.	Logical-Mathematical Apply the six words to analogies. Use synonyms and antonyms to relate to the words (ex. shocked: surprised:: mourn: grieve).
Visual-Spatial Using colored markers, highlight the eight words as they're found in "Challenger Disaster." Create vocabulary flashcards with words on the front and their definitions on the back. NEED: * 3" X 5" note cards	Bodily-Kinesthetic After writing the goldfish eulogy, orally present it to the class as it would be at a real funeral (emphasize voice inflection). Include a jar of water with something gold floating at the top to symbolize the dead fish. NEED: * clear jar of water, something to represent a fish
Musical Write a rhythmic poem using the eight vocabulary words Using the eight vocabulary words, describe tragic deaths of musicians (ex. Buddy Holly, Ricky Valens, Kurt Cobain, etc).	NATURALISTIC Describe the extinction of particular animals by infusing the eight vocabulary words.
INTERPERSONAL Play a game (two to three people) that involves everybody having a list of the eight vocabulary words. Giving each person equal turns to speak, conduct a conversation using the words in the listed order. NEED: * vocabulary list for everybody	Intrapersonal Write a personal reflection about the loss of a friend, relative or pet using the eight vocabulary words.

*Resources/Materials for all Options: Provide reading text, dictionary

*Assessment Procedures: Check all written work for correct usage of vocabulary words

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Reading: Predicting Outcomes - Comprehension

*Lesson Objective(s)/Outcome(s): The students will be able to apply the skill of predicting outcomes in the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Reading 1.1, 1.2, 2.1, 2.2, 3.3, 4.1   Arts 1.1, 1.3, 2.1, 4.1, 4.2 Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2

*Key Vocabulary: prediction, inference, repertoire, event, situation, outcome

*Lesson Options:

Linguistic Given a particular situation on a practice sheet, write what you think the result will be. Use known facts and own past experiences to guide your response. Explain rational for responses. NEED: * practice sheet	Logical-Mathematical Same as the linguistic lesson but represent your response in the form of a sequence. NEED: * practice sheet
Visual-Spatial Same as the linguistic but draw a pictorial representation of their response. Explain rational. Given a Sunday comic strip that is cut into its many boxes and mixed up, put the boxes in order. NEED: * practice sheet, Sunday comic strip	Bodily-Kinesthetic Same as the linguistic lesson but dramatize what you think the conclusion will involve. Present to the class. NEED: * practice sheet, props (clothes, etc.)
Musical Listen to the first half of "The Tale of Mr. Morton." Finish the song's lyrics by writing how the story will end. NEED: * C.D. – School House Rock! Rocks	NATURALISTIC Same as the linguistic lesson but categorize the possible conclusions under the headings: least possible, possible, most possible. Explain each response. NEED: * practice sheet
INTERPERSONAL Complete the bodily-kinesthetic lesson in small groups.	Intrapersonal Same as the linguistic lesson but really emphasize the role of past experiences in predicted outcomes. Add personal rational for your response. NEED: * practice sheet

*Resources/Materials for all Options: Provide reading text
*Assessment Procedures: Grade responses to the practice sheet according to given rational (use of background information and known facts?).

(Houghten - Mifflin, 1996, p.164)

Please note: Content on this page was redacted due to copyright concerns.

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Writing: Expository Writing</u>

*Lesson Objective(s)/Outcome(s): <u>Students will write in a descriptive manner to enhance communication skills in the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Writing 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 4.2</u> <u>Arts 1.1, 2.1, 4.1</u> <u>Communication 2.1, 3.1, 3.2, 3.3, 4.2</u>

*Key Vocabulary: expository, transition words (first, next, then, etc.), simile, adjective

*Lesson Options:

Linguistic	Logical-Mathematical
Using similes and adjectives, describe your favorite birthday gift and how it was presented to you in an expository paper.	Describe a process (ex. making an apple pie) in the form of a sequence. Emphasize the numerical influence of the process (2 ½ cups of butter, etc.).
Visual-Spatial As a pre-writing activity, use the clustering method to list descriptive details of the chosen birthday gift.	Bodily-Kinesthetic Passing numbered paper bags around the classroom, reach into each without looking and write a description of what you feel. NEED: * paper bags filled with different items (sand, cotton balls, candy corn, etc.)
Musical Listen to "Unpack Your Adjectives" and write lyrics that could also be used in the song to describe the camping trip. NEED: * C.D. - School House Rock! Rocks	NATURALISTIC In pairs, guide a blindfolded partner through a natural setting (forest, meadow, orchard) by giving detailed, descriptive oral directions. NEED: * blindfolds
INTERPERSONAL As a group, brainstorm descriptive details of an average school day. Use these ideas to draft a description on paper. Complete the naturalistic lesson. Trade rough drafts with others, examine them and exchange feedback on strengths and weaknesses.	Intrapersonal Write an expository paper that describes the developing stages and experiences that you life has undergone thus far.

*Resources/Materials for all Options: -

*Assessment Procedures: <u>grade all written work on evidence of clear and detailed description.</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Writing: Persuasive Writing

*Lesson Objective(s)/Outcome(s): Students will demonstrate persuasive skills and apply them to writing in the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Writing 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4 Arts 1.1, 1.3, 2.1, 4.1, 4.2 Communication 2.1, 3.1, 3.2, 3.3

*Key Vocabulary: persuade, convince, rational

*Lesson Options:

Linguistic	Logical-Mathematical
Write a persuasive paper to the school principal. Attempt to convince him/her to adopt your ideas on how to improve the school's atmosphere. Complete interpersonal lesson. Write a persuasive letter to a local politician or corporate CEO and suggest changes.	List logical rational for ideas of yours concerning the school. Verify them by revealing supportive evidence and facts. Take a poll of student opinions and graph the results.
Visual-Spatial	Bodily-Kinesthetic
Using a clustering method of displaying ideas, list rational for an idea of yours (ex. a change that should take place within the school – a soda machine in the hallways).	Role-play situations that involve people trying to persuade others to adopt their ideas or beliefs. Present to the class. NEED: * props (clothes, etc.)
Musical	NATURALISTIC
Defend your interpretation of what a composer is communicating through a chosen piece of classical music.	In writing a persuasive paper on how to improve the school atmosphere, categorize present characteristics that you're trying to change as: outdated, dangerous and unattractive.
INTERPERSONAL	Intrapersonal
After hearing "Nancy Drew – If Looks Could Kill" read to the class (up to chapter 11), divide into small groups to brainstorm rational as to why the rest of the class should agree with your theory on who the killer is. NEED: * "Nancy Drew – If Looks Could Kill" book	Complete the linguistic lesson

*Resources/Materials for all Options: -

*Assessment Procedures: Grade persuasive arguments (both written and oral) on detail and support

Please note: Content on this page was redacted due to copyright concerns.

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Writing: Poem Writing</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to explain and apply the mechanics of six kinds of poem writing through the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Writing 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 4.2</u>
Communication <u>2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 4.2</u>

*Key Vocabulary: stanza, haiku, cinquain, limerick, alliteration, syllogism, free verse

*Lesson Options:

Linguistic	Logical-Mathematical
Focusing on a particular theme (homework), write a description on its facets using an alliteration format (constant usage of a consonant sound throughout the poem: Hubert hugs his homework.).	Honing on a particular theme (cars), write a description on its facets using a syllogism format (three lines: premise, premise, conclusion). Old cars are classics. My dad's car is old. Therefore, my dad's car is a classic.

Visual-Spatial
Using a particular theme (a Corvette), write a description on its facets using a free verse format that involves the words making an outline of the described item.
 	
NEED:
* white construction paper
	Bodily-Kinesthetic
	Using a particular theme (crayons), write a description on their many facets using a cinquain format (building-block structure that uses related words). CRAYONS
	    COLORFUL ARTISTIC
	    YELLOW RED TIMBERWOLF-GRAY
	Make a human tower to display the poem.

Musical Using a particular theme (playing the piano), write a description on its facets using a limerick format (rhythmic set-up of certain numbers of syllables per line: 8-8-5-5-8).	NATURALISTIC Complete the logical-mathematical lesson.
INTERPERSONAL Share rough drafts with others, examine them and exchange thoughts on the strengths and weaknesses of each poem (peer editing).	Intrapersonal Focusing on own individual qualities, write a haiku (three lines of syllables: 5-7-5) that describes those characteristics

*Resources/Materials for all Options: <u>Displayed posters that display the mechanics of each poem format</u>

*Assessment Procedures: <u>Grade each poem for writing convention use and poem mechanics</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Writing: Writing Stories

*Lesson Objective(s)/Outcome(s): Students will be able to write and apply the story format to an original modernization of a traditional fairy tale in the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Writing 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 4.2 Arts 1.1, 1.4, 4.1, 4.2 Communication 1.1, 1.2 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 4.2

*Key Vocabulary: story format (beginning, middle, end), fairy tale

*Lesson Options:

Linguistic	Logical-Mathematical
Draft the brainstormed ideas into a story format (beginning, middle, end). Edit first draft and create a final draft.	As a prewriting activity, write down proposed events of the story in the form of a sequence (first, second, third,...).
Visual-Spatial	Bodily-Kinesthetic
After final draft in completed, compliment it with a representative drawing. Put the story's events in a series of events chain. NEED: * construction paper, colored markers	After the story is complete, present it to the class by incorporating voice projection, voice inflection, physical expression, eye contact with the audience and the use of chosen props. NEED: * props of all sorts
Musical	NATURALISTIC
Choose a traditional fairy tale that dons musical elements and modernize them (ex. the dwarfs' work song in "Snow White").	As a prewriting activity, categorize notable characteristics in a traditional fairy tale ("Snow White"). Next, categorize the modernized elements that will replace each respective traditional characteristic.
INTERPERSONAL	**Intrapersonal**
Share rough drafts with classmates, examine them and exchange thoughts on their strengths and weaknesses (peer editing).	Choose a traditional fairy tale that reflects own individual characteristics ("The Ugly Duckling"). Change the story's ending in the same manner that own life should change.

*Resources/Materials for all Options: Give students opportunity to review copies of traditional fairy tales and examples of modernized ones tales.
*Assessment Procedures: Grade each story for writing conventions, use of story format and creativity

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Writing: Research Reports</u>

*Lesson Objective(s)/Outcome(s): The students will be able to collect, organize and present information on a type of natural disaster through their interaction with the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) <u>Writing 1.1, 1.2, 1.3, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 4.2</u> <u>Arts 1.1, 1.3, 1.4, 3.3, 4.1</u> <u>Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 4.2</u>

*Key Vocabulary: natural disasters (tsunami, typhoon, etc.), research sources, note taking, report format

*Lesson Options:

Linguistic	Logical-Mathematical
Draft the brainstormed ideas in an organized report format (introduction, description, conclusion). Edit first draft and produce a final draft.	Describe an actual example of the chosen natural disaster at work by plotting the chain of events of the incident on a time line.
Visual-Spatial Pre-writing: display characteristics of the chosen natural disaster in a cluster formation. After the final draft is complete, place it in a self-constructed "pop-up" book that represents the type of natural disaster. NEED: * const. Paper, scissors, markers, glue, magazines	Bodily-Kinesthetic Conduct research on the chosen natural disaster by using a computer. Utilize Encarta, a search engine on the Internet and send e-mailed questions to reliable sources. NEED: * computer, Encarta C.D., Internet and e-mail access
Musical Present the report to the class with a musical accompaniment in the background while speaking (ex. for thunder/lightning – "The Thunder Rolls" by Garth Brooks) NEED: C.D. – Garth Brooks / The Hits	NATURALISTIC Add a segment to the report that describes **how** the chosen natural disaster is caused. What natural factors are at play?
INTERPERSONAL Share rough drafts with classmates, examine them and exchange thoughts on their strengths and weaknesses.	**Intrapersonal** Add a segment to the report that describes a personal encounter with the chosen natural disaster.

*Resources/Materials for all Options: <u>Provide resource materials</u>
*Assessment Procedures: <u>Grade reports on writing conventions, accuracy of information, use of report format and creativity</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Math: Adding and Subtracting Money

*Lesson Objective(s)/Outcome(s): Students will be able to correctly calculate problems that require the addition and subtraction of decimals in the form of money by interacting with the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Math 1.1, 2.1, 5.1, 5.2, 5.3   Arts 2.1, 2.2, 4.1, 4.2 Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2

*Key Vocabulary: aligned, decimal point, dollar sign, sum, difference

*Lesson Options:

Linguistic	Logical-Mathematical
Write two story problems (one that involves addition and one that involves subtraction) that are centered around money. Solve them.	Complete a practice sheet and represent the facets of the problems on a bar graph. Compare prices of particular items (>,<,=). NEED: * practice sheet that displays sample problems
Visual-Spatial Using play money, display the components of sample problems on the desks. NEED: * play money (bills and coins)	Bodily-Kinesthetic Using old restaurant menus or food advertisements from a newspaper, calculate a night's tab at a restaurant. Students can add up a total or subtract items from a given amount (ex. $20.00 limit). NEED: * menus or newspaper advertisements
Musical Play the song "Money, Money, Money" by ABBA as the students work on practice sheets or other activities. NEED: * practice sheets, C.D. – ABBA Gold	NATURALISTIC Complete the logical-mathematical lesson.
INTERPERSONAL With a Sears catalog (any season will work), arrange small groups to shop together. They are to purchase supplies for a camping trip with a $500 limit. All listing and calculations are done on an official Sears order sheet. NEED: *Sears catalog and order sheet	Intrapersonal Complete practice sheets and individually tutor those who need help.

*Resources/Materials: Provide math text
*Assessment Procedures: Correct practice sheets, evaluate accuracy of menu and catalog activities

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Math: Polygons

*Lesson Objective(s)/Outcome(s): Students will be able to identify and apply five kinds of polygons by participating in the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Math 1.3, 4.2, 5.1, 5.3   Arts 1.1, 1.3, 1.4, 2.1, 2.2, 4.1, 4.2 Communication 1.1, 1.2, 2.4, 2.5, 3.1, 3.2

*Key Vocabulary: closed figure, triangle, quadrilateral, pentagon, hexagon, octagon

*Lesson Options:

Linguistic	Logical-Mathematical
In groups of two students (who are back-to-back), one describes a sketched picture that contains a polygon to their partner draws it according to what he/she hears. NEED: * sketches with polygons on a 3"x5" cards	Given tangrams that represent the five polygons, create ten different patterns that display two representatives of each polygon. Label each. NEED: * tangrams
Visual-Spatial After viewing examples of blueprints, design a "dream house" on graph paper. Include and label at least two of each kind of polygon (rooms, garages, patios, etc.). Add windows, doors and landscaping. NEED: * blueprints, graph paper, rulers	Bodily-Kinesthetic Play a circle game that involves a large group. While children walk in a large circle, the teacher announces the name of a polygon. Students scramble to find enough partners to construct it lying on the floor. Those who are "the odd ones out" are out of he game. Continue until three are left.
Musical Have students create designs on paper with polygon stencils that reflect what they feel when different genres of music is played (classical, bagpipes, big band, reggae, rap, etc.). NEED: * samples of different genres of music	NATURALISTIC Same as logical-mathematical.
INTERPERSONAL Group work in the linguistic and bodily-kinesthetic activities.	Intrapersonal Same as musical activity

*Resources/Materials for all Options: Provide math text, poster featuring the five polygons
*Assessment Procedures: Grade drawings and "dream house" for accuracy

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Content Area/Lesson Title: <u>Math: Solving Division Word Problems</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to solve division word problems and apply the skill to real-life situations in the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Math: 1.1, 1.2, 2.1, 2.2, 2.3, 3.1, 4.1, 4.2, 5.2, 5.3   Arts 1.1, 1.3, 2.1, 2.2, 4.1, 4.2   Communication 2.1, 2.5, 3.1, 3.2, 3.3</u>

*Key Vocabulary: <u>divisor, dividend, quotient, problem solving steps</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Students solve problems on a practice sheet. Students write own division word problems in the form of a limerick poem. Trade with other students to solve NEED: * practice sheet, poster explaining limerick format	Display what the given problems are asking and their answers by using various kinds of graphs (bar, line, pie, etc.). NEED: * practice sheet
Visual-Spatial Draw pictures that represent the elements of given problems. Dissect problems and place the steps of the problem solving process into a flow chart. NEED: * practice sheet	Bodily-Kinesthetic Using manipulatives, create a representation of the given problems along with their answers. Reenact word problems using props. NEED: * practice sheet, manipulatives, box of props
Musical Students will write lyrics to the tune of "Row, Row, Row Your Boat" that orderly describe the steps of the problem solving process. Apply song to given problems. NEED: * copy of the problem solving process, practice sheet	NATURALISTIC Students solve division word problems that involve the categorization of animals or plants. Same as logical-mathematical NEED: * practice sheet
INTERPERSONAL As a small group, write your own problem and reenact it for the class. NEED: * box of props (hats, food containers, clothes, etc,)	Intrapersonal Focusing on metacognition, have students write down **how** they solved each problem. NEED: * practice sheet

* Resources/Materials for all Options: <u>Provide math text, poster of the problem solving process</u>
*Assessment Procedures: <u>Grade practice sheets for accuracy</u>

Problem Solving

Solve each problem.

1. Mrs. Shields had 24 plants. She put them into rows of 6 plants each. How many rows were there?

Mrs. Shields had _____ plants.

She put them into rows of _____ plants each.

She had _____ rows of plants.

2. 28 students sat at 7 tables. The same number of students sat at each table. How many students sat at each table?

There were _____ students.

There were _____ tables.

_____ students sat at each table.

3. Pencils cost 7¢ each. Kelley has 63¢. How many pencils can she buy?

She can buy _____ pencils.

4. Mr. Rojas put 56 books into stacks of 7 books each. How many stacks of books did he have?

He had _____ stacks of books.

5. Marion Street has 54 streetlights. Each block has 6 lights. How many blocks are there?

There are _____ blocks.

6. There are 35 days before Alex's birthday. How many weeks is it before his birthday? (7 days = 1 week)

There are _____ weeks before Alex's birthday.

7. There are 48 items to be packed. Six items can be packed in each box. How many boxes are needed?

_____ boxes are needed.

| 1. |
| 2. |

| 3. | 4. |

| 5. | 6. |

| 7. |

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Math: Naming a Fraction of a Whole Shape or Group

*Lesson Objective(s)/Outcome(s): Students will be able to name the designated fraction of a shape or group and then apply this skill to real-life situations by participation in the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Math: 1.1, 2.2, 2.3, 3.1, 4.2, 5.1, 5.2, 5.3   Arts 1.1, 1.2, 1.4, 2.1, 2.2, 4.1, 4.2   Communication 1.2, 2.5, 3.1, 3.2, 3.3

*Key Vocabulary: whole, part, numerator, denominator

*Lesson Options:

Linguistic	Logical-Mathematical
Looking at shapes and groups that reveal a certain fraction of shaded parts, write down the represented fraction and provide a written explanation on how the answer was achieved. NEED: * practice sheets	Complete a practice sheet that displays shaded fractions of shapes and groups. Compare diagrams according to the fraction this is shaded in each. NEED: * practice sheets
Visual-Spatial With a grid sheet, students color in squares using five different colors. List the fraction of the sheet that each color takes up. NEED: * grid sheet, color markers	Bodily-Kinesthetic Using the breakfast cereal Fruit Loops, have pairs of students quiz each other. For instance, one student could pull out fifteen loops out of the box, place them on the desk and ask their partner what fraction of the pile is red. NEED: * box of Fruit Loops
Musical Listening to the teacher play simple songs on the keyboard ("Hot Cross Buns," "Row, Row, Row Your Boat"), write the fraction that represents the portion of each song that uses middle C. NEED: * electric keyboard	NATURALISTIC Given lists of animals, list the fraction of the list that are extinct, exist in water only, are insects, etc. Complete logical-mathematical lesson NEED: * lists of animals.
INTERPERSONAL Complete the bodily-kinesthetic activity in pairs.	Intrapersonal Aside from the bodily-kinesthetic lesson, complete others as an individual. Tutor those in need of assistance.

*Resources/Materials for all Options: Provide math text

*Assessment Procedures: Grade practice sheets, colored grids, musical note lessons and animal fractions

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(Hake, Saxon, 1997, p. 90)

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Math: Locating Points on a Coordinate Graph</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to plot points on a coordinate graph and apply the skill to the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Math: 1.1, 1.2, 1.3, 2.3, 5.1, 5.2, 5.3   Arts 1.1, 2.2, 3.1, 4.1, 4.1, 4.2   Communication 1.2, 3.1, 3.2, 3.3</u>

*Key Vocabulary: <u>coordinate graph, coordinates, point</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Using a grid, students will list the coordinates that, when points are connected, represent the following capitol letters: I, L, X, N, A. Students can make words with coordinates. NEED: * grid sheet	Plot and label points on a grid that represent given coordinates. NEED: * grid sheet
Visual-Spatial	Bodily-Kinesthetic
Using a grid, students will list the coordinates that, when the points are connected, represent the following polygons: triangle, quadrilateral, pentagon, octagon, nonagon and decagon. Then color the insides of the polygons. NEED: * grid paper, color pencils	Play a game of "Battleship" in groups of two or four. NEED: * the game "Batttleship"
Musical	NATURALISTIC
Using "The 1812 Overture" as background music, plot a point on a grid that corresponds to a list of coordinates every time the symbols crash. NEED: * grid sheet, recording of "The 1812 Overture"	Using a grid, students will list the coordinates that, when connected, represent the silhouette of a particular mountain range. NEED: * grid sheet, photo of a mountain range
INTERPERSONAL	Intrapersonal
Complete the bodily-kinesthetic activity in groups.	Independently plot a list of coordinates on a grid sheet. The points, when connected, can represent a particular feeling (ex. a happy face). NEED: * grid sheet

*Resources/Materials for all Options: <u>Provide math text</u>

*Assessment Procedures: <u>Grade grid sheets for accuracy</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Science: Photosynthesis</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to explain the process and importance of photosynthesis through their interaction with the below lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Science 2.2, 4.1, 4.2, 4.3, 5.1, Arts 1.1, 1.2 1.3, 2.1, 4.1 Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>photosynthesis, chloroplasts, glucose, starch, cell respiration</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Read the text section describing photosynthesis and go over related vocabulary; assign a comprehension sheet. NEED: *comprehension worksheet	Create a timeline of the evolving steps of Photosynthesis.
Visual-Spatial Illustrate and label the steps of photosynthesis on paper. NEED: * white construction paper * colored markers	Bodily-Kinesthetic Dramatize the steps and characters involved in photosynthesis. Put it in a dance format? NEED: *selected props that represent the elements of photosynthesis
Musical Ask the children to write a song that goes with the tune of "Mary has a Little Lamb." Its lyrics should describe the process of photosynthesis. NEED: * an audio tape of "Mary had a Little Lamb"	NATURALISTIC Collect a variety of plants from the outdoors. Explain how photosynthesis works within them to the class.
INTERPERSONAL Work in groups of four or five when doing the bodily-kinesthetic activity.	**Intrapersonal** Write down an experience of personal transformation that compares to the steps of photosynthesis. NEED: *a model of a Venn diagram

*Resources/Materials for all Options: <u>Provide science text, displayed charts and posters of photosynthesis</u>

*Assessment Procedures: <u>Grade timeline, drawing or worksheet; ask students to evaluate dramatizations</u>

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(Silver, Burdett, Ginn, 1996, p.26)

Fifth Grade Lesson Plan Using the Multiple Intelligences

* Subject Area/Lesson Title: <u>Science: Constellations</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to explain the movement of constellations and describe many of the different formations by interacting with the below lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Science: 1.1, 1.2, 1.3, 1.4, 1.6, 2.2, 4.1, 4.2, 4.3, 5.1 Arts 1.1, 1.2, 1.3, 1.4, 2.1, 4.1 Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2</u>
*Key Vocabulary: <u>constellation, Ursa Major, Ursa Minor, axis, rotation, revolution</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Read "The Moving Bears" (a Micmac Indian tale about how Ursa Major developed). Write own tale that explains the origin of Ursa Major or another constellation. NEED: * "The Moving Bears"	Compare and contrast various constellations according to the number of stars each has. Report findings on a line graph.
Visual-Spatial	Bodily-Kinesthetic
Create a planisphere or kaleidoscope that displays various constellations. NEED: Arts and crafts supplies	In groups, have students construct constellations by lying on the ground recreating the formations.
Musical	NATURALISTIC
Create a stringed musical instrument out of Tinker Toys and rubber bands that is in the shape of the constellation Orion. Write a song about Orion's characteristics that can accompany the instrument. NEED: Tinker Toys and rubber bands (long and thin)	Categorize a designated group of constellations into sections of location and number of stars.
INTERPERSONAL	Intrapersonal
Participate in the bodily-kinesthetic activity in groups.	Write a reflection on how some of the constellations relate to the individual (a warrior, a princess, a bear, etc.).

*Resources/Materials for all Options: <u>Provide science text, displayed charts, graphs and posters of constellations</u>
*Assessment Procedures: <u>Grade line graph, planisphere, kaleidoscope, and song for completion and accuracy</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Science: Energy Changes</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to explain the transfer of energy and its application to real-world situations by participation in the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Science: 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 4.1, 4.2, 4.3, 5.1   Arts 1.1, 1.3, 1.4, 2.1, 4.1, 4.2   Communication 1.2, 2.1, 2.2, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>energy, calorie, joule, potential energy, kinetic energy</u>

*Lesson Options:

Linguistic	Logical-Mathematical
After reading the text's section on energy changes, ask students to construct a Venn diagram that compares and contrasts the two types of energy. The vocal part of the visual-spatial lesson.	Looking at a picture of a roller coaster design, determine where potential and kinetic energy would be greatest by measuring with a ruler. NEED: * roller coaster design, ruler
Visual-Spatial Create a small catapult. When finished, pull back the plastic spoon, place a small piece of paper in it and release (aiming for a trash basket). Students say "potential" when holding the spoon back and "kinetic" as they release it. NEED: * a 2"x5" piece and a 2"x2" piece of ½" plywood, rubber band, plastic spoon and hot glue	Bodily-Kinesthetic The pulling back and releasing parts of the visual-spatial lesson. The construction part of the musical lesson.
Musical Collect, cut out and pate a collage of pictures that show musical instruments using potential and kinetic energy. NEED: * scissors, glue, construction paper, magazines	NATURALISTIC List and/or demonstrate that many ways fishing involves potential and kinetic energy. NEED: * fishing pole, net, fishing hat
INTERPERSONAL In groups, brainstorm lists of real-world examples of potential and kinetic energy. Share with the class.	Intrapersonal Individually, go through food boxes and compare that amount of calories that each has. Which one would you chose and why? NEED: * old food boxes or other containers that has a nutrition table

*Resources/Materials for all Options: <u>Provide science text</u>

*Assessment Procedures: <u>Grade roller coaster design, collage and lists; observe accuracy of activities</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Science: Plants and the Oxygen Cycle</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to explain the components and importance of the relationship between plants and the oxygen cycle by participating in the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Science: 1.2, 1.4, 1.5, 1.6, 2.2, 4.1, 4.2, 4.3, 5.1   Arts 1.1, 1.2, 1.3, 1.4, 2.1, 4.1, 4.2   Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>oxygen, photosynthesis, cell respiration, transpiration, stomata</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Read the text section describing plants' relationship with the oxygen cycle. Compare and contrast photosynthesis, cell respiration and transpiration with a Venn diagram.	Describe the sequencing that takes place during this cycle on a timeline.
Visual-Spatial Using colored pencils, illustrate and label the steps of photosynthesis, cell respiration and transpiration. NEED: * white construction paper, colored pencils	Bodily-Kinesthetic Reenact the plant-oxygen cycle using props. Address photosynthesis, cell respiration and transpiration. NEED: * collection of props (food containers, clothes, etc.)
Musical Create a short poem for photosynthesis, cell respiration and transpiration. Choral read them in small groups.	NATURALISTIC Choose particular kinds of plant life and orally explain how photosynthesis, cell respiration and transpiration operate within them.
INTERPERSONAL Complete the bodily-kinesthetic lesson. Complete the musical lesson.	**Intrapersonal** Explain on paper how the process of photosynthesis relates to your life (ex. cycles).

*Resources/Materials for all Options: <u>Provide science text</u>

*Assessment Procedures: <u>Grade Venn diagram, sequencing and colored illustration</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Science: Biomes</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to describe specific details that relate to the six biomes by completing the following project options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Science 1.2, 1.4, 1.5, 2.6, 2.2, 4.1, 4.2, 4.3, 5.1   Arts 1.1, 1.2, 1.3, 1.4, 2.1, 3.3, 4.1, 4.2   Communication 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>biome, rain forest, grassland, desert, deciduous forest, tundra, taiga.</u>

*Project Options:

Linguistic Students will select one of the six biomes and research its animal life, plant life, weather/temperature and geographic locations. A personal reflection on how they would survive in the biome for a month will also be included. Knowledge will be shown in a written and oral report	Logical-Mathematical Students will conduct the same research project as the linguistic students but present information using tables and graphs (ex. chart monthly precipitation). NEED: * graph paper
Visual-Spatial Students will conduct the same research project as the linguistic students but present knowledge by constructing a "biome in a bottle" with a brief written description. NEED: * large mayonnaise jar	Bodily-Kinesthetic Students will conduct the same research project as the linguistic students but present knowledge in the form of a play/dramatization based on a day in their chosen biome. NEED: * props (clothes, plants, etc.)
Musical Students will conduct the same research project as the linguistic students but present knowledge in the form of a song or rap. The musical number may be presented in the form of a choral reading, with background music or to a rhythmic beat. NEED: * an electric keyboard	NATURALISTIC Students will conduct the same research project as the linguistic students but present their knowledge in the form of categorized lists that display the chosen biome's elements (ex. plant life: pine tree, fir tree, etc.). NEED: * graph paper
INTERPERSONAL Students may conduct any of the projects above in groups of two.	**Intrapersonal** Students may conduct any of the above projects individually.

*Resources/Materials for all Options: <u>Provide science text, Internet, encyclopedias and other resources</u>

*Assessment Procedures: <u>Grade all projects graded on accuracy, completion and creativity</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Social Studies: The Jamestown Colony</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to apply the characteristics and achievements of the Jamestown Colony through the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>History 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1 Geography 1.1, 2.1, 3.1, 3.2, 3.3 Arts 1.1, 1.3, 1.4, 4.1, 4.2 Communication 1.1, 1.2, 2.1, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>stock, cash crop, indentured servants, House of Burgesses, Chief Powhatan, John Smith, Pocahontas, John Rolfe, Openchancanough, Chesapeake Bay, Tsenacomacoh, Jamestown</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Interpret this quote from Chief Powhatan to the colonists about fighting: "Think you I am so simple not to know it is better…being your friend, than…being so hunted that…I can neither rest, eat, nor sleep…[E]very year our friendly trade shall furnish you with corn."	Create a time line that describes the events of Jamestown's first five years. Complete the musical lesson.
Visual-Spatial Create a facsimile of the map John Smith created of Virginia. Create a board game that represents the elements of life in Jamestown. NEED: * poster board, colored construction paper, dice, other materials needed for the game	Bodily-Kinesthetic In a large group, reenact the scene where Pocahontas saves John Smith from his death sentence ordered by Chief Powhatan. NEED: * props (clothes, etc.)
Musical After reviewing the animated musical "Pocahontas," compare and contrast its story line with the factual account. Use a Venn diagram. NEED: * a copy of "Pocahontas"	NATURALISTIC Describe the natural elements that contributed to the success and those that contributed to the frustration of the colonists (especially in the first six months).
Interpersonal In small groups, create a task card puzzle that embodies the initiation and rise of Jamestown. Include specifics (Virginia Company, stock, diseases, etc.). NEED: * poster board, scissors, black markers	Intrapersonal Have students list what rules they would impose on their fellow Virginians if they belonged to the House of Burgesses. What was their rational for their decisions?

*Resources/Materials: <u>Provide social studies text, map of Jamestown</u>
*Assessment Procedures: <u>Grade timeline, map, game elements, movie comparison and puzzle for accuracy</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Social Studies: The American Revolution Begins

*Lesson Objective(s)/Outcome(s): The students will be able to apply characteristics and reasons for the initiation of the Revolutionary War through participating in the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) History 1.1, 1.2, 2.2, 2.3, 3.1, 3.2; Geography 1.1, 3.3; Civics 1.2, 1.3, 2.3   Arts 1.1, 1.3, 1.4, 2.1, 3.3, 4.1, 4.2   Communication 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2

*Key Vocabulary: First Continental Congress, American Revolution, Battle of Bunker Hill, minute men, Lexington, Charlestown, Concord, North Bridge, Ethan Allen, William Dawes, John Hancock, Patrick Henry, Paul Revere, John Parker, Israel Putman, Peter Salem

*Lesson Options:

Linguistic	Logical-Mathematical
Interpret Patrick Henry's speech at St. John's Church in Richmond, Virginia in 1775: "..but as for me, give me liberty, or give me death!" Complete the musical lesson.	Create a time line that lists the opening events of the Revolutionary War. Describe the strategical errors made at the Battle of Bunker Hill In terms of numbers of soldiers, calculate the odds of a colonist victory at Bunker Hill.
Visual-Spatial	Bodily-Kinesthetic
Create a historical map that reveals the many routes taken by Revere, Dawes, and the British during the Battles of Lexington and Concord. In honor of the North Bridge, conduct a bridge building contest. NEED: * poster board, specifications for the contest	In a large group, reenact the shot heard around the world. NEED: * props (clothes, name badges, etc.)
Musical	NATURALISTIC
After listening to "The Shot Heard 'Round the World," write a summary on the message delivered by the song. NEED: * C.D. – School House Rock! Rocks	List and explain the significance of particular natural features in the opening battles of the Revolutionary War. Categorize elements of the British and the colonial soldiers.
INTERPERSONAL	Intrapersonal
In groups of three to four, create a board game that depicts the movement of the British and the colonists to the North Bridge. Complete the bodily-kinesthetic lesson. NEED: * poster board, colored construction paper, other game materials	Have students write how they would react if they were colonists defending their land against British invasion.

*Resources/Materials for all Options Provide social studies text, other resources (Internet, Encarta, etc.)
*Assessment Procedures: Grade written work, games and dramatizations on historical accuracy

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Social Studies: The Constitutional Convention

*Lesson Objective(s)/Outcome(s): Students will be able to apply the historical significance and key elements of the Constitutional Convention through the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) History 1.1, 1.2, 2.1, 2.2, 2.3, 3.1, 3.2 Geography 3.3 Civics 1.1, 1.2, 2.1, 2.2, 2.3 Arts 1.1, 1.2, 1.3, 1.4, 3.3, 4.1, 4.2 Communication 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2

*Key Vocabulary: Constitutional Convention, Virginia Plan, legislative, executive and judicial branches, Supreme Court, New Jersey Plan, Great Compromise, House of Representatives, Senate, Alexander Hamilton, James Madison, George Mason, Roger Sherman

*Lesson Options:

Linguistic	Logical-Mathematical
Read the United States Constitution and its amendments. Write down elements that could be amended to it.	Compare and contrast the U.S. Constitution with the Magna Carta using a Venn diagram. Make a bar graph representing the black and white population in each of the thirteen states. NEED: * graph paper
Visual-Spatial Create a concept map that reveals the parts and characteristics of our government's three branches. Create and play a memory card game that matches definitions and vocabulary together. NEED: * poster board, scissors, black markers	Bodily-Kinesthetic Take a class-wide poll on what amendments should be added to the Constitution. Draft the most common requests and post them in the room.
Musical Apply the concepts of the constitution to a rhythmic poem. Listen to "I'm Just a Bill," and write a summary on the song's message. NEED: * C.D. – School House Rock! Rocks	NATURALISTIC List the elements of environmental aspects (protection, control, etc.) that could be included in the Constitution.
INTERPERSONAL Complete the bodily-kinesthetic lesson.	**Intrapersonal** Complete the linguistic lesson.

*Resources/Materials for all Options: Provide social studies text, world atlas, Encarta and other resources
*Assessment Procedures: Grade graphs, concept map and rhythmic poem for accuracy

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Social Studies The Voyages of Christopher Columbus

*Lesson Objective(s)/Outcome(s): The students will be able to explain the achievements of Christopher Columbus through the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) History 1.1, 1.2, 1.3, 2.2, 2.3, 3.1, 3.3   Geography 1.1, 3.1, 3.2, 3.3   Civics 1.1, 1.5   Arts 1.1, 1.3, 1.4, 3.3, 4.1, 4.2   Communication 1.2 , 2.2, 2.3, 2.4, 2.5, 3.1, 3.2

*Key Vocabulary: expedition, colony, Columbian Exchange, King Ferdinand, Queen Isabella, Taino, San Salvador

*Lesson Options:

Linguistic	Logical-Mathematical
Write a persuasive argument that Columbus could have used to convince King Ferdinand and Queen Isabella to fund his first voyage.	Calculate an estimate of what Columbus' first trip could have cost. Put together a detailed list that itemizes estimated needs and costs.
Visual-Spatial Create a board game that represents the four voyages of Christopher Columbus. Create a historical map that accurately shows the paths and dates that Columbus took to the new world. NEED: * poster board, board game materials	Bodily-Kinesthetic Reenact the first voyage from Spain to the Taino Islands. Show possible frustrations of the crew, confusion of the mission, etc. NEED: * props (clothes, etc.)
Musical Put the details of the Columbian Exchange into a rhythmic poem.	NATURALISTIC Compare and contrast the natural resources of the Taino Islands with those of Spain. How was this difference advantageous for Columbus?
INTERPERSONAL In groups of four to five, infer what your reaction to the arrival of Columbus would have been if you were a member of the Taino people. Write the different reactions in a web. Complete the bodily-kinesthetic lesson.	Intrapersonal Write a personal reflection on how the Columbian Exchange affected the parties involved.

*Resources/Materials for all Options: Provide social studies text, world atlas, other forms of resources
*Assessment Procedures: Grade board game, historical map and rhythmic poem for historical accuracy

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Social Studies: The Maya Indians</u>

*Lesson Objective(s)/Outcome(s): <u>Students will be able to apply the achievements and characteristics of the Maya civilization through the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>History 1.1, 1.2, 1.3, 2.2, 2.3, 3.2 Geography 1.1, 2.2, 3.3 Arts 1.1, 1.3, 1.4, 2.1, 4.1, 4.2 Communication 1.2, 2.1, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: civilization, surplus, specialize, Yucatan Peninsula, Tikal, pokta-pok

*Lesson Options:

Linguistic	Logical-Mathematical
The Maya were scientists and historians. They wrote a large number of books (first in the western hemisphere to develop an advanced form of writing) that used symbols for words. Using their symbols and some of your own, describe a typical day as a Mayan.	Log the major developments and inventions (ex. the number "0") of the Maya civilization on a timeline.
Visual-Spatial Using Legos, create a replica of a Maya temple found in the main plaza. Explain its purpose. Draw a historical map of the Yucatan Peninsula. Label the major cities (Tikal, Uxmal, Chichen Itza, Palanque, etc.). NEED: * a set of Lego blocks, poster board	Bodily-Kinesthetic Review the game played by the Maya called pokta-pok (combination of volleyball, basketball and soccer). Write down its rules and conduct a game of it for the class to watch. NEED: * ball and hoop
Musical In honor of the farming and crafting skills of the Maya, rewrite the lyrics of "Old McDonald had a Farm" to reflect the products that they produced.	NATURALISTIC The Maya were excellent farmers. Describe their farming practices and classify their "made" foods according to what they grew (ex. corn = cakes and tortillas).
INTERPERSONAL In groups of three, create a task card puzzle by labeling pieces that don the accomplishments and characteristics of the Maya. Complete the bodily-kinesthetic lesson. NEED: * poster boars, colored markers, scissors	**Intrapersonal** Write about what it would be like to be a fifth grade Maya boy/girl. How would it be similar to your current life?

*Resources/Materials for all Options: <u>Provide social studies text, world atlas</u>
*Assessment Procedures: <u>Grade the Maya description, timeline, pyramid, game and food for accuracy</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: Health and Fitness: The Food Pyramid

*Lesson Objective(s)/Outcome(s): The students will apply the principles of the food pyramid to the following lesson options.

*Addressed EALRs: (Benchmarks 1 and 2) Health and Fitness 1.4   Arts 1.1, 1.3, 1.4, 4.1, 4.2 Communication 1.2, 2.3, 2.4, 3.1, 3.2

*Key Vocabulary: six categories of nutrients (carbohydrates, vegetables, fruits, dairy, meats/dry beans, oils/sweets/fats)

*Lesson Options:

Linguistic	Logical-Mathematical
Write down rational as to why certain nutrients are where they are in the food pyramid.	Given nutrition tables of particular foods (ex. breakfast cereal), bar graph its contents and compare its serving percentage to the food pyramid. NEED: * nutrition tables of certain foods
Visual-Spatial With a model or picture of the food pyramid to look at, draw a detailed replica. NEED: * copy of food pyramid, white construction paper, colored markers, rulers	Bodily-Kinesthetic Given plastic replicas or pictures of food, place them in the correct levels of a drawing or model of the food pyramid. NEED: * pictures or plastic replicas of food, model or drawing of the pyramid
Musical Write and perform a rhythmic poem that reflects the principles of the food pyramid. NEED: * electric keyboard	NATURALISTIC List natural resources that apply to each of the six categories of nutrition.
INTERPERSONAL In a small group, devise a day's diet that would reflect the principles of the food pyramid. Share it with the class.	Intrapersonal Write how your personal diet regimen would change if the principles of the food pyramid were applied to it.

*Resources/Materials for all Options: Provide poster and/or model of the food pyramid
*Assessment Procedures: Grade rational, graphs, drawing, poem, lists and diet changes for accuracy

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Health and Fitness: How to Play Golf</u>

*Lesson Objective(s)/Outcome(s): <u>The students will apply golf's rules, format and mechanics in the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2)<u>Health and Fitness 1.1, 1.2, 1.3   Arts 1.3, 2.1, 3.3, 4.1, 4.2 Communication 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>irons, woods, driver, bogie, par, birdie, eagle, fairway, green, divot</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Write a sequential description on the steps taken to hit a golf ball off of a tee. Use transition words like first, second, next and finally.	After playing a nine-hole game, calculate your score using the scoring principles of golf (scores based on par of each hole). NEED: * a club, ball and tee for each student
Visual-Spatial Watch a video or an actual demonstration on how to swing clubs. NEED: * golf instructional video	Bodily-Kinesthetic Complete the logical-mathematical lesson. Complete the musical lesson.
Musical Present the proper steps on how to swing a club in a rhythmic chant. Apply the chant to practice swings. NEED: * a club and ball for each student	NATURALISTIC Investigate the various designs of a golf course and the methods of construction and maintenance. Design a course on paper. NEED: * Internet, books on golf courses, white construction paper
INTERPERSONAL Assign groups to critique each other's golf mechanics. Complete the logical-mathematical lesson in pairs.	Intrapersonal Individually tutor others on how to swing the clubs.

*Resources/Materials for all Options: -
*Assessment Procedures: <u>grade accuracy of score totals and improvement of mechanics</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Health and Fitness: The Dangers of Smoking</u>

*Lesson Objective(s)/Outcome(s): <u>Students will apply the elements of the dangers of smoking to the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Health and Fitness 1.4, 3.1, 3.2   Arts 1.1, 1.3, 1.4, 2.1, 3.3, 4.1, 4.2   Communication 1.1, 1.2, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>tobacco, tar, nicotine, smoke aerosol, carbon monoxide, lung cancer, filter, emphysema</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Write a persuasive argument that urges it readers not to smoke.	Take a poll at a local grocery store to see how many people smoke and chart the findings. Calculate the number of smoking-related deaths per year in the United States. Use a line graph to chart the last ten years. NEED: * research sources, graph paper
Visual-Spatial Using the clustering method, name the many chemicals (nearly 600) found in cigarettes along with their properties.	Bodily-Kinesthetic Conduct an experiment with unfiltered cigarettes and a plastic bottle. Light a cigarette, stick it into a hole drilled into the bottle cap and squeeze the bottle to simulate inhalation. Observe the residue build-up inside the bottle. NEED: * a clear 2 liter pop bottle with a hole in the cap, an unfiltered cigarette and a box of matches
Musical Compile the many hazards of smoking into a rhythmic poem. Perform it for the class. NEED: * an electric key board	NATURALISTIC Write about how unfiltered smoke can damage the environment. Categorize brand names of cigarettes according to their tar content. NEED: * empty packages or advertisements of cigarettes
INTERPERSONAL Using a group jigsaw, assign members to a disease that can be caused by smoking (emphysema, cancer of the throat, etc.). Assimilate a master list of descriptions. NEED: * research sources, poster board	Intrapersonal Write about own exposure to the effects of smoking. Write a reflection on what smoking addiction could do to your life.

*Resources/Materials for all Options: -
*Assessment Procedures: <u>Grade persuasive paper, cluster, paper on environmental effects and jigsaw on accuracy</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Health and Fitness: The Muscles of the Body</u>

*Lesson Objective(s)/Outcome(s): <u>Students will identify the location and operation of major muscle groups throughout the body in the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Health and Fitness 2.1   Art 1.1, 1.3, 1.4, 2.1, 4.1, 4.2 Communication 1.2, 2.1, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>calves, hamstrings, quadriceps, biceps, triceps, deltoids, latissimus, abdominals, gludious maximus</u>

*Lesson Options:

Linguistic	Logical-Mathematical
On paper, describe the capabilities that each muscle group gives the human body.	Devise a graphic representation of the categories that each muscle group belongs to (legs, torso, arms).
Visual-Spatial Create a 4" skeleton replica with thin wire. After thoroughly chewing gum, apply it to the wire where the muscle groups exist. Label the muscles with toothpicks and masking tape. NEED: * spools of thin wire, dykes, pliers, packs of chewing gum, toothpicks and masking tape	Bodily-Kinesthetic Play a game of "Simon Says" that targets the major muscle groups ("Simon says touch your quadriceps"). Label the muscles on own body with Post-It notes. NEED: * Post-It notes
Musical Rewrite "If You're Happy and You Know It" to fit the major muscle groups (ex. "If you're happy and you know it slap your calves…"). Conduct the class in the song.	NATURALISTIC Along with the human muscular system, identify comparable muscles in pictures of animals (gorilla, horse, cheetah, etc.). Complete the logical-mathematical lesson. NEED: * pictures of animals
INTERPERSONAL Complete the bodily-kinesthetic lesson. Complete the musical lesson.	Intrapersonal On paper, describe how you have used each muscle group.

*Resources/Materials for all Options: <u>Provide research sources</u>
*Assessment Procedures: <u>Grade description paper, categorization, wire/gum figure, interaction in activities and description of animal muscles for accuracy.</u>

Fifth Grade Lesson Plan Using the Multiple Intelligences

*Subject Area/Lesson Title: <u>Health and Fitness: Positive Decision Making</u>

*Lesson Objective(s)/Outcome(s): <u>The students will use elements of positive decision making in the following lesson options.</u>

*Addressed EALRs: (Benchmarks 1 and 2) <u>Health and Fitness: 2.3, 3.2, 3.3, 3.4   Arts 1.1, 1.3, 3.3, 4.1, 4.2 Communication 1.2, 2.1, 2.3, 2.4, 2.5, 3.1, 3.2</u>

*Key Vocabulary: <u>kinds of peer pressure: friendly, teasing, indirect, heavy</u>

*Lesson Options:

Linguistic	Logical-Mathematical
Using inference skills, write a possible outcome/result for each of the demonstrated situations in the bodily-kinesthetic lesson.	Log the situations demonstrated in the bodily-kinesthetic lesson on a timeline.
Visual-Spatial Using a series of events chain, describe the outcomes that could follow a positive reaction and a negative reaction to peer pressure. Complete the intrapersonal lesson.	Bodily-Kinesthetic Reenact situations where various kinds of peer pressure are involved and positive outcomes result. Identify the methods of peer pressure. NEED: * props (clothes, etc.)
Musical Listen to the song "Higher Power" by Boston and describe how the portrayed person overcame pressure to enhance himself. NEED: C.D. -- Boston: Greatest Hits	NATURALISTIC Categorize situations according to the method of peer pressure that is being applied in the bodily-kinesthetic lessons.
INTERPERSONAL In groups, brainstorm lists of positive outcomes that could follow situations confronted by various kinds of peer pressure. Complete the bodily-kinesthetic lesson.	Intrapersonal Log onto www.askjeves.com and get into the "Peer Pressure Simulator" to test own decision making in particular situations. NEED: * Internet access

*Resources/Materials for all Options: <u>Provide poster displaying the kinds of pressure</u>
*Assessment Procedures: <u>Grade outcomes, timelines, chains, dramatizations, song description, categorizations and lists for accuracy.</u>

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CHAPTER V

SUMMARY AND RECCOMMENDATIONS

Summary

Although many valid points and keen observations were noted in Chapter II, there were three characteristics about MI that especially caught my attention. First of all, incorporating music into the curriculum really tests an educator's creativity. The intermediate teacher from New City School in St. Louis gave an effective fraction lesson using rhythm as the vehicle. Using percussion instruments, students performed a fraction for their blindfolded peers who had to synthesize a fraction through listening (Hoerr, 1997).

The second aspect that I feel is significant is the "Think Tank" from Kent Gardens in Virginia. Along with the wealth of manipulatives and other stimulating accessories, its true strength came from the questioning that takes place during the activities. While learning through particular intelligences, children are being challenged to critically analyze and inspect the task at hand (Knodt, 1997). This combination of MI and critical thinking seems to be very effective.

The third element of MI that stood out in the research was the benefit of parent involvement that it brought to the school in Australia. Parents were asked to share their observations of the children, participate in professional development activities, help redesign the progress report and attend MI related sessions at the schools. This atmosphere of cooperation between school officials, parents and students has helped boost the effectiveness of the schools involved (Vialle, 1997).

Recommendations

This project has strengthened my resolve to continue my integration of MI into my classroom environment. I would not only advise my peers to adopt this theory because of the benefits that grace the involved children, but I would also encourage them because of the encompassing charge that it can give an educational program. The invested time of the instructor is increased, but I feel that it's a sacrifice that will harvest crops of knowledgeable, confident and ambitious contributors to our society.

I would also advise a school or teacher who is beginning the MI implementation process to "pace" themselves. This is not something that can be fully operational and effective overnight. If rushed in the early stages of implementation, the many components of the MI teaching practice can be overwhelming and potentially counteractive to its purpose. If slowly incorporated in increments, both the instructors and the students will eventually become familiar and (hopefully) fond of MI in their classroom.

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