1997

Development of a social studies curriculum reflecting Howard Gardner's theory of multiple intelligences

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DEVELOPMENT OF A SOCIAL STUDIES CURRICULUM REFLECTING HOWARD GARDNER'S THEORY OF MULTIPLE INTELLIGENCES

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in

Education: Elementary

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ABSTRACT

Statement of Purpose

The purpose of this project was to address the need for making the subject matter of social studies accessible to all students. Howard Gardner's theory of multiple intelligences was used to create social studies lessons, identify multiple instructional techniques and strategies, and integrate multiple intelligence theory into the assesment process.

Procedures

A comprehensive literature review of educational psychologists from Alfred Binet's one dimensional view of intelligence to Howard Gardner's cluster of at least seven intelligences illustrates the evolution of thinking about how children learn.

The primary goal of social studies is to develop the ability to make informed decisions for the public good. In order to meet this goal, curriculum, instruction, and assessment will be examined as it relates to an effective social studies program. Howard Gardner's theory of multiple of intelligence provides a framework to use to create alternative ways of teaching and assessing students with varying abilities.

The project's handbook is a guide that provides social studies activities, with a focus on multiple intelligences, as a resource for unit planning. It provides a variety of instructional strategies that address students' dominant intelligences. Assessment becomes part of the learning process that focuses on the growth of each student through intelligence fair methods.

ACKNOWLEDGMENTS

I wish to express my appreciation to Dr. Díaz for the guidance and direction that he has given me throughout the course of my Master's degree project. I would also like to thank my second reader, Dr. Iris Riggs, for the time and effort she devoted to my project.

I am also grateful to one of my colleagues, Vicki Lamborn, M.A., for the reading and editing of my manuscript and her support and determination throughout the final stages of completion.

Extra special thanks to my family for their understanding, support, and patience during the past two years while we have accomplished this task. My daughter has graciously typed this project and has weathered many a storm throughout its completion.

TABLE OF CONTENTS

SECTION 1: INTRODUCTION

There has been much discussion in the 1990's concerning public education as it relates to school reform and changes in curriculum and assessment in order to increase the level of student achievement. Today there is general agreement that public education needs to create a system in which the established curriculum enables every learner to proceed at a rate and pace that is challenging and achievable, does not make unfair comparisons with the progress of others, assures positive reinforcement, and provides assessment instruments that reflect the learning styles of all students. The necessity of schools to provide a curriculum that offers both excellence and equity for all students is a priority if all students are to be successful in the future. Instructional strategies need to be utilized which deliver the curriculum to all students in an equitable manner and allow all students to reach their full potential.

In order to accomplish this, methods of teaching, learning, and assessment must be clearly coordinated and integrated. Howard Gardner's research on multiple intelligences and the educational implications of that theory are being evaluated by educators worldwide in a variety of applications. His theory is one of the most promising developments in education today. Gardner's theory has the potential to change the way that students are perceived by teachers and to change the instructional strategies that we use to ensure that all students are successful.

The educational system is in a state of transition regarding the beliefs and practices that have been embraced for decades. Major paradigm shifts have

occurred in the education system at least four times in the history of education. In the seventeenth century, the first schools were established in an environment of religious and theological devotion. In the eighteenth century, an enhanced curriculum included those subjects that were more functional. Communities also demanded that middle class and female students be given the opportunity to attend school. In the nineteenth century, the curriculum was expanded to include the subjects that we still teach today. The twentieth century and the industrial era brought about the need for more vocational courses in addition to college preparation and liberal studies courses.

These shifts have been in direct response to the changes in our society. American society has made a series of transitions from an agrarian-based economy to an industrial-based economy to an information-based economy. Schools have reflected these changes in both curriculum content and instructional strategies. Schools in the early and mid 1900's were modeled after the industrial topdown authoritarian model where desks were in neat rows and students responded to questions and regurgitated information acquired from lectures and textbooks on their exams. Grades were assigned based on the percentage of correct answers.

Public education has maintained this model of industrialized mass production so long that the academic quality of education has suffered in schools, and the United States is no longer preparing our youth to be successful in the work place. Information doubles and triples every two to five years and we need an education system which prepares our students to be successful in this information

rich environment. The basis for that preparation has to be based on a new perspective of students and their abilities.

Traditionally, a single view of intelligence has influenced education, one that said that students learn best by listening and reading to gather information. Then they recite the information back to demonstrate their mastery of the subject. Students were taught in a very regimented and structured environment which did not require interaction in order to ensure learning. This may have worked for some students, it was not an effective method of learning for many others. However, the education system appeared to work because of the many opportunities for students who were not successful in school to be successful in jobs that did not require a formal education. Today, those type of job opportunities no longer exist and students need to be successful in school in order to be prepared for the future job market.

About a century ago, the scientific study of intelligence began with the early attempt in education to measure intelligence. In Paris, a psychologist named Alfred Binet was commissioned to devise a measure that would predict which youngsters would succeed and which would fail in the primary grades in Paris schools (Doris, 1988). These tests were individually administered to determine whether or not a youngster needed remedial education. The child was given a variety of brief, practical tests such as counting coins or naming body parts in order to try and determine a child's success or failure in school. This test became the intelligence test and resulted in a score derived from a quotient generated by dividing mental age by

chronological age. The results were the intelligent quotient, or IQ. This test later found its way to the United States and became psychology's useful scientific tool in the form of the Stanford Binet. Intelligence now became quantifiable and served as an indicator that could measure someone's academic potential (Gardner, 1988). These IQ tests, however, offered a one dimensional view of how to assess a person's mind.

Thus, the search for the perfect measure of intelligence evolved from the narrowness of the IQ tests. From the late 1930's on there was a move away from a unitary, single intelligence and a move toward a multiple intelligences perspective. Thurstone (1938) challenged the unitary IQ idea by describing seven primary mental abilities. Guilford cataloged abilities into a structure of the intellect that were divided into 120 mental abilities. In the 1970's, Sternberg focused on a triarchic view of intelligence, stating that intelligence relates to the internal and external world of the individual, as well as experience (Teele, 1990).

Schools also evolved from the classical curriculum to one more suited for mass education. Schools now had to educate a new, far more diverse group of children. Many of the children had had little exposure to the sort of information that the more widely experienced and privileged children had as part of their background. Instead of teaching all students the classical curriculum as in the past, schools introduced vocational education, modern languages, and other subjects that were considered more appropriate for the majority of a more diverse student population.

With society becoming more demanding, and with the need for skills that increasingly involve technology, a more formal kind of educational institution gradually evolved. Schools became what Howard Gardner (Gardner, 1988) calls the "uniform school," where there was a core curriculum, a set of facts that everybody should know, and very few electives. The better students were allowed to take courses that called upon critical reading, calculation, and thinking skills. Regular assessments, using paper and pencil instruments of the IQ or SAT variety (Gardner, 1988) were put in place. These assessments yielded rankings of students, with only the best and brightest students going on to the most prestigious colleges.

These rankings are usually based on two kinds of abilities or "intelligences." The school system in the United States tends to rely on the linguistic and logical-mathematical intelligences, usually excluding other intelligences. Linguistic intelligence is referred to as verbal intelligence because everyone who speaks orally can be said to possess it at some level. People with well-developed linguistic intelligence thrive in the academic atmosphere because they can express themselves in words, both written and oral forms. Those with logical-mathematical intelligence prefer to do operations with data: collect and organize, analyze and interpret, and conclude and predict (Jasmine, 1996). In our technological society, this intelligence has often been revered above the other types of intelligence.

These two intelligences are those most commonly recognized and appreciated in our society. These intelligences are the ones that ensure success in the traditional school setting. The IQ test and the SAT were designed to test for these two

intelligences. All the standard tests assess either through oral or written language or through knowledge of mathematical systems combined with language. IQ tests and achievement tests are largely language based and if a student's intelligence lies elsewhere, that student probably will not score high enough to be placed in advanced classes. Such students may even be labeled below normal in intelligence and placed in a program in which they are remediated by being drilled in the basics.

The diversity within classrooms today is as varied as the population of our country. Students today come from a variety of cultural and social backgrounds which present a unique set of challenges for teachers. In order for all students to become successful learners, the teacher needs to have some understanding of students' strengths, as well as their weaknesses. Knowledge of students' prior learning is essential in order to establish educational excellence and positive student achievement. By being more aware of students' learning styles, the teacher can encourage those "at promise" in a particular intelligence, provide interventions for those "at risk" and ultimately help all students to find their own niche in learning and in life. In order to achieve these goals, this means looking beyond linguistic and logical-mathematical intelligences.

As part of the recent quest for alternative ways of teaching and assessing students with varying abilities, educators need to begin broadening opportunities for all students, not just those who are identified as gifted or learning disabled based on narrow views of intelligence. Howard Gardner proposes an alternative vision that offers a more holistic accounting of individual potential and talents.

Howard Gardner, a developmental psychologist and professor at Harvard University proposed a theory of multiple intelligences in his book, Frames of Mind (1983). This book was a direct challenge to the classical view of intelligence. Gardner defined seven basic intelligences that he considers to be as fundamental as those traditionally tested for in standard IQ tests. To Gardner, this classical view holds that intelligence is a unitary capacity for logical reasoning where abstract reasoning is most valued. Gardner's theory is not concerned as much with explaining and presenting patterns of scores on psychometric tests as with accounting for the variety of adult roles that exist across cultures (Gardner, 1983). His key point is not of underlying capacity, but a variety of intelligences working in combination with each other.

Howard Gardner has proposed that there is no single "intelligence," but a cluster of at least seven intellectual abilities, or multiple intelligences: linguistic, logical-mathematical, spatial, bodily kinesthetic, musical, interpersonal, and intrapersonal. To Gardner, intelligence is a general ability that is formed in varying degrees in all individuals. It is the key to success in solving problems. His theory of multiple intelligences states that human cognitive competence is better understood in terms of a set of abilities, talents, or mental skills which he calls intelligences (Gardner, 1983).

All normal individuals possess each of these skills to some extent. Individuals differ in the degree of skill and in the nature of their combination. Gardner's theory of intelligences diverges from the traditional point of view. The traditional

view of intelligence is defined operationally as the ability to answer items on tests of intelligence. The general faculty of intelligence does not change much with age, training, or experience. Gardner's theory on the other hand, pluralizes the traditional idea of intelligence. He defines intelligence as an ability to make something of value that is appreciated in at least one culture. His definition challenges the idea that you can measure intelligence with a paper and pencil test.

Gardner's theory states that every person possesses all seven intelligences, though one or more may be more fully developed than the others. This tendency to have greater development in certain types of intelligence than others may make a difference in many areas of our lives: from preferred learning styles, to the things that interest us both in school and out of school, to our career choices later in life (Fagella, 1990).

Gardner's theory of multiple intelligences is an excellent framework for finding the strength in all students, including gifted areas and different learning styles. According to Gardner, all children possess each of the seven intelligences to some extent and a variety of intelligences evolve from the combination of these seven intelligences. It is important that teachers and students understand this in order to achieve their full potential. Whether we call them intelligences, learning styles, talents, skills or human attributes, everyone uses them to construct their own meaning. It is essential that students discover what they are best at and how they learn early in life in order to ensure maximum growth. People who discover their unique intelligence(s) early in life have the motivation to develop those intelligences.

Students who never discover what they are very good at may become part of the staggering negative statistics which mark the failure of our education system. Therefore, it is the responsibility of educators to identify students' strengths and help guide them to be successful. Their special talents or skills need to be identified, educated, and nurtured so that they become productive citizens in the future.

Howard Gardner's theory of multiple intelligences is the ultimate validation of the idea that individual differences are important. Its use in education depends on the recognition of, and respect for, each learner's way or ways of learning, as well as each learner's special interests and talents. It not only acknowledges these individual differences for teaching and assessing, but it accepts them as normal, okay, and even interesting and valuable (Jasmine, 1996).

Using Howard Gardner's theory of multiple intelligences the classroom teacher can use two different approaches to address the intelligences through the curriculum. The intelligences can be taught "straight" or "infused" into the regular curriculum (Jasmine, 1996). For instance, in the straight approach (Jasmine, 1996) the teacher begins with a specific type of intelligence and then identifies some assignments that incorporate various areas of the curriculum using that intelligence. A benefit to the straight approach is that the material involving the intelligence will not be forced, artificial, or insignificant. This will automatically involve the process of meta-intelligence with all its benefits.

The second approach is to take an area of the curriculum and devise an approach that would involve each of the intelligences and infuse it into your

curriculum. In this situation the teacher can continue to teach the regular curriculum without adding another area to their lesson plans. The teacher makes sure that all, or as many as possible, of the intelligences are infused into every lesson. The resulting infusion into the curriculum should be meaningful. It is easier to infuse some intelligences than others and some curricular areas are easier than others to manipulate so that the maximum infusion of multiple intelligences takes place.

Social studies lessons lend themselves very easily to the infusion approach. Using the objectives from a social studies book about Westward Expansion the classroom teacher could devise lessons that would involve each of the intelligences. The teacher of a self-contained classroom needs to infuse the intelligences into their whole curriculum (language arts, mathematics, social studies, science, art, physical education, and music) on a daily basis.

Usually the linguistic intelligence is well covered, and it is easy to check for the interpersonal intelligence if the teacher uses cooperative learning. What about the other forms of intelligence that are the ones most often neglected or omitted? Through the use of innovative educational methodology come techniques and strategies that effective teachers have been using for years. The effective classroom teacher offers all students as many different approaches as possible through cooperative learning, thematic units, the use of centers, open-ended projects, individualization, emotional context and the use of technology.

As we move towards the 21st century, there is a need to restructure the social studies curriculum to meet the changing needs of our students and the future that is facing them. Our students are moving into a highly interdependent world that requires the ability to think critically, work collaboratively, and act rationally. In order to survive successfully in a changing world, students need and deserve approaches to social studies that provide them not only with basic knowledge, but with the thinking and language tools required to enter into a lifetime of negotiation and problem solving (Walker, 1995).

In 1992 the Board of Directors of the National Council for the Social Studies adopted a definition of social studies which states that the primary purpose of social studies is to help young people develop the ability to make informed decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world (Task Force at the National Council for the Social Studies, 1994). While consensus may have been reached on a general definition of social studies, there is still disagreement on exactly what students should learn and how they should learn it within the content of the social studies curriculum.

In order for this view of social studies to become a reality, teachers need to have students become actively involved in experiencing social studies. The History-Social Science Framework for California that came out in 1988 emphasizes that history is a story well told. Educators need to make history meaningful by using literature both of the period and about the period that is filled with accurate information, yet maintains the interest of students. Finally, we also need to ensure

that students are successful and have positive feelings toward learning history. Teachers need to make sure that the instructional strategies that they use focus on all learning styles and provide significant choices in order for students to be successful. Howard Gardner's theory of multiple intelligences provides excellent insights for teachers to keep in mind when selecting social studies assignments. Teachers need to provide a variety of experiences for students. Some students may do poorly on a written exam, but can present the same exam information in an oral form, dramatic presentation or in an artistic form, such as a mural. By providing variety and significant choices in social studies activities, the teacher ensures all students will succeed.

The purpose of this project is to address the need for making the subject matter of social studies accessible to all students. Howard Gardner's theory of multiple intelligences will be used to create social studies lessons for use in the intermediate grades.

SECTION II: LITERATURE REVIEW

Historical Perspectives of Intelligence

The purpose of the literature review is to present a historical perspective in the 20th century of intelligence that also includes the beginning of intelligence measurements that can be reported in numeric form. A comprehensive review of the works of cognitive psychologists from Alfred Binet to Howard Gardner illustrates the evolution of thinking in both the study of intelligence and cognitive learning ability. Although cognitive psychologists have studied various aspects in the field of intelligence and cognitive learning and arrived at different conclusions, all of their individual research studies have had an impact on the way educators look at intelligence.

Binet

Throughout the twentieth century psychologists have studied the nature of human intelligence. Even though psychologists have not reached agreement on what intelligence means, they have agreed that it can be measured (Ogbu, 1988). The most widely used IQ test is the Stanford-Binet. The test was created to measure whether youngsters would succeed or fail in the primary grades in Paris schools. The Stanford-Binet test made its way to the United States and became an enormous success (Doris, 1988).

Early testing procedures acknowledged a single, unitary, quantitative concept of intelligence. Intelligence testing provided a numeric measure of

someone's actual or potential intelligence. Alfred Binet's test in 1916 measured motor development, cognitive abilities, memory tests, and divergent-productive thinking abilities, yet produced a single score for measurement based on the ratio of mental age to chronological age. His concept of mental age and chronological age has been a foundation for intelligence evaluation (Teele, 1995).

Spearman

Some of today's tests are based upon the theory of Spearman. According to Spearman, intelligence is best conceived as a single, general ability that applies only to individual tasks (Spearman, 1927). Intelligence is a measure with a single index and is taken to be a measure of this general ability that is common to all of the different tests. In 1927, Spearman introduced the first and possibly the simplest factor model. This model meant that any test in the intellectual category had only one common factor, "g."

Thurstone

L.L. Thurstone's work, Primary Mental Abilities (1938), challenged Spearman's idea of unitary intelligence. He recommended that individual testing be developed with material designed to feature the primary factors that have been found by group methodology. His test distinguishes seven common primary mental ability factors: verbal comprehension, word fluency, numerical facility, memory, reasoning, space and perceptual speed. This test provides several scores rather than just a single score. His test batteries were developed for three age levels with approximately six tests designed to measure a separate ability (Thurstone, 1938).

He determined in these seven areas that the basis of the age when the average child reached 80% of maturity and estimated the following: Perceptual Speed (P) - 12 years, Space (S) - 14 years, Numerical Facility (N) - 16 years, Verbal Comprehension (V) - 8 years, and Word Fluency (W) - later than 20 years (Teele, 1995). The practice of intelligence testing began to incorporate Thurstone's multifaceted analyses. Consequently, others soon started to develop similar tests to measure separate abilities.

Guilford

J.P. Guilford defines intelligence as, "a systematic collection of abilities or functions for the processing of information of different kinds in various ways" (Guilford, 1982). His Structure of Intellect (SI) model includes five categories of informational content - visual, auditory, symbolic (S), semantic (M) and behavioral - each of which occurs in the same six kind or items o six different products - units (U), classes (C), relations (R), systems (S), transformation (T), and implications (I). The thirty kinds of items of information are called psychoepistemology. Five kinds of operations - cognition (C), memory (M), divergent production (D), convergent production (N), and evaluation (E) are performed with any of the thirty kinds of items of information.

Guilford proposed that the many distinct factors detected by the analysis of test performances could in turn be classified on the basis of their resemblance. The first referred to the operations of the mind; the second, to the content upon which the mind operates; the third, to the products of the mind's operation upon contents

(Doris, 1988). Guilford's intellect model has dissatisfied some critics because his model contains one hundred and twenty factors of the mind. Each of these one hundred and twenty factors are of equal importance and may be too much to grasp, especially for those who measure and interpret score differences.

Bruner

Jerome Bruner's (Samples, 1992) theory of learning modalities identifies different ways of knowing. This theory was born out of the explosion of research findings in brain mind function. Bruner identified three major classes of knowledge: iconic, enactive, and symbolic. Iconic was linked to the ways of knowing central to the visual and spatial arts. Enactive knowing framed the wisdom of movement, kinesthetic action and dance. Symbolic - the realm of reason and reductive logic - was primarily carried through coded symbols - letters, numbers and abstract codes (Samples, 1992). Schooling was dominantly framed in the symbolic and that intelligence as well as achievement was measured in this area.

Bruner was the designer of the spiraling curriculum. The curricular topics are not just revisited sporadically at various ages of some unspecified level of sophistication; rather, each revisit is based on a deepening knowledge of that topic, which is critically dependent on past experience and on the developing knowledge base of the child. Bruner's once heretical claim that any subject could be taught to a child at any age, in some intellectually honest way, is more acceptable today (Samples, 1992).

Piaget

Jean Piaget, a Swiss scholar, proposed one of the most influential theories of intelligence. He was concerned primarily with cognitive development and the formation of knowledge. His research led him to conclude that the growth of knowledge is the result of an individual's constructions made by the learner (Piaget, 1971). According to Piaget, the key to understanding intelligence and the operation of the human mind is being able to understand how humans acquire and use knowledge (Teele, 1995). He viewed constructivism as a way of explaining how people came to know about their world. Piaget viewed the human mind as a dynamic set of cognitive structures that help us make sense of what we perceive. These structures grow in intellectual complexity as we mature and as we interact with the world we come to know as we gain experience. Throughout maturation and experience, the groundwork for new structures is laid (Brooks, 1993).

Piaget recognized that children are not simply miniature versions of adults. Instead, every child passes through roughly the same stages in the same order. Each stage involves a fundamental reorganization of knowledge that is so profound that the child does not have access to his earlier forms of understanding. Once the child is out of a given stage, it is as though knowledge level of the prior stage had never happened. Children transition through a number of very different stages of development that begin with the sensorimotor stage of infancy, to the pre-operational, intuitive stage of early childhood, on to the concrete, operational stage of adolescence.

From infancy to about two years of age, the child comes to know the world in a sensorimotor way. The infant learns with toys, physically acting on the environment and accommodating new schemes, learning that objects have constant shape and that bodily movements can be coordinated with other objects. During this stage, infants are constructing the first form of knowledge of time, space, numbers and causality. Also during this stage, infants and toddlers learn through coordinating sensory perceptions and motor activity.

Preschool and kindergarten children fall into Piagets's category of pre-operational or intuitive thinking. The child learns language and other forms of representation, and begins to relate objects and ideas to one another in time and space. Children learn to represent the world symbolically through language, play, and drawing. Thinking is based on direct experience and perception of the present moment. The child can draw upon number and causality in a practical situation. However, they cannot use numbers or causality in a systematic or logical manner. Egocentrism is another characteristic of thinking children during the pre-operational period. The young child is not capable of assuming another person's point of view. Piaget maintained that preschoolers cannot figure out, in the literal sense, what object will be seen from vantage points different from their own.

More advanced stages are marked by the two forms of operational thinking. The young school child of seven or eight years of age is capable of concrete operational thinking. The child's reasoning processes broaden to include what is known as logic, but mostly in terms of what is tangible and observable. Here the

child has mastered those casual and quantitative understandings. According to Piaget those new understandings are sufficiently powerful so that they are able to annihilate earlier conceptions. Ultimately, the child must have the opportunity to watch the objects and to try out experiments for himself.

The formal operational stage, begins sometime during and beyond adolescence when the individual can use abstract logical structures in diverse problem areas. A formal operator is able to reason exclusively on the level of propositions. The objects now can be construed mentally. The operations that once had to be carried out in the physical realm have now been internalized or interiorized (Gardner, 1991).

Piaget's conclusions about reasoning and the structure of logic were based on the responses his subjects gave via speech and writing (Samples, 1992). His work explores the limitations and growth of young children's thinking rather than merely measuring intelligence.

Piaget suggested that educators take into account the child's perspective and level of understanding. His theory recognized cognitive psychology and sensorimotor activity and provided a concept of universal development. Piaget thought that normal children passed through different stages of development at the same rate. This concept was quite popular in the 1950's and 1960's.

Piaget's career spanned over fifty years and generated an extraordinarily substantial body of research. His work gained varying levels of acceptance in American education circles.

Multiple Perspectives

Howard Gardner

Howard Gardner, a Harvard University psychologist, was disturbed about the nearly exclusive stress in school on two forms of intelligences (knowledge), linguistic symbolization and logical-mathematical symbolization. These two items are also overwhelmingly represented in the construction of items on intelligence, aptitude, and achievement tests. He felt that if different types of items were used or different types of assessment were devised, then a different view of intelligence might come forth.

His theory of multiple intelligences came from work with the cognitive capacities of normal individuals and abilities of special populations such as prodigies, autistics, idiot savants, and learning disabled children. Combining what he learned from his work with brain damaged patients and evidence collected from other sources, Gardner isolated and identified seven basic autonomous intelligences (Gardner, 1990). Candidate capacities that were found in the literature compiled a provisional list of human intelligence's, whereas abilities that applied only once or twice were configured differently in diverse sources were abandoned (Gardner, 1993).

The list included seven intelligences, each with its own component process and subtype. These intelligences according to Gardner are linguistic, logical-mathematical, musical, spatial, kinesthetic, and two forms of personal intelligence -

interpersonal (understanding other people) and intrapersonal (understanding yourself).

Gardner's Seven Intelligences

The *linguistic child* is world-oriented; a good storyteller and writer; a trivia expert; an avid reader who thinks in words and loves verbal play (tongue twisters, puns, riddles).

The *logical-mathematical child* is image and picture oriented; a daydreamer; an artist, designer, inventor, attracted to visual media; adept at spatial puzzles (Rubik's cube, three-dimensional tick tack toe); creates visual patterns.

The *linguistic child* is rhythm and melody oriented; may sing or play musical instruments; sings little songs in class; becomes animated and may study better when music is playing.

The *bodily-kinesthetic child* is physically oriented; excels in athletics or fine motor areas like crafts; achieves in self-expression through body action (acting, dancing, mime); touches things to learn about them.

The *interpersonal child* is socially oriented; has strong leadership abilities; mediates disputes; can be an excellent peer teacher; enjoys group games and cooperative learning.

The *intrapersonal child* is intuitively oriented; is strong-willed and self-motivated; prefers solitary hobbies and activities; marches to the beat of a different drummer.

Gardner proposed the existence of a number of human intelligences. He defined intelligence as the capacity to solve problems or to fashion products that are valued in one or more cultural settings and detailed a set of criteria for what counts as human intelligence (Gardner and Hatch, 1989). Intelligence relates to what it takes to be an effective member of a community, and thus all intelligences are important. His definition and his criteria deviated significantly from established practices in the field of intelligence, such as Guilford and Thurstone. Most definitions of intelligence focus on the capacities that are important for success in school.

The existing psychometric instruments to measure intelligence play no role in Gardner's theory. A candidate's ability emerges as an intelligence if it has recurred as an identifiable entity in a number of different lines of study of human cognition (Gardner and Hatch, 1989). Every normal individual possesses varying degrees of each of these intelligences but the ways in which intelligences combine and blend are as varied as the faces and personalities of individuals (Blythe, 1990). While all humans exhibit the range of intelligences, individuals differ - presumably for both heredity and environmental reasons - in their current profile of intelligences (Gardner and Hatch, 1989).

Multiple Intelligence Theory

as a Model for Instruction

Traditionally, instruction has been based almost entirely on linguistic and logical-mathematical abilities. Instructional strategies have been directed almost exclusively to those abilities. Classrooms have been structured in such a way that learners were isolated and independent of other students in the classroom. Interaction has been at a minimum, not only between students, but also between teacher and students. This type of instruction and learning environment was effective for a small minority of students. However, the large majority of students were in a learning environment which was not conducive to successful achievement. The theory of multiple intelligences provides a rationale for changing the way we deliver instruction to all students.

Multiple intelligence theory seeks to describe how individuals use their intelligences to solve problems and fashion projects. Multiple intelligence theory has been described as "a philosophy of education, an attitude toward learning, or even a meta-model of education in the spirit of John Dewey's idea on progressive education rather than a set of program of fixed technique and strategies" (Armstrong, 1994 pg. x). This philosophy gives educators a vast opportunity to apply its principles to any number of educational settings. The theory of multiple intelligences also provides a broad range of stimulating curricula that goes beyond the typical linguistic and logical learners.

However, multiple intelligences as a philosophy guiding instruction is hardly a new idea. It can be said, that all the pioneers of modern education developed systems of teaching. Jean Jacques Rosseau stated that the child must learn not just through words, but through experience. Pestalozzi, a Swiss reformer stressed an integrated curriculum. Froebel, the founder of modern day kindergarten, developed a curriculum of hands on experiences with manipulative. Even Montessori and Dewey developed systems of instruction, based on multiple-intelligence like techniques (Armstrong, 1994).

Current alternative educational models, such as cooperative learning, use multiple intelligence systems where activities involve students in each of the other intelligences. For example, the core of whole language uses linguistic intelligence using music, hands on activities, reflections and groups work.

The theory of multiple intelligences is one method that supports good teaching. Effective teachers reach beyond the written word in the text to awaken students' minds. Multiple intelligence theory provides a way for all teachers to reflect upon their best teaching methods and understand why these methods are successful. Teachers can examine why these methods work well for some students, but not work with other students.

Multimodal Teaching

The multiple intelligence teacher contrasts sharply with the traditional teacher. The traditional teacher lectures in front of the classroom, writes on the chalkboard, asks students short answer questions about readings, hands out

worksheets and waits for students to finish their written work. Too many classrooms today are filled with students who, because of traditional teaching methods, spend too much of their time doing written assignments or worksheets. The multiple intelligence teacher may spend part of the time lecturing and writing, but in addition draws pictures on the board, uses multimedia to illustrate themes, and plays music to stimulate more learning. They involve all students by providing hands on experiences that allow for movement within the classroom, use of artifacts to clarify meaning of material studied, have students actively interact with others, and allow students time for self-reflection.

The curriculum that multiple intelligence teachers create is best represented by a loose and diverse collection of teaching strategies. Multiple intelligence theory represents a model of instruction that has no distinct rules. Teachers can be selective, implementing the theory in a manner suited to their own unique teaching style. Multiple intelligence theory suggests a "set of parameters within which educators create new curricula" (Armstrong, 1994 pg.50). Educators can address any skill, content area, theme, or objective and develop at least seven ways to teach it. Multiple intelligence theory allows for the building of daily lesson plans, weekly units or monthly or year long themes in such a way that all students have their strongest intelligence tapped into at least some of the time.

The best way to approach curriculum development is to use the theory of multiple intelligences to translate the curricular material that is to be taught from one intelligence to another. A linguistic lesson might also be represented in other

intelligences by pictures, physical or musical activities. Teachers must first focus on the specific objective or topic. Next they ask key multiple intelligence questions to help connect the objective with the seven intelligences. The classroom teacher then considers which methods and material are most appropriate for the lesson. Using brainstorming techniques, the teacher creates many possible approaches and has at least one idea for each intelligence. Once the ideas have been created, the teacher chooses the ones that seem the most workable within the educational setting. The teacher then designs a lesson plan or unit around the specific topic. The teacher is then ready to implement the plan by gathering materials needed, setting the appropriate time frame and carrying out the lesson plan. Once the unit is completed the teacher as well as the students engage in self-reflection.

Now that teachers have asked students to participate in a wide range of experiences in all seven intelligences, they also need to evaluate the progress of students' learning in a new way. The traditional methods of assessment which require students to show what they know or have learned through standardized tests that focus narrowly on verbal or logical domains are not aligned with the multiple intelligences philosophy. Authentic measures of assessment that probe into students' understanding of materials are far more valuable in assessing students' progress than multiple choice or fill in the blank test (Armstrong, 1994). Authentic measures allow students to demonstrate what they have learned. This type of assessment closely matches the environment in which they would be expected to show that learning in real life.

Authentic assessment covers a wide range of instruments, measures and methods. Howard Gardner has pointed out the best way to assess students' multiple intelligences is by observing them. This provides the best picture of student competencies in the range of subjects taught in school.

Another important component of implementing authentic assessment is the documentation of student performance products in a variety of ways:

Anecdotal Records - A section in a journal for each student that records accomplishments.

Work Sample - File for each child that contains samples of student work .

Audio Cassettes - Sample of oral language with students reading into a tape recorder.

Videotapes - Record a child's abilities in areas that are hard to document in any other way.

Photography - Pictures of things that students have made.

Student Journals - Write about their experiences in school.

Student Kept Charts - Student records of academic progress.

Informal Test - Teacher created, non-standardized test that shows student ability.

Student Interviews - Meet with student to discuss school progress.

The theory of multiple intelligences' greatest contribution to assessment is that it allows for multiple ways to evaluate students. Multiple intelligence theory supports the belief that students should be able to demonstrate competence in a specific skill, subject, content area, or domain in any one of a variety of ways.

Almost any instructional objective can be taught in at least seven different ways and almost any subject can be assessed in at least seven different ways.

Current Projects

Several projects have attempted to create a model of instruction and assessment that align with the fundamental philosophies of multiple intelligence theory. They have been initiated nationwide in such cities as St. Louis and Indianapolis. Some are under the direction of Howard Gardner and his colleagues at Harvard University's Project Zero. The projects range from pre-school, elementary, middle school and high school level. Howard Gardner did not specify how the theory of multiple intelligences should be implemented, so the application of the theory has varied widely.

Project Spectrum

Project Spectrum is a long term, collaborative research project undertaken by researchers at Harvard Project Zero. Project Spectrum has been conducting a study that is designed to assess the different intellectual strengths or intelligences in a group of three and four year olds. They identify certain cognitive strengths of children in music, visual arts, language, numbers, movements, social skills and science. They have created classrooms which are rich with materials such as puzzles, games, and musical instruments.

The project proposed to find out if individual differences existed, whether they could be documented at an early age, and how they could be assessed at that level. Two assessment tools were designed: domain projects and process portfolio.

A domain project is an extended curricular sequence based upon a concept or practice that is central to a discipline. The process portfolio captures the steps and phases through which the student passes while developing a project, product, or work of art. A Modified Spectrum Field Inventory (MSPFI) was created and used to sample the children's intelligences. Fifteen children were assessed in ten different activities with MSPFI and also with the Stanford Binet Scale. The results revealed that those children tested had distinct intellectual profiles and demonstrated independent relative strengths in certain intelligences and weaknesses in other intelligences. The results support the theory of multiple intelligences that children from the age of three to seven exhibit profiles of relative strengths and weaknesses in specific intelligences.

Art Propel Project

The Art Propel Project began in 1987. It brought together Pittsburgh Public School, Educational Testing Service and Project Zero to design ways to evaluate student learning to provide information to teachers and school districts. They developed portfolios that contained a compilation of a diverse range of student work and reflections about their work for both students and teachers. Students selected several works that best illustrated their growth over time at the end of the semester or a given school year.

That portfolio demonstrates student development over time. Teachers follow student growth in learning from the beginning stages to the final product. Qualitative modes of assessment are used to help teachers read essays and review

student portfolios. The portfolios contain diverse types of materials that reflect the multiple intelligences such as tapes, performances, discussions, drawings, and written work. This enables the teacher to see students' profile of skills and how they have improved over time. Teachers conduct reflective interviews where students are able to evaluate their own progress (Teele, 1990).

Key School

Key School, in Indianapolis, was one of the first schools to implement the theory of multiple intelligences. It is an experimental elementary school that was founded by eight experienced teachers who believed that schools should be as enjoyable as they are rigorous. The group of teachers, under the guidance of Patricia Bolanos (who eventually became the principal), raised funds and were eventually allowed to have their own inner city public "options" school in downtown Indianapolis (Gardner, 1993).

One of its founding principles is the belief that each child should have his or her own multiple intelligences stimulated every day. Every student participates on a regular basis in the activities of computing, music, bodily kinesthetic, as well as the theme-centered curriculum. Each student participates in an apprenticeship like "pod" where he or she works with peers of different ages and a teacher to master a craft of interest. The focus of the pod falls on the acquisition of real world skills in an apprenticeship type of environment. Once a week, an outside specialist visits the school and demonstrates an occupation or craft to all the students. The students learn about the range of activities that exist in the wider community.

The school features three themes within a year at ten week intervals. The themes are quite broad and are shaped by the educators, artists, businesses, government leaders, cultural organizations, parents, and students. Each student develops three independent or collaborative projects related to the theme. Student presentations are video recorded and put into their portfolios. Students are also interviewed as part of the assessment. The focus of the school is enrichment, not remediation.

The school's philosophy is that all children will be provided with an equitable education. Its purpose is to reach the entire spectrum of intelligences by offering instruction in music, dance, visual arts, computers, and foreign languages as well as the basic subjects (Teele, 1990).

New City School

New City School is an independent preschool and elementary school in St. Louis, Missouri. It was founded by parents and serves students from age three through sixth grade. It has a minority enrollment of 24%. In the beginning, approximately one third of the faculty began meetings to discuss Howard Gardner's book, Frames of Mind (1983). Teams of teachers had the responsibility to present sections of the book to the rest of the committee. They spent the first year discussing the book and how their school could use multiple intelligences in the classroom. Over time, more of the teachers became interested in participating in the committee's work. Teachers began to experiment with applying multiple intelligence theory and more teachers began using it in their classrooms. Currently,

the concept is found in all classrooms with various approaches and to varying degrees. The multiple intelligence approach has become much more than a theory. It is a philosophy about education with implications about how kids learn, how teachers should teach, and how schools should operate (Hoerr, 1994).

Teachers at the school found it necessary to modify the curriculum and create learning centers that give options for all seven of the intelligences. They decided to design their curriculum so that all children could learn and succeed through their strength intelligence(s). Teachers found themselves considering all the intelligences when planning instruction and assessment.

Methods to improve assessment were also considered and addressed. Previously almost all assessments were measures of linguistic competence. Portfolios became one method which reflected all the child's intelligences. At least once each year each intelligence was captured in a student's portfolio. Parents were kept up to date with weekly letters, progress reports, and multiple intelligences profiles.

Renaissance Project

Renaissance Project is a research project through the University of California, Riverside Extension. They are studying methods for integrating instructional strategies and assessment measures with the theory of multiple intelligences. Using a test called Teele's Inventory of Multiple Intelligence (TIMI) developed by Dr. Sue Teele, the teacher is able to identify students' dominant intelligences. This test demonstrates to teachers how to use methods that emphasize

all seven intelligences. By using this information, the teacher can help to increase student learning. Learning will be increased because the students are better able to reach their maximum potential. The project focuses on developing teaching methods that relate to those intelligences. Hence, students develop capabilities in all seven intelligences and not just their most dominant ones. Classroom teachers need to honor the diversity within their rooms in order to make learning relevant to all students, create positive self-esteem and educate the whole child.

Using the TIMI, Dr. Teele's research has revealed some interesting data. Students at the primary level demonstrated a much stronger performance for linguistic and logical-mathematical intelligence than students at middle and high school levels, respectively. Primary students' most dominant intelligences were spatial, bodily kinesthetic, linguistic, and logical-mathematical; while upper elementary students were spatial, bodily kinesthetic, interpersonal and musical. Middle and high school students were strongest in interpersonal, bodily kinesthetic, spatial and musical intelligence.

Social Studies Theory and Instructional Practices

Students reflecting back on their experiences in a social studies classroom in an elementary school might remember sitting at a desk, reading a textbook, listening to lectures, answering questions and memorizing facts and dates, on which they would be tested. Such reflections might also include a sense that social studies had no meaning to the student as well as being very boring. What is needed is a better

way to teach history and social studies. The theory of multiple intelligences provides teachers with the knowledge and the means to accomplish this.

Curriculum

Traditionally, elementary social studies instruction is delivered with teachers using the textbook as the primary source of the curriculum. Students are subjected to round robin reading techniques where students take turns orally reading the written text, followed by questions and answers. Hill (1983) conducted a survey of eighty fifth grade teachers in South Dakota. He found that 97% of the teachers used round robin oral reading of the textbook at least three times a week in social studies or science instruction. In this one particular study, Hill found that there was a great reliance upon the use of textbooks.

Textbooks often fail to maintain the interest of their audience. The topics within the book are given only superficial treatment. For example, a fifth grade social studies textbook will cover three hundred years of history in as little as one hundred pages. Coverage of the material is either scanty or disconnected. Students typically find the materials difficult to understand and relate to other situations. Not only is content coverage too broad but it also gives a very shallow explanation of the event. The skills taught tend to be those that are most easily measured (Woodard, 1986).

Students have difficulty understanding and learning from textbooks that are filled with such extensive content that cannot be reasonably covered in the span of a given calendar year. Many times students have not been taught how to read a

content area textbook for information and have difficulty identifying the key ideas in the text. Traditional instruction practices do not foster the development of conceptual understanding and meaningful learning through this content (Armbruster, 1991). When students first learn to read, much of what they read is from basal reading programs that are narratives. These narratives are short and self-contained and have little relationship to other selections (Armbruster, 1991). Reading textbooks in content areas for information causes problems with conceptual understanding and meaningful learning. Students usually have little practice in reading informational texts, either in school or out. The informational material that they do read is different from that of their social studies textbooks.

The reform of social studies textbooks begins with the state looking for and adopting instructional materials that will produce understanding. Publishers must be persuaded to prepare textbooks that have a more selective, in depth approach to the content. The social studies textbooks should not inundate readers with dates, facts, headings, review questions and test questions (Elliott, 1985). Instead, these sources of knowledge should devote sufficient time to a particular topic or period to establish an adequate context for historical learning. They should have frameworks of experiences that are rich enough to provide an in depth exploration of ideas. What is needed are social studies texts and trade books that provide for a wider range of needs and interest. There should be ways of supplementing textbooks with additional information from both print and non-print sources. Students need to experience a wide range of topics having more depth (Elliott, 1985).

Instruction

Another consideration in effective social studies teaching is the method of instruction. The method of instruction fosters the development of conceptual understanding and meaningful learning (Armbruster, 1991). Teachers emphasize factual recall (factoids) which deadens student interest and fails to develop students' ability to think (Goodlad, 1984). History and social studies teachers rely heavily upon class discussions, lectures, individual assignments, and weekly quizzes. The lessons are teacher directed and rely upon the text as a resource. Lessons are primarily factual with memory type questions that focus on isolated bits of information. Daines (1986) found out that teachers ask about 1.3 questions per minute. About 40% of the lesson is spent asking questions and responding to student questions. Too many teachers present topics in a superficial manner and do not allow adequate time for in depth coverage. Students only have time to develop limited understanding of the topic. Teachers feel compelled to try and cover the entire curriculum. Many times that causes them to feel inadequate, because they are not able to cover the content in depth. This in turn leads to a lack of complete comprehension by the student. Instead, they memorize information for quizzes or tests and then do not retain the information. This knowledge is rarely used and is seldom available for transfer to new situations (Newman, 1988).

Another factor in effective instruction in social studies is whether young children have adequate understanding of historical time to benefit from history instruction in the lower elementary level. Students at this level may not have a

sufficient sense of historical time to study history in any meaningful way. By its very nature, history is linked to time and chronology. John Poster (Downey and Levstik, 1988) in his research states that there are different times within a single cultural context: social time, literary time, personal or interior time, physical or clock time, and historical time. Historical time requires a "sense of existing in the past as well as the present, a feeling of being in history rather than standing apart from it" and it may be constrained as much by lack of reinforcement as by developmental level (Downey and Levstik, 1988).

Perhaps the younger student does not have a sense of historical time because it has not yet reached that developmental level. Historical, as well as physical time concepts, develop slowly. Young children can and do understand historical time in a variety of ways, such as patterns and sequence of real events, though some of the patterns many be general and imprecise. In Levstik and Pappas' (Downey and Levstik, 1988) study, children in grades two, four, and six linked history to chronology. Young children used broad time categories that were elaborated by older children so that by grade six, the broad categories became headings for more specific historical eras (Downey and Levstik, 1988). Bruner's work (1986) notes that "narrative, like history, deals with intention and action, with the particular; not any person, but this person at this time and place, and given the set of circumstances." Narrative conventions, then, connect events, providing a temporal scaffolding for historical understanding for young children (Downey and Levstik, 1988).

Another concern of social studies instruction is whether the concept of history is an appropriate school subject for children and young adolescents because it requires a level of cognitive development that they have not yet attained. Research grounded in Piagetian theory was concerned with the development of logical thinking in history instruction. E. A. Peel, a British psychologist, concluded that similar stages could be identified in the learning of other subjects, including history. Roy N. Hallam's work like Peel's (Downey and Levstik, 1988), found that logical structures similar to those described by Piaget could be detected in historical thinking. Students responded to questions based on narrative historical passages comparable to Piaget's stages. The only problem was that these stages occurred at a later age than in the study of math and science. Peel also noted that young students can develop the feel for humanity that is part of historical learning and they are capable of understanding the things of the past. Hallam concluded that history can be taught to younger students as long as instruction was selected so that it matched the pupil's schemata (Downey and Levstik, 1988).

The teacher should design lessons for younger students that use concrete operational thinking, yet challenges them. This will also help prepare them for higher levels of thought. The classroom teacher needs to evaluate the quality of their history instruction (Downey, 1988). Classroom teachers need to be aware of what children know and how they have attained that knowledge. If what the learner knows is not significant background for him or her to be able to understand, the target ideas in the text may be out of reach (Elliott, 1985).

Children's understanding of time and history and their ability to make historical connections is enhanced when they possess an adequate background (Downey, Levstik, 1988). Social studies instruction should be a framework of experiences that is rich enough to provide more than surface features of concepts so that students can construct their own theory to explain their work. Students are meaning makers engaged in a journey of discovery, rather than products to be tested after the journey is over.

Assessment

Currently, some classroom teachers have their students participate in a wide range of experiences. Then they require their students to show what they know through standardized tests that focus narrowly on verbal and logical domains. When it comes to evaluation of students' learning progress, teachers tend to test the way that they have always tested. Many teachers feel that alternative assessment methods might not be reliable. The people who believe that reliability is all important seem to be saying that teachers need an outside authority to validate all measures of progress. Therefore, testing must be done objectively through the linguistic or logical-mathematical intelligences.

Assessment also needs to change. For example, if teachers can learn to make social studies more relevant, interesting and authentic, then the assessment needs to match the instruction. Test developers and teachers must reduce the number of isolated bits of information covered by the test and instead use test items that allow

students to synthesize their ideas and show the development of their thinking on selected topics.

If instructional practices change, then the manner in which the learning process is evaluated will also change. Multiple intelligences theory proposes a fundamental restructuring of the way educators assess their students' learning progress. It should be a system that does not rely upon formal standardized or norm-referenced tests but on authentic measures. Authentic measures of assessment probe students' understanding of material far more thoroughly than multiple choice or fill in the blank tests. These authentic measures give students a variety of opportunities to show what they have learned.

Authentic assessments cover a wide range of instruments, measures, and methods. They use instruments such as observations that are verified by checklists and anecdotal records and portfolios with rubrics and reflections. Authentic assessment is not exact and its application may vary from situation to situation and student to student. However, it is a tool for measuring student performance on an ongoing basis.

Changing Social Studies for the Schools of Tomorrow

Many people, teachers, parents, and students consider that the conventional educational system has failed to address the diverse needs and strengths of students. Schools traditionally have not educated for conceptual understanding and thus any significant change in our current educational system will be extremely difficult. In

addition, until recently the gulf between educational theory and practice has been unchallenged which makes change even more difficult.

Teachers are the greatest agents in the fight for change in education. The methods that teachers use within their classrooms could determine student success in life. Teachers must address all the students' strengths as well as weaknesses, helping each child identify their special talents and cultivating their potential. To accomplish this, teachers need to be more aware of the students-learning style or abilities. Teachers must encourage those at promise in a particular intelligence and provide innovations for those students at risk. Students need to find their niche in learning and in life (Fagella, 1990). Early identification of strengths is very helpful in indicating what types of experiences benefit children the most. Early identification of weaknesses can be equally important (Gardner, 1988). The teachers must also re-examine their systems of assessment to reflect the diverse strengths and needs of their students. A fresh alternative approach to assessment needs to reflect the kinds of activities that are authentic products of students, both in and out of school.

Traditionally, we have relied upon our educational system and specifically a social studies curriculum to provide students with the needed knowledge and skills to develop into active and constructive citizens (Boyer, 1995). Teachers have been taught to think and teach about subjects in a departmentalized manner and to view knowledge as something that is simply given to students. This has been supported with the use of textbooks and ancillary materials (Walker, 1995).

Today and in the years to come the issue for students is not the availability of information, but how to best select the most appropriate material and make meaningful decisions that will affect them and others. In the year 2000, the United States needs to have students who are prepared to adapt to a changing world (Walker, 1995). Students need and deserve approaches in social studies that not only provide them with basic knowledge, but with the thinking and language skills to enter into a lifetime of negotiations and problem solving.

Public schools are responsible for helping young people develop a wide variety of intellectual and other skills. These basic skills are in reading, writing, math, thinking skills, and habits of critical thinking. Study skills, library skills, and test taking skills have also been related to school success. Students also need skills related to working with other people. Intellectual skills are interrelated and content based. This gives social studies an extraordinary versatility as a vehicle for skill development. Social studies is representative of other disciplines, content areas, and modes of inquiry. The social studies curriculum provides a large arena to develop skills in various combinations and in over-lapping patterns. Social studies instruction can play a major role in helping the schools meet the important responsibility of preparing students for their future.

Social studies educators must develop an alternative model for skill development that reflects the complex and dynamic process by which skills are actually learned in a social studies curriculum. Social studies instruction is related to all the major areas in which the schools have responsibilities for developing skills.

The subject matter of social studies provides students with extensive opportunities to learn or further develop basic skills in reading, writing, oral language, information gathering and research, memorization, and study habits. In the social studies classroom, students develop basic skills as well as those that are specific to the subject matter of social studies. Students learn to apply basic skills in a variety of learning activities. Skills that are specific to the content of social studies are skills relating to time relationships, analysis and interpretation of historical information, spatial relationships, social science, knowledge, and knowledge grounded in the humanities discipline.

The ultimate goal of social studies education in the area of skill development is to promote the ability to think critically. This goal is reached when students develop the ability to think critically about people and events in the world today and relate them to past historical events when appropriate. The social studies student learns to view the world from many vantage points in order to interpret reality from the perspective of various peoples and cultures (Downey, 1986).

Constructivist View

Constructivism is not a theory about teaching. However, it is a theory about knowledge and learning that draws on a synthesis of current work in cognitive psychology, philosophy, and anthropology. The theory defines knowledge as temporary, developmental socially, and culturally mediated. Learning is a self-regulated process of resolving inner cognitive conflicts that often become apparent

through concrete experience, collaborative interaction, and reflection (Brooks, p.VII).

For the constructivist, learning is problem solving based on personal discovery and intrinsic motivation. The learner needs a responsive environment in which consideration has been given to the individual style as an active, self-regulating, reflective learner (Cooper, 1993). This environment can be that of a multiple intelligence classroom where every student is succeeding and actively engaged in the learning process. The teacher in this setting encourages student-to-student interaction, initiates lessons that foster cooperative learning, and provides for students to be exposed to interdisciplinary curriculum. Students understand that they are responsible for their learning within a learning environment. Assessment processes are linked to the learner and the teacher. The teacher provides nonjudgmental feedback, monitors by observations, and includes activities that assess while learning is still occurring.

The classroom of today is no longer limited to the confines of a textbook where knowledge is something that is simply given to students. Instead, the classroom has become a window on the world, with increased emphasis on curriculum integration and thematic teaching (Schubert, 1993). Recent studies on learning have promoted an interdisciplinary constructivist approach where students develop their knowledge through team collaboration, discuss different interpretations of a problem, and negotiate and synthesize ideas drawing from various disciplines (Boyer, 1995). According to constructivist theory, knowledge

develops holistically rather than through the memorization of discrete facts. The constructed knowledge is embedded into one's own authentic personal experience. This constructed knowledge relates to the individual and has significant interest to him or her.

The constructivist lesson has the students applying their understanding of a problem, reflecting on it, and defending their position. This empowers students and enables them to take ownership of their learning. A constructivist lesson would incorporate an authentic learning activity that demonstrates knowledge is transferable to the real world. It can be integrated into the student's responsibility for asking questions and not just memorizing facts, dates, and answers. It would include opportunities for students to do critical thinking and test experiences by comparing alternative points of view. The lesson would motivate students to examine and become conscious of other cultures. Students would be encouraged to re-examine their knowledge base and become self-reflective (Boyer, 1995).

The teacher's role has changed from the traditional giver of knowledge to a facilitator or coach who provides authentic activities. These activities could be simulations, apprenticeships, and other experiences in an actual real world context. The teacher shares with students the process of evaluating and critically reflecting on what learning is taking place (Boyer, 1995).

In the constructivist view, students are seen as active learners, who make sense of the world by constructing meaning and linking new information with past experiences (Thijs, 1992). Learning involves the generation and restructuring of

students' conceptions. A process of conceptual change is only likely to occur if students are dissatisfied with their current concepts and feel the need to form a new concept. Students should consider the new concept intelligible, plausible, and fruitful in solving existing problems (Thijs, 1992). Constructivists feel that teaching is not merely the transformation of knowledge, but the negotiation of meanings. The teacher organizes and controls the situations in the classroom in a way that promotes intended learning outcomes.

The constructivist sees reality as determined by the experiences of the knower. The constructivist views the mind as the builder of symbols - tools used to represent the knower's reality. External phenomena are meaningless except as the mind perceives them. They view reality as personally constructed, and state that personal experiences determine reality, and not the other way around (Cooper, 1993).

Learning is problem solving based on personal discovery and is intrinsically motivated. The learner needs a responsive environment in which consideration has been given to the learner's individual style as an active self-regulating, and reflective learner (Cooper, 1993). Children discover and construct meaning from their experiences in their environment through analyzing data to detect patterns, forming and testing hypotheses, and integrating new knowledge with previous understanding (Condon, 1993).

The constructivist teacher acts as a guide to inquiry, fostering students' learning by posing questions and asking questions aimed at helping students clarify

their thinking. They see knowledge as emergent, uncertain, and subject to revision. Constructivist teachers encourage students to be thinking, exploring individuals who generate questions. Students do not simply mirror what they are told or what they have read. The teacher asks students to analyze relationships, interpret data, predict outcomes, and synthesize information to construction new understandings (Brooks, 1993).

Traditionally, classroom teachers have been taught to think and teach about single subjects in departmentalized manner. They view knowledge as something that is simply given to students through the memorization of discrete facts. However, recent studies by cognitive psychologists on how children learn challenges this practice (Boyer, 1995).

Gardner's theory of multiple intelligences is a vehicle through which students can construct their own meaning. The multiple intelligence teacher keeps in mind that all students do not learn in the same way and that teacher uses different approaches to help the student's structure meaning for themselves. Social studies allows for thematic teaching. The integration of the seven intelligences through activities and choices within each component or themes allows students the opportunity to construct and take ownership of their own meaning. Multiple intelligences theory is the easiest and most appropriate way for students to demonstrate their genuine understanding through a project, exhibition, or presentation.

Application of Multiple Intelligence to Social Studies

Gardner's theory of multiple intelligences provides us with a theoretical basis for stating something we hoped would be true. Individuals exemplifying different abilities like music, politics, sports, and dance in philosophy and physics and architecture - were really just exemplifying one or another of several kinds of intelligence. His theory allows us to appreciate human skills in a new way (White, 1988).

Gardner's theory is open to interpretation. He does not have a prescribed single course of action. Instead, individual school administrators or teachers have been left with considerable latitude in putting his ideas of multiple intelligence into practice.

The purpose of school should be to develop students' intelligences and to help them reach vocational goals that are appropriate to their particular spectrum of intelligence (Gardner, 1988). This rethinking of how schools value and support the abilities of children is the core of Gardner's work.

The individual centered school of Howard Gardner is rich in assessment of individual abilities and proclivities. (Gardner, 1988). It should seek to match individuals not only to the curricular areas, but also to particular ways of teaching those subjects. This type of school would match individuals with the various kinds of life and work options that are available in their culture.

Students at an individual centered school or a school geared to optimal understanding and development of each student's cognitive profile spend more time completing the kinds of projects that carpenters and artists pursue everyday (Gardner, 1988). While creating these products they should be receiving coaching instructions for a variety of skills within the context of these projects. As they work on their projects they will produce drafts, revisions, final products, and observations which are placed into processfolios. They also collect and reflect on the work they do during each meaningful activity. Now they are gaining a deeper understanding of the material and have a chance to learn how to improve their products (Hatch, 1993). The students learn to reflect and evaluate their own work. The work is then evaluated by intelligence fair methods that will take place on a regular basis throughout the daily curriculum. This assessment is more natural, familiar, and non-threatening (Blythe, 1990). The learners are in an atmosphere where they feel free to explore unfamiliar situations to use their knowledge to achieve a higher understanding.

Intermediate Students Constructivist Approach to Social Studies (Grade 3-5)

The social studies curriculum for this grade level cluster provides opportunity for disciplinary study of our community, state, and nation. Special attention is also given to our culture, environment, people, challenges, and successes. By studying the community, state, and nation, students have the opportunity to learn such concepts as diversity, environment, migration, urbanization,

transportation, heritage, ethnicity, technology, and beliefs. Students learn about institutions such as family, government, economy, and education in selected settings.

Students should explore a variety of print and non-print resources to learn about their cultural, geographic, economic, political, and historical heritage. Most students at this age level enjoy reading and studying biographies of great individuals in various geographical and historic settings. Children's literature, music, and art provide opportunities to integrate social studies with other areas of the social program. Other excellent sources for data include field trips to museums, historical sites, local businesses, agricultural centers, governmental agencies, and environmental areas.

Students in these grades need to have numerous activities, experiences, and opportunities to refine and develop previously learned skills. They need to develop new learning skills including inquiry and research skills from ever widening sources to develop critical thinking and problem solving abilities. Numerous opportunities should be offered throughout the year for meaningful individualized, small group, and whole group instruction. Students develop knowledge and skills that are needed for learning and productive living (Hartoonian, 1986).

Social studies teachers must encourage young citizens to appreciate that diversity constitutes our nation's greatest strength. Students must practice responsible social decision making in educational settings that feature learners from diverse age groups, ability levels, and ethnic backgrounds. Today and in the future,

young citizens will make important choices that involve people who seem different in many ways (McGowan, 1995).

Teachers need to ensure that kids are successful and have positive feelings toward learning history (Clifford, 1993). Students need to be encouraged in the belief that they can be successful learners. They need to be provided with the creative and varied materials that enable the development of their unique strengths and engage them with materials which reflect the value of every individual and group (Wade, 1995). Social studies teachers need to provide for interactive learning. Students need to create and apply the knowledge they acquire to better understand and change their self and the world. Teachers provide opportunities for every child to experience success and give students the freedom to explore topic that interest them. The social studies teacher's job is to establish boundaries, maintain high expectations, enhance the learning environment for students, and facilitate the development of student responsibility.

Using Howard Gardner's theory of multiple intelligences, the social studies teacher can address all learning styles and provide significant choices for students to be successful. Gardner's theory provides excellent insights for teachers to keep in mind when giving assignments and assessing progress. Most people have three or four dominant intelligences from the seven intelligences that Howard Gardner describes. Therefore as teachers we need to provide a variety of experiences for children which address different intelligences. Some children who may do poorly on written exams can present the same exam information in an oral way. By providing

varied and significant choices in history activities we allow for all students to succeed (Clifford, 1993).

Conclusion

As we move into the 21st century, we have many opportunities to make a difference in the lives of students as we restructure the curriculum to meet their changing needs. The students will move into a highly interdependent world that requires the ability to think critically and act rationally. The essential elements for this type of classroom are an enriched environment where all students want to learn and there is mutual trust between teacher and student. The students will be given adequate time to learn how to learn, gather new information, and create a life long love of learning. The curriculum will be meaningful to the learner without being repetitive and dull. The teacher, with the knowledge of his or her students, is in the best position to make the most appropriate choices for effective instruction. Finally, the students are given options to choose those modalities or styles with which they feel most successful (Schubert, 1993).

As educators, we need to find out what our students are good at and help them develop their own strengths in the classroom. Gifted children have talents which are usually easily identified by formal testing. The students on the lower end of the curve are also tested to identify their special needs, but the device that was used may not be intelligence fair. Students in the middle are assessed and evaluated by teachers, but they are not given the same type of assessments as special needs students. What is needed is a framework that will allow the classroom teacher to

find out the strengths of all learners including the gifted, average, and the learning different.

All children possess each of Howard Gardner's seven intelligences to some degree and all educators need to be aware that there are different types of intelligence and different ways to demonstrate that intelligence.

It is only when we acknowledge and celebrate individual learning styles that teachers deliver the rich instructional program that allows students to truly achieve their full potential.

SECTION III: PROJECT GOALS

The purpose of this project is to develop a social studies curriculum for intermediate students that reflected Howard Gardner's theory of multiple intelligences. This will be accomplished by designing a curriculum handbook for the in-service instruction of teachers with regard to thematic units, literature enhancements, alternative methods of instruction, and assessment strategies that are varied and intelligence fair.

Project Goals:

1. **Incorporate the use of multiple intelligences theory into the social studies curriculum with a handbook of multi-level integrated thematic units which include a literature unit to enhance the content.**
2. **Provide alternative methods of instruction that reflect Howard Gardner's seven intelligences.**
3. **Provide alternative methods of assessment that provide a better understanding of the learner's strengths that are more authentic and intelligence fair.**

SECTION IV: DESIGN OF THE PROPOSED PROJECT

This project consists of a curriculum handbook for intermediate social studies teachers. The handbook is divided into three sections based upon the goals and objectives from Section 3. Each of the three sections will provide the teacher with guidance to successfully integrate the multiple intelligences theory into social studies instruction.

The first goal of the designed handbook is to assist teachers in the integration of varied multiple intelligences activities into the social studies curriculum. The handbook provides teachers with course content and concepts that are divided into thematic units of instruction for each grade level. The thematic units of instruction are aligned with the State of California History-Social Science Framework and provide activities for all students using Howard Gardner's seven intelligences. A list of literature books and trade books is provided to help teachers effectively integrate instructional themes into the social studies curriculum.

The second goal of the handbook is to provide social studies teachers with alternative methods of instruction using Howard Gardner's seven intelligences. These instructional strategies provide teachers with multiple entry points when teaching the social studies content.

The third goal of this project handbook is to provide alternatives to assessment for the teacher's use. The handbook includes rubrics, performance-based assessments, student reflections, and response activities for use by intermediate social studies teachers. By using student-parent-teacher conferences

and parent response reflections, lines of communication are opened between the school and home.

The project also provides tools that allow the learner to develop a deeper and more complete understanding of their strengths. A student intelligence inventory test is included to help students assess their most effective learning style, allow them to develop a needs assessment, and set learning goals is included in the project. This goal is further met through the inclusion of a student needs assessment survey, student forms, and Sue Teele's (Director of Extension Education, UCR) Intelligence Inventory Test.

Appendix A

Curriculum Handbook

Curriculum Handbook Contents

CURRICULUM

The application of multiple intelligences theory to curriculum can best be implemented by a relaxed and diverse collection of teaching strategies. The multiple intelligences theory represents a model of instruction that does not have distinct rules other than those imposed by the demands of the cognitive component of the intelligences themselves. Teachers can pick and choose how to implement the theory, using their personal teaching style as a guide, as long as the general philosophy of multiple intelligences is adhered to in the method of curriculum delivery. Multiple intelligences theory suggests a set of parameters within which educators create new curriculum. The theory provides a context within which teachers can address any skill, content area, theme, or instructional objective, and develop at least seven ways to teach it. Multiple intelligence theory offers a means of building daily lesson plans, weekly units, or year long themes in a way that exposes all students to all intelligences throughout the year.

When approaching curriculum development, the theory of multiple intelligences allows the teacher to translate the material taught from one intelligence to another. This approach allows for numerous entry points within a traditional curriculum. The deepened curriculum is narrowed and centered on essential questions and generative ideas. The curriculum is transferred into the range and scope of the student's own life and provides a natural, personal connection to real-life experiences.

This handbook provides thematic, constructive, hands on, and interactive activities that make it easier to teach all students basic skills and to address the needs of all students. It provides instructional strategies that address all seven of the intelligences. It helps ensure that the differing needs of students are met. The curriculum content is activity oriented and permits the teacher to tap into all the intelligences and engage the talents and abilities of all students. Linguistic and logic-mathematical intelligences continue to be avenues available to reach students; however with the addition of five entry points that were previously underrepresented, learning opportunities for all students have been greatly enhanced.

LESSON PLANNER

BOOK_____
BEGINNING DATE_____
POSSIBLE ENDING DATE_____
NUMBER OF LESSONS_____

LESSON	INTELLIGENCE	ACTIVITY	ASSESSMENT METHOD

Multiple Intelligences Planning Sheet

Lesson Planning To Enable All Students To Succeed	
Objective: **Assessment:**	
Linguistic	**Bodily-Kinesthetic**
Logical-Mathematical	**Intrapersonal**
Spatial	**Interpersonal**
Musical	**Combinations of the Intelligences**

THIRD GRADE CURRICULUM

Social studies at grade three should expose the learners to the theme of continuity and change. Students at this age are not ready for a formal study of history, but they can begin to think about the change that has taken place in their own locality and nation. By exploring their own nation and locating some of the features that were built by people long ago, they begin to make contact with the past. Students learn about people whose activities have left their mark on the land.

For Beyond the Appalachians

Background Information
Lesson 1: The Wilderness Road

Students study the movement of settlers from the eastern seaboard to the midwest and the west that spans the period from the late 1700's to the early 1900's. Many pioneers overcame the great challenges to westward movement. Men like Daniel Boone helped to blaze the Wilderness Road through the Appalachian Mountains. Once trails were blazed, settlers were able to cross these mountains and head westward. The clearing of other trails and the development of railroads led to the settlement of many new towns in the midwest and the west.

	ACTIVITIES
Linguistic	**Define the terms pioneer, blaze, pass, and wagon train.**
Linguistic	**Role play a pioneer family crossing the Appalachians. Write a dialog for the characters and role play their parts.**
Linguistic	**Research Daniel Boone and George Washington. Find out important aspects of their lives.**
Linguistic	**What would make a trip on the Wilderness Road so difficult? Write about your trip.**
Linguistic	**Write a journal entry for a day on the Wilderness Road. You have to cross several deep streams with steep banks with your wagon and horses.**
Linguistic	**Read the book <u>Wagon Wheels</u>. In cooperative groups make the story into a Reader's Theater and present to the whole class.**
Linguistic	**Write a journal entry from a wagon trip west.**

Linguistic	**Make a list of laws that would be followed along one of the trails used by early pioneers.**
Linguistics	**Read the book Daniel Boone and the Wilderness Road. Then write a story about Daniel Boone or the Wilderness Road.**
Linguistic	**Write about how easy or difficult it is to make a map.**
Linguistic	**Make up a list of questions you would like to ask a legendary person such as Daniel Boone.**
Linguistic Spatial Intrapersonal	**Write a letter to someone back east about your adventure out west and tell how it feels to be the first pioneer to see this territory. Draw something that you described in the letter.**
Logical-Mathematical Spatial	**On a map locate Kentucky, Tennessee, Virginia, and Ohio. Add the Wilderness Road, Cumberland Gap, and Appalachian Mountains to the map.**
Spatial Interpersonal	**Make a timeline showing important events in the life of a major political or social figure as a whole class.**
Spatial	**Make a mural or diagram depicting the Wilderness Road or Cumberland Gap.**
Spatial	**List good and not so good points about moving to Kentucky in the late 1700's.**
Spatial	**Design a poster advertising free land in the west.**
Spatial	**Daniel Boone often mapped the trails he blazed. Ask students to become cartographers and draw detailed maps of their route from home to school.**
Musical	**Listen to recordings of early American folk songs including songs from the Appalachian region.** **"Down in the Valley"** **"On Top of Old Smoky"** **"Farewell My Own True Love"** **" Skip to My Lou"** **"Home on the Range"** **"Springfield Mountain"** **"Old Joe Clarke"** **"Turkey in the Straw"**
Bodily-Kinesthetic	**Make pioneer foods such as cornmeal mush.**

Bodily-Kinesthetic	**Create a conestoga wagon from a shoe box. Make a list of supplies for the six month trip.**
Bodily-Kinesthetic	**Play The Wilderness Adventure game.**
Intrapersonal	**You are a Cherokee Indian. Tell how you feel about the settlers taking over your land.**
Interpersonal	**How did they feel? Write about how you think these early pioneers felt about leaving their home.**

Background Information
Lesson 2: Passages to the West

Over the years the frontier was pushed farther and farther west to the Great Plains. Many settlers choose to stay in the interior plains until traders and fur trappers mapped out new trails, such as the Santa Fe Trail. Trappers went after beaver and other animals in search of good trapping grounds. These trappers brought back stories about rich new lands to the restless pioneers.

Some families that wanted to start farms traveled on the Oregon Trail to the northeast. These wagon trains usually consisted of a hundred covered wagons that met in early spring near the Missouri River. The trail crossed over 2000 miles beginning in the Great Plains, over the Rocky Mountains, through the Great Pass, and continued on to what is present day Oregon. This difficult trip would take from four to six months to get to the end of the trail. Travelers would be faced with food and water shortages or Indians attacks.

	ACTIVITIES
Linguistic	**Role play the daily life of a pioneer woman on the Oregon Trail.**
Linguistic Interpersonal	**Make a list of items to take with you on the move west. Which five items are the most important? Discuss with other group members the items you selected and why you selected them.**
Linguistic Spatial	**Write a paragraph or draw a picture about pioneer life.**
Linguistic	**For additional information about her life write to: Laura Ingalls Wilder Association P.O. Box 283 Malone, NY. 12953**
Linguistic	**Read <u>If You Traveled West in a Covered Wagon.</u>**
Linguistic Logical-Mathematical Intrapersonal	**Preparing for the journey - List the supplies that the pioneers took with them on the journey. Group the supplies, label each group and give a reason for the grouping.**
Linguistic	**Draw a diagram of a prairie schooner and label its parts.**

Linguistic	**Do a live news report about crossing the mountains by wagon train.**
Spatial Bodily Kinesthetic	**Make a patchwork quilt.**
Spatial	**Design clothes for a pioneer family.**
Spatial	**Make craft stick forts or Indian teepees.**
Spatial	**Design postcards showing some sights travelers would have seen along the overland trails.**
Musical	**Do square dancing. Find the music and learn the various calls.**
Bodily- Kinesthetic	**Design clothes for a pioneer family such as paper dolls.**
Bodily- Kinesthetic	**Make craft stick forts or Indian teepees.**
Bodily- Kinesthetic	**Create log cabins from rolled construction paper. Glue the rolls on top of each other to form a four-sided house. Add the chimney and roof and leave openings for the windows and door.**
Bodily- Kinesthetic	**Make a fringed buckskin shirt to wear from butcher or construction paper. Punch holes every two inches in the paper. Match the holes in the sides and stitch with yarn or string. Add fringe to the edge.**
Bodily- Kinesthetic	**Make a sun bonnet or shawl.**
Bodily- Kinesthetic	**Make frontier food such as flapjacks and biscuits.**
Interpersonal	**Students can take turns reading settlers' stories to each other from <u>Early Settlers Storybook</u> by Bobbie Kalman.**
Interpersonal	**Make a list of rules for life on the trail.**

Background Information
Lesson 3: Early Prairie Town

Another trail was used during the westward movement was the Chisholm Trail. This trail demonstrates how the railroad and trade with the east enabled western cities to grow. The city of Abilene is where the Chisholm Trail and the railroad line met.

Cowboys drove cattle along the Chisholm Trail to Abilene where the cattle were loaded onto railroad cars. The cattle were taken east to Chicago to be sold, slaughtered, and loaded onto railroad cars as beef. The beef was then moved east to be sold in markets.

Cowboys had to be skillful with lariats, spurs, and branding irons. Eight to twelve cowboys managed about 2,500 cattle. Their work was never finished. In the autumn they would round up the cattle and brand them. In the winter they kept watch over the cattle and in the spring drove the cattle to the nearest railroad town.

	ACTIVITIES
Linguistic **Logical-Mathematical** **Spatial**	**Movement of cattle from Texas to the East** **1) grazing on the range** **2) driven along the Chisholm Trail** **3) penned near railroad lines** **4) shipped on railroad cars to Chicago** **5) prepared to be sold as meat** **6) beef loaded onto railroad cars** **7) beef moved from Chicago to the east** **Illustrate each stage and sequence the illustrations to create a mural.**
Linguistic **Spatial**	**Research names for the clothing and equipment a cowboy used and the function that each served. Draw pictures of their findings and label the items such as: lariats, spurs, branding irons.**
Linguistic	**Write a cowboy story using as much cowboy lingo as possible.**
Linguistic **Bodily-Kinesthetic**	**Look up knots in an encyclopedia or other reference source and demonstrate for the class how to tie them.**

Linguistic	**Imagine you are a cowboy and describe a routine day rounding up and branding cattle.**
Linguistic	**Write poems on grave markers or tombstones. Create funny epitaphs for a cowboy, pioneer, or forty-niner.**
Linguistic Bodily-Kinesthetic	**Create a chuck wagon meal of beans, slaws, biscuits, and coffee.**
Linguistic	**Research the building of the transcontinental railroad and present an oral report to class.**
Logical-Mathematical	**If eight to twelve cowboys were responsible for 2,500 cattle, then how many cows was each cowboy responsible for? Create other similar story problems.**
Logical-Mathematical Spatial	**Use a classroom set of atlases. Have students take turns finding the names of the cities in the index and locate each city on a map using it grid coordinates.**
Spatial	**Design a brand to use on your ranch and identify your cattle. You can use your initials or a combination of the symbols on a branding chart. Reproduce the design on an index card and file it with the county registrar.**
Spatial Bodily-Kinesthetic	**Make realistic life size pictures of cowboys using a strong light to draw a silouhette.**
Spatial	**Draw western trails on a map. Which trail crosses the most states; the Oregon Trail, Chisholm Trail, or Sante Fe Trail?**
Spatial	**Draw a picture of something you saw along the trail.**
Spatial	**Make two drawings that compare a cowboy's life in 1867 to a cattle rancher's life in 1997.**
Spatial Bodily-Kinesthetic Intrapersonal	**Each student can contribute to the construction of a Main Street in a western boom town. Assemble the buildings and place them side-by side. Add additional features to the town such as sidewalks, tumbleweeds, hitching posts, etc.**

Musical	**Sing cowboy songs such as:** **"Home on the Range"** **"Billy the Kid"** **"Old Paint"** **"Get Along Little Doggies"**	 **"The Red River Valley"** **"I'd Like to Be in Texas"** **"Cowboy Dream"**
Musical	**Compose an original western song.**	
Musical	**Play and sing "Wabash Canon Ball." Use an autoharp to accompany the song. Tap the beat as you sing the entire song.**	
Musical	**Sing the song "John Henry" or other folk heroes. Choose a student to sing John Henry's lines and another student to sing the captain's lines. The class will sing the rest.**	
Bodily-Kinesthetic	**The most important item made by the frontier blacksmith was horseshoes. Use a pattern to trace and cut a horseshoe from tagboard.**	
Bodily-Kinesthetic	**Construct a pair of chaps from brown paper by cutting two shapes the length of your leg. Cut a 2" wide strip large enough to fit around your waist. Add yarn for the leggings bottom.**	

Background Information
Lesson 4: Life in a Mining Community

The discovery of valuable minerals also brought people west. News of the discovery of valuable minerals in the west traveled very fast. People from all over the country came to the area. Towns began wherever the mines were started. The population of these mining towns grew even more rapidly when the railroad was built through the mountains. The railroad brought in miners, business people, and heavy machines needed in the mines.

	ACTIVITIES
Linguistic Intrapersonal	**Pretend you are living in the east in 1879. You have heard about Leadville, Colorado and its silver mines. You have been given a free railroad ticket to go there. Would you use the ticket? Write a story to tell why you would or would not go.**
Linguistic	**Write two diary entries, one describing what life was like for the wealthy miner or merchant and one describing what life was like for a poor mine worker.**
Linguistic	**Read a story about miners who struck it rich. Write a story to describe their next adventure or how they plan to use their money.**
Linguistic Spatial	**Design a catalog for a company that sells miner's equipment and supplies. Draw illustrations and tell the price of the equipment and supplies.**
Logical-Mathematical Spatial	**Design a machine you could use to pan for silver or gold.**
Logical-Mathematical Spatial	**Make a large mural map of the area, include the general store, assay office, jail, and natural features. Create grid lines and label them A, B, C, and 1, 2, 3, to identify landmarks on the claim forms.**
Spatial Intrapersonal	**Create a mural from a large piece of butcher paper. Each student paints a deteriorating building.**

FOURTH GRADE CURRICULUM

The history of California is a series of successive waves of immigration from the sixteenth century through modern times. The unit developed begins with the settling of California by the Spanish. A timeline shows the development of cattle ranches and agricultural villages around missions and presidios. The importance of the Mexican War for Independence is studied and discussed to help set the stage. The geography of California has been analyzed to show how the natural barriers and remoteness of the region influenced settlement patterns.

California: A Changing State

Background Information
Pioneers in California

Four events changed the course of modern California history: The establishment of the Bear Flag Republic, the Mexican American War, The Gold Rush, and California's admission to statehood in 1850.

Lesson 1: Pioneers in California

Many adventurers were interested in more than just a short stop at California's coast. They wanted to explore California itself. Jedediah Smith and his men were the first people from the United States to cross the mighty Sierra Nevada in 1826. Another pioneer from the United States was Abel Sterns. In 1828 Sterns sailed to California from his home state of Massachusetts to open a trading business. He saw the opportunity to find wealth in California. He shared his knowledge of business with the Californians to help them improve their trading methods. He was so successful in his business that later he became the wealthiest man in Los Angeles. He chose to become a Mexican citizen and worked closely with their government.

John Sutter also agreed to become a Mexican citizen, in return he was given 3,000 acres of land in the Sacramento Valley. The Indians in the area helped him build a huge settlement with a fort, workshop, and a farm

ACTIVITIES

Linguistic	**Read the books <u>Patty Reed's Doll</u> and <u>Beyond the Great Divide</u>. What message would you leave for other pioneers?**

Linguistic	**Describe daily life on a California rancho. Imagine you are vaqueras or vaqueros. Write a poem or story that describes what it is like to camp out under the stars. Include the sights, sounds, smells, tastes and feeling in their poem or story.**
Linguistic	**Why did Jedediah Smith, Abel Steans, and John Sutter travel to California for a better life?**
Linguistic Intrapersonal Bodily-Kinesthetic	**Write a skit, act out the parts, design the costumes, and direct the performance. Show how each person struggled to reach California and survive there.**
Linguistic Intrapersonal	**Write three diary entries that describe some of the adventures you experience.**
Linguistic Intrapersonal	**Describe a new experience, a new neighborhood, a new school, etc.**
Linguistic	**Create a reader's theater for the book <u>Patty Reed's Doll.</u>**
Linguistic	**Write a headline and for a news story about the Donner Party tragedy for a 1846 California newspaper.**
Linguistic	**List the advantages and disadvantages of each route used to get to California. Write about the route you would choose and why.**
Linguistic	**Read <u>By the Great Horned Spoon</u> and write about the voyage.**
Logical-Mathematical Spatial	**Create a timeline showing the order of establishment of the Bear Flag Republic, the Mexican American War, the Gold Rush, and California's admission to the union.**
Logical-Mathematical Spatial	**Make a relief map of California using salt and flour.**
Spatial	**Pretend you are a Mexican citizen in 1834. You have received a land grant. Draw a map to show the boundaries of your land. Use symbols to stand for features like hills, rivers, and trees.**
Spatial	**Make a mural that shows what daily life was like on a rancho and a pueblo. Work in 2 teams: a rancho team and a pueblo team.**
Spatial	**Make a poster advertising a trip to California by either a land or sea route.**

Spatial	**Draw a treasure map where one or more items of treasure lie buried in land. Include such things as cities, towns, lakes, rivers, mountain ranges, and a scale.**
Spatial	**Locate California on a map. Describe where California is located in relationship to the rest of the United States and the world.**
Musical	**Write a song that tells a story of the pioneers, the Bear Flaggers, or the gold miners of California.**

Background Information
Lesson 2: Mexico Defeated

The tension continued to grow between the United States and Mexico. At the time of the Bear Flag Revolt in 1846, California was part of the nation of Mexico. The Bear Flag rebels of Sonoma did not feel that they were a part of Mexico. They were not happy with the Mexican government that ruled California, so the rebels decided that they would create a new nation based on their beliefs.

Before the Bear Flag Revolt began, the United States government declared war on Mexico. The United States captured California in 1847, but the Mexican War lasted until 1848. The signing of the Treaty of Guadalupe Hidalgo ended the war. Mexico agreed to give a large area of land to the United States known as the Mexican Cession. This treaty cut the size of Mexico in half and placed California under the rule of the United States. Californians that already owned land before were allowed to keep it and became citizens of the United States.

	ACTIVITIES
Linguistic	**Research the Treaty of Hidalgo 1848. Why was this treaty important to California history?**
Linguistic **Intrapersonal**	**In study groups gather information about Mexico's language, population, religion and industry.**
Linguistic	**Retell the story of General Vallejo and his wife Francisca Benicia**
Linguistic **Spatial**	**Read the book <u>Vallejo and the Four Flags</u>. Make these four flags:** **1) Spanish** **2) Mexican** **3) California** **4) United States**
Linguistic **Bodily** **Kinesthetic** **Intrapersonal**	**Make stick puppets of General Vallejo, his wife, and the Bear Flaggers.** **Enact the Bear Flag Revolt.**

Spatial/Interpersonal	**Look at a map of the Mexican Cession. Discuss with your group the amount of land that Mexico lost in the Mexican Cession. Why do you think Mexico was willing to sign the treaty that made them give up so much land?**
Spatial	**Make a map of the United States in the 1840 that includes Mexico, the United States, the Unorganized Territory, and the Oregon Territory.**
Musical	**Sing "Laredo." Clap the melodic rhythm of the English words to feel the syncopated pattern of this song. Play an autoharp to accompany the song.**

Background Information
Lesson 3: The Rush for Gold

In 1848 James Marshall walked down the American River to check on the sawmill he was building for John Sutter. At the edge of the water a flash of something shiny caught his eye. Gold was discovered in California and within six weeks all the workers at Sutter's Fort had left to hunt for gold.

The Gold Rush changed California by bringing sudden wealth to the state. Thousands of people traveled to California in one of the fastest migrations of all time. People rushed to California to take advantage of the opportunity to get rich quick.

The least expensive method to get to California was the overland route. These routes often presented dangers such as flooded rivers, burning deserts, and steep mountain passes.

Others traveled to California by sea. The ship would sail from the eastern United States around South America and then north to San Francisco. The ships were usually crowded, many people were seasick and the six month journey was boring. The fastest route was to take a steamship through Central America, but this was also the costliest method with poor food.

ACTIVITIES

Linguistic	**Read these books:** **Jonathan Down Under (follows father from California to Australia)** **By the Great Horned Spoon (stowed away on a ship bound for California)** **California Gold Rush - Search for Treasure (at Sutter Mill when gold is discovered)** **Gold Rush Adventure (collection of stories)** **The Great American Gold Rush (ordinary people; excitement and danger)** **Levi Strauss: The Blue Jeans Man (biography of the inventor)**
Linguistic	**You are living in 1849 and have just heard of the discovery of gold in California. You want to travel to California from the east coast to find gold. What essentials would you take with you?**
Linguistic	**Write a poem about a gold miner or the journey west to become a gold miner.**

Linguistic	**Write about the effect that the gold rush had on the people who lived in California. Include such things as population, growth, widely inflated prices, great wealth for a few and many deaths.**
Linguistic	**Use the encyclopedia or other source books to research and write a report on the contribution of Chinese Workers in the building of the transcontinental railroad.**
Logical-Mathematical	**The price of gold in 1849 was $16 an ounce. How many ounces of gold would a miner have to find to earn $100?** **Figure the current value of gold by looking in the business section of the newspaper for the exchange rate.**
Logical-Mathematical	**Research the prices of goods on the east coast versus price of goods on the west coast during the Gold Rush.**
Logical-Mathematical	**Compare the cost of a six month trip to California by ship with a six month journey by land.**
Spatial	**Draw a map showing passageways to California.**
Musical	**Play songs from Keith and Rusty McNeil tapes.** **Sing "Rio Grande" which is a work song aboard sailing ship.** **Think of adjectives that would describe the singing style.** **Sing "Blow the Wind Southerly". Move to the gentle rocking motion of the music of this sea song.**
Musical	**Sing "On the Banks of Sacramento River." Write a second verse to the song.**
Bodily-Kinesthetic Intrapersonal	**Role play the dialogue between two gold miners. Develop details about each character. Then create a dialogue between them.**
Bodily-Kinesthetic Interpersonal	**Role play staking a claim by measuring an area 8'x 8' square. Put a colored stake at each corner of the square. Mine for gold. Put the gold you find in a bag and take it to an assay office.**

Background Information
Lesson 4: Gold Mining

The daily life of a gold miner wasn't easy. Miners were often without enough food to eat and what was there was very expensive. Forty-niners did not feel they had to share their dreams with Indians or immigrants from other countries. There was discrimination in the mine fields against the Californians, Hispanics, Indians, and Chinese. Miners from the United States had a Miner's Tax passed that charged certain foreign miners sixteen dollars a month to mine in the gold fields. Large scale mining used huge hoses to spray water against river banks and mountainsides. The stream of water bore away tons of sand, dirt and gravel. Mining on this scale was harmful to the earth. The huge piles of gravel left over from hydraulic mining blocked the flow of rivers. The blocked rivers overflowed onto farmland. Fish and wildlife suffered as well as Indians.

	ACTIVITIES
Linguistic	**Describe the life of a gold miner in California.**
Linguistic Logical-Mathematical Spatial	**Have students design a catalog for a company that sells miner's equipment. Inside the catalog the students draw, describe, and list the price for equipment and supplies.**
Linguistic	**Students claim a section of land on a mural and file their claim. Write up a set of rules for a gold mining area. Then write about how to resolve a dispute about a claim.**
Logical-Mathematical	**Miners carried everything they owned with them. List the items you think a miner carried in his backpack and tell why it was important.**
Logical-Mathematical	**Make a pictograph of population growth in California by using this information.** **1840 - 50,000** **1844 - 150,000** **1846 - 200,000** **1849 - 450,000** **1850 - 600,000** **1860 - 800,000** **1870 - 1,250,000** **1880 - 2,000,000**

Logical-Mathematical	**Pack a sample gold miner pack with belongings. Estimate its weight and then weigh it.**
Spatial	**Write a set of correctly sequenced directions for panning and using a rocker.**
Spatial	**Design a machine you could use to pan for gold**
Spatial **Bodily-Kinesthetic**	**Create a miner's house made out of house out of popsicle sticks.**
Spatial	**Locate the American River and the gold claim at Sutter's Mill on a map of California. Students draw a large mural map of the area including a 19th century mining town, courthouse, general store, assay office, jail, sawmill, rivers, mountain lakes, streams, and grid lines.**
Interpersonal	**Discuss how gold mining affected the natural resources of California. Also discuss whether your group feels that gold mining was a benefit or a problem for California.**
Interpersonal	**Work in small groups. Discuss the pros and cons of different mining methods such as panning, rocker, and hydraulic.**
Musical	**Sing gold miner's songs.**

FIFTH GRADE CURRICULUM

Social studies at fifth grade presents the story of the development of the nation, with emphasis on the period up to 1850.

The unit on the new nation's westward expansion discusses the advance of pioneer settlements beyond the Mississippi River and the flow of migration westward. Between 1775 and 1810 pioneers burst upon the Appalachian frontier with a relentless push forward in their search for land. There were numerous reasons for this westward movement. Fur trappers and forty-niners were searching for wealth, farmers and settlers were looking for land, and Mormons were looking for the New Zion in Utah. Settlers pushed westward from one frontier to the next, largely at the expense of the American Indians.

The New Nation's Westward Expansion

Background Information
Lesson 1: Moving West - The Moving Frontier

The moving frontier begins the story of westward settlement with mountainmen like Daniel Boone and other frontiersmen who built the Wilderness Road in 1775. Daniel Boone led the first group of thirty pioneers into Kentucky. Boone became a legend in his own time to the men and women that followed his trail. Daniel Boone represented boldness, courage, and the restless spirit of adventure. Daniel Boone explored the area west of the Appalachians which according to the Proclamation of 1763 belonged to the Shawnee, Creek, Cherokee, and other Indian tribes. The rights of Indians to their traditional lands was not a consideration for the pioneers who followed. People continued to cross the Appalachians for a variety of reasons.

Even though life was difficult, many packed their personal possessions and moved to the next frontier at the expense of the Indians. Indians lost more and more land each year by relying on treaties that were not upheld. In the end, most Indian tribes were forced to move off their tribal lands by the continuing western expansion. As the number of settlers increased, the United States government decided to organize the territory west of the Appalachians. Congress passed the Northwest Ordinance of 1787. This law divided the region into separate territories that guaranteed freedom of religion, outlawed slavery, and protected the rights of the Indians.

	ACTIVITIES
Linguistic	**Davy Crockett's best friends were animals. If you could have any animal for a pet what type of animal would you choose? Why?**

Linguistic	**Write about your journey on the Wilderness Road.**
Linguistic	**Research the role of the Chinese immigrants and European immigrants on the completion of the Transcontinental Railroad. Write a paragraph telling of their importance**
Linguistic	**Create another animal friend for Davy Crockett. It could be any kind of animal such as a tiger, a wolf, or an eagle. Then tell a tall tale about Davy Crockett and that animal.**
Linguistic	**Suppose you were a pioneer traveling with your family along the Wilderness Road to Kentucky. Write a letter to a relative back east telling about your adventures.**
Linguistic	**Write a poem about the settling of the frontier from the point of a view of child of a pioneer family.**
Linguistic	**India had no previous contact with, and thus hand no resistance, to many of the diseases brought over from Europe. Research how human beings develop immunities to certain diseases and how vaccines work.**
Linguistic Intrapersonal	**Present a short dramatization showing Indian-pioneer interaction, such as Daniel Boone and the Shawnee in 1775, just after the completion of the Wilderness Road.**
Logical-Mathematical Spatial Intrapersonal	**Divide the class into small groups Each group will represent settlers preparing for a journey to the Appalachian Frontier. Discuss the supplies you would need for the journey and map out the routes and trails they would use. Then have the groups explain how they would travel and what they would take with them.**
Logical Mathematical	**Make a graph about the growth of the Trans-Appalachian population 1790-1820 using the information listed below. Years, Number of people 1800 -- 400,000 people 1820 -- 2,000,000 people**
Spatial	**Work with a partner to draw and label a large map of one of the frontier areas such as the Northwest Territory.**
Spatial	**Students work together to make a mural showing some of the people discussed in the unit: Daniel Boone, Davy Crockett, etc.**
Spatial	**Make a map of the area explored by Daniel Boone.**

Interpersonal	**Role play the conversation that a frontiersman would have with an Indian chief trying to persuade him to allow white settlement to extend farther west.**
Interpersonal	**Create a short dramatization showing Indian/Pioneer interaction between Sequoyah and an American army officer in 1838, just after the Cherokee were forced to march to Oklahoma on the Trail of Tears. Each side can voice opinions about who is responsible for the trouble between the Indians and the pioneers.**
Spatial Linguistic	**Research these important dates and the events that took place on them and make a timeline: 1763, 1775, 1787, 1792, 1796.**
Spatial	**Draw a picture of a frontier man or woman. Include the special clothing and equipment such a person might need.**
Spatial	**Pioneers like Daniel Boone often mapped the trails they blazed. Ask students to become cartographers and draw detailed maps of their route from home to school. Include any important landmarks as well as a map key and appropriate symbols.**
Musical	**Listen to and sing American folk songs like:** **"Down in the Valley"** **"Farewell My Own True Love"** **"Home on the Range"** **"Old Joe Clarke"** **"On Top of Old Smoky"** **"Skip to My Lou"** **"Springfield Mountain"** **"Turkey in the Straw"**
Bodily-Kinesthetic	**Play the Wilderness Adventure game. Divide the class into two teams. Students stand back-to-back and about six feet apart. The first player has a choice; he can be Daniel Boone and try to sneak noiselessly from one end to the other between the teams or stay in place. After a limit of thirty seconds, the second team votes on which choice they think the player made. If correct, they score a point. If incorrect, "Daniel's" team scores a point.**

Background Information
Lesson 2: Life on the New Frontier

Many changes took place in the wilderness as it evolved into settlements and later into towns. River travel was a major mode of transportation for moving west between 1780 and 1820. In 1788 alone, about 20,000 pioneers, 8,000 horses, 2,400 head of cattle, 1,000 sheep, and 700 wagons were transported on rivers. The growth of canal building encouraged greater use of river transportation and provided pioneers with faster and more economical transportation.

Other pioneers traveled west by land following the Wilderness Road or National Road. Travel over land was difficult and dangerous. These pioneers traveled on rough roads and dangerous rivers, faced extreme temperatures in winter and summer, all for the chance to start a new life.

Year after year pioneers pushed on from one frontier to another. Some Indians became friendly with the settlers and traded them furs for tools and clothing. Other Indians were unhappy to see so many settlers moving onto land that had once been theirs.

	ACTIVITIES
Linguistic Intrapersonal	**Discuss moves that students have made. Have them share their experiences. Imagine moving to Alaska in a wilderness area without any roads, electricity, and houses. Settlers would have to live in a tent until they could build log cabins. Write about it.**
Linguistic Interpersonal	**Interview relatives or neighbors about changes in their area. Discuss the changes that occur in everyday life such as the building of a mall on an open area.**
Linguistic Interpersonal	**Divide the class into several small groups. Obtain a version of "The Legend of Mike Fink," and distribute a copy to each group. Students read and discuss the story. Then divide the story into segments and read the parts aloud.**
Linguistic	**Research river travel.**
Linguistic	**Write a research paper about the Erie Canal.**
Logical-Mathematical	**Construct a large model or map of a frontier station. The map or model should include log houses, fortifications, and other important structures that are essential to the community.**

Logical-Mathematical	**Compare and contrast the ways the pioneers used the resources of the West with the ways Native Americans used them. Make a comparison chart to show their differences and similarities.**
Linguistic Logical-Mathematical Spatial	**Research the Oregon Trail. Find the distance and the amount of time it took pioneers to travel the trail by wagon train. How long would it take to travel the same distance if you went by car at 65 mph?**
Spatial	**Draw a picture of a flatboat loaded with a family's possessions.**
Spatial	**Map the principal routes for westward expansion on the river systems.**
Musical	**Create a new verse to "Erie Canal." Clap the rhythm of the new words on like phrases and tap the steady beat.**
Linguistic Interpersonal	**Debate the building of canals - One group will side with the issues of expense and complicated building structures, and environmental issues, while the other side discusses its benefits.**
Bodily-Kinesthetic	**Construct a log cabin by rolling out paper logs. Glue them on top of each other to form a four-sided house. Add a construction paper chimney. Leave openings for windows and door. Roof with folded construction paper. Connect student's log cabins together to make frontier towns.**
Bodily-Kinesthetic	**Build a flatboat (forty ft. long) using craft sticks with a boxed shelter in the middle.**

Background Information
Lesson 3: The Next Frontier

In 1803, President Thomas Jefferson purchased the Louisiana Territory from France for the sum of $15,000,000. The addition of 830,000 square miles from the Mississippi River to the Rocky Mountains doubled the size of the United States. Interested in finding out about the land that he had purchased, President Jefferson commissioned Meriwether Lewis and William Clark to explore the new territory. From 1804-1806 they traveled 7,700 miles mapping the land and writing down what they observed about the land and its people. These two men recorded the region's terrain, climate, minerals, plants, animals, and native peoples. They kept detailed journals throughout the two and a half year journey.

	ACTIVITIES
Linguistic Logical-Mathematical	**Research the current price of an acre of land near your school. Invite a real estate agent to the classroom to talk about the land values.**
Linguistic	**Write how you would feel if the United States were "purchased" and you found yourself in a "foreign country."**
Linguistic	**Write an imaginary letter from James Monroe to Thomas Jefferson telling him about the Louisiana Purchase.**
Linguistic	**Write a journal entry of the Lewis and Clark expedition from Sacajawea's point of view. Sacajawea was a young woman accompanying her husband and these two famous explorers.**
Linguistic	**Take part at one of the explorers of the Louisiana Purchase, such as Meriwether Lewis or William Clark. Write a letter to President Jefferson in Washington giving details of their expedition and describe some of their discoveries such as plants, animals and information about Native Americans.**
Logical-Mathematical	**Have students visualize the concept of a million by reading <u>How Much is a Million?</u> Have students bring a million of something to class.**
Logical-Mathematical	**How did Lewis and Clark measure trees? Maybe they used shadows. Measure a tree or a tall flagpole on the school grounds by using the ratio of an object's shadow. Determine the ratio by holding a yardstick upright and measuring the shadow it casts.**
Logical-	**Go on a nature walk and have students collect five small objects.**

Mathematical **Bodily-Kinesthetic** **Interpersonal**	**In cooperative groups, sort and classify the objects, group them, and state specific reasons for the groupings. Have students present their information and have other groups guess what classification they used.**
Spatial	**Map the area of land known as the Louisiana Purchase. Compare it with a map of the modern day United States.**
Spatial	**Create a mural or Moment in Time Poster for a famous hero or heroine such as Daniel Boone, Meriwether Lewis, Zebulon Pike, Sacajawea, or Back Hawk. Include such things as their native clothing or attire and special equipment.**
Musical	**Sing or listen to "Sweet Betsy from Pike" and have students pat, snap, or clap on the strong first beat.** **Keep time to the music of "Roll on Columbia" by strumming on an imaginary guitar.**
Intrapersonal **Linguistic**	**Have students recall an experience they had when they were exploring a new place. Write a descriptive story about the experience.**

Background Information
Lesson 4: The American Indians in Retreat

In 1775 there were just 150 settlers living in the Appalachian frontier, by 1820 there were over two million. A series of treaties signed during the late 1700's gave settlers the right to more and more Indian land. Many Indian leaders signed treaties giving away lands that belonged to others. What lands the government did not win by treaty, they took by force as in the Battle of Fallen Timbers in Northwestern Ohio and the Battle of Tippecanoe in Indiana. In 1824, the government started the Bureau of Indian Affairs. This Bureau had the power to make treaties and control trade with the Indians. By 1830, the United States government was no longer asking the Indians to move away from their ancient tribal lands, instead it was ordering them and forcing the Indians to move west. American Indians were being driven from their ancient tribal lands east of the Mississippi. The continued forced movement of Indians eventually resulted in increasing violent conflicts between Indians and settlers.

	ACTIVITIES
Linguistic Intrapersonal Interpersonal	**New families are constantly moving into our community. What could you and your class do to help them get settled? Share your ideas with the class.**
Linguistic	**Imagine you are the first settler in an area. Soon other settlers come and a town grows up around you. List both the advantages of staying in the area or moving on to a new frontier.**
Linguistic	**Write an essay on why you think people sometimes treat those of a different culture as if they do not have equal rights.**
Linguistic	**Write a newspaper account of the forced march of 18,000 Cherokees from their homes in the southwest to reservations in Oklahoma.**
Linguistic	**Present a dramatization showing the Indian-pioneer interaction between Tecumseh and William Henry Harrison in 1811, just after the Battle of Tippecanoe.**
Linguistic	**Write an essay on why they think people sometimes treat those of different cultures as if they do not have equal rights.**

Linguistic **Bodily-Kinesthetic** **Interpersonal**	**Present a dramatization between Sequoyah and an American Army officer in 1838, just after the Cherokee were forced to march to Oklahoma along the Trail of Tears.**
Logical-Mathematical	**Have a student figure out approximately how many Indians died on the route to Oklahoma (a fourth of 18,000).**
Logical-Mathematical **Spatial**	**Sequoyah, a Cherokee Indian, created an alphabet. Develop or create an alphabet of your own. Make up a new symbol for each letter in the alphabet and then write a message using the new symbols.**
Spatial	**Compare the size of Indian lands before 1750 with the size of Indian lands in 1800, and their lands in 1850.**
Spatial	**Imagine that the government is sponsoring a competition for a memorial to the Indians who died on the Trail of Tears. Make a model or drawing of your design for the memorial. Your memorial may be a statue, a mural, a park, or a list of names.**
Interpersonal	**Imagine you are Indians and you have to decide what to do about the settler problem. Have students argue opposing points of view.**
Intrapersonal	**Suppose a group of strangers moved to your neighborhood and tried to buy up every piece of available land, at bargain prices. What would you think? Would you sell land to them? Write a response paper to this problem and what you would do.**
Musical **Bodily-Kinesthetic**	**Students participate in a friendship dance. Two students begin by playing a slow steady rhythm with the drum and rattle. Two boys stand side-by-side; they do a slow shuffling step one time around a circle. Each boy asks a girl to join. The four, side-by-side, then shuffle one time around the circle. Each girl then asks a boy to join . The six, still side-by-side, dance in a circle. The dance continues in this way until everyone joins the dancing circle.**
Bodily-Kinesthetic	**The Cherokee played a stickball game lacrosse called Anetsa. The field was 230' long and the goal post was 20' high. Players used one or two webbed sticks to toss, catch, or carry the ball. Have them make their own playing stick and a ball made of three to four sheets of newspaper covered with masking tape.**

LITERATURE CONNECTION

Pioneer Trails

Title	Author	Publish Date
The Oregon Trail	Leonard Fisher	1990
Oregon Trail	Laurence Santrey	1985
Daniel Boone and the Wilderness Road	Catherine Chambers	1984
The Defenders	Ann McGovern	1970
The Light in the Forest	Robert Conrad	1953
Streams to the River, River to the Sea	Scott O'dell	1986
The Sign of the Beaver	Elizabeth George Spear	1983
Trouble River	Betsy Byars	1988
Wait for Me, Watch for me, Eula Bee	Patricia Beatty	1978
I am Regina	Sally Keenh	1991
Erie Canal	P. Spier	1970
Daniel Boone	Keith Brandt	1983
Going West: Cowboys and Pioneers	Matine Cortault	1989
Davy Crocket	Naunerle Farr	1979
If you Traveled West in a Covered Wagon	Ellen Levine	1976
Davy Crockett: Hero of the Wild Frontier	Elizabeth Moseley	1991
The Plains Across	John Unrah	1979
The Lewis and Clark Expedition	Patrick McGrath	1986
The Story of the Erie Canal	Conrad Stein	1985
The Railroads' Opening the West	Dennis Flatley	1989
The Sante Fe Trail	David Lavender	1995
Wagon Train	Gersham Griffith	1995
West by Covered Wagon	Dorothy Patent	1995
Frontiermen	Gail Stewart	1990
Sacajawea and the Journey to the Pacific	Ingoglia	1992

Pioneer Spirit

Title	Author	Publish Date
Pioneer Child of Appalachia	Joan Anderson	1986
The Prairie Schooner	Glen Rounds	1978
Araminta's Paint Box	Karen Acherman	1990
Beats Me Claude	Nixon	1980
If You Say So Claude	Nixon	1980
Fat Chance Claude	Nixon	1980
Cassie's Hourney: Going West in the 1860's	Brett Harvey	1988
For Ma and Pa on the Oregon Trail, 1844	Wilma Pitchford	1972
Grasshopper Summer	Ann Turner	1989
Dakota Dugout	Ann Turner	1985
Trouble for Lucy	Carla Steven	1979
Wagon Wheels	Barbara Bremmer	1978
Paul Bunyun	Steven Kelly	1984
Pecos Bill	Steven Kellogg	1986
Joshua's Westward Journal	Joan Anderson, George Anacona	1987
The Matchlock Gun	Walter Edmonds	1941
Save Queen of Sheba	Louise Moeri	1981
Spanish Pioneers of the Southwest	Joan Anderson	1989
Fiesta U.S.A.	George Ancona	1995
American Alive	Ian Schoenherr	1995

Frontier Life

Title	Author	Publish Date
Pioneers	Francence Sabin	1985
Children of the Wild West	Russell Freedman	1983
How the Settlers Lived	George and Ellen Laycook	1980
The Little House Cookbook	Barbara Walker	1979
Pioneer Women: Voices from the Kansas	Joanne Stratton	1981
Plenty of Patches: An Introduction to Patchwork, Quilting, and Applique	Marilyn Ratner	1978
Prairie Visions	Pam Conrad	1991
Three Names	Patricia MacLachlin	1991
Prairie Songs	Pam Conrad	1985
Log Cabin Home	Catherine Chambers	1984
Square Dancing For Me	Mildred Hammond	1983
The Story of the Women Who Shaped the West	Mary Virginia Fox	1991
My Prairie Christmas	B. Harvey	1990
Caddie Woodlawn	Carol Ryrie Brink	1935
Oxcart Man	Donald Hall	1979
The Josephina Story Quilt	Eleanor Coerr	1978
The Little House	Laura Ingalls Wilder	1965
The Quilt Story	Tommy Johnston	1985
Sarah, Plain and Tall	Patricia MacLachlin	1985
Black Eyed Susan	Jennifer Armstrong	1995
Call me Francis Tucket	Gary Paulsen	1995
The Quilt Block History of Pioneer Life	Mary Cobb	1995
Sod House on the Great Plains	Glen Rands	1995

California and Gold Rush

Title	Author	Publish Date
California Gold Rush	Catherine Chamber	1984
Gold Rush Adventures	Edith McCall	1968
The American Gold Rush	Rhonda Blumberg	1989
Levi Strauss: The Blue Jeans Man	Elizabeth Van Steenwyck	1988
Beyond the Great Divide	Kathryn Lasky	1983
By the Great Horned Spoon	Sid Fleischmann	1963
Jonathan Down Under	Sid Fleischmann	1963
Klondike Fever	Micael Cooper	1989
The World Rushed In	J. S. Holliday	1981
Patty Reed's Doll	Rachel Laurgaard	1956
Mr. Mysterious & Company	Sid Fleischmann	1962
Valejo and the Four Flags	Esther Comstock	1979
Decline of the Californias	Leonard Pill	1966
The Transcontinental Railroad	Marilyn Miller	1989
The Story of the Gold at Sutter's Mill	Conrad Stein	1981
The Bandit at Mok Hill	Evelyn Campman	1969
Whispers from the First Californians	Gail Faber and Michele Lasagna	1980
The New Enchantment of America California	Allen Carpenter	1978
Nine for California	Levitin	1996
Song of the Swallows	Politi	1948
The Rainbow Bridge - A Chumash Legend	Kerry Nechodom	1992
The United States in the Mexican War	Don Lawson	1976

Cowboys

Title	Author	Publish Date
Cowboys	Glen Rounds	1991
Cowboys of the Wild West	Russell Freedman	1983
Reflections of a Black Cowboy	Robert Miller	1991
Paintbox on the Frontier	Alberta Wison Constant	1974
Songs of the Wild West	Dan Fox & Alan Axelrod	1991
Cowboy Dreams	Dayal Khalsa	1990
Justin & the Best Biscuits in the World	Mildred Walter Pitts	1986
Rosie and the Rustlers	Roy Gerrard	1989
White Dynamite and the Curly Kid	Bill Martin Jr.	1986
Hunter's Stew and Hangtown Fry	Lila Perl	1977
Going West: Cowboys an Pioneers	Martina Cortault	1989
Why Cowboys Sleep with Their Boots On	Laurie Lazzaro Knowlton	1995
Home on the Bayou: A Cowboy's Story	G. Brian Karas	1996
Cowboys: Roundup on an American Ranch	Joan Anderson	1996
Let's Rodeo. Young Buckeroos and the World's Wildest Sport	Robert Crum	1996
Fact or Fiction: Cowboys	Stewart Ross	1995

Appendix B

Instruction and Methodology

Instruction and Methodology Handbook Contents

INSTRUCTION AND METHODOLOGY

Multiple intelligences theory makes its greatest contribution to education by recommending that teachers expand their instructional techniques and strategies beyond the typical linguistic and logical-mathematical approach used in the traditional American classroom. Within the multiple intelligences classroom, the teacher continually shifts methods of instructional delivery from linguistic to spatial to musical and so on and even combines intelligences in creative ways. The teacher offers all students as many different approaches as possible to facilitate learning. Some of the multiple approaches include cooperative learning, thematic units, the use of centers, open-ended projects, individualization, and the use of technology.

In order for schools to provide opportunities for all students to learn and develop, instruction must be delivered in ways that address the students' dominant intelligences. Using multiple intelligence strategies, students are able to process information through their strength intelligence into their less dominant intelligences. The translation process is a way to empower students to learn through their dominant intelligence while strengthening their weaker intelligences. Quality instruction is linked to content that addresses the basic skills. It is delivered through applications of all seven intelligences to allow students to process information through their dominant intelligences. The teachers instruct , facilitate, coach, model, and guide the growth and development of students.

Cooperative learning actively engages interpersonal intelligence, teaches students to work together, and encourages collaboration. In cooperative learning all

group members need to work together to accomplish the task. The groups should be heterogeneous. The activities need to be designed so that each student contributes to the product and group members can be assessed individually on their performance. The groups need to know the social and academic objectives of the lesson.

Themes cut through traditional curricular boundaries and weave together subjects and skills that are interwoven in real life. Themes provide students with opportunities to use their multiple intelligences in practical ways. Centers can be used to engage the seven intelligences of students on a daily basis. The curriculum is based upon thematic units. Groups spend part of the day rotating through centers. Each student is responsible for completing individual as well as group assignments. Various activities available at each center provide opportunity for success. Other types of centers could also be adapted to the multiple intelligence classroom.

Open-ended projects provide opportunities for students to select projects which are best suited to their strongest intelligence. Students participate in the same unit or theme but they are free to choose the topic and/or the approach that best suits their interest or talents. The teacher may initially guide the students on how to decide on a project. Students also need to have criteria clearly stated in order to set and reach goals.

Individualized instruction requires the initial evaluation of each child and identifying and implementing an instructional program which enables each child to achieve his or her full potential. Each student is able to progress at his or her own

pace. The teacher acts as a facilitator and works with individuals or small groups on specific concepts.

The use of new technology provides a degree of interactive learning that has been impossible to achieve with traditional learning materials. Multimedia computer systems have the ability to meet the needs of students with different intelligences. Technology provides students with access to information and resources that are not available in the traditional classroom setting.

PROFILES OF MULTIPLE INTELLIGENCE CHARACTERISTICS

LINGUISTIC LEARNER
"The Word Player"

Reads

Writes

Tells stories

Learns best by saying, hearing, and seeing words.

Does well memorizing names, places, dates, and facts.

LOGICAL MATHEMATICAL LEARNER

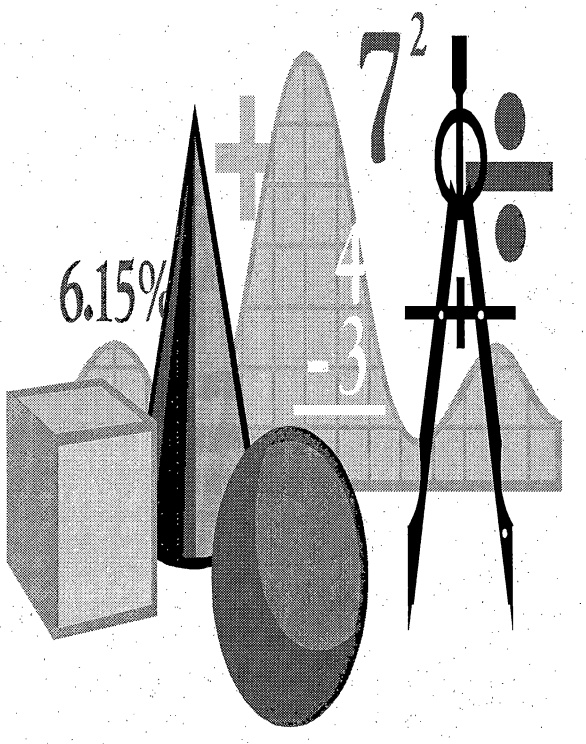
"The Questioner

does experiments

figures things out

works with numbers
asks questions

explores patterns and relationships

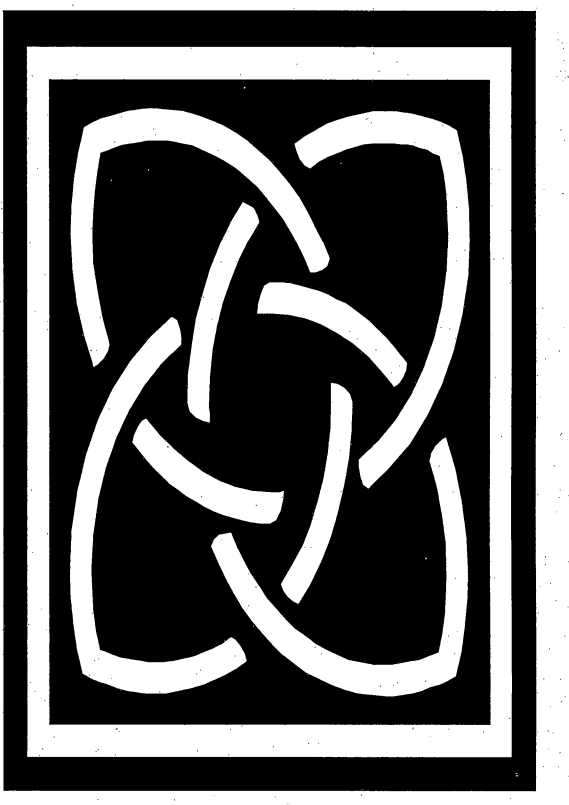


Learns best by categorizing, classifying, working with abstract patterns and relationships.

Does well with math, reasoning, logic, and problem solving.

SPATIAL LEARNER
"The Visualizer"

draws, builds, designs, and creates things



daydreams

looks at pictures and slides

watches movies

plays with machines

Learns best by visualizing, dreaming, using the mind's eye, working with colors and pictures.

Does well imagining things, sensing changes, mazes and puzzles, and reading maps and charts.

BODILY-KINESTHETIC LEARNER
"The Mover"

moves around

touches and talks

uses body language

Learns best by touching, moving, interacting with space, processing knowledge through bodily sensations.

Does well at physical activities (sports/dance/acting), crafts.

MUSICAL LEARNER
"The Music Lover"

sings

hums tunes

listens to music

plays an instrument

responds to music

Learns best by rhythm, melody, and music.

Does well picking up sounds, remembering melodies, noticing pitch, rhythms and keeping time.

INTERPERSONAL LEARNER
"The Socializer"

has lots of friends

talks to groups

joins groups

Learns best by sharing, comparing, relating, cooperating, and interviewing.

Does well understanding people, leading others, organizing, communicating, manipulating, and mediating conflicts.

INTRAPERSONAL LEARNER
"The Individual"

works alone

pursues own interests

Learns best by working alone, individualized projects, self-paced instruction, and having own space.

Does well understanding self, focusing inward on feelings and dreams, following instincts, pursuing interests goals, and being original.

ACTIVITIES TO SUPPORT MULTIPLE INTELLIGENCES

Activities to Support the Linguistic Intelligence

Logical-Mathematical

- **Story mapping**
- **Reasoning skills like analogies, palindromes, and comparing and contrasting**
- **Crossword puzzles**
- **Logical humor; for example, riddles, puns and jokes**
- **Flow charts**

Spatial

- **Book making**
- **Alphabetizing**
- **Playing games, such as Scrabbles and Boggle**
- **Labeling diagrams**
- **Cartooning**

Bodily-Kinesthetic

- **Scavenger hunts**
- **Keyboarding on the word processor and handwriting**
- **Finger plays and puppet shows**
- **Charades and pantomime**
- **Dramatic play**

Musical

- **Creating poetry**
- **Writing lyrics**
- **Detecting meter and pattern in poetry (limerick, haiku)**
- **Performing an opera**
- **Using a Karaoke machine and lip-synching**

Interpersonal

- **Oral presentations or story telling**
- **Collaborative writing**
- **Panel discussions or debates**
- **A persuasive article or "how to" story**
- **Partner and choral reading**

Intrapersonal

- **Show and Tell activities and Persons of the Week interviews**
- **Books for choice reading**
- **Personal narratives, journal writing or experience charts**
- **Tape recorded reflections**
- **Questionnaires**

Adapted from a form developed by the faculty of the New City School (1994).

Activities to Support the Logical-Mathematical Intelligence

Linguistic

- **Thinking strategies (for example, *Mind Benders* by Anita Harnadek**
- **Time lines**
- **Statistical analysis to create story problems**
- **Computer programming**
- **Students make up the problem**

Spatial

- **Manipulatives like Unifix cubes, Cuisenaire rods, pattern blocks, geo-solids and geo boards**
- **Puzzles and mazes**
- **Story mapping**
- **Tessellations**
- **Tangrams**

Bodily-Kinesthetic

- **Orienteering**
- **Duration activities**
- **Building and constructing with blocks**
- **Using your body for constructing graphs, Venn diagrams, patterning and people sorting**
- **Determining probability by shooting basketballs or rolling dice**

Musical

- **Create your own time signatures and musical notations**
- **Put number problems to music**
- **Turn logic stories into chants or raps**
- **Play instruments by following different time signatures**
- **Clap patterns and rhythms**

Interpersonal

- **Plexirs**
- **Board games**
- **Strategy games**
- **Cooperative skill building**
- **Problem-solving**

Intrapersonal

- **Estimate/Predict**
- **Use deductive reasoning**
- **Write in math journals**
- **Create your own story problems from your life experiences**
- **Identify math problems you deal with in your own life**

Adapted from a form developed by the faculty of the New City School (1994).

Activities to Support the Spatial Intelligence

Linguistic
- Story maps
- Flannel boards
- Comic strips
- Mind maps
- Posters and display boards

Logical-Mathematical
- Puzzles and mazes
- Pattern Blocks and Cuisennaire rods
- Scale models
- Construction of maps and time lines
- Chess, checkers, and other strategy games

Musical
- Set up an orchestra using paper models of instruments
- Create a floor plan of the symphony
- Learn to dance
- Develop a musical notation system
- Make musical instruments

Bodily-Kinesthetic
- Building with geometric solids, blocks or manipulatives
- Painting with different tools
- Quilting, clay, papier mâché and other crafts
- Orienteering
- Constructing models from plastic kits or making origami animals

Interpersonal
- Create an environment
- Make dioramas
- Design costumes
- Create architectural designs and construct floor plans
- Be aware of one's body in space

Intrapersonal
- Murals
- Collages
- Choreography
- Blindfold activities
- Finger puppets

Adapted from a form developed by the faculty of the New City School (1994).

Activities to Support the Bodily-Kinesthetic Intelligence

Linguistic

- **Play a game to practice content (for example, catch the ball and answer a question or juggle while spelling words)**
- **Use sign language**
- **Prepare demonstrations**
- **Write or make letters using the body**
- **Practice spelling words by writing words with a paintbrush and water or drawing the words in the sand or on someone's back**

Logical-Mathematical

- **Solve problems using manipulatives**
- **Create floor graphs using bodies**
- **Solve story problems by acting them out**
- **Practice Chisanbop and other finger counting systems**
- **Use body math to reinforce patterning, estimating, shapes, and counting**

Spatial

- **Using tools while cutting or taking apart machines**
- **Creating play dough and clay sculptures**
- **Building**
- **Hair braiding**
- **Sewing, Quilting, and weaving or other craft activities**

Musical

- **Dancing**
- **Playing a musical instrument**
- **Jogging, Jumping rope, and exercising to music**
- **Story telling through musical performances**
- **Creating rhythms using one's body**

Interpersonal

- **Acting techniques that require the artist to become a character**
- **Individual sports**
- **Meditation and yoga**
- **Hobbies like gardening or cooking**
- **Activities to avert anger or frustration (for example, hitting pillows, tearing paper or squishing playdough)**

Intrapersonal

- **Role playing**
- **Drama, mime, and charades**
- **Athletics or sports**
- **People as game pieces during floor games like chess or checkers**
- **Facial expressions**

Adapted from a form developed by the faculty of the New City School (1994).

Activities to Support the Musical Intelligence

Linguistic

- **Compose a song, rap, jungle or melody**
- **Say things to rhythm**
- **Spell to music by singing each letter to a beat**
- **Retell a story by rewriting the words to a familiar tune**
- **Find music to accompany parts of a story which demonstrate the mood**

Logical-Mathematical

- **Assign sounds to pattern elements and play the pattern**
- **Connect fractions with music, i.e., whole notes, half notes**
- **Compare and contrast musical styles from a historical perspective**
- **Sort instruments into the four basic groups--strings, brass, woodwind, percussion**
- **Sort and classify music by style, genre, or instrumentation**

Spatial

- **Paint a picture of musical instruments**
- **Make apple doll or puppet composers**
- **Listen to a musical work and draw the visual image you get or what you think the composer looks like**
- **Design a new musical instrument**
- **Create a symbol system to record music**

Bodily-Kinesthetic

- **Make up a dance with instrumental accompaniment**
- **Experiment with unconventional instruments and sound**
- **Interpret a rhythm through role-playing**
- **Lip-synch a song**
- **Use your body to make music**

Interpersonal

- **Design musical board games such as "Instrument Bingo" or "Composer Concentration"**
- **Turn a song into a finger game, story, puppet show or play**
- **Play circle games like "Miss Mary Mac," "Down, Down Baby," or "Sally Walker"**
- **Learn musical games from other countries**
- **Practice and invent jump rope rhythms**

Intrapersonal

- **Have music playing in the background during other activities**
- **Create a music montage**
- **Become a DJ for ten minutes and record selections to fit your mood**
- **Listen to music and think about how it affects you. What makes you move, lie still, smile, turn off the music?**
- **Compare yourself to a musical instrument or piece of music**

Adapted from a form developed by the faculty of the New City School (1994).

Activities to Support the Interpersonal Intelligence

Linguistic

- **Debate or panel discussions**
- **Person of the Week interviews**
- **Partner poems or group story writing**
- **Peer support groups**
- **Reciprocal teaching or jigsawing**

Logical-Mathematical

- **Develop a flow chart to show classroom or playground rules the class has developed**
- **Chart or graph interactions during television shows**
- **Play strategy games-competitive and non-competitive**
- **Describe a pattern you have made while someone else tries to copy it**
- **Sort students by favorite activities or personality attributes**

Spatial

- **Design a group mural**
- **Make partner drawings**
- **Create a group quilt**
- **Describe a picture you have drawn while your partner tries to recreate it**
- **Redesign book covers for the same book or story to show different perspectives or points of view**

Musical

- **Playing instruments with others**
- **Singing with a group**
- **Composing a round from a familiar song that reinforces a skill**
- **Creating group rhythmic patterns**
- **Matching music to moods**

Bodily-Kinesthetic

- **Role playing or creative dramatics**
- **Playing at recess**
- **Providing a service to another group of people**
- **Sending, receiving and interpreting messages through gestures, Morse Code, flags or sign language**

Intrapersonal

- **Murphy-Meisgeier Type Indicator for Children**
- **Trust and team-building activities**
- **Partnering and Big Buddy activities with other grades**
- **Appreciation Statements**
- **Rubrics or rating sheets for activities**

Adapted from a form developed by the faculty of the New City School (1994).

Activities to Support the Intrapersonal Intelligence

Linguistic

- **Write "Dear Abby" letters asking for advice**
- **Administer an interest or personality inventory**
- **Write in journals or create diary entries as a character in a story**
- **Record "How I feel" statements on a tape**
- **Act like objects that describe you**

Logical-Mathematical

- **Create charts and graphs of interests**
- **Construct Venn diagrams to show how students are similar or different**
- **Construct a feelings mind map**
- **Explain what climate you prefer and why**
- **Make a personal time line**

Spatial

- **Use magazine pictures to create a personal collage**
- **Put together a mobile that shows who you are**
- **Create a mind map of your likes and dislikes or interests**
- **Draw or paint self-portraits**
- **Develop a slide show or photo display to show who you are**
- **Design your dream room**

Musical

- **Bring in music that reminds you of a special time in your life**
- **Listen to a song and describe how it makes you feel**
- **Create body music that shows your feelings**
- **Share your favorite song with the class**
- **Construct a melody**

Bodily-Kinesthetic

- **Visualize through movement a part of a story and create a story from that point of view**
- **Listen to a made-up situation; use body movement to react**
- **Assume the role of a character using voice and body language**
- **Do needlework that expresses a belief or feeling.**
- **Construct own personal space using Legos or other material**

Interpersonal

- **Conduct a "Magic Circle" (Human Development Corporation)**
- **Analyze your role in a group**
- **Request feedback and react to it**
- **Describe yourself, have a classmate describe you, then compare**
- **Role-play the ending to an open-ended story or situation**

Adapted from a form developed by the faculty of the New City School (1994).

Appendix C

Assessment

Assessment Handbook Contents

ASSESSMENT

The focus of assessment on the growth and progress of each student is an integral part of the learning process. Assessment should reflect day-to-day teaching in order to guide students in their learning. The growth of the students and their ability to complete products and performances should be the focus of assessment. Teachers need to assess both what each student can do and cannot, in order to enable both the teacher and student to set future learning goals.

Integration of multiple intelligences into the assessment process can be achieved through classroom portfolios, video and/or musical productions, exhibitions, classroom demonstrations, peer review, discussions, simulations, dioramas, sculpture, and problem solving situations. A multiple assessment system provides opportunities to identify the unique capabilities of each student.

The classroom teacher needs to develop an awareness of the dominant intelligences and talents of their students. Dominant intelligences could be identified through daily observations or a diagnostic test such as the Teele Inventory of Multiple Intelligence (Teele, 1994). The Teele Inventory of Multiple Intelligence test provides for discovery of the dominant intelligences of students, independent of language, and can be given to all grade levels.

Observations within the classroom can be another assessment tool but they must be structured, documented, and repeated at regular intervals. Observations can be structured by being linked to specific activities. A checklist is a list of things to be checked off by the observer. In order to make a meaningful checklist, it is

necessary to do a task analysis. The teacher needs to identify the key elements of the task that results in the achievement of a particular goal.

Rubrics provide teachers with a basis on which to score selected pieces of work. The criteria is set in advance for a particular task. Rubrics are shared with and sometimes developed by students. Rubrics set the standard by which the work will be judged.

Anecdotal records are observations comprised of positive comments which document the development and growth of students. The observations are interpreted based on the judgment of the teacher and focus on specific skills. Anecdotal records are recorded by student name and date of observation.

Portfolios are a method of authentic assessment which are composed of a variety products. The products in a portfolio could include creative writing, journals, projects, videos, audio tapes, art projects, and group activities. Portfolios provide a way to look at student work, compare work at different stages, and observe progress over time.

Reflections are a form of self-assessment. They can be used by all students to assess themselves. Reflections on work can take a variety of forms from writing a brief analysis of the quality of the work to reflecting on how group members worked together on an assignment. Reflection is an important component of any portfolio because it requires the student to evaluate the their effort as well the product.

Initial Planner for Product

To show that I know about _____ I would like to:

_____ teach it to someone else_____

_____ write a letter/journal_____

_____ create movement_____

_____ build your own_____

_____ put on a demonstration_____

_____ design a timeline_____

_____ create a game/puzzle_____

_____ develop a model/chart/map/mural/poster_____

_____ tape record or give a talk_____

_____ interview_____

_____ create rhythmic patterns and record lyrics_____

_____ create a song or lyrics_____

_____ develop a project not listed above_____

_____ other_____

Brief description of what I intend to do:

_____
Signature of Student

_____
Signature of Teacher

Unit Culmination Rubric

Name_____

Group Members: _____ _____

_____ _____

	Group Assessment		Teacher Assessment	
Finished Product or Exhibit	☺	☹	☺	☹
1)				
2)				
3)				
4)				
Steps to Production or Process				
1)				
2)				
3)				
4)				
5)				
6)				

☹ = revisit project

Portfolio Reflection Sheet

Title of Work_____ **Name**_____
Date_____ **Teacher** _____

This work exhibits the following of my multiple intelligences:

□ **Logical/Mathematical** □ **Linguistic** □ **Spatial/Artistic**
□ **Musical** □ **Bodily-Kinesthetic** □ **Interpersonal**
□ **Intrapersonal**

Product
I worked on this project:

□ **alone** □ **with the help of a teacher and/or friend**
□ **in a group** □ **other**_____

I have chosen this piece in my portfolio because:

_____

_____

_____

This work shows that I know about:

_____

_____

_____

I like this piece because:

_____

_____

If I could change one thing about this piece I would:

_____

_____

_____

Portfolio Assessment Sheet

I. Student Response:
The item I am proudest to show you is:

_____

_____

I think I could do better on:

_____

_____

If I could ask one question about what we just studied it would be:

_____

_____

***Rating: I would give myself * * * * *** _____

II. The Teacher Response:
I really enjoyed:

_____

_____

I would like to see time:

_____

_____

The answer to your question is:

_____

_____

My overall impression of your portfolio is:

_____

_____

***Rating: I would rate this work: * * * * *** _____

Student Signature_____

Teacher Signature_____

PORTFOLIO SELECTION

Subject Area_____ **Date**_____
Name of Selection_____

This work exhibits the following of my multiple intelligences:

□ **Logical/Mathematical** □ **Linguistic** □ **Spatial/Artistic**
□ **Musical** □ **Bodily-Kinesthetic** □ **Interpersonal**
□ **Intrapersonal**

I chose this performance for my portfolio because:

_____
_____
_____
_____
_____

I think the best thing about this performance is the:

_____
_____
_____
_____
_____

If I could do it again, I would change:

_____
_____
_____
_____
_____

Teacher Comments:

_____
_____
_____
_____
_____
_____

Portfolio Assessment Contents

Name_____
Year/Quarter_____

Date	Subject	Assignment	Intelligence

Your child has put together a portfolio of their work from the _____ quarter of the year. The student has selected what they believe is the best work they have done this quarter. Please take this opportunity to go over their portfolio with them. After you and your child have gone through the portfolio, please comment on how you think your child is doing in school, the progress that they're making, or anything else that you'd like to comment on. Your child and I will be keeping their portfolios at school until the end of the year.
Please return the portfolio to school on_____

Parent Signature and Comments:

GOAL SETTING: A STUDENT-PARENT-TEACHER PROCESS

Student's name_____
Grade_____
Teacher_____

INTERPERSONAL: self confidence, responsibility, self management, ethics

INTERPERSONAL: relationship with others, respect, multi-cultural understanding, solving problems

WORLD-UNDERSTANDING: science, social studies, visual arts, media, multi-cultural global studies

LINGUISTIC: reading, writing, speaking, media

LOGICAL-MATHEMATICAL: math visual problem solving

SPATIAL: visual arts, geometry, spatial reasoning

BODILY-KINESTETIC: physical education, dance, physical coordination

MUSICAL: vocal, instrumental, culture

OTHER GOALS: your life beyond the classroom

Student Signature_____

Parent Signature_____

Teacher Signature_____

Adapted from a form developed by Launa Ellison (Clara Barton School, 1991).

Appendix D

Resources

Teachers' Multiple Intelligence Resources

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