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Integrating reading, language arts, science, and social studies curriculum with the use of technology

Bonney Elizabeth Waters

INTEGRATING READING, LANGUAGE ARTS, SCIENCE, AND SOCIAL

STUDIES CURRICULUM WITH THE USE OF TECHNOLOGY

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:

Instructional Technology

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by

Bonney Elizabeth Waters
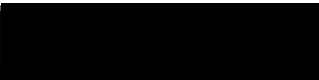
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ABSTRACT

The purpose of the project was to develop three
thematic units for fifth grade that integrate California
State Standards in Reading, Language Arts, Science, and
Social Studies with the use of technology. The benefits
of doing so allows instructional time to be spent on more
in depth study of the disciplines, students make
connections across curriculum which allows them to
develop a deeper understanding of what is being taught.
Also, integrating curriculum with technology engages
students and allows them to have more control over their
learning environment. When students are actively involved
in what is being taught, they will internalize the
information for better understanding.

ACKNOWLEDGMENTS

I would like to express gratitude to Timothy Thelander, a graduate assistant at California State University San Bernardino, for offering his advice pertaining to this thesis. His words of encouragement influenced me in to completing this project.

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CHAPTER ONE

INTRODUCTION

Introduction

Chapter One begins with an explanation of the
project. In each of its own subsection the purpose of the
project is stated followed by the context of the problem,
project overview, significance of the project,
assumptions, and limitations. Finally, definitions of
terms are presented.

Purpose of the Project

The purpose of the project was to design curriculum
using three thematic units for fifth grade that integrate
California State Standards in Reading, Language Arts,
Science, and Social Studies with the use of technology.
Integrating these subjects will allow more instructional
time in Science and Social Studies. Also, the units are
designed to engage students in what they are learning.

Context of the Problem

Palm Springs Unified School District adapted and
implemented a new reading program to raise test scores on
the norm reference state test in Reading and Language

Arts. Because of this implementation, the district requires the majority of instructional time each day to be spent in the areas of Reading and Language Arts leaving instructional time for Science and Social Studies extremely limited. A solution to the problem is to find a way to teach Science and Social Studies within Reading and Language Arts content areas. By doing so, the majority of instructional time each day would be spent in the areas of Reading and Language Arts at the same time teaching Science and Social Studies.

Project Overview

The project involves curriculum design that integrates Reading, Language Arts, Science, and Social Studies content areas for fifth grade. Within the design, three thematic units are developed that expand over a period of one school year. Each unit takes approximately six to eight weeks to complete, based on spending two to two and a half hours per day, four to five days a week with access to computer technology each day.

All three units require students to develop an end product that demonstrates what was learned such as group presentations, reports, and skits. The difference between

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these units is how the end product is accomplished. For instance, in the beginning of the school year, the first unit is structured so that the students are guided through each step in the development process, which includes conducting research and deciding on the form of final presentation. Then, in the middle of the school year, the second unit is structured so that students accept more responsibility and less guidance than in the first unit to develop the end product. Here, students conduct research with less guidance and have more freedom to be creative in their form of final presentation. Towards the end of the school year, the third unit is structured in a manner that allows students to accept even more responsibility than in the second unit and continues to have less guidance in developing the end product. By this time, students are capable of conducting research on their own without too much guidance. Also, having experience throughout the school year with various presentation methods, they are able to choose an adequate form of final presentation fairly easily.

Several teaching strategies are used in developing each unit to ensure student success such as student cooperative groups, English language development methods,

and the use of technology to enhance performance. Also,
several resources are used in each unit that includes,
but not limited to, Internet Web sites, videos,
textbooks, and literature pertaining to topics of study.
Finally, various forms of assessment, both formal and
informal, are built into the units. The degree to which
assessment is measured for these units is to insure
mastery of the standards being taught.

Significance of the Project

The Significance of the project was to address the
importance of meeting California State Standards for
fifth grade in Reading, Language Arts, Science, and
Social Studies. However, raising test scores on the norm
reference state test in Reading and Language Arts while
meeting Palm Springs Unified School District's new
reading program was equally as important. In order to
meet standards and raise test scores, integrating
Reading, Language Arts, Science, and Social Studies is a
solution.

This project involves developing three thematic
units for fifth grade that focus on Science and Social
Studies topics within the areas of Reading and Language

Arts. Combining these subjects allows teachers to utilize instructional time in a more effective manner at the same time students are able to make connections across curriculum areas and become engaged in what they are learning.

Assumptions

The following assumptions were made regarding the project:

1. There is access to the following technology equipment such as computers, Internet connection, Encyclopedia software, word processing software, presentation software, video camera, video editing software, and means to edit and view videos.

2. There is access to a library with selections that relate to the thematic units within the subject as well as district adopted textbooks.

Limitations

During the development of the project it was noted that a needs assessment was not conducted. Also, the formative evaluation was not an in depth evaluation of

the project. Because of these, it presents limitations to the project.

A needs assessment is a survey that is given to a group of people with similar interest in order to assess whether or not a particular need is present. For this project, the question is whether or not there is a need for integrating curriculum. Knowing the answer could have had an impact on the project.

A formative evaluation involves an in depth examination of a product conducted by groups of people with special points of interests. For this project, these groups were not asked to conduct an in depth evaluation to the existent of running trail studies of the project or assessing final revisions. Without this type of formative evaluation, the project could have faults in the design and development stages.

Definition of Terms

The following terms are defined as they apply to the project.

The terms instructional design and instructional technology are used in much of the literature in relation to programs. The following definitions are used to

clarify these terms. Instructional design is the method of development for instructional specifications using instructional theory and learning to ensure the quality of instruction. Instructional technology is a form of instruction using computers, computer applications such as multimedia (digital integration of text, graphics, audio, still images, animation, motion video, etc.), and computer software (Semple, 2000).

Organization of the Thesis

The thesis portion of the project was divided into Four chapters. Chapter One provides an introduction to the purpose of the project, context of the problem, significance of the project, and definitions of terms. Chapter Two consists of a review of relevant literature. Chapter Three documents the steps used in designing and developing the project. Chapter Four presents conclusions and recommendations drawn from the design and development of the project. Project references follow Chapter Four.

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

Chapter Two consists of a discussion of the relevant literature to the project. Specifically, the benefits of integrating technology in classrooms, the effects of technology on learning environments, and the integration of curriculum with the use of technology.

Integrating Computers

Integrating computers in classrooms has been a popular idea for sometime. Many studies on this topic have been performed and the majority agrees on the benefits of implementing computer technology in classrooms. However, the degree of successful implementation in that computers were used to stimulate cognitive thinking processes is worth examining. The following researches give examples of attitudes towards the use of computers in classrooms over the last decade and more. They offer a perspective on the idea of using computers to learn with versus to learn from. The one idea, learning with computers, sees computers as a tool to invoke thinking processes where the other sees

computers as a tool for entertainment or drill and practice routines.

Looking at research that was performed in the late 1980s, over a decade ago, is a good place to start. These studies will demonstrate attitudes towards technology when classroom integration was a fairly new idea.

The title of this article is *The Changing Nature of Teaching and Learning in Computer-Based Classrooms* by Swan and Mitrani (1993). The main focus here is how the level of computer integration between students and teachers has changed the nature of teaching and learning. The use of computers creates a new classroom environment, one that is more student-centered and cooperative, and classrooms in which learning is more individualized. These changes in educational structure will most likely appear at the level of individual interactions among students, teachers, and computers.

Two high schools located in Brooklyn and Staten Island participated in the study reported in this article. The subjects were 185 at-risk students, 13 teachers, and paraprofessionals in seven remedial reading and seven mathematics classes. Two competency-based, hierarchical systems in which individualized lessons and

unit sequences based on students' performance were

utilized. These schools had offered the researchers an

opportunity to be able to study the same students and

teachers using differing environments due to the reason

of teaching and learning that was evenly split between

traditional classroom and computer-based settings (Swan &

Mitrani, 1993).

The interest of the study was based on possible

differences in two areas described as being affected by

the use of computers: student- versus

teacher-centeredness, and whole group versus

individualized instruction. The results of the study

demonstrated a significant change in teaching and

learning in computer-based classrooms versus teaching and

learning in traditional classroom settings. The changes

that were noted are the attitudes of the students and the

interaction they have with their teachers. Students told

researchers that having control over their own learning

was the best thing about using computers (Swan & Mitrani,

1993).

Advocates for educational computing have argued that

computer usage will significantly change teaching and

learning (Swan & Mitrani, 1993). This study proved this

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argument. Although the study was conducted in the school year 1989-1990, it demonstrates the effects of computers in the classroom. This is important for the idea of integrating computers in classrooms.

The article *First Year Elementary School Teachers' Utilization of Instructional Media* by Descy (1992) is another study that demonstrates attitudes towards integrating computers. What is interesting about this article is that the study was conducted 10 years ago and the concerns described in the study are similar to ones of today. Teachers at all levels do not incorporate large amounts of media into their lesson. They prefer traditional means of instruction. Cited within this article was a quote taken from another study, preformed over 20 years ago, where the researchers stated that " . . . the majority of teachers are afraid of media equipment, are unaware of resources available, and are unwilling to expand the extra effort required to locate media resources" (as cited in Descy, 1992, p. 16). This is an example of some attitudes that still exists today.

Descy's report is based on a study conducted on first year elementary school teachers who were all graduates from winter 1988 through summer 1989 at Mankato

State University whose first complete year of teaching

was 1989-1990. The purpose of this study was to measure

the extent to which first year elementary school teachers

utilize 21 types of instructional media. The instrument

used was the Descy Instructional Media Survey that

consisted of five pages of information, response

questions on media and computer utilization, questions

concerning attitudes towards media utilization in

general, and their own pre-service media preparation

(1992).

The results of this survey demonstrated a shift in

media utilization practice compared to studies conducted

in previous years. The utilization of computers in the

elementary school classroom is one major shift. 77.1 % of

the respondents used computers in their classroom at

least once a week. As Descy points out "If the American

public education system is to flourish, it is imperative

that teachers utilize instructional media to its fullest

extent. Utilization of instructional media can increase

student achievement, self-image, and attitude towards

instruction" (1992, p. 19).

Although this early study did not describe the type

of computer utilization; for instance, did they use

programs to stimulate cognitive thinking processes, which is undoubtedly important to the future of computers in classrooms? This study stimulates further studies into the integration of computers in the classrooms.

The article *Exploring Individual Characteristics Associated with Learning to use Computers in Preservice Teacher Preparation* by Ropp (1999) addresses the issue brought up in the last article about the need for teachers to utilize instructional media. This study measured the computer attitudes, computer anxiety, computer self-efficacy, technology proficiency, and computer coping strategies among fifty-three teacher preparation students in a semester-long course.

Ropp first mentioned how researchers have studied individual characteristics in relationship to learning to use computers over the past two decades. "These individual characteristics range from motivational variables that foster self-regulated learning to levels of computer anxiety that practically prevent any kind of learning with technology" (Ropp, 1999, p. 403). Negative thoughts toward computers may heighten feelings of anxiety that includes worries about looking foolish, embarrassed, or fear of damaging computer equipment.

Also, beliefs about preservice teachers who demonstrate proficiency integrating technology into their teaching does not necessarily indicate that they will teach using technology. This was the basis for the research conducted in this study.

The research included a survey on individual characteristics that was compiled from four different instruments of previous research. These were adapted into a six-point Likert scale. Students also completed a fast write at the end of the hands-on technology sessions. Nine different background variables; age, gender, computer ownership, computer access, weekly computer use, how many teachers used computers in previous schooling, method of most computer learning, and completed computer courses, were measured and included in the analysis (Robb, 1999).

The conclusions of this research provided evidence that the individual characteristics in relation to behaviors about computers responded in favor of instructional activities. However, further research needs to be conducted to investigate experiences over a longer time period (Robb, 1999).

This next article, *Networked Instructional Computers in the Elementary Classroom and Their Effect on the Learning Environment: A Qualitative Evaluation* by Keeler (1996), researches a school-wide computer implementation project. The results of this study reflected changes in teaching strategies, teacher attitudes, classroom management, classroom climate, and teacher's role in the classroom.

The study took place in an elementary school serving approximately 619 kindergarten through fifth-grade students. A total of 13 teachers, half of teachers at each grade level, were chosen to participate in this one year Teaching-Learning Computer pilot project. Everyone participating received one week of training on the project as well as classroom structures and management. Programs that were used included writing, math, and language arts (Keeler, 1996).

The project had a great impact on this school. Teachers became enthusiastic about their teaching and expressed new excitement and energy in the classroom. Teaching strategies changed as a result of computers. Centers for learning allowed students to discover knowledge for themselves. Teachers felt more informed

about student's performance and were able to spend more time with individuals. Students became actively engaged in what they were learning. There was a switch in the classroom climate from teacher-centered to student-centered instruction. Teachers also found freedom to learn along with their students (Keeler, 1996).

The results of this study reflect a positive attitude toward the use of computers in the classroom. The demands for increased student learning and educational accountability over the past decade has placed educators in a tenuous situation. Changes in schools are becoming necessary. "...computer implementation has the potential to act as a catalyst for change at three levels: the classroom, the building, and the district" (Keeler, 1996, p. 336). Learning should be fun and exciting. Renewed teacher enthusiasm and student motivation creates a fun and exciting learning environment (Keeler, 1996).

The article by Maor, *Teachers-As-Learners: The Role of a Multimedia Professional Development Program in Changing Classroom Practice* (1999), continues the idea of changes in attitudes as a result of computer implementation. This study investigated the

transformation of teachers' thinking of the use of

multimedia programs and constructivist approaches in

their classrooms through a series of professional

development workshops.

The research was conducted through workshops with

secondary mathematics and science teachers. The design of

these workshops was to guide teachers in promoting

constructivist approaches to teaching and learning by

using computers to support students' higher-level

thinking skills. Key factors in this study were how

teachers responded to changes and whether or not those

changes lasted (Maor, 1999).

The results of this study indicate that teachers

preferred working together to solve technical problems

that occurred and to support one another in discussions

about the task at hand. The teachers became aware of

learning approaches that are inquiry-based and they plan

to use it in their classroom. Classroom observations

confirmed teachers implementing what they had learned by

the motivation of students and how they were able to

conduct investigations with little teacher supervision.

This change in classroom learning environment is directly

related to the teachers' participation in the professional development program (Maor, 1999).

This study "...indicates that placing teachers in the role of learners in a novel situation is a strategy which has the potential to bring about epistemological change among the teachers" (Maor, 1999, p. 50). Also, clear instructions of programs, familiarity with the multimedia, and teamwork were pre-conditions for successful inquiry-based learning. Teachers used constructivist-oriented teaching in the classroom, promoted inquiry-based learning, and engaged their students in constructivist learning. This study suggests that future professional development programs include classroom support for teachers during and after completion of the workshop phase (Maor, 1999).

The article *Extending Educational Computing: A Case Extensive Teacher Development and Support* by Parr (1999), is another focus on teacher development and support in implementing technology in the classroom. In this study a fee-paying secondary school (Years 9-12) was used. This teacher-development and support program was in parallel with a plan for technology expansion in the school. It was administered in three phases.

The results of this program indicated clear support for the idea of incremental integration of technology into classrooms. Considerable progress was evident in the year of implementation of technology in terms of increasing staff level of experience and competence as computer users. However, the need to connect computer knowledge with teaching knowledge was apparent. Teachers lacking of classroom use of computers was associated with the lack of quality subject-specific software. Also, open-ended software was not applied towards classroom usage (Parr, 1999). Unlike the previous study, this one needed stronger computer-base instruction for teachers.

The next article, *Investigating Implementation Strategies for WWW-Based Learning Environments* by Oliver, Omari, and Herrington (1998), takes a look at using World Wide Web (WWW) learning activities and their effects on learner behaviors and learning outcomes. The researchers planned and developed WWW-based instructional materials to investigate differences in learner behaviors and achievement brought about by implementations where the controlled variables included student collaboration and use of a printed guide to direct and focus student behavior.

Motivation for this study stemmed from other articles the authors mentioned. These articles discussed how many writers are beginning to question students' exposure and the effectiveness of the WWW-based learning environments. "With any form of information or knowledge, providing students with access to meaningful content does not guarantee learning, a factor frequently overlooked by developers of WWW-based learning materials" (Oliver, et al., 1998, p. 122).

The researchers first developed WWW-based learning materials. They then chose a module from a Multimedia Networking and Communications course that had an enrollment of 60 university students. This course was based on a series of computer-based workshops and lectures. The environment of this course was an ideal setting for this study (Oliver, et al., 1998).

The results of this study supported the researchers beliefs that the use of collaborative groups and support materials are useful implementation strategies in learning environments and support high levels of learner autonomy. Having students work with partners tended to cause each to remain focused on the learning task. The researchers intent to use this form of research to

further study collaboration activities that encourage students to be more attentive to textual information that is presented. "The WWW is a powerful and flexible resource and research of this nature is needed to ensure that its maximum learning potential can be gained" (Oliver, et al., 1998, p. 138).

The drive to reform education is an issue that has been the topic of many discussions. The use of instructional technology in classrooms has been viewed as a strong leader in this reform. The article by Clark, *Urban Middle School Teachers' Use of Instructional Technology* (2000), is a qualitative study that investigated teachers' perspectives on instructional technology. Twenty-eight teachers in a large urban middle school participated in the study.

Clark first reflects on the patterns of education reform, beginning with the 1983, *A Nation at Risk: The Imperative for Education Reform* (National Commission on Excellence in Education, a report to the United States Secretary of Education). This report, at the time, caused many leaders of the nation to feel that America's schools were failing. Because of this report, education reform became a top issue to Americans. In 1996, a report by the

National Commission on Teaching and America's Future
indicate that in order to keep up with economic changes
in today's world, teachers need to continually learn new
technologies. This report suggested that educational
technology could be used to implement a change in the
education system. Today Americans expect teachers to use
the newest technology in their classrooms. "Technology is
and will be an integral part of today's students'
learning and working lives...America must have teachers
who are ready and able to teach using technology" (Clark,
2000, p. 180). To avoid being part of a superficial
curriculum, teachers must understand the nature of
technology.

Returning to the nature of the study, two important
findings regarding teachers' views of technology and the
role it plays in education process, were discussed. The
findings suggest that teachers feel that technology plays
an important part in the process of educating their
students at the same time teachers see a need for more
technology in their classroom. According to this study,
"...teachers seem to have a positive attitude towards
technology when it comes to what is good for student
educational needs and teacher's administrative uses for

technology" (Clark, 2000, p. 187). The main point is that integration of technology in the curriculum need to be encouraged by educational leaders (Clark, 2000).

This section has clearly stated the path technology is going towards in educational environments. Integrating technology has become a priority for our schools especially for the new century. The next section will discuss learning theories and their influence on the learning environment.

Technology and Learning

The integration of technology into the classroom and its influence on learning environments is worth examining. The article, *Learning Theories and Their Influence on the Development and Use of Educational Technologies* (2000), by Semple, traces the development of learning theories and the impact on educational technologies. In the 1950s and 1960s educational computing followed the introduction of programmed learning by machines. This was based on the psychological theory of behaviorism whose major proponent was B. F. Skinner. Learning was viewed as a process involving trail and error until a positive event occurred. To the

behaviorists, learning was to have taken place if there were observable changes in behavior (as cited in Semple, 2000, p. 24).

The formal design of the more traditional computer-based teaching systems indicates evidence of behaviorist principles. For example, drill and practice as well as tutorial programs give packets of information that provide positive feedback to the user. The control lies in the designer and the computer program rather than with the user (Semple, 2000).

Behaviorist did not take into consideration mental processes when explaining learning instead they would use terms of observable behavior. Cognitive theories, on the other hand, viewed learning as "...mental constructions involving active mental processes on the part of the learner" (as cited in Semple, 2000, p. 25). Computer technologies according to cognitive theories are cognitive learning or mind tools that amplify human abilities rather than instructional media. For example, the development of computers and software with an input-processing-output design reflects these ideas. "Jonassen (1994) argues that children cannot use them [computer technologies] without thinking deeply about the

content that they are learning; the cognitive tools
activate thinking and learning takes place through the
process of using the tool" (as cited in Semple, 2000, p.
25).

A third theory, constructivist, examine yet another
view on learning. "Piaget and Papert argued that children
construct their own knowledge through defined experiences
in accordance with their cognitive development" (as cited
in Semple, 2000, p. 26). However, they did not take into
consideration the influence of cultural transmission and
the effect of social interaction. Vygotskian
constructivism, views the child within a socio cultural
context, which also describes situated learning (as cited
in Semple, 2000, p. 26). These two views of
constructivist theory complement each other in that they
both emphasize the role of interaction and constructive
development processes of learning. Learning is considered
an active process versus a passive process proposed by
the behaviorist. "The power of technologies is invested
more in the user or learner than in the designer"
(Semple, 2000, p. 26).

All of this was said to better understand learning
theories and the influences on the use of technology in

schools. One feature in applying constructivist principles to learning is the use of collaboration. When collaboration occurs between students they come to view peers not as competitors but as resources. "Learning is enhanced by communication, resulting in new knowledge, re-organized knowledge or additional understanding, with groups of students learning how to use the tools or their culture in a collaborative learning environment" (Semple, 2000, p. 27). Constructivists recognize that the characteristics of the learners themselves influence learning. There would be no change in the philosophy driving learning if technologies were merely used to present, electronically, the same information that they would present in a traditional non-electronically manner (Semple, 2000).

The traditional learning environment for the learner before integrating technology relied on teacher-student interaction. The teacher was the main component in promoting student involvement in what was being taught. As technology is integrated into everyday learning the role of teacher merely shifts from teacher-center to learner-centered. The Analysis, Design, Development, Implementation, and Evaluation (ADDIE) Instructional

Design Model, (Fardouly, 1998), takes this new approach to instruction, learner-centered, to ensure effective learning. This design is geared towards preparing the student for self-paced learning verses face-to-face learning. This model is for the adult learner, one who already knows strategies for learning. However, having a learner-centered design of instruction for the elementary level student is not out of the question, it simply requires a different approach than the design for the adult or higher level learner. The role of the teacher would be that of an overseer or one who guides the learner (Fardouly, 1998).

This next article by Budin, *The Computers Enter the Classroom* (1999), address the influence technology has on education. Budin reviews several educational books on the topic of computers in classrooms. The author notes that a beginning of a movement to move computers into teachers' classrooms is a challenge for teachers to learn more about computers, software, and integration into their curricula. Computer labs were used to teach computer literacy at the same time isolating computers help succeed in reducing teachers' anxiety about how to use it. Drill and practice software had little or no relation

to what was being taught in class. "Instead of computers being a vehicle for higher-order thinking using databases and simulations, or for communication and research, they were being used to teach about themselves, and this was a waste of time" (Budin, 1999, p. 657).

Budin's report has brought about an awareness that we are just beginning to ascend onto a relatively steep learning curve in terms of the effect of technology on education. Also, technology changes so quickly that it is hard to adjust to one level of computing before we are forced to learn another. "...the changing context of computer use from lab to classroom substantially changes the conditions of learning with and from the computer." Budin continues to state that " . . . past research has largely failed to address the question of learning effects" (Budin, 1999, p. 660).

Integrating technology in the classroom also includes using the Internet as a tool for instruction. How the learner and teacher utilizes this tool determines the level of success. Hoffman and Ritchie, of San Diego State University, authors of *Using Instructional Design Principles to Amplify Learning on the World Wide Web*, address this issue. The article describes instructional

design principles that utilize Web material to provide a powerful instructional medium.

Instructional sequences according to Ritchie and Hoffman usually include at least seven common elements:

1. Motivating the learner

    The use of graphics, animation, color, and sound in Web pages are used in motivating the learner. They attract the learner to the site and hold their attention.

2. Explaining what is to be learned

    Let the learner know what they will be responsible for. This helps learners focus on information.

3. Helping the learner recall previous knowledge

    Building background knowledge allows the learner to relate new information to be retained in long-term memory.

4. Providing instructional material

    Most important is that the learner must be actively involved and one way to insure active learning takes place is to require them to classify, compare, analyze errors, make abstractions, construct support, or analyze

perspectives that they encounter in their Web
searches.

5.   Providing guidance and feedback

Web pages provide links that are
highlighted and underlined text that serve as a
descriptor for that link. Using words such as
"example", "relationship", "definition", or
"shortest path" provide reasons for learners to
choose them. Another method would be to require
the users to make a choice after engaging in
instruction.

Last, a more complex method is Common
Gateway Interface (CGI) codes. These codes
provide learners with information. The
information placed by the students into forms
or buttons can be compared to answers in a
database file. This method allows the students
to receive feedback thus providing the student
with a deeper explanation of their choices.

6.   Testing comprehension

On- or off-line testing through objective or
subjective tests will ensure students have
integrated desired knowledge. Using CGI methods

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described above is one way to administer

on-line testing. Another strategy is to develop

learning artifacts such as constructing their

own Web pages.

7. Provide enrichment or remediation

Instructional programs provide learners with

either remediation in areas where the learner

is lacking comprehension or enrichment that

features information which extends the

learner's knowledge. Methods such as CGI scrips

can provide additional information directly to

the learner (1996).

Integrating the Internet, World Wide Web, introduces

unlimited access to information immediately. However, how

instruction is delivered and received may be a new

dimension that will require thoughtful analysis and

investigation of how to use the Web together with

instructional design principles (Ritchie & Hoffman,

1996).

Theories of learning have survived over time.

However, the model for instructing what is to be learned

is changing. Integrating technology in the classroom has

spirited this need for change. The next section will

discuss in detail integration of curriculum and its

influence on learning environments.

Integrating Curriculum

Integration of curriculum in schools has been

encouraged by learning theorists and curriculum

specialists for more than a decade. Davis, author of

Design's Inherent Interdisciplinarity: The Arts in

Integrated Curricula, presents an overview of integration

and national reform. "...integrated curricular

experiences...encourage students to make connections

between and across disciplines" (1999, p. 8).

Davis explains that national reform legislation has

addressed integration in the 1994 Goals 2000: Educate

America Act. This Act describes outcomes for education in

core subjects in which students must achieve mastery of

discipline-based skills and knowledge (as cited in Davis,

1999, p. 10).

Unfortunately, according to Davis, in most

integrated curriculum strategies what is revealed about

subject matter and problem solving when thinking from one

discipline is applied to another and how disciplines

reinforce certain cognitive behaviors are missing.

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"Students learn the specific connections anticipated by teachers but not how to make connections in general" (Davis, 1999, p. 11).

Reisberg, author of *Facilitating Inclusion With Integrated Curriculum: A Multidisciplinary Approach*, (1998), explains integrated curriculum and offers strategies for teachers. Although Reisberg discusses inclusion of students with disabilities the ideas are good practices for all learners. "Integrated curriculum is a model that minimizes instruction in isolated academic disciplines by combining goal and objectives from a variety of areas" (Reisberg, 1998, p. 272). When curriculum is integrated students are able to see relations between subjects and are able to learn more relevant information at a deeper level.

Reisberg presents three different models of integrated inclusion by Drake (1993). One is the multidisciplinary approach in which certain subject areas maintain their identity and the focus is on a given theme. Second is the interdisciplinary approach where the focus is on an area that is common to all subjects that have transcended through individual disciplines. The last model is the transdisciplinary/real-world approach where

real-life issues are merged with skills from each academic area (as cited in Reisberg, 1998, p. 273).

Using a curriculum integration approach allows teachers to include many relevant subjects in their lesson and unit plans. Which model is used for integration does not matter as long as a process of planning and development is used. First, determine the focus of study. Next, identify the disciplines and topics to be included in the plan. Then, identify the specific skills and knowledge that will be taught. Gather resources and materials for the students. Finally, develop learning activities and lessons (Reisberg, 1998).

Even though Reisberg's article was directed towards students with disabilities, as mentioned before, using these strategies is fitting for second language learners as well. Another strategy that reflects good teaching is the Specially Design Academic Instruction in English (SDAIE) method discussed by Linquanti, author of *Fostering Academic Success for English Language Learners: What do We Know?* (1999). This method requires the instructor to use a variety of strategies when instructing students who have reached at least

Intermediate Fluency level of proficiency in English and who possess basic literacy skills (Linquanti, 1999).

Valle of Pepperdine University listed helpful strategies for using SDAIE methods.

1. Analyze textbook material from the point of view of the limited English proficiency (LEP) learner.

2. Provide background information to personalize the lesson.

3. Identify and teach essential vocabulary.

4. Present lessons orally.

5. Use visuals with the lessons.

6. Paraphrase and simplify grammatical structures.

7. While teaching content, reinforce language learning.

8. Teach study skills and how to use textbook aids.

9. Use hands-on-activities and manipulative materials.

10. Continuously monitor student's progress (Valle, 1999).

Up to this point the discussion of integrating curriculum has not included integration of technology.

The remaining articles will address the importance of using technology to integrate curriculum.

Linking Technology With Social Studies Learning Standards, by Danker, discusses the efforts of the Massachusetts Department of Education's Learning Network project to use technology in the development of interdisciplinary curriculum and to incorporate the state's standards for learning (2000).

A goal of the Learning Network project was to help teachers in the district align their curriculum with the state's newly developed learning standards. Also, demonstrating to educators in the local districts how "the potential use of technology as a tool for helping students meet the challenges of the learning standards of the various curriculum areas" (Danker, 2000, p. 256).

The Learning Network project illustrated many areas where technology was interweaving the curriculum framework in Social Studies and Language Arts. For example, teachers and students in the Blackstone-Millville Regional School District created a virtual museum display touring the town of Millville. Included in this tour is a study of the local Nipmuc Indians. The accomplishment of the Learning Network

project in innovative curriculum development was a success. The project "fostered student mastery of history and social science learning standards in creative and lively formats, stressing both social studies content and state-of-the-art technology" (Danker, 2000, p. 257).

The next article *Yesterday, Today, and Tomorrow: The History and Social Science Classroom*, by Mason and Dralle, discuss the use of computer technology in social studies as well as the advantages of placing information in electronic form (1999).

The authors envision future uses for technology. One use is the hand-held computers known as Personal Digital Assistants (PDA). They see a use for them in the social studies classroom as a means to store information. Students would be able to receive and send files to and from the teacher. The volume of data that can be stored electronically is extremely large (Mason & Dralle, 1999).

This view is not so far in the future. Looking back, technology has reached tremendous growth. "In the past few years, classrooms equipped with computer and Internet technology have progressed from the exception to the norm" (Mason & Dralle, 1999, p. 4).

The authors stress the importance of immersing preservice teachers in technology and encourage the use of technology to enhance social studies learning. Also, educators must encourage them to consider the impact technology is having on our society (Mason & Dralle, 1999).

The last article by Cooper, *Online Courses*, examines the steps and procedures that instructors can take to ensure online courses are working effectively. First of all, there are a variety of online formats to choose from. An instructor may choose to create their own Web pages, use a computer-based classroom management system such as Topclass, Web CT, or Web in a box, or utilize an online system offered by a textbook vendor. No matter what form the instructor decides to use, the steps and procedures that are taken "to encourage interaction among instructor and students, increase students' opportunities for learning, and improve students' overall satisfaction with the class" (Cooper, 2000, p. 86).

Understanding students have different learning styles, it is important to offer them instructional materials in a variety of formats. Technology is one way to offer this variety, for example, PowerPoint

presentations to accompany each topic, links to interactive Web sites, and automatically graded exams (Cooper, 2000).

Online instruction can bring new opportunities to both students and instructors. If the instructor carefully plans and implements the online course and is open to student feedback and continues improvement then online instruction can be an effective educational environment that offers an alternative to traditional teaching (Cooper, 2000).

Summary

This chapter presented the literature important to the project. The details of integrating curriculum and technology in classrooms were clearly stated. The effects of integration on learning were examined. The next chapter uses the topics discussed in the literature to design and develop the project.

CHAPTER THREE

DESIGN AND DEVELOPMENT

Introduction

The project involves designing curriculum for fifth

grade that uses three thematic units that expand over the

period of one school year and integrates Reading,

Language Arts, Science, and Social Studies content areas.

Each unit requires students to produce a final end

product where students present what they have learned.

Chapter Three describes the steps used for designing

and developing the project. Certain teaching strategies

were taken into consideration for the population of this

project such as student cooperative groups, English

language development, and technology used for

enhancement. Also, choosing the resources for this unit

were considered after an understanding of the population

was determined.

The project requires students to work in cooperative

groups, research a topic, and report on their findings.

There are various forms of assessment, both formal and

informal, built into the project. Each assessment

measures the existent of understanding to insure mastery

of Palm Springs Unified School District Power Standards, the California State Standards, and the National Technology Standards being taught for fifth grade (see Appendix A).

Population Served

The project is designed for a class of fifth grade students at Two Bunch Palms Elementary which servers Kindergarten through Fifth grade and is within Palm Springs Unified School District in California. The school's accountability report card list the percentage of students in a racial/ethnic category according to California Basic Educational Data Systems (CBEDS) total enrollment for the school year 2000/2001. The percentages are as follows; 6.9% are African-American, 0.8% are American Indian or Alaska, 0.8% are Filipino-American, 69.1% are Hispanic or Latino, and 22.4% are White (not Hispanic). The report card continues to demonstrate that a large number of the population is second language learners resulting in various learning styles, English language proficiencies, and academic levels (Palm Springs Unified School District, 2002).

This project addresses the issues that surround the population for this particular school by designing units that support English language development through the use of various teaching strategies. Even though these strategies reflect good teaching for all learners, modifications can be made according to particular populations for other schools.

Teaching Strategies

Understanding the demographics of the population served, several teaching strategies were taken into consideration for this project. One technique, as discussed in chapter 2, that reflects good teaching is the Specially Design Academic Instruction in English (SDAIE) method (Linquanti, 1999). This method requires the instructor to use a variety of strategies when instructing students who have reached at least Intermediate Fluency level of proficiency in English and who possess basic literacy skills.

Another strategy used for this project is cooperative groups. As stated previously in chapter 2 by Semple, author of *Learning Theories and Their Influence on the Development and Use of Educational Technologies,*

(2000), when children collaborate with one another they come to view their peers as resources not competitors.

Using this strategy enables students of various academic levels to participate in a project that will have a positive outcome for each student. Students' working together on a common goal teaches cooperation, patience, and respect for one another. Everyone participating in a cooperative group helps each other to produce a final product.

Using technology as a tool is a strategy that engages the learner in what is being taught. Keeler, author of Networked Instructional Computers in the Elementary Classroom and Their Effect on the Learning Environment: A Qualitative Evaluation, as stated earlier in chapter 2, teaching strategies changed as a result of computers. The classroom climate changed from teacher-centered to student-centered instruction (Keeler, 1996).

Technology changes the classroom environment and for this project it creates a student-centered climate. When using technology successfully, student motivation increases, learning is fun and exciting, and teachers find more time to help students on a one-to-one basis.

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The last strategy addressed is the integration of curriculum. Well planned and executed lessons that cross several curricula areas enable students to see many connections and obtain deeper understanding of concepts and skills. It also helps students transfer and retain knowledge (Resiberg, 1998).

The purpose of this project was to have time to teach Science and Social Studies. Integrating these subjects with Reading and Language Arts allows the time needed to do so. Initially, planning integration takes time. However, after the instructor becomes more comfortable with instruction, integration begins to run more smoothly. Students accept more responsibilities and begin working more independently. When the student is placed in the role of responsible learner, active approaches to instruction do not burden the teacher (Mason & Dralle, 1999).

Resources

There were several resources used for this project and each one is described below.

The Analysis, Design, Development,
  Implementation, and Evaluation Instructional
  Design Model

The design model used for the project was the
Analysis, Design, Development, Implementation, and
Evaluation (ADDIE) Instructional Design Model (Fardouly,
1998). As stated in chapter two, this model uses a
systematic approach to designing instruction. The aim is
a learner-centered instructional design rather than the
traditional teacher-centered approach to instruction.
However, the population served for this project requires
the role of the teacher to be that of an overseer or one
who guides the learner.

There are several steps to this design model.

1.   Analysis

     Identify who the learners are; define what to
     achieve with the instruction; determine what
     skills, knowledge, and attitudes need to be
     taught; decide the scope of the content to be
     covered in terms of topic areas, time required,
     and number of lessons.

2.   Design and Development

     Define specific learning outcomes or measurable
     objectives; according to the objectives,

determine what skills, knowledge, and attitudes
to develop; choose resources and strategies
used for instruction; structure the content of
your learning material; and decide what
assessment methods will be used to assess the
learners' understanding and whether or not they
have met the objectives of the instruction.

3. Implementation

Implementation involves several things from
presenting classroom instruction to teaching
learners how to use time wisely with
interactive learning materials.

4. Evaluation

To provide the basis for improvement and
development, evaluation of the instruction by
both teachers and learners are necessary.

Using this model will ensure that every component of
the instruction is directed by the learning outcomes
(Fardouly, 1998).

District Curricula

The textbooks used for this project are Palm Springs
Unified School District's newly adopted and implemented
reading program, SRA Open Court Reading, (Bereiter,

Brown, Campione, Carruthers, Case, Hirshberg, et al.,

2000), which offers a variety of genres. The district's

Social Studies textbook that has been in use for several

years is America Will Be, (Armento, Nash, Salter, &

Wixson, 1991).

California State Standards

Grade Five California Standards in Reading, Language

Arts, Science, and Social Studies were the basis for the

project (see Appendix A).

Technology Standards

National Educational Technology Standards for

Students in grades three through five were the basis for

designing instruction for the educational technology

aspects of the project (see Appendix A).

Other Resources

Other resources include but not limited to the

following:

Encyclopedias, both software and hard copies such as

Microsoft Encarta Encyclopedia.

Various library non-fiction books pertaining to

topic of interest.

Various videotapes pertaining to topic of interest

such as *The Native American* collection by TBS

Productions: *The Natives of the Southwest, The Tribal People of the Northwest, The People of the Great Plains (Part One and Part Two).*

Various Internet sites containing factual information pertaining to the topic.

Exam View 3.51, (2001), a software application that enables the user to create printed tests, computer based tests, and Internet tests.

Blackboard (2002, http://www.blackboard.com), this is an online service that allows instructors to create an online component to their classes quickly. Instructors are able to bring learning materials, class discussions, and tests online. This service also provides users with access to online educational resources for locating educational information.

Web Page Design

Integrating technology in the classroom has many benefits. However, before technology is used, the instructor must engage in careful planning. How technology is utilized determines the level of success. Therefore, using the Internet as a key component to this

project is one way of integrating technology successfully.

The World Wide Web (WWW), also know as the Internet, is a great source for information however, when it comes to finding acceptable material for a diverse group of fifth graders the information becomes overwhelming and the students may loose interest. For this reason the project uses the Internet by developing Web pages that have targeted links to ensure readability for the students.

According to the author of *Integrating Social Studies and Ethno Botany: A Multicultural Approach*, Harrell and Forney (2001), teachers should provide students with a list of Internet sites that are reliable. If the teacher decides to allow students to conduct searches, caution students to limit their searches to reputable organizations such as universities because of the amount of information available on the Internet.

Searching for topic related links that are appropriate for the students is very time consuming. However, the rewards for taking the time locating materials prior to starting the units are well worth it in the end. Students spend more time learning what was

intended and less time searching for information. However, students who are ready to go beyond the targeted links should not be discouraged from doing so.

Before designing Web pages for this project, knowing key elements that are involved in instructional design for Web pages are important. As stated previously in chapter 2 in the discussion of the article by Hoffman and Ritchie, *Using Instructional Design Principles to Amplify Learning on the World Wide Web*, instructional sequences include at least seven elements: motivating the learner, explaining what is to be learned, helping the learner recall previous knowledge, providing instructional material, providing guidance and feedback, testing comprehension, and providing enrichment or remediation (1996). Designing the Web pages for this project included these elements and took into consideration of how the project increases in levels of difficulty.

The three fifth grade units developed for this project are Native American Indians, Back Through the Stars, and American Civil War. In all three, students begin their research accessing the classroom home page and then going to the link directing them to the unit of study (see Figure 1). Activating the link pertaining to

the unit of study and keeping links to the other units inactive will ensure students focus on what they are researching. The sole purpose of this page was merely to have a central location for points of interest. For instance, it not only includes the Web sites for the units of this project but links to the school's home page, standards, grading rubrics, other units of study, online discussion, and a site for parents.

Figure 1. Classroom Home Page

Another use for the Internet in the units for this

project is to have the students participate in an online

discussion group through Blackboard. They will be able to

access this site from the classroom home page. The

purpose of this activity has three goals; one is to

evaluate the depth of understanding the students have

experienced for each unit, another is to strengthen

writing skills, and the third is to offer students the

opportunity to give the instructor feedback on each unit.

Native American Indians
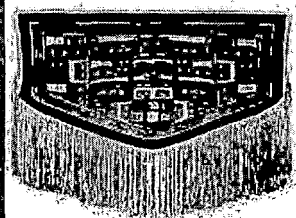
    The first Web page for the Native American Indians unit involves students more than the classroom home page. This site includes graphics to encourage the visitor to stay on the page and be guided through instructional material (see Figure 2 and for the full version of the Web page see Appendix C). After reading and choosing where to

Native American Indians

An Interactive Project for Students

Introduction

Each cooperative group will be responsible for choosing a Native American group, obtaining and filing information on their Native Americans, and **presenting** what they have learned in a group multimedia presentation. The following table will direct your group on their search.

People Locate and list your group's language, any famous persons, and family values.

Region Locate and list where your group lives or did live at one time.

Arts Locate and list your group's art work.

Ceremonies/Potlatches Locate and list your group's spirituality/religion, music, and dances.

Figure 2. Native American Indians' Web Page

go next, navigational buttons take the visitor to another

page where they will begin conducting their research.

The following flow chart (see Figure 3) indicates

navigational directions and will aide in understanding

the complexity of the Web pages for this unit.

```
                        ┌──────────────┐
                        │  Home Page   │
                        └──────┬───────┘
                               ▼
                     ┌──────────────────┐
                     │ Native American  │
                     │     Indians      │
                     └────────┬─────────┘
```

Northwest	California-Intermountain	Plains	Southwest	Woodlands
Choose your tribe	Choose your tribe	Choose your tribe	Choose your tribe	Choose your tribe
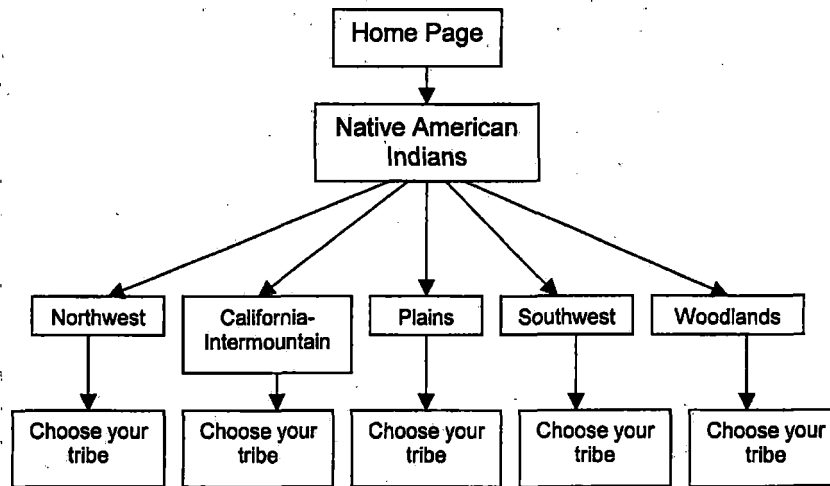
Figure 3. Flow Chart for Native American Indians Unit

The Native American Indians unit is taught in the
beginning of the year. More guidance from the teacher and
the Web pages is used with this unit for the purpose of
training students in how to conduct research using the
Internet. The next two units begin to allow students to
take control of their research by not guiding them
through every step in the Web pages.

Back Through the Stars

The Web page for Back Through the Stars unit is not
as involved in design as the Native American Indians unit
nor are the students guided in their searches. This page
does not include photos or instruction (see Figure 4).
The purpose of the Web page is for students to have a
location to target their research by providing a number

of links. Instead of reading instructions on the Web page

as in the Native American Indians unit, students will

learn through classroom discussions and from using a

grading rubric, what is expected of them.
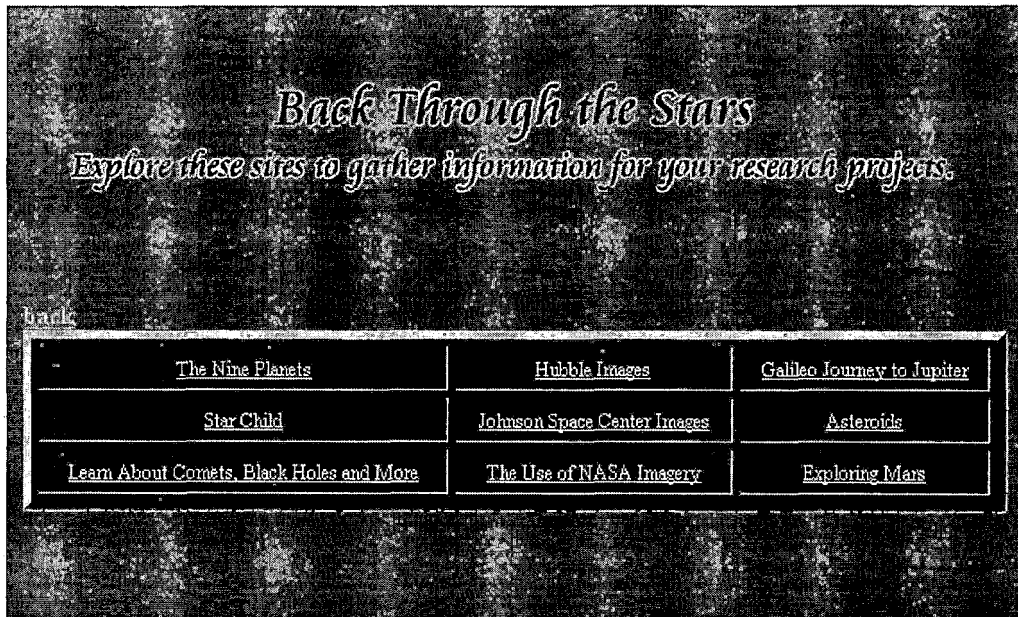
Figure 4. Back Through the Stars' Web Page

This unit is taught in the middle of the year when

students have had more experience conducting research and

are more comfortable writing essays and reports. Although

the teacher's role is still that of an overseer and

guide, students are becoming more independent in using

technology.

American Civil War

The Web page for the third unit, American Civil War,
is similar in design to Back Through the Stars' Web page
(see Figure 5). Again, the students will receive
directions during class discussions as well as a grading
rubric. The purpose of the Web page is to target
students' research by providing links and allowing them
to become even more independent in their searches as in
the previous units.

Figure 5. American Civil War's Web Page

This unit is taught towards the end of the year when the students are very comfortable with using technology and the Internet. Students have gained knowledge of how to conduct research on their own with very little assistance from the teacher.

Units Planning

The following plans outline instruction for three fifth grade units developed for this project. The ADDIE design model as described previously was used as a guide to designing instruction. A summary of the components to this model are to first conduct an analysis of the group and materials to be used, then define the objectives and design and develop instruction, next is to implement instruction, and lastly is to evaluate what was learned and how to improve instruction.

The goal for all three units is to help students internalize what is being taught by actively involving them in their learning. Each unit also shares similarities in other areas such as certain strategies and evaluations. The teacher will use a rubric that shows mastery of Grade Five California State Standards, District Power Standards, and Technology Standards by

each student in all three units (see Appendix F). This rubric will enable the teacher to follow each student's progress through all of the units in this project.

Native American Indians

Objective:

Students will demonstrate an understanding of major pre-Columbian settlements including California-Intermountain culture, Northwest culture, Plains culture, Southwest culture, and Woodlands culture by reading various genres, writing essays, delivering an oral presentation, and taking a written test.

Strategy:

The Native American Indians unit is taught in the beginning of the year where cooperative groups of 3 to 4 students are working close together to conduct research using a Web site that provides the students with research questions and targeted Web links on different tribes within a region of the country. They will also read literature as well as watch videos and participate in whole class discussions and threaded online discussions

through Blackboard on the topic of Native American Indians.

Group members are each responsible for their own tribe that requires them to document their findings and then compare their findings with those of other group members. The group is then responsible to report on these tribes as part of a region.

Each group will design a storyboard, which is a graphic representation of the multimedia project, to help organize their information to be presented. After the teacher approves a storyboard, the group then develops their slide show that will include sound, text, and graphics as part of the requirement. Students will be able to use graphics within the slide show program or draw a picture in another program on the computer and insert the drawing into the slide show. Another option is to save an image from the photos link located on the Web site they use to gather information and insert the photo into the slide show. When all the groups are finished they will take turns

presenting their findings to the class through
their slide show presentation.

Measure:

There are both formal and informal
assessments for the first unit. The teacher
will observe students conducting research as to
how well each student is working in a group,
following directions, and whether each student
displays understanding of how to gather
information.

For a more formal assessment, the teacher
and students will follow a Student's Grading
Criteria Rubrics (see Appendix G) based on
Grade Five California State Standards that is
designed specially for this unit that
integrates Reading, Language Arts, and Social
Studies standards (State of California
Department of Education, 1999, 2001).
Technology standards have not been adopted for
California at this time. The National
Educational Technology Standards for Students
will be used to assess students' technology
skills (International Society for Technology in

Education [ISTE], 1998). The following is a

list of standards that will be acquired by each

student. The District Power Standards are

indicated with an asterisk. See Appendix A:

Standards for a full version of the standards

used.

Headings for Grade Five Reading and

Language Arts Standards

        *1.0   Word Analysis, Fluency, and
                Systematic Vocabulary
                Development
        *2.0   Reading Comprehension
        *1.0   Writing Strategies
        *1.0   Written and Oral English
                Language Conventions
         1.0   Listening and Speaking
                Strategies
        *2.0   Speaking Applications (State of
                California Department of
                Education, 1999)

Headings for Grade Five History-Social

Science Standards

        *5.1   Students describe the major
                pre-Columbian settlements,
                including the cliff dwellers and
                pueblo people of the desert
                Southwest, the American Indians
                of the Pacific Northwest, the
                nomadic nations of the Great
                Plains, and the woodland peoples
                east of the Mississippi River.
        *5.3   Students describe the
                cooperation and conflict that
                existed among the American

Indians and between the Indian
nations and the new settlers.
(State of California Department
of Education, 2001)

Categories for National Educational

Technology Standards for Students Grades

3-5

1. Basic operations and concepts
2. Social, ethical, and human
    issues
3. Technology productivity tools
4. Technology communications
5. Technology research tools
6. Technology problem-solving and
    decision-making tools (ISTE,
    1998)

Students will demonstrate mastery of these

standards through oral and written reports that

will be delivered through slide show

presentations accompanied by speaking in front

of a whole group or class. Threaded online

discussions will be assessed for content and

proper use of the technology tool. A written

test including multiple choice and short answer

essays will be administered at the end of the

unit to complete assessment.

Back Through the Stars

Objective:

Students will know the dynamics of the solar system that consists of nine planets and their satellites and other bodies such as asteroids and comets that orbit the Sun in predictable paths. Students will also know the composition of the Sun, planets, satellites, and other bodies in the solar system. Students will demonstrate their knowledge by reading various genres, writing a report, writing poetry and a play, delivering an oral presentation, and taking a written test.

Strategy:

Back Through the Stars unit takes the skills that were learned in the first unit to a higher level of expertise. In this unit, cooperative groups of 3 to 4 students research a specific planet assigned to their group. As with the first unit, they will use a Web site with targeted links to conduct their research. This time, they will have specific questions to research that are provided through whole class discussion. Again, students will be watching videos, reading literature, participating in

whole class discussions as well as responding
to threaded online discussions through
Blackboard related to space and planets.

Each group member is responsible for
writing a report about the planet assigned to
that group. The group members will then write a
poem about their planet, create a fictional
play including factual information about their
planet to act out live or tape on video, and
then present their work as a group through a
slide show presentation to the class that
includes sound, text, and graphics. The
graphics for this unit will be attained in the
same manner as in the Native American Indians
unit. A storyboard will be used before
developing the slide show presentation with an
additional storyboard for the play.

Measure:

There are both formal and informal
assessments for the second unit as well. The
teacher will observe students in a similar
manner as in the first unit by observing how
they are conducting research, how well each

student is working in a group, following

directions, and whether each student displays a

better understanding of how to gather

information than in the first unit. The teacher

will notice improvement when the students

require less guidance than in the first unit.

For a more formal assessment, the teacher

and students will follow a Student's Grading

Criteria Rubrics similar to the one used for

the first unit (see Appendix G). Again, this

rubric is based on Grade Five California State

Standards that is designed specially for this

unit that integrates Reading, Language Arts,

and Science standards (State of California

Department of Education, 1999, 2000). The same

National Educational Technology Standards for

Students will be used to assess students'

technology skills (ISTE, 1998). The following

is a list of standards in addition to the

Reading, Language Arts, and Technology

standards listed for Native American Indians

unit that will be acquired by each student.

Again the District Power Standards are

indicated with an asterisk. For a full version

of the standards used see Appendix A:

Standards.

Headings for Grade Five Reading and

Language Arts Standards

*1.0 Word Analysis, Fluency, and
     Systematic Vocabulary
     Development
*2.0 Reading Comprehension
*3.0 Literary Response and Analysis
*1.0 Writing Strategies
*2.0 Writing Applications
*1.0 Written and Oral English Language
     Conventions
 1.0 Listening and Speaking Strategies
*2.0 Speaking Applications (State of
     California Department of
     Education, 1999)

Headings for Grade Five Science Standards

Earth Sciences
*5. The Solar System consists of
     planets and other bodies that
     orbit the Sun in predictable
     paths. (State of California
     Department of Education, 2000)

Students will demonstrate mastery of these

standards in the same manner as in the first

unit with the addition of a skit.

· The American Civil War

Objective:

Students will demonstrate an understanding
of the causes, course, and consequences of the
American Civil War. Students will demonstrate
their knowledge by reading various genres,
writing a persuasive essay, writing a research
report, writing a play or speech, delivering an
oral presentation, and taking a written test.

Strategy:

The unit on the American Civil War uses
all the skills learned up to this point in the
year to complete a Web-based project. For this
unit students begin by reading literature that
focuses on the events that led to the American
Civil War and participating in whole class
discussions and threaded online discussions
through Blackboard on the topic. Next, as a
class, a list of questions is generated
relating to American Civil War topics. Students
then choose one question to write a persuasive
essay about. Cooperative groups are formed
according to the questions chosen for their

persuasive essays. Group members will be responsible to conduct research through a Web site that offers links on topics relating to their question.

Group members share found information with each other and decide on a presentation format such as a play or speech. Each group will also present factual information using a slide show that includes sound, text, and graphics. Again, graphics will be acquired in the same manner as in the other units. A storyboard for both forms of presentation will be required from each group as in previous units. Then, each student is responsible for writing a research paper. When all groups are finished with developing their play or speech and slide show they will present their work to the class.

Measure:

There are both formal and informal assessments for the third unit as in the previous two. The teacher will observe students conducting research as to how well each student is working in a group, following directions,

and to the degree each student displays a
better understanding of how to gather
information than in the first two units. The
teacher will notice continuous improvement when
the students require even less guidance than in
the first two units.

For a more formal assessment, the teacher
and students will follow a Student's Grading
Criteria Rubrics, again similar to the ones
previously used (see Appendix I). The rubric,
as with the other two rubrics, is designed
specially for this unit and based on Grade Five
California State Standards that integrates
Reading, Language Arts, and Social Studies
standards (State of California Department of
Education, 2001). Once again, National
Educational Technology Standards for Students
will be used to assess students' technology
skills (ISTE, 1998). The following is a list of
standards in addition to the Reading, Language
Arts, and Technology standards listed for the
two previous units that will be acquired by
each student. The district Power Standards are

indicated with an asterisk. See Appendix A for

a full version of the standards used.

Headings for Grade Five Reading and

Language Arts Standards

   *1.0 Word Analysis, Fluency, and
         Systematic Vocabulary
         Development
   *2.0 Reading Comprehension
   *3.0 Literary Response and Analysis
   *1.0 Writing Strategies
   *2.0 Writing Applications
   *1.0 Written and Oral English
         Language Conventions
    1.0 Listening and Speaking
         Strategies
   *2.0 Speaking Applications (State of
         California Department of
         Education, 1999)

Prerequisite of the following Grade Five

History-Social Science Standards headings

   *5.4 Students understand the
         political, religious, social,
         and economic institutions that
         evolved in the colonial era.
   *5.5 Students explain the causes of
         the American Revolution.
   *5.6 Students understand the course
         and consequences of the American
         Revolution.
   *5.7 Students describe the people and
         events associated with the
         development of the United States
         Constitution and analyze the
         constitution's significance as
         the foundation of the American
         republic.
   *5.8 Students trace the colonization,
         immigration, and settlement

patterns of the American people
from 1789 to the mid-1800s, with
emphasis on the role of economic
incentives, effects of the
physical and political
geography, and transportation
systems. (State of California
Department of Education, 2001)

Students will demonstrate mastery of these

standards as in the previous units with the

addition of a research paper.

Formative Evaluation

The project was presented to three different

existing committees at the same elementary school site,

Two Bunch Palms Elementary. Each committee received the

project including a list of resources, Web design, units

planning, and rubrics used for assessment. They were

asked to review the project and offer recommendations for

improvement. The following describes each committee and

their recommendations for the project.

The Accountability Committee, also known as the Data

Team, is comprised of four experienced teachers of

various grade levels and two administrators. The duties

of this team are to analyze data received from the state

norm referenced test for the school, evaluate programs,

and plan for improvement.

For this project they were to concentrate their evaluation on the measurement tools of assessment that included the Student's Grading Criteria Rubrics and the Teacher's Rubric for Standards for each unit. Their report recommended including written test with a combination of multiple choice and short answer essay. This recommendation was easily adopted into the project because such tests were already available through the newly implemented Palm Springs Unified School District's reading program at the school site.

The Grade Level Committee is a team comprised of one grade level leader who is an experienced teacher chosen by peers, and the remaining teachers of that particular grade level. For this project the Fifth Grade Level Committee was chosen because the project is designed for fifth grade students. The committee was to concentrate on the content of the project in relationship to Grade Five California Standards for Reading, Language Arts, Science, and Social Studies.

The committee's report was very positive. The project aligns with the standards with one exception; The American Civil War is not a Grade Five Social Studies Standard. However, the emphasis on Reading and Language

Arts in the unit fully covers the standards for Grade

Five Reading and Language Arts. As a result of this

report, a prerequisite of the Grade Five History-Social

Science Standards, which includes events leading up to

the American Civil War, was placed in the beginning of

the unit.

The final committee chosen is the Technology

Committee that is a team comprised of three experienced

teachers with backgrounds in instructional technology.

The responsibilities of the committee at the school site

are to oversee spending of technology funds and trouble

shoot technology problems at the site. For this project

the committee used a rubric that enabled them to evaluate

the Web sites used in the project. The team was to rate

the sites according to content and usability on a scale

of 1 to 5, 1 being very understandable and usable and 5

not understandable and not usable. This rubric represents

all 3 responses and gives their average. The following

represents their report:

Visibility:

_1_ Common and recognizable backgrounds, text, and

color schemes throughout all pages

_2_   Objects, backgrounds, and text compliment each

       other and are consistent throughout pages

_1_   Consistency of directional buttons throughout

       pages

Navigation:

_1_   Flexibility to move through pages

_2_   Accuracy of buttons, links, and steps

       throughout pages

_1_   Consistent linking of pages

Content:

_1_   Information accessible

_2_   Meaning and logic of language

_1_   Information relates to users task

Format:

_1_   The use of Web pages as a learning tool

_1_   Linked Internet sites relate to content of

       project

The Technology Committee's evaluation was helpful. The main issues were that not all of the graphics were visible, failure of some links, and the vocabulary in some areas needed revision. These were minor problems that could distract the learner.

Summary

This chapter addressed the principles of the
project. Integrating Reading, Language Arts, Science, and
Social Studies requires teachers to examine their
curriculum and find materials that relate to one another
across all subjects. The initial implementation of
integration is complicated. However, the result of
integrating allows more time spent on mastering state and
district standards in all areas.

CHAPTER FOUR

RECOMMENDATIONS AND

CONCLUSIONS

Introduction

The recommendations extracted from the project are

discussed. Further, the conclusions gleaned as a result

of completing the project are presented in Chapter Four.

Recommendations

Implementing integration is a big step for teachers.

However, with careful planning and the right materials it

is very rewarding. When a teacher is ready for the

challenge of integrating curriculum, there are several

steps to follow. First of all, they need to know who the

targeted audience is and from there, analyze different

curriculum areas to determine which ones to use. Then,

the teacher is ready to start planning goals and

objectives.

The next step is to choose strategies and resources

to be used for instruction. Before using technology, make

sure the teacher is comfortable working with it. Also,

when planning to use the Internet for research, target

the links students' will be using prior to starting

instruction. This will save time and ensure readability of the sites.

Determining the method of assessment that will be used to assess the students' understanding of the objectives is the next step. Using both formal and informal assessment will offer a more rounded view of students' learning.

The teacher is now ready for implementation. This is when understanding the demographics of the class are very important. If the students are not accustomed to working in groups, then the teacher will need to instruct them in how to work in a group and how to use time wisely. The teacher should select students for each group to ensure successful group management.

Implementation also involves how the instruction is presented to the students. During the planning stage, the teacher should have determined this depending on the classroom environment, teacher-centered or student-centered.

Evaluation of the instruction by both teachers and students is the most important step in integration. This will provide the teacher with the basis for improvement.

Integrating for the first time is a challenge. There will always be room for improvement.

Conclusions

Integrating technology in classrooms is more than sending students to a computer to type a paper or practice drills. It means to use technology as a tool to enhance the learning environment. Students learn when they are actively involved with what is being taught. When the use of technology is included in this interaction, students are motivated, have control of their learning, and feel successful.

Integrating curriculum allows students to make connections from one subject to another. When technology is used as a method to make these connections, students learn more than a computer program or how to use a calculator. Students learn with technology.

The Internet opens the world to students in the click of a mouse. Using this technology together with integrated curriculum, the possibilities for instruction are endless.

After considering the impact technology is having on society, it is clear to say we are rapidly moving into a

new era, one of which having discussions about integrating technology will be non existent. So, instead of considering the impact technology is having on society, consider where do we go from here?

Integrating curriculum with the use of technology is challenging for any teacher. However, the benefits out way these challenges. Once the initial integration is implemented, it becomes easier each time.

This project, by integrating curriculum with the use of technology, produces a positive impact on education by demonstrating its importance through expert opinions, the design and development of thematic units, and putting it into effect within the learning environment. This positive impact on education will continue as long as educators understand the important role technology plays in education.

APPENDIX A

STANDARDS

California State Standards in Grade Five Reading
  and Language Arts

      Items marked with an asterisk are the Palm Springs

Unified School District Power Standards.

*1.0 Word Analysis, Fluency, and Systematic Vocabulary
      Development
      *1.1 Read aloud narrative and expository text
           fluently and accurately and with appropriate
           pacing, intonation, and expression.
      *1.2 Use work origins to determine the meaning of
           unknown words.
      *1.3 Understand and explain frequently used
           synonyms, antonyms, and homographs.
       1.4 Know abstract, derived roots and affixes from
           Greek and Latin and use this knowledge to
           analyze the meaning of complex words (e.g.,
           controversial).
       1.5 Understand and explain the figurative and
           metaphorical use of words in context.
*2.0 Reading Comprehension
      *2.1 Understand how text features (e.g., format,
           graphics, sequence, diagrams, illustrations,
           charts, maps) make information accessible and
           usable.
       2.2 Analyze text that is organized in sequential or
           chronological order.
      *2.3 Discern main ideas and concepts presented in
           texts, identifying and assessing evidence that
           supports those ideas.
      *2.4 Draw inferences, conclusions, or
           generalizations about text and support them
           with textual evidence and prior knowledge.
      *2.5 Distinguish facts, supported inferences, and
           opinions in text.
*3.0 Literary Response and Analysis
      *3.1 Identify and analyze the characteristics of
           poetry, drama, fiction, and nonfiction and
           explain the appropriateness of the literary
           forms chosen by an author for a specific
           purpose.
      *3.3 Contrast the actions, motives (e.g., loyalty,
           selfishness, conscientiousness), and

appearances of characters in a work of fiction
and discuss the importance of the contrasts to
the plot or theme.

3.4 Understand that theme refers to the meaning or
moral of a selection and recognize themes
(whether implied or stated directly) in sample
works.

3.5 Describe the function and effect of common
literary devices (e.g., imagery, metaphor,
symbolism).

3.6 Evaluate the meaning of archetypal patterns and
symbols that are found in myth and tradition by
using literature from different eras and
cultures.

3.7 Evaluate the author's use of various techniques
(e.g., appeal or characters in a picture book,
logic and credibility of plots and settings,
use of figurative language) to influence
readers' perspectives.

*1.0 Writing Strategies
*1.2 Create multiple-paragraph expository
compositions:
a. Establish a topic, important ideas, or
events in sequence or chronological order.
b. Provide details and transitional expressions
that link one paragraph to another in a
clear line of thought.
c. Offer a concluding paragraph that summarizes
important ideas and details.
*1.3 Use organizational features of printed text
(e.g., citations, and notes, bibliographic
references) to locate relevant information.
1.4 Create simple documents by using electronic
media and employing organizational features
(e.g., passwords, entry and pull-down menus,
spell checks).
1.5 Use a thesaurus to identify alternative word
choices and meanings.
*1.6 Edit and revise manuscripts to improve the
meaning and focus of writing by adding,
deleting, consolidating, clarifying, and
rearranging words and sentences.

*2.0 Writing Applications
*2.1 Write narratives:

a. Establish a plot, point of view, setting, and conflict.
b. Show, rather than tell, the events of the story.
*2.3 Write research reports about important ideas, issues, or events by using the following guidelines:
a. Frame questions that direct the investigation.
b. Establish a controlling idea or topic.
c. Develop the topic with simple facts, details, examples, and explanations.
*2.4 Write persuasive letters or compositions:
a. State a clear position in support of a proposal.
b. Support a position with relevant evidence.
c. Follow a simple organizational pattern.
d. Address reader concerns.
*1.0 Written and Oral English Language Conventions
*1.1 Identify and correctly use prepositional phrases, appositives, and independent and dependent clauses; use transitions and conjunctions to connect ideas.
*1.2 Identify and correctly use verbs that are often misused (e.g., lie/lay, sit/set, rise/raise), modifiers, and pronouns.
*1.3 Use a colon to separate hours and minutes and to introduce a list; use quotation marks around the exact words of a speaker and titles of poems, songs, short stories, and so forth.
1.4 Use a correct capitalization.
1.5 Spell roots, suffixes, prefixes, contractions, and syllable constructions correctly.
1.0 Listening and Speaking Strategies
1.1 Ask questions that seek information not already discussed.
1.2 Interpret a speaker's verbal and nonverbal messages, purposes, and perspectives.
1.3 Make inferences or draw conclusions based on an oral report.
1.4 Select a focus, organizational structure, and point of view for an oral presentation.
1.5 Clarify and support spoken ideas with evidence and examples.

1.6 Engage the audience with appropriate verbal
    cues, facial expressions, and gestures.
1.7 Identify, analyze, and critique persuasive
    techniques (e.g., promises, dares, flattery,
    glittering generalities); identify logical
    fallacies used in oral presentations and media
    messages.
1.8 Analyze media as sources for information,
    entertainment, persuasion, interpretation of
    events, and transmission of culture.

*2.0 Speaking Applications
   2.1 Deliver narrative presentations:
       a.   Establish a situation, plot, point of
            view, and setting with descriptive words
            and phrases.
       b.   Show, rather that tell, the listener what
            happens.
   *2.2 Deliver informative presentations about an
        important idea, issue, or event, by the
        following means:
       a.   Frame questions to direct the
            investigation.
       b.   Establish a controlling idea or topic.
       c.   Develop the topic with simple facts,
            details, examples, and explanations.
            (State of California Department of
            Education, 1999)

California State Standards in Grade Five
   History-Social Science

    Items marked with an asterisk are the Palm Springs

Unified School District Power Standards.

*5.1 Students describe the major pre-Columbian
     settlements, including the cliff dwellers and pueblo
     people of the desert southwest, the American Indians
     of the Pacific Northwest, the nomadic nations of the
     Great Plains, and the woodland peoples east of the
     Mississippi River.
    *1.   Describe how geography and climate influenced
          the way various nations lived and adjusted to
          the natural environment, including locations of
          villages, the distinct structures that they

built, and how they obtained food, clothing, tools, and utensils.
*2. Describe their varied customs and folklore traditions.
*3. Explain their varied economics and systems of government.

*5.3 Students describe the cooperation and conflict that existed among the American Indians and between the Indian nations and the new settlers.
*1. Describe the competition among the English, French, Spanish, Dutch, and Indian nations for control of North America.
*2. Describe the cooperation that existed between the colonist and Indians during the 1600s and 1700s (e.g., in agriculture, the fur trade, military alliances, treaties, culture interchanges).
*3. Examine the conflicts before the Revolutionary War (e.g., the Pequot and King Philip's Wars in New England, the Powhatan Wars in Virginia, the French and Indian War).
*4. Discuss the role of broken treaties and massacres and the factors that led to the Indians' defeat, including the resistance of Indian nations to encroachments and assimilation (e.g., the story of the Trail of Tears).
*5. Describe the internecine Indian conflicts, including the competing claims for control of lands (e.g., actions of the Iroquois, Huron, Lakota [Sioux]).
*6. Explain the influence and achievements of significant leaders of the time (e.g., John Marshall, Andrew Jackson, Chief Tecumesch, Chief Logan, Chief John Ross, Sequoyah).

*5.4 Students understand the political, religious, social, and economic institutions that evolved in the colonial era.
*1. Understand the influence of location and physical setting on the founding of the original 13 colonies, and identify on a map the locations of the colonies and of the American Indian nations already inhabiting these areas.
*2. Identify the major individuals and groups responsible for the founding of the various

colonies and the reasons for their founding
(e.g., John Smith, Virginia; Roger Williams,
Rhode Island; William Penn, Pennsylvania; Lord
Baltimore, Maryland; William Bradford,
Plymouth; John Winthrop, Massachusetts).
*3. Describe the religious aspects of the earliest
colonies (e.g., Puritanism in Massachusetts,
Anglicanism in Virginia, Catholicism in
Maryland, Quakerism in Pennsylvania).
*4. Identify the significance and leaders of the
First Great Awakening, which marked a shift in
religious ideas, practices, and allegiances in
the colonial period, the growth of religious
ideas, practices, and allegiances in the
colonial period, the growth of religious
toleration, and free exercise of religion.
*5. Understand how the British colonial period
created the basis for the development of
political self-government and free-market
economic system and the differences between the
British, Spanish, and French colonial systems.
*6. Describe the introduction of slavery into
America, the responses of slave families to
their condition, the ongoing struggle between
proponents of slavery, and the gradual
institutionalization of slavery in the South.
*7. Explain the early democratic ideas and
practices that emerged during the colonial
period, including the significance of
representative assemblies and town meetings.
*5.5 Students explain the causes of the American
Revolution.
*1. Understand how political, religious, and
economic ideas and interests brought about the
Revolution (e.g., resistance to imperial
policy, the Stamp Act, the Townsend Acts, taxes
on tea, Coercive Acts).
*3. Understand the people and events associated
with the drafting and signing of the
Declaration of Independence and the document's
significance, including the key political
concepts it embodies, the origins of those
concepts, and its role in severing ties with
Great Britain.

*4. Describe the view, lives, and impact of key individuals during this period (e.g., King George III, Patrick Henry, Thomas Jefferson, George Washington, Benjamin Franklin, John Adams).

*5.6 Students understand the course and consequences of the American Revolution.

*1. Identify and map the military battles, campaigns, and turning points of the Revolutionary War, the roles of the American and British leaders, and the Indian leaders' alliances on both sides.

*3. Identify the different roles women played during the Revolution (e.g., Abigail Adams, Martha Washington, Molly Pitcher, Phillis Wheatley, Mercy Otis Warren).

*4. Understand the personal impact and economic hardship of the war on families, problems of financing the war, wartime inflation, and laws against hoarding goods and materials and profiteering.

*5. Explain how state constitutions that were established after 1776 embodied the ideals of the American Revolution and helped serve as models for the United States Constitution.

*6. Demonstrate knowledge of the significance of land polices developed under the Continental Congress (e.g., sale of western lands, the Northwest Ordinance of 1787) and those policies' impact on American Indian's land.

*7. Understand how the ideals set forth in the Declaration of Independence changed the way people viewed slavery.

*5.7 Students describe the people and events associated with the development of the United States Constitution and analyze the Constitution's significance as the foundation of the American republic.

*4. Understand how the Constitution is designed to secure our liberty by both empowering and limiting central government and compare the powers granted to citizens, Congress, the president, and the Supreme Court with those reserved to the states.

      *5. Discuss the meaning of the American creed that calls on citizens to safeguard the liberty of individual Americans within a unified nation, to respect the rule of law, and to preserve the Constitution.

      *6. Know the songs that express American Ideals (e.g., "America the Beautiful," "The Star Spangled Banner").

*5.8 Students trace the colonization, immigration, and settlement patterns of the American people from 1789 to the mid-1800s, with emphasis on the role of economic incentives, effects of the physical and political geography, and transportation systems.

      *1. Discuss the waves of immigrants from Europe between 1789 and 1850 and their modes of transportation into the Ohio and Mississippi Valleys and through the Cumberland Gap (e.g., overland wagons, canals, flatboats, steamboats).

      *2. Name the States and territories that existed in 1850 and identify their locations and major geographical features (e.g., mountain ranges, principal rivers, dominant plant regions).

      *4. Discuss the experiences of settlers on the overland trails to the West (e.g., location of the routes; life in the territories at the end of these trails).

      *5. Describe the continued migration of Mexican settlers into Mexican territories of the West and Southwest.

      *6. Relate how and when California, Texas, Oregon, and other western lands became part of the United States, including the significance of the Texas War for Independence and the Mexican-American War. (State of California Department of Education, 2001)

California State Standards in Grade Five Science

Items marked with an asterisk are the Palm Springs Unified School District Power Standards.

Earth Sciences

*5. The Solar System consists of planets and other
     bodies that orbit the Sun in predictable paths. As a
     basis for understanding this concept:
     a. Students know the Sun, an average star, is the
         central and largest body in the solar system
         and is composed primarily of hydrogen and
         helium.
     b. Students know the solar system includes the
         planet Earth, the Moon, the Sun, eight other
         planets and their satellites, and smaller
         objects, such as asteroids and comets.
     c. Students know the path of a planet around the
         Sun is due to the gravitational attraction
         between the Sun and the planet. (State of
         California Department of Education, 2000)

National Educational Technology Standards for
  Students Grades 3-5

  1. Use keyboards and other common input devices
      (including adaptive devices when necessary)
      efficiently and effectively.
  2. Discuss common uses of technology in daily life and
      advantages and disadvantages those uses provide.
  3. Discuss basic issues related to responsible use of
      technology and information; and describe personal
      consequences of inappropriate use.
  4. Use general purpose productivity tools and
      peripherals to support personal productivity, to
      remediate skill deficits, and to facilitate learning
      throughout the curriculum.
  5. Use technology tools (e.g., multimedia authoring,
      presentation, web tools, digital cameras, scanners)
      for individual and collaborative writing,
      communication, and publishing activities to create
      knowledge products for audiences inside and outside
      the classroom.
  6. Use telecommunications efficiently and effectively
      to access remote information and communicate with
      others in support of direct and independent learning
      and for pursuit of personal interests.
  7. Use telecommunications and on-line resources (e.g.,
      email, online discussions, web environments) to
      participate in collaborative problem-solving

activities to develop solutions or products for audiences inside and outside the classroom.

8. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem-solving, self-directed learning, and extended learning activities.

9. Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.

10. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources. (ISTE, 1998)

APPENDIX B

CLASSROOM HOME PAGE

Welcome to Ms. Waters' Fifth Grade Class

My intention for my fifth graders is to use technology to integrate all subject areas. I invite you to have a look around.

Social Studies Projects	Science Projects
Native American Indians	Taking a Closer Look
Revolutionary War	Human Body
American Civil War	Back Through the Stars
States Reports	Science Fair

- Two Bunch Palms Home Page
- 5th Grade Standards
- Parents and Students
- Grading Rubrics
- Blackboard Online Discussion

APPENDIX C

NATIVE AMERICAN INDIANS

Native American Indians

An Interactive Project for Students

Introduction

Each cooperative group will be responsible for choosing a Native American group, obtaining and filing information on their Native Americans, and **presenting** what they have learned in a group multimedia presentation. The following table will direct your group on their search.

People Locate and list your group's language, any famous persons, and family values

Region Locate and list where your group lives or did live at one time.

Arts Locate and list your groups art work.

Ceremonies/Potlatches Locate and list your group's spirituality/religion, music, and dances

crafts, and clothing.

Housing Locate and list the type of dwellings your group used

Lifestyles Locate and list the type of work/trade your group did and any games they played.

To begin your project, choose your group by clicking on one of the following. Then, under your group's name, find and click on a tribe you want to learn about. Remember to save information on your tribe or print out a copy of the tribe's web page.

Northwest Culture
California-Intermountain Culture
Plains Culture
Southwest Culture
Woodlands Culture

*Remember to use the back arrow at the top of the window after each search to bring you back to this home page.

Filing

To save and file the information your group has collected you need to follow these steps:

1. To save text- Click and drag over the text you want to copy. From the edit menu, choose copy. Next, open a document and select paste. Your text should appear in the document. Save your document to your file.

2. To save an image- Choose an image by right clicking on the image (picture, map, etc.). Next, select save image as .... Open your file, name the image, and save.

3. To save music- Follow the same step to save an image.

Presenting

To present what you have learned, follow these tips:

1. Choose one- Power Point, AppleWorks Slide Show, Web Page using Netscape Composer.

2. Include in your presentation, images, some text, sound, and graphics.

3. Every group member must have a part in the presentation.

My intentions for this web page is to enhance students social studies by integrating technology, at the same time increasing language arts skills. This project was designed with my fifth grade class in mind as well as sharing it with other classrooms and educators.

Copyright/Permission Statement

*Send questions and opinions concerning this project to Bonney Waters, superteach_@hotmail.com

Flow Chart for Native American Indians

```
                    ┌──────────────┐
                    │  Home Page   │
                    └──────┬───────┘
                           │
                           ▼
                  ┌──────────────────┐
                  │ Native American  │
                  │     Indians      │
                  └──────────────────┘
        ┌──────────┬──────┼──────────┬──────────┐
        ▼          ▼      ▼          ▼          ▼
  ┌──────────┐ ┌──────────┐ ┌────────┐ ┌──────────┐ ┌───────────┐
  │Northwest │ │California-│ │ Plains │ │Southwest │ │ Woodlands │
  │          │ │Intermount.│ │        │ │          │ │           │
  └────┬─────┘ └────┬─────┘ └───┬────┘ └────┬─────┘ └─────┬─────┘
       ▼            ▼           ▼           ▼             ▼
  ┌──────────┐ ┌──────────┐ ┌────────┐ ┌──────────┐ ┌───────────┐
  │Choose your│ │Choose your│ │Choose  │ │Choose your│ │Choose your│
  │  tribe   │ │  tribe   │ │your    │ │  tribe   │ │  tribe   │
  │          │ │          │ │tribe   │ │          │ │           │
  └──────────┘ └──────────┘ └────────┘ └──────────┘ └───────────┘
```

Northwest Culture Web Page
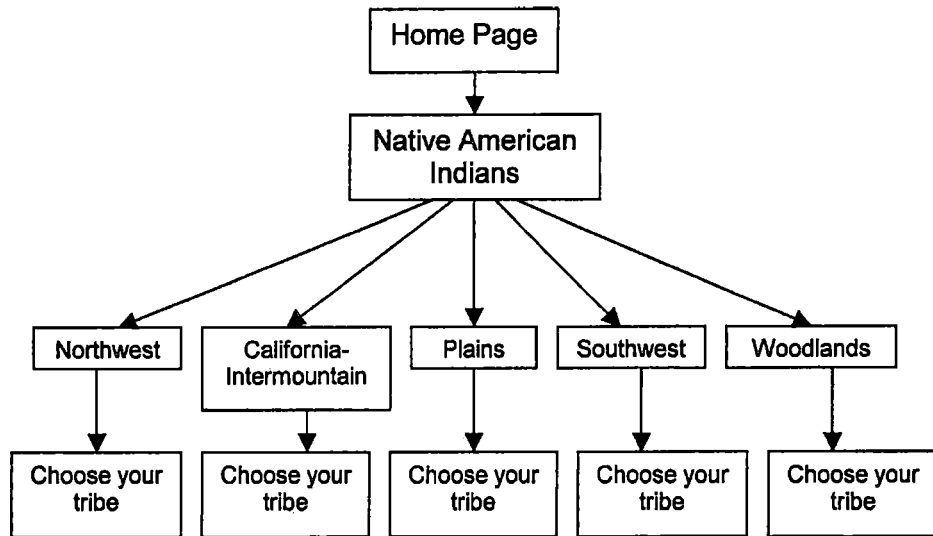
Native American Indians

Northwest Culture

Choose a tribe

back

Yakima	Klickitat	Wisham
Salishan	Kutenai	Eskimo
Nez Perce	Wallawalla	Kwakiutl

Native American Indians

California-Intermountain Culture

Choose a Tribe

back

Yuki	Cahuilla	Dieguenos
Luisenos	Mono	Paviotso
Washo	Yurok	Shasta

Plains Culture Web Page

Native American Indians

Plains Culture

Choose a Tribe

Lakota	Cliff Dwellers	Mandan
Cheyenne	Atsina	Arapaho
Asperoke/Crow	Arikara	Piegan

Native American Indians

Southwest Culture

Choose a Tribe

back

Hopi	Navaho	Yuma
Zuni	Apache	Jicarilla
Comanche	Mohave	Pima

Woodlands Culture Web Page

Native American Indians

Woodlands Culture

Choose a Tribe

Powhatan	Narragansett	Iroquois
Micmac	Nipmuc	Shinnecock
Mohegan	Passamaquoddy	Wampanoag

APPENDIX D

BACK THROUGH THE STARS

Back Through the Stars

Explore these sites to gather information for your research projects.

back

The Nine Planets	Hubble Images	Galileo Journey to Jupiter
Star Child	Johnson Space Center Images	Asteroids
Learn About Comets, Black Holes and More	The Use of NASA Imagery	Exploring Mars

APPENDIX E

AMERICAN CIVIL WAR

American Civil War

a research project for students

Use this chart to help you research Civil War topics.

Abraham Lincoln sites	Women in the American Civil War
timeline	women in uniform
a closer look	women's role in the war

African Americans in the American Civil War	Boy Soldiers in the American Civil War
Africans in America	boys in war
routes of the Underground Railroad	John Lincoln Clem - boy soldier
states of the Underground Railroad	
Harriet Tubman	
Fredrick Douglass	

Casualties of the American Civil War	
numbers compared to other wars	Time line of the American Civil War
battle statistics	Music of the American Civil War
possible causes of the Civil War	Photos of the American Civil War

Have questions or comments about this web site? Send them to Bonney Waters at superteach @hotmail.com

APPENDIX F

TEACHER'S STANDARDS MASTERY

CHARTS

Standards Mastered   Not M= Not @ Mastery, N M= Near Mastery, M= Mastery

Standards	Unit 1				Unit 2				Unit 3		
Reading Language Arts	Not M	N M	M		Not M	N M	M		Not M	N M	M
Reading											
1.1 Word Recognition											
1.2 Word Origin											
1.3 Synonyms, Antonyms, and Homographs											
1.4 Roots and Affixes											
1.5 Figurative words											
Reading Comprehension											
2.1 Structural Features											
2.2 Analyze Text											
2.3 Comprehension & Analysis											
2.4 Inferences, Conclusions, or Generalizations											
2.5 Expository Critique											
Literary Response & Analysis											
3.1 Structural Features of Literature											
3.3 Contrast the Actions											
3.4 Understand Meaning or Moral											
3.5 Describe the Function & Effect											
3.6 Evaluate Meaning											
3.7 Evaluate Techniques											
Writing											
1.1 Organization & Focus											
1.2 Create Multiple Paragraph Compositions											
1.3 Use Organizational Features											
1.4 Create Simple Electronic Documents											
1.5 Use a Thesaurus											
1.6 Evaluation & Revision											
Writing Applications											
2.1 Write Narratives											
2.3 Write Research Reports											
2.4 Write Persuasive Compositions											
Written & Oral Eng. Lang. Conventions											
1.1 Sentence Structure											
1.2 Grammar											
1.3 Punctuation											
1.4 Capitalization											
1.5 Spelling											
Listening & Speaking											
1.1 Ask Questions											
1.2 Interpret Messages, Purposes, & Perspectives											
1.3 Make Inferences											
1.4 Select a Focus											
1.5 Clarify Ideas											
1.6 Engage the Audience											
1.7 Identify, Analyze, & Critique Persuasiveness											
1.8 Analyze Media											
Speaking Applications											
2.1 Deliver Narrative Presentations											
2.2 Deliver Informative Presentations											

Grade Five Reading and Language Arts Standards

Mastery Chart

Standards Mastered   Not M= Not @ Mastery, N M= Near Mastery, M= Mastery

Standards	Unit 1				Unit 2				Unit 3		
Social Studies	Not M	N M	M		Not M	N M	M		Not M	N M	M
5.1 Describe Major Pre-Columbian Settlements											
1. Geography & Climate Influences											
2. Describe Customs & Traditions											
3. Explain Economics											
5.3 Describe cooperation & Conflict Among Indian Nations											
1. Describe Competition											
2. Describe Cooperation											
3. Examine Conflicts											
4. Discuss Role of Broken Treaties											
5. Describe Internecine Indian Conflicts											
6. Explain Influence & Achievements											
5.4 Understand Political, Religious, Social, & Economic Institutions During Colonial Era											
1. Understand Influence & Location of 13 Colonies											
2. Identify Major Groups											
3. Describe Religious Aspects											
4. Identify Significance of Great Awakening											
5. Development of Self-Government											
6. Describe Introduction to Slavery											
7. Explain early Democratic Ideas											
5.5 Explain the Cause of the American Revolution											
1. Understand How Revolution Began											
3. Declaration if Independence											
4. Describe Key Individuals											
5.6 Understand the Course & Consequences of the American Revolution											
1. Identify & Map Major Battles											
3. Identify Roles of Women											
4. Understand Impact of War											
5. State Constitutions											
6. Significance of Land Policies											
7. Declaration of Independence Changed Views											
5.7 U.S. Constitution											
4. Design to Secure Our Liberty											
5. Safeguard Liberty											
6. Songs That Express American Ideals											
5.8 Trace Colonization, Immigration, & Settlement Patterns											
1. Discuss Waves of Immigrations											
2. Name States & Territories That Existed in 1850											
4. Experiences of Settlers											
5. Continued Migration of Mexican Settlers											
6. Relate How Western Lands Became Part of U.S.											

Grade Five Social Studies Standards Mastery Chart

Standards Mastered   Not M= Not @ Mastery, N M= Near Mastery, M= Mastery

Standards	Unit 1				Unit 2				Unit 3		
Science	Not M	N M	M		Not M	N M	M		Not M	N M	M
Earth Sciences											
5. The Solar System											
a. Know the Sun											
b. Know the Solar System											
c. Know the Path of a planet around the Sun											
Technology											
1. Use Input & Output devices											
2. Discuss Common Uses of Technology											
3. Discuss Basic Issues											
4. Use General Purpose Productivity Tools											
5. Use Technology Tools											
6. Use Telecommunications											
7. Use On-line Resources											
8. Use Technology Resources											
9. Determine When Technology is Useful											
10. Evaluate Electronic Information Sources											

Grade Five Science and Technology Standards Mastery

Chart

APPENDIX G

STUDENT'S GRADING CRITERIA

RUBRIC FOR NATIVE AMERICAN

INDIANS

Name _____

Unit 1: Native American Indians
Grading Criteria

Name of Tribe _____   Region _____

Possible Points			Points Earned	
5		**Group Participation**		
		Written Report		
	10	Content		
	10	Structure		
	10	Grammar		
	10	Spelling		
	10	Neatness		
50		(Total Points)		
5		**Blackboard Discussion**		
40		**Unit Test**		
100		**Total**		

APPENDIX H

STUDENT'S GRADING CRITERIA

RUBRIC FOR BACK THROUGH THE

STARS

Name _____

Unit 2: Back Through the Stars
Grading Criteria

Name of Tribe _____   Region _____

Possible Points			Points Earned	
5		**Group Participation**		
		Group Video		
	5	Script		
	5	Props		
	5	Production		
	5	Editing		
20		(Total Points)		
		Written Report		
	5	Content		
	5	Structure		
	5	Grammar		
	5	Spelling		
	5	Neatness		
25		(Total Points)		
5		**Blackboard Discussion**		
45		**Unit Test**		
100		**Total**		

APPENDIX I

STUDENT'S GRADING CRITERIA

RUBRIC FOR AMERICAN CIVIL WAR

Name _____

Unit 3: American Civil War
Grading Criteria

Name of Tribe _____   Region _____

Possible Points			Points Earned	
5		**Group Participation**		
10		**Group Skit**		
		Research Report		
	5	Outline		
	5	Content		
	5	Structure		
	5	Grammar		
	5	Spelling		
	5	Illustration		
	5	Neatness		
35		(Total Points)		
10		**Blackboard Discussion**		
40		**Unit Test**		
100		**Total**		

REFERENCES

Armento, B., Nash, G. B., Salter, C. L., & Wixson, K. K. (1991). *America will be*. Boston: Houghton Mifflin Company.

Bereiter, C., Brown, A., Campione, J., Carruthers, I., Case, R., Hirshberg, J., Jager Adams, M., McKeough, A., Pressley, M., Roit, M., Scardamalia, M., & Treadway, Jr., G. H. (2000). *SRA open court reading*. Columbus, Ohio: SRA/McGraw-Hill.

Budin, H. (1999, Spring). The computers enter the classroom. *Teachers College Record, 100*(3), 656-670.

Clark, K. D. (2000, Winter). Urban middle school teachers' use of instructional technology. *Journal of Research on Computing in Education, 33*(2), 178-196.

Cooper, L. (2000, March). Online courses. *T H E Journal, 27*(8), 86-92.

Danker, A. C. (2000, November/December). Linking technology with social studes learning standards. *Social Studies, 91*(6), 253-257.

Davis, M. (1999, September). Design's inherent interdisciplinarity: The arts in integrated curricula. *Arts Education Policy Review, 101*(1), 8-14.

Descy, D. E. (1992). First year elementary school teachers' utilization of instructional media. *International Journal of Instructional Media, 19*(1), 15-22.

Dunn, M. A. (2000, May/June). Closing the book on social studies: Four classroom teachers go beyond the text. *Social Studies, 91*(3), 132-137.

Fardouly, N. (1998). *Intructional design of learning materials*. [electronic version]. Retrieved June 15, 2002 from http://www.fbe.unsw.edu.au/learning/instructionaldesign/materials.htm

Hsiao, J. W. D. L. (1996). *CSCL theories* [electronic version]. Retrieved July 5, 2002 from http://www.edb.utexas.edu/csclstudent/Dhsiao/daphne.html

Keeler, C. M. (1996, Spring). Networked instructional computers in the elementary classroom and their effect on the learning environment: A qualitative evaluation. *Journal of Research on Computing in Education, 28*(3), 329-346.

Linquanti, R. (1999). *Fostering academic success for english language learners: What do we know?* [electronic version]. Retrieved July 5, 2002 from http://www.wested.org/policy/pubs/fostering/index.htm#sect1

Maor, D. (1999, August). Teachers-as-learners: The role of a multimedia professional development program in changing classroom practice. *Australian Science Teachers Journal, 45*(3), 45-51.

Mason, C. L., & Dralle, A. (1999). Yesterday, today, and tomorrow: The history and social science classroom. *Journal of Education, 181*(3), 1-12.

Oliver, R., Omari, A., & Herrington, J. (1998). Investigating implementation strategies for www-based learning environments. *International Journal of Instructional Media, 25*(2), 121-139.

Palm Springs Unified School District, (2002). *School accountability report card school year 2000/2001.* Retrieved August 8, 2002 from http://www.psusd.k12.ca.us

Parr, J. M. (1999, Spring). Extending educational computing: A case extensive teacher development and support. *Journal of Research on Computing in Education, 31*(3), 280-292.

Reisberg, L. (1998, May). Facilitating inclusion with integrated curriculum: A multidisciplinary approach. *Intervention in School & Clinic, 33*(5), 272-278.

Ritchie, D., & Hoffman, B. (1996). *Using instructional design principles to amplify learning on the world wide web* [electronic version]. Retrieved June 15, 2002 from http://edweb.sdsu.edu/clrit/learningtree/ DCD/WWWInstrdesign/WWWInstrDesign.html

Ropp, M. M. (1999, Summer). Exploring individual characteristics associated with learning to use computers in preservice teacher preparation. *Journal of Research on Computing in Education, 31*(4), 402-425.

Semple, A. (2000, September). Learning theories and their influence on the development and use of educational technologies. *Australian Science Teachers Journal, 46*(3), 21-28.

Swan, K., & Mitrani, M. (1993, Fall). The changing nature of teaching and learning in computer-based classrooms. *Journal of Research on Computing in Education, 26*, 40-55.

Valle, C. R. (1999) *Helpful stratigies for the SDAIE content area teacher* [electronic version]. Retrieved July 5, 2002 from http://hale.pepperdine.edu/ ~crvalle/page3.htm