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# A hypermedia field trip through Old Town Temecula

Vivian Terese Burke-Scheuerell

# A HYPERMEDIA FIELD TRIP THROUGH OLD TOWN TEMECULA

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A Project

Presented to the

Faculty of

California State University,

San Bernardino

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In Partial Fulfillment

of the Requirements for the Degree

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in

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by

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## Abstract

The purpose of this project was to develop a computer-based instructional material for Temecula third grade teachers to use with their History/Social Science curriculum. What evolved was a stack about Old Town Temecula that supports the Framework, an integration of technology into the History/Social Science Curriculum.

This project connects the past and present by focusing on the historical buildings in Old Town Temecula. As an instructional tool the stack provides teachers with the pre field trip materials and follow-up activities to use when doing a field trip to Old Town Temecula.

This project, developed using the authoring tool HyperStudio®, integrates text, graphics, sound and video to present the local Temecula history. The stack gives the user control over the navigation and information. It can be linear, but also it lends itself to a web of information.

Teachers are expected to benefit from the stack as a teaching tool and as a model for developing and creating their own stacks as they integrate technology into the History/Social Science curriculum.

Acknowledgements

I truly appreciate all the guidance and help that my advisor Dr. Rowena Santiago has given me throughout this project. I would also like to thank Dr. Sylvester Robertson for his guidance in the many classes leading to this project.

My parents Donald and Vivian Burke played an instrumental role in my becoming a teacher. The moral support and encouragement I received from them helped me through my years in college. My father has given me his thirst for knowledge and my mother her perseverance. To them I owe my education and this degree.

I must acknowledge my dear friend Cathy Chandler, who convinced me to go back to school with her to get our Masters. I think I made it through that first year because she was there with me, encouraged me and car pooled those many miles with me.

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# Chapter One: Introduction

## Local History and Field Trips

Temecula is one of the fastest growing areas in Southern California. It is located at the southern tip of Riverside County and has approximately 41,850 people living in its city. Temecula is well known for its wineries and its breathtaking views of rolling hills. In addition to this, Temecula has an "Old Town" that has been preserved from its turn of the century motif. There are several original buildings in "Old Town" that provide plenty of local history.

Discovering the locality's past and traditions is a major focus in third grade social studies curriculum. "Continuity and Change" titles the History/Social Science State Framework for the third grade level. The Framework (1996) states, "by exploring their locality and locating some of the features that were built by people who lived long ago, children can make connections with times past and with the people whose activities have left their mark on the land and community" (p. 40). Temecula lends itself to making that connection due to the abundance of historical sites preserved in the area.

Taking a field trip is one way to help students connect to the past. According to the Montgomery County Public Schools Curriculum Department Web Site (1996) titled, "Elementary Social Studies Field Trips," field trips enable teachers to expand children's learning beyond the walls of classroom into the vast community outside. This web site,

further known as MCPS, goes on to state that incorporating field trips into the curriculum increases knowledge and understanding of a subject, adds realism and provides an opportunity to develop and enhance a students socialization and citizenship skills. Another value of a field trips, as Pasuier (1994) notes, is that highlights of excursions stand out to mark the school years racing by.

There are, however, limitations with field trips. Limitations include money, safety and security, time availability of the place to be visited, bus schedules and, of course, the weather. Funding to go on the trip is usually a major concern and one of the major reasons many field trips are not taken. Frank Ohnesorgen (personal interview January 28,1997), principal of Sparkman Elementary School in Temecula, noted financial resources for field trips are often supplemented through the PTSA (Parent Teacher Student Association).

Once funding is available, the next thing to consider is the students being safe and secure on the trip. Generally, one adult to every ten students is needed for proper supervision on a field trip. Teachers try to elicit the help of classroom parents. Unfortunately, it is hard to find parents that are not at work themselves during the school hours.

The time availability of the place to be visited along with the bus scheduling is important. The bus scheduling in most districts often dictate where and when you can go. In

the Temecula Valley Unified School District teachers are limited to fifty miles and the trip must be taken within normal school hours. Once field trip travel begins there are numerous things that can happen. Pasuier (1994) warns "the best laid plans and the fallibility of the ever-vigilant teacher are never as apparent as when you're on the road."

An additional limitation to field trips is the time to prepare for the academic purpose. To ensure that students have a successful experience, prior to the trip, teachers need to discuss with the students what they should be looking for while on the field trip and what is expected of them to learn. Miller (1994) states that during museum field trips that learning depends upon how well the child has been prepared and motivated for the experience. MCPS (1996) also states that field trips are a valuable contribution to a child's education, but should be preceded by good planning. When considering the practical details mentioned above, along with the instructional objective to be met, it is easy to see that field trip preparation is a critical factor to the success of the field trip as a learning experience but that preparation is a time consuming task. It would greatly benefit teachers if they had access to instructional materials that will help them prepare for field trips.

Social Studies and Technology

In addition to discovering locality's past and traditions, the History/Social Science Framework (1996) also encourages the use of technology within the curriculum. It's

Elementary (1992), an elementary task force report, identifies technology as a tool for improving curriculum and instruction, the use of which can help reach students with a variety of learning styles.

Research shows that there are three major learning modalities - visual, tactile/kinesthethic and auditory. Murphy-Judy (1996), reports that not one of the three learning styles is better than the other. She further states that it is best to use a learner's favored style as a point of entry into engaging a specific content area, then strengthening the learning and the learner by the use of the other styles to reinforce learning. It is believed that learners may become more adept through a multiple sensory approach.

The use of technology can help visual, tactile/ kinesthethic and auditory learners. Part of this technology is hypermedia, a term that involves nonlinear representations of knowledge and integrates the many separate components commonly referred to as multimedia (Reed et al, 1995). Hypermedia is often credited to being able to address the three learning modalities. Hypermedia is an environment that combines text, audio, graphics and video which gives the learner a multimodal approach to education.

Statement of the Problem

The need for field trip instructional materials was confirmed by Temecula teachers when all third grade teachers were interviewed informally as part of a needs analysis for

this project. The teachers expressed need for pre-field trip materials led to the idea of creating a piece of software that could be used by teachers to prepare students for the trip and by the students to reinforce what they had seen. As a preparation tool the software would also be used as a pre visit to "Old Town Temecula." Considering the rapid growth of Temecula, and the relocation of students from other cities and states, it was then determined this may help students who have not had a chance to establish any roots in Temecula get a sense of being connected to the area. More importantly, the software will help in preparing students for what they may see and learn on the field trip. Just in case one of the limitations previously mentioned prevents the students from going on the trip, the software would also be able to simulate some of the real experiences of the filed trip.

The software will enhance the History/Social Science curriculum and enable students to experience places of Temecula's past. Third grade teachers engage their students in a fairly comprehensive unit about Temecula and also take them on a field trip of "Old Town" itself. The third grade teachers have had trouble with unreliable docents and limited museum schedules. This school excursion is attended by most of the students but often there are a few who miss it due to some type of absence. Hopefully, those students who could not attend the local field trips could get an idea of what was seen and experienced by using the software.

The Temecula unit provides plenty of hands-on projects

to do such as writing about, drawing and constructing different elements of Temecula's past. Unfortunately, it does not include anything that uses technology. "Integrating technology of any kind in instruction is always a difficult task. Historically a majority of educators have demonstrated some resistance to it for a variety of reasons".(Reed et al, 1995, p. 297) However, the teachers in question are interested in technology and wish to use it in their classrooms to enhance and reinforce learning. The time to develop anything to correlate with the Temecula Unit as far as technology is concerned has been limited. In addition to limited time, most of the teachers are unsure of what kind of authoring programs are available and how to use them in there lessons.

Project Overview

To accomplish the goal of exploring the Old Town Temecula Historical buildings using technology, this project will create a computer-based instructional material entitled "Field Trip Through Old Town Temecula" (Temecula Field Trip). The "Temecula Field Trip" stack will feature four historical buildings in Old Town Temecula and it will incorporate voice, video, text, and digitized pictures. The project will also use a word processing program for journal prompts to be used by the students individually and/or in small groups. The stack will be developed using HyperStudio®, a multimedia authoring tool for K-12.

The central importance of this project is history, "the

glue that makes the past meaningful, the lens through which children and adults can come to understand the world that they live in and understand how it was shaped." (State Framework, 1996). The "Field Trip Through Old Town Temecula" software will focus on connecting the past to the present as part of the third grade social studies curriculum.

## Chapter Two: Review of Related Literature

This chapter examines the literature as it relates to Social Studies teaching, the third grade learner and field trips. It will go on to examine the technology and how it can be used to help teachers in the preparation of their students before a field trip.

### Social Studies: Framework and Curriculum

The word "history" comes from a Greek word meaning "to know." To know the past and relate it to the present is what teachers will expect from their third grade students. The History/Social Science Framework (Revised, 1996) for the third grade level states that students connect the past with the present by exploring their locality and locating some of the features that were built by people who lived long ago. By exploring their locality children can make connection with times past and with the people whose activities have left their mark on the land and community.

Temecula Valley Unified School District History/Social Science Curriculum (Revised 1991) states that changes in a community continue to evolve while some things remain the same. A great legacy of local, regional and national traditions provide common memories and a shared sense of who we all are. Pitts (1995) states history is the intricate and involving story of who we are and how we got this way. If kids do not find it riveting, maybe the fault is not theirs alone. Maybe we could do a better job of telling the story.

"Continuity and Change" titles the Temecula third grade History/Social Science curriculum with the local history as

major focus. The Temecula Unit taught by third grade teachers provides students with a variety of activities to help in learning about the local history. There are several hands-on projects in which students can construct elements of Temecula's past and present. Third grade students are also engaged in writing and drawing assignments along with some basic knowledge questions.

In 1989, a Curriculum Task Force comprised of members from the American Historical Association, the Carnegie Foundation for the Advancement of Teaching, National Council for the Social Studies (NCSS) and the Organization of American Historians, published a volume titled Charting a Course: Social Studies for the 21st Century. The report maintains that social studies in the primary grades "set the tone and lay the foundation for social studies education that follows" (Curriculum Task Force of the National Commission on Social Studies in the Schools, p. 7).

Third Grade Learner and Social Studies Learning

Students in the third grade are approximately between the ages of eight and nine years old. Third grade tends to be an age of transition, an "awkward" age, as some teachers put it. Jean Piaget (1896-1980), a psychologist interested in cognitive development, posed that children progress through four stages (Santrock 1995). The stages are Sensorimotor Period, PreOperational, Concrete Operations and Formal Operations. The Sensorimotor Period is the first stage which occurs from birth to two years of age. During this period, infants learn mostly through trial and error. Initially,

infants rely on reflexes but then build on these reflexes to develop more sophisticated procedures. At this Sensorimotor stage, children also begin to recognize that objects do not cease to exist when hidden.

The second stage ranges from two to six or seven years of age and is called the PreOperational Period. During this period children being to acquire language skills and are able to think operations through logically in one direction. Generally, their thoughts and communications are egocentric - caring only about oneself. According to Vasta (1995) children in the PreOperational period have great difficulty seeing another person's point of view.

Concrete Operations is the third stage of Piaget's Theory of Development. It includes children from approximately seven years of age to eleven or twelve. Contrary to the PreOperational stage, children in the Concrete Operations stage are able to take another's point of view and take into account more than one person's perspective concurrently.

Formal Operations occurs around the ages eleven or twelve to adult and is the stage of thinking logically and abstractly. Piaget consider this the ultimate stage of development, and stated that although the children would still have to revise their knowledge base, their way of thinking was as powerful as it could get.

Third grade learners are in the concrete operations stage. Students at this stage are able to take another's point of view and take into account more than one perspective

simultaneously. Although students at this stage can understand concrete problems, Piaget would argue that students at this stage cannot yet perform on abstract problems (Vasta, 1995). Third grade students are just beginning to see another person's point of view. Once learned, this ability helps connect the past to the present - an intricate part of the third grade social studies curriculum. At this point, "they can begin to think about continuity and change in their own locality and nation" (History/Social Science Framework, 1996, p. 40).

The National Council for Social Studies (NCSS) (1994) recently issued a mission statement of "powerful learning in social studies." There are five key points of this statement that provide powerful student learning. According to the NCSS, powerful learning is meaningful, challenging, value-based, integrative and active. No longer would reading a chapter in the textbook and answering questions at the end, uphold as effective teaching and learning.

Powerful student learning begins when the concepts being taught become meaningful for the student. This is where the students see relevance and are able to bridge their own experiences to the social studies curriculum. Relevance has to do with connecting with students' interest, particularly as it relates to their sense of self and their evolving sense of being able to control and operate on their world (Curley & Whittaker, 1996). The recent publication of California Educator (February, 1997) had several articles dealing with the subject of relevance. In short the article stated that

many students who were participating in programs of relevance, such as school-to-work/career programs, "are able to see, firsthand, how their school curriculum is related to "real life" and real work" (p. 6). Thus, creating meaningfulness for the student.

The second concept describes powerful learning as challenging. According to Cruley & Whittaker (1996), people are by nature inquisitive beings, constantly striving to expand our horizons, to increase or ability to understand and control our worlds. People are creatures that value and seek out challenges. Cohen's (1986), Levin, (1988), Zarella (1994), concur that the trend has been to have teachers present all students with more demanding academic challenges. Teachers are now challenged to provide lessons that are meaningful, and that provides the student with the positive sense of self to take on new challenges (Curley, Whittaker, 1996).

Powerful learning is value-based. People grow up with different religions, cultures, backgrounds and therefore bring to a lesson many different values, beliefs and ideas. The city of Temecula is a fast growing area and teachers find themselves trying to provided a common background knowledge for their students to understand their local community. According to Hirsch (1992) shared background knowledge makes schooling more effective. Along with guiding students to an area of shared background knowledge, the teacher also needs to be a neutral mediator. As the neutral mediator the teacher promotes discussions from students with varying backgrounds

in order to have them share their values and beliefs. Through this sharing, students become aware of and sensitive to other cultures other than there own.

Powerful learning is integrative. This statement is directly consistent with the first statement powerful learning is meaningful. New ideas and concepts need to be integrated with the students' existing knowledge. For example, a teacher can have students relate a historical event with an experience that happened to them or in their family. Once students reflect on what is known, how they know it and how it relates in learning of new material to their own experiences, they begin to engage in metacognitive thought. Because the social studies curriculum is value-based and interpretative, teachers have many opportunities for promoting metacognition as students reflect on how concepts, themes and events are connected to their own experience (Curly, Whittaker, 1996).

Finally, the last concept, powerful learning is active. Active engagement in meaningful learning, which may be challenging and is based on existing knowledge and beliefs, provides a powerful form for learning (Curly & Whittaker, 1996). Negon and Perfect Ricklin (1996) along with Finkelestine, Nielsen and Switezer (1993) support the idea of active learning. These researchers also support the idea of teachers changing the emphasis of content delivery to focusing on child learning. A focus in which encourages students to become active participants in their learning. After examining the powerful learning features, which

includes learning that is meaningful, challenging, value-based, integrative and active, this author concludes it is an excellent alternative to reading a chapter in the textbook and answering questions at the end. Powerful learning can help lay the foundation of history for younger students and keep an active interest in history for older students.

History/Social Studies Teaching Strategies

The History Social Science Framework (Revised, 1996) also concurs with NCSS and the powerful learning aspect. "While the neighborhood and the region provide the field for exploratory activities related to geography, economics,and local history, the students will read, hear and discuss biographies, myths, fairy tales, and historical tales to fire their imagination and whet their appetite for understanding how the world came to be as it is" (p. 5).

One definition of the word history in the dictionary is a story or tale. According to Aaron Shepard (1996), author of many children's books, the telling of a story could be:

- a folktale, meaning a story from the oral tradition. This could be a fairy tale, hero tale, humorous tale, tall tale, wisdom take, animal story of fable, love story, myth or legend.
- a "literary tale," by a single author, originally meant to be read.
- a real-life story, from history or personal experience.

There are a variety of teaching strategies that are appropriate for third grade learners and that meet the five

concepts of powerful learning recommend by the NCSS. Story telling, hands-on activities, field trips and the use of technology are a few ways of teaching history social science. Field trips and technology will be discussed further on in this chapter.

First, the strategy of storytelling, especially storytelling done by the students, incorporates all the elements of powerful learning suggested by the NCSS. If it is a real life story for the student it becomes meaningful and integrates their family values. The challenge may come by organizing the events in an order that tells a good story for their listeners. Telling a story may be integrative - reflect on what has happened in the past and connect the events to the present. The actual telling of the story may be consider active learning. Not only does a student actively present the story but also actively engages the audience to listen by gestures of the hand, facial expressions and the tone of the storytellers voice.

Another strategy is hands-on activities. Powerful learning is present in hands-on activities. Students need opportunities for "doing the subject" and for being assessed on tasks that allow them to demonstrate what they have learned through "exhibitions of mastering" (Nickel, 1992). Schneider (1994) suggest the "doing a subject" to be authentic learning. He goes on to state that it is important for students to be engaged in purposeful, stimulating tasks, that permit expression through a variety of ways that have value beyond the instructional setting.

Third grade students in Temecula use The Houghton Mifflin Social Studies book, From Sea to Shining Sea. The authors, Armento, Nash, Salter & Wixson (1991) provided ample suggestions for each unit in regards to hands-on activities. These activities engage students in a variety of tasks. The following are some examples: drawing Indian symbols, locating places on the globe, examining beach sand through a microscope, making costumes of Cheyenne children's clothing, and so on. Each lesson developed in the book has hands-on activities for the students to participate in, thus providing active learning.

The History/Social Science Framework (1996) also supports a variety of content-appropriate teaching methods that engage students in hands-on activities and engages them actively in the learning process. The framework encourages the use of "local and oral history projects, writing projects, debates, simulations, role playing, dramatizations, and cooperative learning" (p. 7).

The use of cooperative learning, also known as collaborative learning is a strategy that is used in many lessons and activities across the curriculum. Cooperative learning has the following characteristics:

- Work is done in small heterogeneous groups of three to five students
- Members of the group are assigned a clearly defined role and is held accountable for that role's responsibilities.
- Each member must contribute to the group

successfully completing the assignment.

This type of learning promotes a positive interdependence and allows the students to develop and practice skills of social participation. According to Nergon & Ricklin (1996), collaborative method of instruction helps meet the needs of students with varying abilities and backgrounds. Learning becomes student directed with the teacher as a facilitator helping students to construct their own interpretations of historical events. Storytelling, hands-on activities, collaborative learning are but a few of the many strategies teacher have to choose from to teach history. The following strategies, field trips and technology also present useful options for teaching history and are directly related to this project. This section concludes that there is an abundance of effective teaching strategies that one can choose from in order to help students develop empathy for the experiences of people in other times and places.

Field Trips

One way of taking learning beyond the traditional instructional setting (the classroom) is to go on a field trip. "Field trips are especially important if children have not had an opportunity before this to explore, observe, and study firsthand their local environment" (History/Social Science Framework, 1996 p. 41). According to Miller (1994) and Leary (1996), field trips are a vital part of a child's schooling that provide real life experiences and enable students to use a variety of learning styles.

Generally, school districts accept the fact that

learning experiences for school age children are not limited to the classroom and therefore, under specified conditions, approve educational field trips. Some of those conditions include:

- The trip is safe for the age group of students involved.
- The trip is consistent with the District's educational goals.
- The trip is directly related to the curriculum for participating students.
- The trip has adequate supervision.
- The trip will provide students with unique experiences that are not available in a classroom.
- The learning opportunities for students justify the time and expense in planning and conducting the trip.
- The trip will be funded partially by the district or district related funds. (i.e. P.T.S.A.)

As stated in chapter one, there are several limitations to field trips such as money, safety, time availability of place to be visited, bus schedules and weather. However, the greatest limitation is the time for teachers to prepare for the academic purpose of the trip. Leary (1996) states, "You can accomplish many learning objectives with an organized, well-planned field trip" (p. 29).

Several articles conclude that preparation is the key to a successful field trip. Teacher pre-visits are suggested to help in the planning. Teachers can familiarize themselves

with the major features of the trip along with confirming the educational objectives that can be met with this trip. During a pre-visit, teachers can collect materials such as visual aides to help prepare students for the trip. Often teacher expectations and student expectations of a trip are totally different. According to Leary (1996), "Students want to have fun with their friends, see a favorite exhibit, visit the gift shop, and *maybe* learn something" (p. 27). On the other hand, teachers view the trip as an enrichment to the regular classroom instruction - having their students learn in an informal setting (Leary, 1996).

Researchers Falk and Balling (1982) conducted a study of fourth grade students taking a field trip to the zoo to see if both the student and teacher expectations could be accomplished. The students were divided into five groups. Prior to the trip two groups were given details about what was expected to learn - a "cognitive knowledge and facts orientation". With this group the facts and concepts that the students were expected to learn were discussed with the children before the trip. An example of this would be the diet and habitat of giraffes.

The next group of students was the "process skills" orientation group. Researchers taught this group learning skills needed for a certain setting. An example of this was how to observe and record different animals' behavior.

The third group was "child centered" which focused on the student's concerns of the trip. Researchers focused on the concerns of the children at this point. Such as how long

the trip would be, what exactly were the students going to see, who they were going to sit with and so on.

The fourth group and fifth group were control groups, one went on the filed trip with no preparation and one did not go on the field trip at all.

The three groups that received some type of orientation before the field trip learned more than the group that received no pre field trip orientation or the group that did not go on the field trip. The research study did show some surprising results. The "child centered" group showed the most learning. In the "child-centered" group, researcher observed that students were more attentive and relaxed. Therefore if teachers want educational objectives met, it is important to first take care of the concerns of the children such as, how long the bus trip is, where the bathrooms are, which students are group together, when will lunch be, is there a gift shop and so on. Perhaps a combination of the three orientations mentioned may further assure teachers of instructional objectives being met. First the child-centered orientation, to put students at ease. Next, cognitive orientation, where the knowledge and facts are discussed. Finally, the process skills orientation, where the students are shown the "how to" procedures.

Leary (1996) suggest that teachers can prepare their students by having a class discussion just to answer questions like the ones above. Once concerns are addressed students can focus in on what learning experience is planned for the trip. The teacher, however, is still encouraged to

first make the trip and decide the educational gains and collect any materials pertinent to the trip. Gregg, Seyer and Ochi (1996) agree that field trips take enormous teacher preparation if it is to be successful.

An Ideal Field Trip

Once the planning of the trip is taken care of and the educational goals set and the teachers has discussed the students concerns then the actual trip beings. The bus ride can be an experience for teachers to never take a field trip again. If the teacher has prepared the students with visual aides then this is a good time to have trip booklets out and have students looking for familiar landmarks on the way to the field trip destination (Lerner, 1996).

Arriving at the destination the students are prepared once again by the teacher to the areas they will be seeing. The teacher can plan a free exploration time within a certain area then call students back for a guided tour. The teacher having met with the guide on the pre visit, has informed the guide of the educational goals that need to be met. This allows the guide to focus in on what the students have studied in class beforehand and enrich those areas while on the trip. According to Feinberg (1993), "No amount of planning makes a trip run perfectly, but diligent organization can help make a trip educational and fun" (p. 46).

The trip is not over once the class arrives back at school. Students use information gained on the trip to do follow-up activities. The first thing to do when back in

class is to have a discussion about the trip. The teacher can reinforce some of the learning that took place and clarify any misunderstandings. Projects may be assigned such as creating a scrapbook containing information from the field trip. The scrapbook may have photos, drawings, and perhaps short writings by the students. This follow-up assignment can be done in collaborative groups and each group can then present the scrapbook to the whole class. The class now has six or seven books that can put in the class library and referred to throughout the year.

Researchers Farmer and Wott (1995) did a study of the effectiveness of follow-up activities. The study involved 111 public school fourth graders visiting the Washington Park Arboretum, located in a Seattle city park. The study shows that follow-up activities do reinforce and solidify the concepts discussed and experienced on field trips. Therefore, the teacher needs to incorporate follow-up activities as a part of the field trip lesson plans.

Electronic Field Trips

There is a growing trend in the area of field trips and that is to take them electronically. Electronic field trips are, "events scheduled for a certain period of time during which students have a chance to interact with project leaders, professionals, experts, and peers all over the world" (Holzeberg, Ph.D., 1996, p. 58). Why take electronic field trips and miss the real life experiences that a traditional field trip can give? The reason the electronic field trips are so popular today is that students can go to

foreign countries, distant planets and dangerous places, places that probably are not on the district approval list but still worth the adventure. These include places that otherwise students would not have any access to.

Electronic field trips are highly interactive and offer a wide variety of resources to supplement the trips (Buettner & de Moll, 1996). Teachers can take advantage of lesson plans prepared in advanced or modify the lessons to meet the needs of their students. The Electronic Field trip may be used as a whole group experience or individual lesson. There is a great deal of technology that is involved in the use of electronic field trips. The following is a review of the popular electronic filed trips. This chapter will then go into the technology that is involved and the teacher training that may be needed.

Review: Electronic Field Trips

Electronic field trips, often called Virtual Field Trips are taking students to places such as, The Louvre, The Smithsonian, Scripps Institute of Oceanography. Other places to explore may be NASA, Weather Stations, The Institute of Egyptian Art and Archaeology and many more.

MayaQuest '97, Journey North, Jason Project VIII-Journey from the Center of the Earth are but a few of the electronic field trips that students get an opportunity to connect in real time with real people through the use of video conferencing and e-mail services for those who do not have the video conferencing equipment.

Teachers subscribe to a field trip of their choice -

usually this depends on their curriculum and the dates of the field trip. The teachers are sent lesson plans and materials to help in the preparation of their students for the field trip. During the field trip students help in making decisions about what to do, where to go and so on. These decisions are based on their correspondences with experts in the field and around the world.

Journey North, Jason Project VIII-Journey from the Center of the Earth offer one year internet projects. Journey North focuses on the migration of animals and seasonal changes. To learn about geysers, glacier, boiling mud pots and volcanoes, The Jason Project VIII-Journey from the Center of the Earth, will have students researching Yellowstone and Iceland. MayaQuest is also an excellent example of the electronic field trips. The following is a review of trip.

In the spring of 1995 and 1996 a team of explores, led by Dan Buettner, bicycled through Mexico and Central America to explore ruins trying to discover the collapse of the ancient Maya Civilization. Dan Buettner is not only the leader of MayaQuest he is also the author of MayaQuest: *The Interactive Expedition* and *Sovie Trek*. MayaQuest '97 pulls together the same team as in 1995 and 1996 for a bicycling expedition though rainforests in the countries of Guatemala, Mexico, Belize and Honduras. As with the previous expeditions the team was able to communicate with students daily through the use of satellite dishes and laptop computers that are linked to the Internet. The hi-tech team equipment, linked the explorers to classrooms and computers around the world,

and let followers lead the expedition, interact with online archaeologists and experts, view images from the journey, and learn about the ancient Maya and contemporary Central America (http://www.mecc.com/internet/maya/maya.html).

In order to achieve communication from the field the team members used the following technology:

- Trimble Global positioning system (for navigation and mapping with the Newton message pad)
- Apple Macintosh laptop computer (for online communications, calculations, log entries)
- Digital Video Cameras (2)
- Rockwell Inmarsat satellite telephone (for data transmission)
- Nikon still camera
- A Mercury solar panel by Keep It Simple Systems Supplied the energy to run powerbooks and satellite equipment.
- Battery Power to run computers and satellite for two weeks while deep in the rainforest

Once the field trip/expedition is over, an abundance of materials such as, photos, sound clips, maps and archives from previous MayaQuests, are available for students to use for research. Additional information supporting the curriculum in science, social studies, art and Spanish are available for students and teacher researching the Mayan history and culture. Names of articles in periodicals, books, along with the previous MayaQuest expeditions are listed on the MayaQuest '97 internet site,

(http://www.mecc.com/internet/maya/maya.html).

Regardless of the type of field trip one takes, one that is actual or one that is done over the internet, there still is the need for teacher preparation. Orin and Hofstein (1994) state that the amount a student is able to learn on a given field trip is called "novelty space". An adequate amount of preparation is needed in order to reduce the novelty levels and enhance learning. According to Orin and Hofstein (1994), the use of visual aides and description of the destination by the teacher can help the students become familiar with an actual field trip. The novelty space with an electronic field trip is high in the beginning but will decrease as the students become familiar to the World Wide Web then learning can occur.

Technology: Teaching and Learning

The MayaQuest is one example of how teachers are using technology in their classrooms. The History/Social Science framework (1996) suggest that technology be used to enrich the teaching of history and social science. It goes on to suggest that teachers utilize resources such as, "video programs and laser discs, computer software and newly emerging forms of educational technology can provide invaluable resources for the teaching of history, geography, economics and other disciplines" (p. 7-8).

Computers have impacted education for the last fifteen years. Hypermedia is one of the more recent forms of computer-based learning tools to develop (Ayersman, 1996). Hypermedia is the process of interconnecting pictures, sound,

text and actions in a non sequential way that lets the user browse through related topics in the order that they choose. It requires the use of an authoring tool like HyperCard or HyperStudio. HyperCard, created by Bill Atkinson, was released in August, 1987. It became a very popular computer application for Macintosh users. Apple used a marketing strategy of providing a free copy of HyperCard with every new Macintosh computer sold. Often the HyperCard process has been referred to as hypertext/hypermedia or multimedia. It is an easy to learn and easy to use authoring tool that is not limited to a linear sequence of information but rather lends itself to a much more powerful and flexible environment. This environment encompasses text, still images, sound and video. It gives the user the freedom of choice on what direction to take in learning or presenting the information.

To better understand hypermedia authoring program,such as HyperCard or HyperStudio it is essential to know a few basic elements of the program such as stacks, cards, backgrounds, buttons and fields.

A HyperCard document is a called a stack. A stack is a collection of cards. A stack may have one card or a great multitude of cards this depending on the amount of information that is to be covered. An analogy of a stack may be note cards one has taken on Generals of the Civil War as seen below in Figure 1.

The card is the basic unit in HyperCard. In HyperCard everything seen on the computer screen is part of a card or on larger screens the card may appear in a

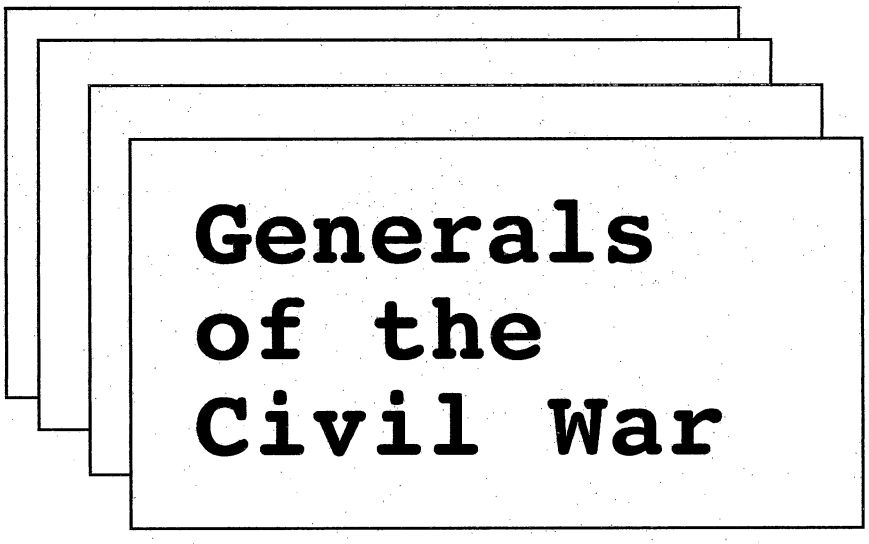


Figure 1. Example of a stack of cards.

window. Each card contains a background. Backgrounds may contain text, graphics or a combination of both that may stay the same throughout the stack. It may be that each subject in a stack will have the same background. In figure one the example of the Civil War the user might find all the cards dealing with the Confederate side in gray and all the cards related to the Union side in blue. This is of course if one is using the newer version of HyperCard that incorporates color.

In a HyperCard stack cards may be accessed in a linear sequential fashion. On the other hand, cards may be accessed randomly through the use of buttons. Each card contains one or more mouse-activated buttons which lead to cards with related information. Buttons can perform calculations, trigger animated sequences, play sounds and even control a peripheral such as videodisc player or CD-ROM drive (Cannings & Finkel, 1993). Exciting action can lie within the buttons.

Figure 2 shows a card containing buttons. Notice how this card gives the user a variety of pathways to explore. The user may go through the cards in a linear sequence if they wished to do so.

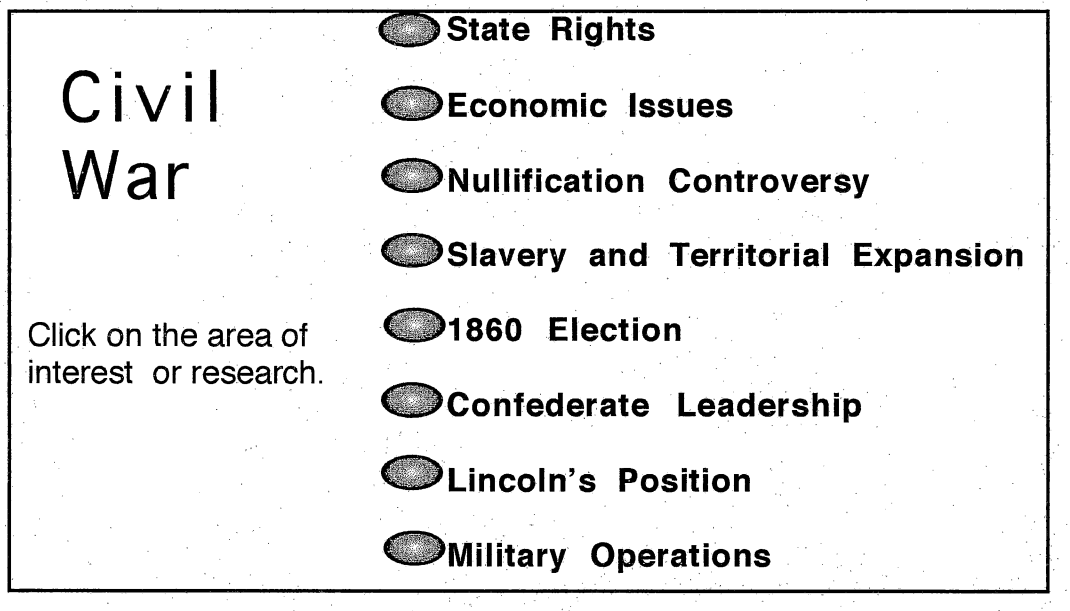


Figure 2. Example of a main menu card with buttons.

Finally, the area of fields. Fields are areas that store and display text. A variety of styles, sizes and fonts can be used in fields depending on what is trying to achieved. If the user wanted to have a large amount of textual information a scrolling field could be used for this purpose.

"HyperCard is alive and well," according to Gleason, (1995). The point that Gleason tries to make in his article is that Hypermedia is not only for developers or programmers. He further states that HyperCard opened up the world of programming to thousands of nontechnical people who simply wanted to create a product that worked for them. Teachers from all over are using Hypermedia to present information to

their students in a way that catches their attention and actively involves them.

Hypermedia, the integrated use of graphics, text, sound and actions, is used across the curriculum by teachers as well as students. The beauty of hypermedia is putting it in the hands of students to present multimedia information that has been researched, organized and created graphics for. Turner & Land (1994) believe that students, as authors, must not only research the information for the stack but also decide how to organize and present the information in a meaningful way. Students find hypermedia to be an easy to learn and easy to use authoring tool that takes them away from the somewhat stifling traditional way of reporting. The flexible environment that is provided with Hypermedia format becomes a powerful tool for a student and his/her imagination.

Ayersman's (1996) review of hypermedia literature from 1987 to 1996, found evidence in which hypermedia was an effective teaching and learning tool. Even though hypermedia is relatively new, he found four strands of research in the field of hypermedia: Perceptions and Attitudes, Individual Differences, Systems Analyses, and Performance.

On the whole, positive attitudes, the first strand of research reported on by Ayersman (1996), are noted in the use of hypermedia learning settings. Becker & Dwyer (1994) found that students using hypertext as a tool for learning experienced and increased sense of control and levels of intrinsic motivation. Overbaugh (1994) found that students

unanimously enjoyed using programs to learn classroom management skills. Teachers in training were found to have positive attitudes toward interactive multimedia than either computer-assisted instruction or video (Ayersman, 1996). Teachers are gaining more positive attitudes toward hypermedia suggest a realization of its potential for learning. "Perceptions and attitudes toward hypermedia are fundamentally important because they often accompany effective learning" (Ayersman, 1996, p. 505).

The next strand of research, individual differences deals with learning styles. Human minds store and organize information more like that of a spider web than a straight line. Hypermedia programs lets users jump around large amounts of information following specific tangents that directly reflect the needs or interests of the user. It allows the user the ability to skip information that may be irrelevant at that time. Interconnecting text, image and sound provides the user with more than one path between pieces of information. Although this may be the way in which human minds tend to work "there may be a danger or sensory overload as well as organizational anarchy inherent in hypertextual media" (http://auden.fac.utexas.edu/ins.html).

There are many different learning styles and hypermedia may tend to confuse those who learn best in a highly structured sequential manner. According to Gordon & Lewis (1992) linear sequences may be beneficial for conveying details and cause-and-effect relationships and nonlinear structures allow a broader context and information that

enhances global learning. Ayersman (1996) discovered a growing body of research showing students may choose a different path, choose different media tools and learning aids but will generally end up obtaining the information that allows them to perform at the same levels.

The third strand of research, systems analyses, includes pathways, navigational preferences, link structures and knowledge systems. Harmon and Dismore (1994) studied students and how they linked nodes of information within a hypermedia structure about the Holy Lands in the Middle East. Harmon and Dismore (1994) found that students had a variety of linking mechanisms and that not all students processed and organized the information in the same way. This is related to linear and nonlinear paths. Ayersman (1996) believes that context should be the deciding factor for links among nodes of information but also concludes that having both options of pathways linear and nonlinear could greater accommodate the diversity of learning preferences.

The last strand of research is performance. Although the research for K-12 students is limited, it appears that students do benefit from using hypermedia in a variety of ways. According to Carlitz (1995), students test scores were impressive at the end of a course using a multimedia program. Only four percent received a grade of "C" and the other ninety-six percent received "A's" or "B's" and these students were more well-rounded in their comprehension than the control group. Traditionally, low-ability students have been one group to benefit from hypermedia type programs. Boone &

Higgens (1993) did a three year study using hypermedia reading lessons for reading. The study involved 300 K-3 students. It found that low-ability students made significantly higher gains than a control group of students.

On the other hand, Ayersman (1996) discovered some research that has been done using hypermedia verses traditional format (lecture) that showed no significant differences in performance. He concludes that although the hypermedia format was not favored, no significant differences were found, therefore, "hypermedia treatments are no less effective than other methods of instruction" (p. 515). He states that the majority of research does show significant increase in performance in a variety of content areas.

Students using hypermedia to convey information learned, "showed greater descriptive detail, unique perspectives, and more diversity among backgrounds, interest, and skill when using hypermedia software to create and add graphics, animation, and sound to their textual communications" (Ayersman, 1996, p. 515). The hypermedia tool used in the classroom somewhat changes the role of the teacher. Toomey and Ketterer (1995), did a study and found that "Teachers adopted constructivist learning approaches and became influential mediators and facilitators by working collaboratively with the other mediators in the room, namely other children and technology" (p. 480).

In conclusion, the use of hypermedia programs is beneficial for learning and teaching. It address several learning modalities. Strategies of how to work together in a

group must be taught along with another important issue, teacher training. Teachers with little or no background experience with technology, along with experienced teachers may find benefits in being trained in authoring programs, tools to integrate technology into the curriculum.

The Importance of Teacher Training

The growing access to information and technology has put teachers in the position of a need to be inserviced in areas never used before. Often teachers will go to a staff development workshop only to be disappointed when arriving back to the classroom. Teachers do not have what is needed to implement the great ideas that were shared or worse yet, no one to turn to in the event the materials or equipment were provided. According to Kinnaman (1993), there are numerous reasons why staff development, especially staff development that incorporates educational technology, has to take a deep look at rethinking the whole process.

First, most school districts have teachers that have been teaching for well over fifteen years. Their teaching style was well developed before the computer was introduced into the classroom. In addition, computers may not have been part of their own K-12 experience. Therefore the push to use computers and other technology in the curriculum may have been overwhelming. In the beginning, staff development/ teacher training in the area of educational technology found limitations with the machines, unsound software and workshop leaders who knew nothing about the classroom. Kinnman (1993),

states that it was unfortunate that the majority of in-service programs were conducted by people who knew more about computers than education.

Teachers need to receive adequate, ongoing training in how to use technology and need to be encouraged to learn and experiment with new ideas and methodologies. Kinnaman (1993) as well as Robinson (1996) agree the with the above statement and feel their needs to be a plan.

How should schools determine staff development or teacher training needs? First, survey teachers to see the areas needed for inservicing. Helge (1985) believed that teachers should play an active role during the planning phase so that other needs can be identified and included in the training program. Give teachers the opportunity to make the decisions of where training is needed and they will buy into it more than giving the administrators total authority. Ellis (1994) concurs by stating that teachers are primarily motived by intrinsic rewards such as self-respect, responsibility, and a sense of accomplishment. Thus, administrators can boost morale and motivate teachers to excel by means for participatory governance.

Teachers buy in is one part of the plan; however, another aspect of the staff development plan is funding. School districts recognize that funding is vital component for staff development and now require a portion of every SIP Plan or Technology grant to be set aside for the sole purpose of staff development. The Fresno Unified School District (1994) states in their Educational Technology Plan that in

districts where a thorough technology plan exists one will find funding sources that include grant monies, foundation contributions, mentor funds, categorical funds, and general funds. It is also likely to find a strong support system in place. The support system takes into account staff development and training that is facilitated both internally and by business partners and vendors.

Establishing what needs to be inserviced and how it is going to be funded leads into the question of, "Who will do the inservicing?" As stated earlier nothing is more frustrating to a teacher than not being able to take what is learned and bring it back to the classroom. Teachers want to learn and use what is learned as soon as possible. What is needed is the continued support of the workshop leader. The availability of the workshop leader is an important aspect. Many schools districts are beginning to train their teachers to do the inservicing of other teachers. Teachers teaching teachers is one way to combat the frustration that is felt by many educators. Mentor programs are an example of this. This is not to say that all staff development will be done in-house. Business and community member are viable resources and should also be utilized when available.

However, how fair is it to send a teacher to a workshop for one day and expect them to learn computers? It is not, therefore find teachers who are willing to participate in a leadership role, teachers who will provide modeling, one-to-one support and encouragement to those who need help in getting started. Kinnaman (1993) perceives that effective

modeling occurs in two phases. One, where the staff developer takes over the class and lets the teacher observe and the the other way to model is to have the teacher and the staff developer work with the class together. Teachers respond to both ways well and find it less threatening than having a "principal" in the room. Generally these staff developers are teachers they know and feel comfortable with.

No matter what district one works in, there are always those who are enthusiastic about technology and how to use it in the classroom. They will usually be the ones who are willing to inservice others. The time has come that teacher services should not go unnoticed. Teachers deserve recognition for their efforts. According to Kinnaman (1993), the "Three R's" of staff development are release time, renumeration and recognition. Release time for those creating the work shop as well as those attending. Release time can be achieved in many different ways such as through block scheduling, providing roving substitutes or giving an extra prep period and dismissing those who are staff developers from non educational duties, i.e. lunch duty.

Some form of renumeration, reward for the leaders is in order. Perhaps a stipend or mentor money to show appreciation for the leaders talents and time. Finally, recognition for the efforts put into the inservice. Robinson (1996) feels that recognition is important not only within the district but outside the district, "Not only does it make the teacher feel good to be recognized it provides excellent PR in the community" (Robinson, personal interview).

Some districts offer incentives and rewards for the teachers who are leaders in getting others started in technology. Incentives for participation in professional development will include university and/or district credit, not-cost attendance, release days, paid attendance at conferences for participants in professional development and pay, including preparation time for staff members who teach or facilitate professional development courses (Educational Technology Plan, 1996).

There have been and will continue to be many changes in the area of technology. Dyrli & Kinnaman (1994) believe technology will continue to accelerate in development and technologies of the present will continue to become obsolete. Teachers are aware of the need for the knowledge to help bring students into the next century and beyond. Districts that provide a strong foundation of staff development/teacher training will succeed in providing that educational technology background for their teachers and their students.

In summary, this chapter has covered the related literature in regards to social studies and the third grade learner, in which the elements of powerful learning were discussed. Actual and electronic field trips were described, it follows that both are worthwhile as long as the teachers do the preparation beforehand. The technology and the importance of teacher training were discussed. Hypermedia, the interconnection of text, graphics, sound and action, is the latest development in authoring tools. It is found to be a tool that can reach diverse learners and can promote

positive attitudes and perceptions to what is being taught. Finally, teacher training especially in the area of technology is a must if students are to be delivered into the twenty-first century.

## Chapter Three: Goals and Objectives of the Project

The goal of this project is to develop a multimedia software program for use with the third grade History/Social Science curriculum. It will address lesson preparation and follow-up when using the field trip approach. It also gives guidelines on how to use the Field Trip Software as part of staff development.

The instructional objectives of the field trip software follows:

I. After exploring a stack of cards about Temecula, the student will participate in an activity in which they will be able to recall from memory and state information about the particular historical buildings featured.

II. Once given written prompts that apply to the field trip the students will generate a journal entry that requires a written response incorporating what they have learned.

## Chapter Four: Design and Development of the Software

This chapter describes the processes that were pursued for the development of a software program entitled "A Field Trip Through Old Town Temecula" (Temecula Field Trip). The "Temecula Field Trip" is a software program that is intended to be used along with the third grade History/Social Science curriculum. It provides the teacher with information and activities on the historical buildings in "Old Town Temecula". The historical buildings in this program is one the features of an actual field trip. Teachers can use the program for field trip preparation and for reinforcement or follow-up activities.

### Content Analysis

The third grade curriculum in Temecula involves learning about the local community. The scope of Temecula local history is broad, covering past, present and future time periods. For this project the content focus will be on the past history of Temecula. There are four main periods of the past covered in Temecula History (See Figure 3), Temecula Indians (900-1797), Spanish/Mission Period (1797-1848), First Period of Growth (1848-1861), and the Second Period of Growth (1891-early 1900's). The Second Period of Growth was chosen for this project and narrowed down further to Old Town Temecula. Third grade students generally go on a field trip to Old Town as a cumulative event to the Temecula Unit. On the field trip the students visit the Museum, Historical Buildings, and

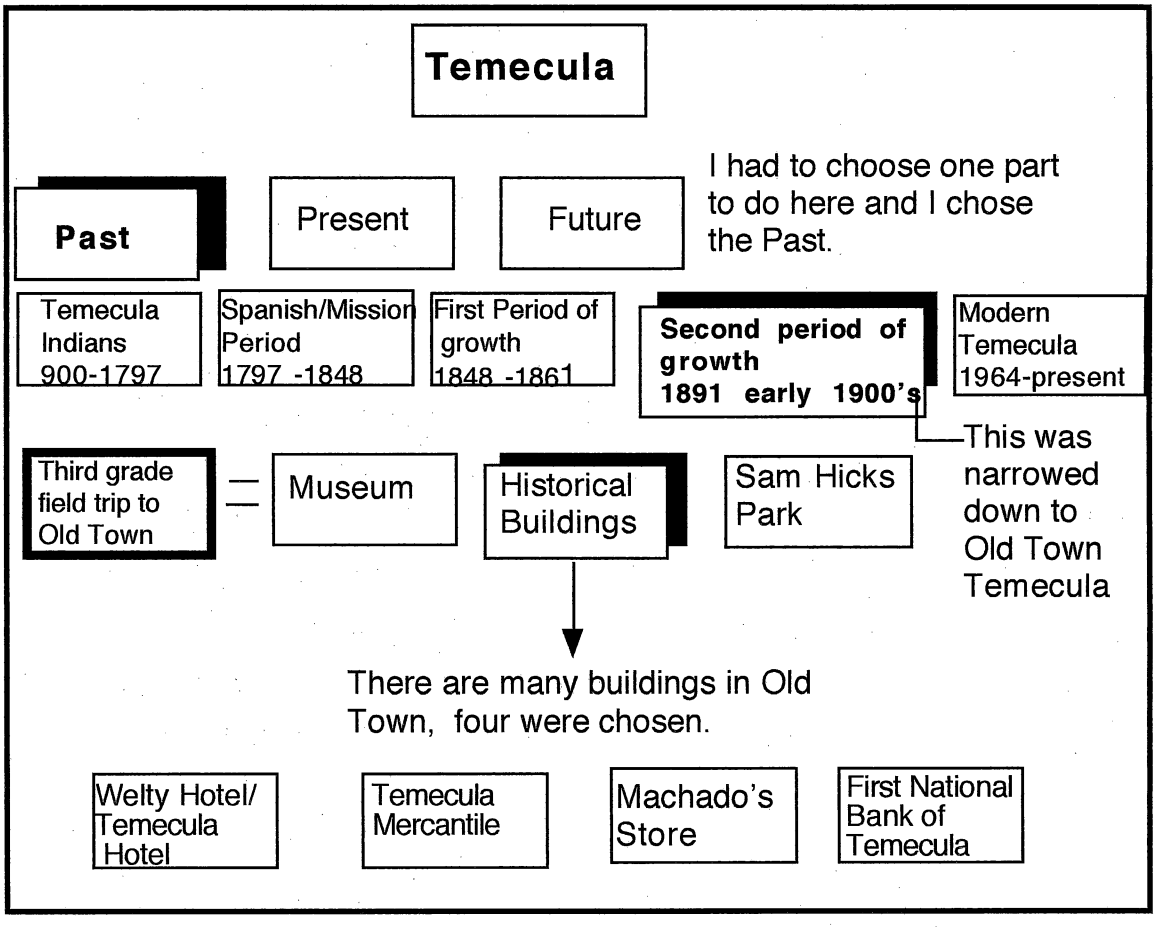


Figure 3. Content Analysis Diagram. This diagram shows the processes taken to develop the software.

Sam Hicks Park. The "Temecula Field Trip" focuses on the historical buildings, four of which were chosen for this project:

- Welty Hotel/Temecula Hotel
- Temecula Mercantile
- Machado's Store
- First National Bank of Temecula

Audience

The "Temecula Field Trip" software program was designed for elementary school teachers to prepare third grade students in Temecula for a field trip to "Old Town". It is also designed for students to be used as a follow-up activity after the field trip. Students using this program are approximately between the ages of eight and nine years old.

Technology Requirements

The "Temecula Field Trip" Software was created with the authoring program HyperStudio®. HyperStudio® incorporates the elements previously discussed in the related literature chapter on hypermedia. Hypermedia allows the user to combine text, graphics, images, sound and video.

The program was designed to be used with a Macintosh computer, system 7.5 or greater if possible. Additional hardware needed to install this program is a Zip Drive, which is similar to an external hard drive. The software needed is HyperStudio® 3.0 or 3.1. A word processor program is also needed and presently the program uses

ClarisWorks 2.1.

Software Structure

The "Temecula Field Trip" begins with an introduction/title screen (See Figure 4). This title screen invites the user to go on a field trip through Old Town Temecula. The next part of the stack is the main menu. The main menu screen provides the user three options. The options, each representing a learning activity are:

- Historical Buildings
- Quiz
- Journal Entries

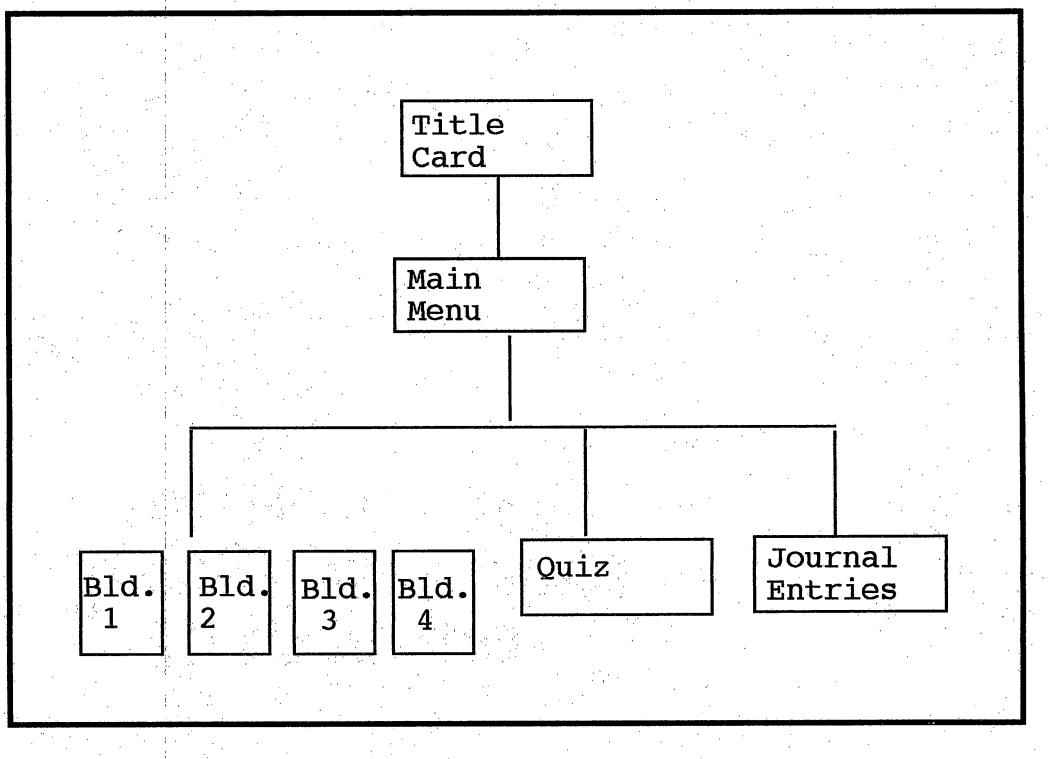


Figure 4. Flowchart. The "Temecula Field Trip" stack.

"Historical Buildings", takes the user to an electronic field trip of four historical buildings in Temecula by providing textual information, pictures of the buildings, video and at times additional information about each landmark structure. The Quiz Section tests student performance and achievement of instructional objectives. The Journal Entries takes the student to a word processor program. At the present time the Journal Entries are done in ClarisWorks 2.1, this can be changed to a word processing program the students are accustomed to using. Once at the Journal Entries portion of the program the students are asked to work in groups or individually to complete activities.

Instructional Design

The instructional goals for the "Temecula Field Trip" were determined as a result of a interview of all third grade teachers. The teachers expressed a need for pre field trip materials to prepare students for the trip and to reinforce what they had seen.

As stated previously in this chapter, a content analysis was done to narrow down the vast amount of information on Temecula. It was decided that connecting the past to the present was the main theme of the software and the use of the historical buildings in Temecula would lend itself to this purpose.

Various features were incorporated in the instructional design to gain learner's attention and keep them motivated throughout the lesson. The use of

animation is featured in the title screen. A bus takes off across the screen simulating an actual experience of a field trip. Transitions between screens were also utilized to gain attention and motivate. When going from one screen to another, the screen turns into blocks or a solid color. Transitions tend to catch the eye of the user and concentrates the attention to what is happening next.

The stack's instructional design addresses the three major learning modalities, which are visual, tactile/kinesthethic and auditory. Most learners have a favored style but as noted in Chapter Two, learners may become more adept though a multiple sensory approach. Every screen has some type of picture or graphic that relates to what is being taught on that screen. For example, on the Historical Building screens there is an actual picture of the building. Sound or voice is incorporated throughout the stack for auditory students. A voice will tell the user about store items of the past that are displayed on the screen. Also, a short music sound is heard when going from one screen to the next. Along the lines of a tactile experience, the user will find that this stack is interactive. The users interacts with the stack by making a choice to click on buttons and hypertext which will take them to different screens, watch a video or hear sound.

The use of feedback is an instructional design that informs the learners about the correctness of their

performance. On the Quiz screen, the learner hears a "Yahoo" sound when the correct location of a building is identified. When an incorrect choice response is made, the user hears a voice stating, "Try again". Along with the "Try Again" sound the user may be taken to a screen that has a picture of the building and restates where building is located. Feedback can also be given by the teachers in the form of a participatory grade when the journal prompts are printed and shared.

The "Temecula Field Trip" stack evaluates different levels of learning outcomes. According to Gagné, Briggs, and Wagger (1992), there are five learning outcomes that the instructional design may include:

- Intellectual skill - enable students to interact with their environment in terms of symbols or conceptualizations.
- Cognitive Strategy - students become capable to govern their own learning, remembering and thinking behavior.
- Verbal Information - knowledge we are able to state.
- Motor Skill - students ability to physically do something.
- Attitude - the effect is to amplify a reaction, positive or negative, to a person, thing, or situation.

The "Temecula Field Trip" addresses three out of the five learning outcomes. The Journal Entries (See Appendix

A) portion of the "Temecula Field Trip" program and the Quiz assess some of the learning outcomes mentioned above. Intellectual skills are evaluated when students identifying where buildings are located on the quiz screens. Higher order intellectual skills are assessed when students, based on the gained knowledge, use the images they see in the program and transfer what they think Old Town will look like and be used for in twenty years. Cognitive strategy is assessed when the students are asked to work together in small cooperative groups to create the future "Old Town" and make a presentation to the class. The Attitude portion of learning outcomes is hard to assess, however, it is hoped that the user will have a positive attitude about using the "Temecula Field Trip" program. The user may choose to learn more about their local environment by revisiting Old Town or with further research on Temecula.

In summary, the instructional designs of "Temecula Field Trip" addressed motivation and attention, multisensory learning styles, interactivity, feedback and measuring various learning outcomes.

Navigation

The "Temecula Field Trip", uses a main menu, buttons and hypertext links for navigation. The main menu, seen in Figure 5, enables the user to go to a particular building to learn more about it. The same capability is also provided by placing an invisible navigation button on each historical building. The user may then go from

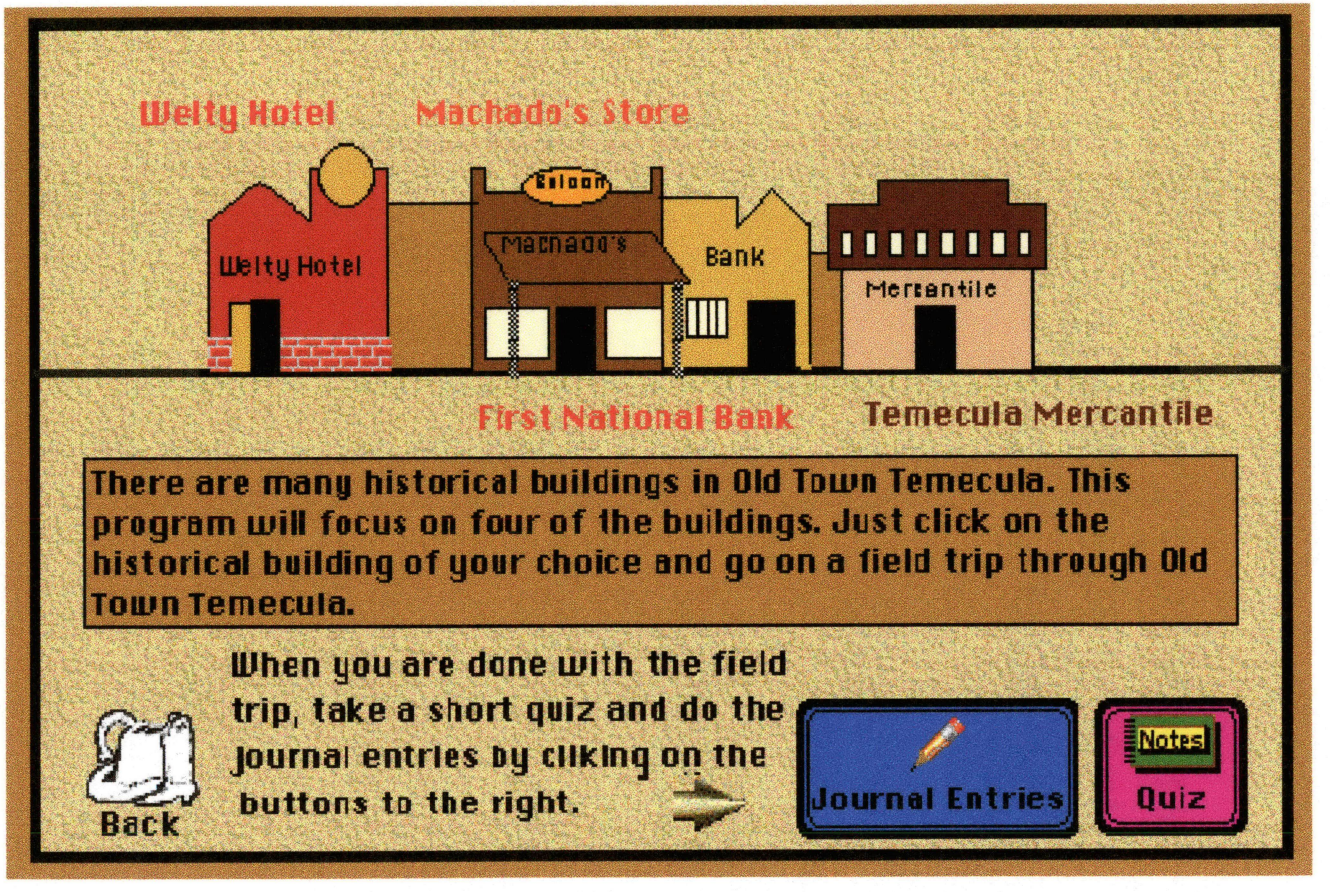


Figure 5. Main Menu displays the navigational buttons.

one building to another by clicking the building of choice. Both the main menu and building buttons are accessible form any screen in the Historical Building Section.

The Historical Building Section also has colored words found in text boxes. The words are hypertext links that take the user to another screen that provides more information about that particular building or about a related topic. The user may also be taken to another stack when clicking on a hypertext link in the text box. For example, the text box on the Machado's Store screen has the word "cowboys" hyperlinked to another stack. This stack has six screens about cowboys. There is a button that returns the user to the original stack.

Also seen on the main menu screen are buttons that take the user to the Quiz and the Journal Entries. The Quiz portion of the stack is primarily linear. It allows the user to go forward when the location of the building is correctly chosen. The user has the option to go back to the previous screen by clicking on the "Back" button. On the first and last screen of the Quiz, the "Back" button brings the user to the main menu.

In the Journal Entries Section, the user leaves the HyperStudio® program and enters a word processor program. By quitting the word processor program, the user will reenter the HyperStudio® stack, at this point the user can revisit the program or they may quit.

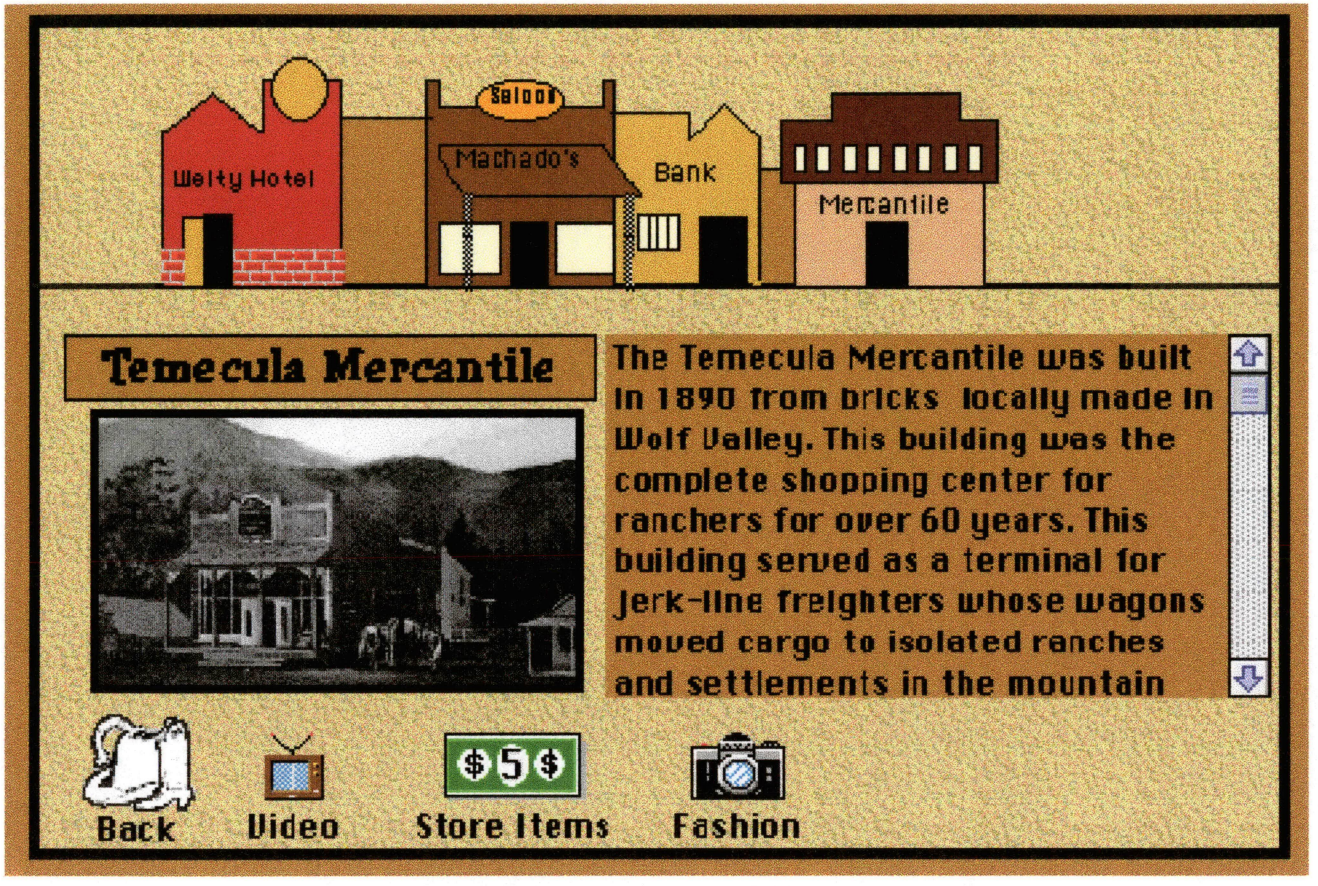


Figure 6. Historical Building Screen. This shows the three imaginary sections, top, center and bottom

Screen Design

"Temecula Field Trip" has a "Western" look to go along with the theme of the town and the turn of the century motif. The screens in the Historical Buildings Section follow a similar lay out (Figure 6). Each screen is divided into three imaginary sections. The top section is the graphic representation of the buildings in the town. The center portion of the screen contains the name of the building and two areas that contains the picture of the building, and a text field.

The bottom section of the screen is dedicated to buttons such as a navigational button that lets the user go back to the main menu or a video button displays and activates a video clip that will pop-up over the picture of the building. To establish the "past to present" theme in the historical building screen, two additional buttons, one that displays store items of the time period and a fashion button that shows fashion then and now, are also activated in this section of the screen.

For the Quiz Section the user will find the screen divided into two halves. The left half of the screen contains a compass rose in the upper corner to help the user with north, east, south and west directions. The map, which is the main focus of the screen is also in the left side. The map is right below the compass rose. It contains four boxes that represent one of the four buildings featured. The right side of the screen displays the text field with directions on what to do with the

map. In addition to the text field the right side has a picture of the historical building. As with all the screens, the directional button to go back is in the bottom left corner.

Consistency in the screen design is important. The layout of the screens are consistent in the Historical Building and Quiz Section of the program. The user will find that the background color and text box color stay the same throughout the stack. Each text box is written in the same font, size and style. Adhering to the principles of consistency throughout the stack helps the user focus in on the information being provided.

The Journal Entries screen takes on a different look than the stack made in HyperStudio® because it was created in a word processor program. To keep with the "Western" look, a graphic of a lasso, boots and hat were added to this screen along with the writing prompts. In most word processor programs the user sees a window with scroll bars that lets the user scroll up and down through the document. This particular document has two pages to start with but might end up with more depending on how much the user writes.

Formative Evaluation

For the formative evaluation of the software program, a third grade teacher and two third grade students were selected from an elementary school in Temecula. The computer lab was provided by the principal to use after school for evaluating the software program.

Before evaluations took place signatures of participants and/or guardians were obtained on approved IRB consent forms (Appendix B).

The purpose of the evaluation was to test reading level appropriateness for third grade, also, to see if the program was user friendly. The teacher chose two students at different reading levels. Student 1, was considered to be the highest level in the teachers class. Student 2, was average to below average in reading.

The teacher and students were given a quick inservice on how to navigate through a HyperStudio® stack. Then they were asked to explore the stack, take the quiz and view the journal entry prompts. When they completed the stack the author had them complete a questionnaire (Appendix C for actual results) and the results are summarized as follows.

Student 1 had trouble reading the information on the screens that were hyperlinked but said that you can just hit the link again. All the subjects felt the directions were easy to follow and that the buttons were easy to find.

The teacher and Student 1 agreed that the reading was okay for third grade students but Student 2 found the reading a bit hard. It was observed that Student 2 did have trouble reading the screen at times. They all said that they learned something new about Temecula after going through the stack.

The teacher liked the information on the historical buildings and the cowboys the most. She did not have a least favorite thing about the stack. The students liked the Quiz and sounds and both agreed that their least favorite section

was the Journal Entries. This may be due to the fact that it only has a small amount of graphics and no sounds like the stack has.

In order to make revisions the subjects were asked if they had any suggestions to make the program better. The teacher suggested more time for the students to read what is on the hyperlink buttons. Student 1 thought that kids could make up their own town, name the buildings and design the clothes. Student 2 did not have any suggestions.

Revisions

While observing the students going through the program it was noted they seemed to enjoy the different buttons, what they did and where they went. Revision on the hypertext link buttons that did not allow the user enough time to read were made. These buttons, originally on an automatic timer, have been changed to a navigation button that allows the user as much time as needed to read the information. When they are done the "Back" button will take them to the previous screen. This revision should enable even the lowest level reader to have enough time to read the material. On the whole, the teacher and students found the program to be at the appropriate reading level and user friendly.

Student 1 made the suggestion of making up your own town and naming it and designing clothes. Due to time restraints, this feature was unable to be put in the program, however, the idea was mentioned to the teacher as a possible follow-up activity to the field trip. The teacher agreed that it would be a good activity after they have gone on the field trip.

Strengths, Limitations and Recommendations

The strength in this project is its ties to the History/Social Science curriculum. It provides a connection between the past and present and has a good knowledge base for teachers to use in the preparation of a field trip to Old Town Temecula. The project also has follow-up activities for the the students, namely the Journal Entries and the Quiz. Another strength of the project is that it is developed with instructional strategies that meet the needs of diverse learners.

As with any project there are limitations. This project is specific to third grade teachers and students in the Temecula area. There may be interest for use in other grade levels but it was not designed for that level of learning. The project concentrates only on four of the historical buildings in Temecula. A recommendation for future projects would be to develop a program that added to this one as far as the historical buildings were concerned.

Another limitation is the assumption that teachers have some experience with a Macintosh computer and the authoring program, but this may not be true. The importance of teacher training/staff development was discussed in Chapter Two and a sample workshop lesson has been included in Appendix D to help facilitate the use of this program.

Some limitations revolve around hardware/software issues. The program only works on a Macintosh computer

running system version 7.5. However, the program was created in HyperStudio® version 3.0. HyperStudio® 3.1 is now available which has the ability to run both Windows 95 operating system and the Macintosh operating system. It is recommended that HyperStudio® 3.1 be one of the districts' standard software buys when purchasing new computers.

A final recommendation would be to continuing with this type of HyperStudio® project to include the Indian Reservation located in the Temecula and how they have affected history in the area.

Appendix A:

Journal Entry Screen

Name _____

Date _____

# Journal Entries

**Directions:** Place your cursor where you want to type. Make sure you use the Save As command under the File pull-down menu and title it with your name.

## Journal 1:

Imagine that you lived in the Temecula area in the late 1800's. You are on your way to the post office that is located in the Machado's Store to mail a letter to a friend on the east coast. Write that letter below....

## Journal 2:

My favorite part of Old Town Temecula is .... (complete this with a least two paragraphs)

**Journal 3: Small Group Activity**

What will Old Town Temecula look like in 20 years.

- Describe the town in detail.
- What will people be wearing?
- Draw a map of how the group thinks the town will look like.
- Present to the class.

# Appendix B:

# Approved IRB Consent Form

APPROVED IRB CONSENT FORM

I,_____, agree to participate in the evaluation of the software product entitled "A Field Trip Through Old Town Temecula" which is being conducted by Vivian T. Burke-Scheuerell, Master's Student at California State University San Bernardino. I understand that this participation is entirely voluntary; I can withdraw my consent at anytime without penalty and have the results of the participation, to the extent that it can be identified as mine, returned to me, removed for the records, or destroyed.

The following has been explained to me:

1. The project is a HyperStudio Stack that uses multimedia aspects to give information on four of historical buildings of Old Town Temecula.

2. The benefits I may expect fro it include the knowledge that my feedback will help revise the software for future use by third grade students.

3. This participation will not in any way affect how I am evaluated in my regular class and will involve not risk of any kind.

4. The results of this participation will remain confidential and will not be release in any individually identifiable form without my prior consent, unless required by law. The only personal information that I need supply the investigator is my year in school.

5. The software developer (Vivian Burke-Scheuerell) will answer any questions about the software or project now or during the course of the evaluation. Phone # (909) 694-9603

Signature of Participant:_____

Parent or Guardian:_____
(If under the age of 18)

Signature of Investigator:_____

Date:_____

PLEASE SIGN BOTH COPIES OF THIS FORM, KEEP ONE AND RETURN THE OTHER TO THE PERSON CONDUCTING THE EVALUATION.

CSUSB's IRB approval letter on file.

# Appendix C:

# Formative Evaluation Questionnaire and Responses

## "A Field Trip Through Old Town Temecula"

## Questionnaire

1. What did you like most about the stack?

   Teacher: The building information and the information about the cowboys.

   Student 1: The Quiz.

   Student 2: The Sounds

2. What did you like least about the program?

   Teacher: I didn't have a least favorite part.

   Student 1: The Journal Entries part.

   Student 2: The Journal Entries part.

3. Did you have any problems, and if so what were they?

   Teacher: No

   Student 1: Yes, time to read the info on the card but you can just hit the button again.

   Student 2: No

4. Were the directions easy to follow?

   Teacher: Yes

   Student 1: Yes

   Student 2: Yes

5. Did you like the graphics (pictures)?

   Teacher: Yes, the graphics were good and I liked the video on each building.

Student 1: Yes

Student 2: Yes

6. Were the buttons easy to find?

Teacher: Yes

Student 1: Yes

Student 2: Yes

7. Was the reading okay, too hard or easy? (Circle your choice)

Teacher: Teacher felt it was okay for third grade.

Student 1: Okay

Student 2: Hard

8. Did you learn anything new about Temecula?

Teacher: Yes, I wasn't aware of some previous uses for the buildings.

Student 1: Yes, lot's of things.

Student 2: Yes

9. Do you think other students in your class would enjoy this program?

Teacher: Yes, when can I use this?

Student 1: Yes

Student 2: Maybe

10. Do you have any suggestions to make this program better?

Teacher: Give more time on the buttons for students to read.

Student 1: Kids could make up their own town, name the buildings design clothes and things.

Student 2: I don't know.

# Appendix D:

## Staff Development/Teacher Training

## A FIELD TRIP THROUGH OLD TOWN TEMECULA

Inclusion:

- Workshop presenter will share a funny incident on a previous field trip taken. Then the leader ask that each person share a memorable field trip that they went on as either a child or as an adult.

Objectives:

- To have participants open a HyperStudio® stack that is located on the hard drive.
- After sharing a little bit about the stack the participants will work together in pairs to find at least five facts about Old Town Temecula.

Activities:

- The leader walks the group step by step on how to open a stack from the hard drive. The use of an Infocus overhead will enable the participants to observe and participate at the same time.
- Allow fifteen minutes for teachers to explore the stack and discover the five facts.

Wrap-up:

- Report to the group the five facts they discovered while exploring the stack.
- Ask how this software might benefit them.

Conclusion:

- Ask for some feedback o how to make the workshop better in the future. "I want to do this workshop at another school and your feedback is important to me."

Materials:

- The use of a computer lab or five computers on carts, four for the participants and one for the presenter.
- An Infocus Overhead for demonstration
- Software Program "A Field Trip Through Old Town Temecula" installed on each computer.

## Appendix E:

## A Field Trip Through Old Town Temecula
## Software Disk

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