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PRACTICAL APPLICATIONS OF THE INTERNET AS A RESEARCH TOOL FOR STUDENTS IN GRADES K-8

by
Mary Moyer

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree in the Graduate School
of Rowan University
May, 1997

Approved by

Professor

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ABSTRACT

Mary Moyer — Practical Applications of the Internet As A Research Tool for Students In Grades K-8; May 1997; Dr. Lynne Levy, Adviser, School and Public Librarianship

The purpose of the study was to illustrate practical applications of the Internet as a research tool for students in grades K-8 at Logan Township Elementary School in Swedesboro, NJ, through a multimedia presentation. While there are many educational uses of the Internet for students, this study focused on E-Mail and research capabilities. Specific Internet projects that were incorporated into the elementary curriculum are highlighted and explored through HyperStudio, a multimedia computer software program. Text and graphics describing and illustrating the practical applications of the Internet, along with audio clips with student and teacher comments detailing the benefits to the students, are included in the HyperStudio presentation. In addition, video clips of the student Internet projects complete the presentation. The featured Internet projects have helped the students to expand their learning and increase their communication, thinking and decision-making skills. New educational resources were discovered through the Internet and as a result energized instruction.

MINI-ABSTRACT

Mary Moyer — Practical Applications of the Internet As A Research Tool for Students in Grades K-8; May 1997; Dr. Lynne Levy, Adviser; School and Public Librarianship

The purpose of the study was to illustrate the practical applications of E-Mail and the research possibilities of the Internet for students in grades K-8 at Logan Township Elementary School in Swedesboro, NJ. HyperStudio, a multimedia computer software program was used to present the Internet projects. The benefits of the Internet for students and teachers included increased student decision-making skills and new teacher instructional resources.

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CHAPTER 1
Introduction

Overview of Project

A librarian in a technologically rich elementary school, with students in grades K- 8, is challenged to present new technologies to students to enrich their curriculum studies. The students at Logan Township Elementary School in Swedesboro, NJ, have access to the Internet and it has been the role of the librarian to introduce these new resources to the students. The purpose of this paper is to (1) define the Internet, (2) describe ways that the Internet can be incorporated into the elementary school curriculum and (3) present practical applications of the Internet as a research tool in a HyperStudio presentation.

School Demographics

Logan Township Elementary School is located in Swedesboro, NJ. Swedesboro is a former farming community; currently in the midst of a housing boom with many new housing developments. Many of the new residents have college backgrounds and are very interested in education. There are approximately 950 students in grades K-8, with a teaching staff of 80 and an administrative staff of 6. The school was built in 1991 and has a school board that is very committed to technology. The district is in the unique position of having an industrial park in the community which provides ratables for the school tax base. This helps to keep the property taxes low, yet provides funds for the school's technology needs.

There are computers in every classroom and there are 23 computers in the library. The school is completely networked throughout the building and the students have access

to the library catalog, Grolier's Electronic Encyclopedia and appropriate programs for the different grade levels in their individual classrooms. There are two computer labs where children learn word processing and database skills, along with HyperStudio, an authoring program. WICAT, an integrated instructional program, is also used in the lab setting. In addition, students have access to the Internet in the library and in one of the computer labs. The school is connected to the Internet via an ISDN line and utilizes Netscape. There are eight Internet stations in the library and 25 stations in the computer lab. The school also subscribes to Scholastic Network, a commercial on-line service that provides a multitude of curriculum related projects. The teachers are beginning to incorporate Internet projects into their regular curriculum. The projects are exciting for teachers and motivating to students. It is changing teachers' methods of instruction.

Educational Value of the Internet

The Internet is a dynamic, constantly changing and growing source of multimedia resources that connects students to real-world events. In addition, the Internet encourages collaboration with other students outside the confines of the classroom. The possibilities for K-12 teachers to utilize the online resources of the Internet for classroom assignments and projects is limitless. This paper will discuss E-Mail, an Internet tool, and the research capabilities available on the Internet. According to Frazier, Kurshan & Armstrong (1996), these tools benefit students' social, personal, cultural and intellectual development. Their social development is enhanced through communication as students learn to discuss and debate with a wide array of people. They learn through open exploration which encourages personal development. The worldwide resources, information, ideas, issues and people of the Internet, along with the written information, graphic images, sound and movies, challenges their cultural and intellectual development. The ultimate result is the empowerment of students as they begin to control their learning.

Educational Goals

The question for schools that have Internet access is how to use the Internet in meaningful ways to achieve educational goals and to make it an effective research tool for students (Eisenberg, 1996). The challenge for schools is to use the Internet within the curriculum to ensure that students are effective users of information, encompassing and serving the wide range of learning styles that exist. It is a means to achieve educational goals, allow access to up-to-the minute information, and create opportunities to collaborate with peers; hence, stimulating the love of learning.

The Internet as a Classroom Research Tool

The Internet is a research tool that can provide new resources for students to expand their learning and at the same time help students to be more productive by developing communication skills, decision-making and thinking skills. The Internet allows students to exchange ideas and get information. Elementary students have access to millions of documents, resources and databases from around the world. Students are able to define problems, gather data, and communicate with people who were previously inaccessible. Students can share experiences with other students, collaborate on group projects and conference with experts. Utilizing Internet resources can enhance an elementary curriculum by increasing the resources available to students. The boundaries of the classroom are no longer limited to the physical walls of the school building. Information is readily available to anyone at any place. It is a communication and research tool that can be used by elementary students in grades K-8. The Internet is a powerful information tool that connects students, teachers, businesses, government and communities together to solve problems. The Internet is an interactive, dynamic educational medium for elementary students. The ability to utilize resources on the Internet will give students the skills needed for future employment and lifelong learning (Dyrli, 1994 ; Eisenberg, 1996).

Study

The objective of this study is to present the Internet as a research tool for students and as an instructional tool for teachers to help their students achieve the educational goals of the elementary curriculum. Specific Internet projects will be highlighted and specific web sites will be explored through a hypermedia presentation. The hypermedia presentation will be used with students as an introduction to the uses of the Internet and will be used with teachers to show specific applications of the Internet into the curriculum. The benefit of using hypermedia for the presentation is it is a dynamic, instructional teaching tool.

Hypermedia utilizes multiple senses to examine a particular topic with a hands-on approach to new technology. The basic organization of hypermedia allows for the creation of objects, including buttons to initiate actions, or fields to display text or graphics, on a computer screen. Hypermedia is not static like an overhead transparency because it engages the viewer in the presentation. Creative thinking is promoted because the viewers choose their own path to explore ideas. Critical thinking is involved due to the components of analyzing, evaluating and sequencing information and the synthesizing of material into a final project. Hypermedia is inexpensive to produce, provides motivating, meaningful activities and is easy to learn. Information can easily be stored and is fun to use (Barron, 1994; Barron & Orwig, 1995).

According to Search (1993), using hypermedia as an instructional tool allows students to visualize abstract interactive processes. In addition, students can randomly access information promoting their creation of associations and synthesizing of ideas. Hypermedia provides for enriched content and anchors instruction to meaningful and concrete references (Brigham & others, 1994).

The software program selected for the hypermedia presentation is HyperStudio. Barron & Orwig (1995) note that HyperStudio is a hypermedia program that combines

text, graphics, audio, video and/or animation for teacher or student produced projects. Taub (1996) lists one benefit of HyperStudio for teacher productions as its excellence in bringing in multimedia resources, especially video. Teachers can easily adapt productions to the exact teaching situation.

HyperStudio provides a unique structure called a stack which is composed of a collection of cards to hold its information. Each computer screen is a different card which can contain text items, buttons or graphics. The buttons link the cards together and move the user to another screen, activating sound, video or pictures. The Home Card is the index for the stack.

Eiser (1994) describes HyperStudio as an instructional tool that provides tools to create attractive graphics and animation. It is easy to capture graphics from other sources. The buttons can be created in standard and freeform shapes. In addition, HyperStudio was designed specifically for schools because of the templates that allow teachers and students to easily create interactive lessons. Furthermore, Brigham (1994) notes that HyperStudio is a menu-driven authoring tool that requires little programming knowledge and uses plain language commands making the program simple for novices.

The HyperStudio project created for this study allowed for a visual representation of the Internet projects at Logan Township Elementary School. The teachers and the librarian are incorporating the Internet resources into the elementary curriculum. The HyperStudio project communicates visually the educational value of the Internet and the benefits to students and teachers.

DEFINITIONS

Electronic mail or E-mail : A form of communication by which people send messages to others on the computer using the Internet. This permits for a quick turnaround time in communication. Correspondence can be sent to other states, countries or continents in seconds.

Hypermedia : Defined by Theodore Nelson in 1974 as "nonsequential documents composed of text, audio, and visual information stored in a computer, with the computer being used to link and annotate related chunks of information in larger networks or webs" (Heinich, 1989, p. 269).

HTML : Hyper Text Markup Language. The formatting language of the Web.

http : Hyper Text Transfer Protocol. This allows for the exchange of HTML language.

Hyperlink : Highlighted or underlined text or icons that provide connecting links from one document to other documents in other places.

Internet : Originally used by the military, scientific and academic communities. Has become a worldwide network of networks that utilize a common addressing format. The network does not originate from any one source and is owned by no one. The potential for information is limitless.

Scholastic Network : A commercial online service that provides a variety of educational resources targeted for students and teachers. The service includes research in reference books, book discussions, author interviews, educational games, and curriculum related projects.

URL : Universal Resource Locator. The address and method used to locate specific resources on the Internet.

Web Page : A single online document containing information that can be accessed over the World Wide Web.

Web Site : Made up of a series of Web pages connected to each other with hyperlinks.

World Wide Web or WWW : Most user-friendly part of the Internet that combines text, graphics and sound. Links thousands of documents by key words and phrases.

Chapter 2
Literature Search

Overview of the Internet

The Internet, or the Information Superhighway, is a worldwide network of networks that links together people and institutions by miles and miles of cables and telephone lines. The computer networks connect scientists, researchers, educators, students, business people and government agencies. They are able to communicate due to their sharing a common language known as a protocol, which allows the different computer networks and computers to talk to each other. The Internet is the largest telecommunications network in the world (Eisenberg, 1996). It is a new, constantly changing, and growing electronic frontier for communicating and exchanging ideas and resources.

History of the Internet

The Internet grew out of a project started by the defense department in 1958 to connect the military, research institutions and universities in different physical locations, allowing them to correspond and share research data. In 1969, the Department of Defense, through its Advanced Research and Projects Agency (ARPA), provided funding for the network as a Cold War defense strategy whereby computer networks transferred information in packets instead of in single files. This was thought to be a safer and more secure way to transfer information for research purposes at universities and research laboratories. During the 1980s, the computer network was used solely by universities and government agencies. However, by 1990 the computer network of the National Science Foundation allowed supercomputers to transfer electronic data from network to network in both the private and public sectors and on an international level. At this time the com-

puter network officially became known as the Internet. The Internet has many uses : communication, entertainment, and research. This paper will focus on its use as a research tool for schools (Burke, 1996).

E-Mail

One Internet research tool is communication through electronic mail or E-mail. Walker (1995) notes that benefits of using E-mail in the classroom include developing information literacy skills by combining writing, grammar, and spelling skills along with math, science or social studies for an interdisciplinary approach. E-mail also helps students to develop keyboarding skills through typing of mail messages.

According to Frazier (1995), E-mail supports learning across all curriculum areas and promotes cultural understanding and awareness because the global network allows for sharing of information about cultures and values. The computer communication provides a safe environment for children to discuss diverse cultural perspectives. They are introduced to global resources and people that are outside the walls of their school environment. This exposure to technological resources gives children marketable skills for the future job market by helping to improve their communication skills (Miller, 1996).

Other benefits of E-mail, according to Abilock (1996), include learning the value of networking and how to ask meaningful questions. Online communication gives children an opportunity to freely express their values and beliefs in an open forum (Hampel, 1993). E-mail projects permit students to freely exchange ideas and gives them time for reflective answers. They can participate in global discussions and interact with people they don't know or will probably never meet. There is no discrimination in electronic communication due to socio-economic, geographic or handicapping barriers. Children can also receive answers from experts in subject areas and can be connected as partners in learning. Communicating with experts helps students to develop effective questions which builds meta-

cognitive thinking. (Orlando & Levy, 1996; Kimeldorf, 1995).

Telecommunication projects help to achieve fundamental educational goals and master core content. These projects help to build strong basic skills and promote creative and critical thinking. Telecommunications also encourages cooperation in a collaborate manner, through sharing personal experiences and using appropriate problem-solving strategies. Children begin to function as part of the global community and become committed to lifelong learning because telecommunications helps to make learning more interesting by stimulating a child's curiosity and eagerness to learn (Dyrli & Kinnamen, 1996).

E-mail projects may include conducting online correspondence with students from other states or countries (Walker, 1995). This type of E-mail project is called keypals and involves students corresponding online with their peers to share ideas, personal experiences or to complete cooperative learning assignments. This project helps to promote teamwork with students ("Internet Integration", 1996). Another telecommunications project is electronic mentors whereby experts in subject matters work closely with students. Electronic mentors may also include community members who can provide time and guidance to children in learning to use E-mail.

Electronic mentor projects are multi-age projects matching older people with younger students. Children learn to communicate with adults they do not know personally, helping them to develop an interest in understanding the adult world of business and science. Children enjoy the intellectual stimulation and individual attention they receive from their mentors since they do not have any competition for the mentor's time from other children. In addition, the mentors can benefit from the enthusiasm children bring to learning. Other benefits for children include writing with an authentic and motivating purpose, which helps to improve their writing and communication skills. They learn to develop effective questions since they are limited to electronic communication, which lends itself to succinct language. Participating in electronic mentoring projects makes students

more responsible for their learning since they stay focused and engaged in the activity (Sanchez & Harris, 1996; Jansen, 1996).

E-Mail Projects

Celeste Oakes (1996) integrated telecommunications into her first grade language arts program by having her first graders correspond with a class in Alaska. The students learned about different lifestyles, shared stories about their families and shared learning experiences in school during the group keypal project. The correspondence made instruction meaningful and telecommunications was a real educational tool for Celeste Oakes' students.

Another E-mail project involved first graders at Franklin Elementary School in Reistertown, MD. The students posted words and pictures related to the word SPRING and invited other first grade classes to do the same thing. They learned to compose good questions and learned about other people in different areas and parts of the country. For example, they were introduced to Hawaiian terms when they received answers from another first grade class in Hawaii. The class was able to share their results with twenty other first grade classes. The teacher incorporated comparison into her language arts curriculum by having the students compare words that were the same in the various lists and list the words that were different. Geography was also another subject the teacher was able work into the lesson as the students located the cities on a map from their different responses. The project was a successful unit for the first grade language arts curriculum at Franklin Elementary School (Scott, 1996).

Leisa Winrich used E-mail to enrich her sixth grade math class at North Middle School in Menomonee Falls, WI. The project was entitled "Math Penpals : Communication through Numbers." They participated in measuring and graphing activities with other sixth grade math classes that they corresponded with through E-mail. The students ea-

gerly worked on learning their math lessons so they could answer the problems presented in the E-mail letters. The E-mail task was integrated into the math curriculum (Dyrli & Kinnaman, 1996).

The first graders at Emerick Elementary School in Purcellville, VA used E-mail to communicate with an expert from the Bureau of Indian Affairs while studying Native American tribes. This project gave the students first-hand knowledge of the Zuni tribe. The students were interested and learned to compose questions for the expert. The first grade social studies curriculum was enhanced with the use of E-mail to develop their knowledge of the Zuni Tribe (Etchison, 1996).

The Internet as a Research Tool

According to Kimeldorf (1995) another way to integrate the Internet into the elementary curriculum is to utilize the Internet as an information-gathering research tool. The Internet allows for students to access information in a variety of ways. Students learn to use information databases, encyclopedias, newspapers, and magazines for research. In addition, they are able to view exhibits in the Smithsonian or visit museums such as the Louvre through the Internet. Students can also interview experts in subjects areas as human resources available through Internet.

Sherman (1995) sees benefits of utilizing the Internet as a research tool because research is easier and more intriguing for students. Students stay involved and are genuine participants in the learning process. The Internet is not a toy when they can access web sites to receive answers to homework questions. More resources are also available to children than they might find in their local school or public library. In addition, one of the strengths of the Internet for research purposes is its timeliness: news can be accessed as it is occurring. Current resources are readily available. Children can learn about a volcano

erupting in New Zealand or learn of a nuclear accident in New Delhi (Kimeldorf, 1995; Matusevich, 1996).

Utilizing the Internet for research purposes allows exploration of areas that are not available through traditional classroom methods. Children can participate in real-life research and collaborate with experts in discussions, thereby developing global awareness by being transported to other countries and museums beyond the walls of their classrooms. The Internet also provides for interdisciplinary hands-on activities (Lindroth, 1996; Miller, 1996).

Davis (1995) suggests that the use of the Internet for research is a unique educational tool because it supplies multiple points of view on a subject pertinent to children. Problem-solving is encouraged because of a need to determine what is important to use due to the large amount of information on the Internet. Children also develop evaluation skills to select appropriate Internet sources due to the large amount of commercial information and information with inaccuracies that is found on the Internet.

One other benefit of the Internet as a research tool is that children can learn from other children. Peer teaching can occur when children learn from each other in collaborative projects, becoming partners in the learning process. This encourages teamwork and critical thinking skills to solve problems. Students become part of the teaching team as they assist other students in assessing information found through the Internet. By doing this they develop useful computer skills that will provide marketable job skills in the future. Children are learning how to find useful information in real-world learning experiences by developing search and retrieval skills (Frazier, 1995; Miller, 1996; Walker, 1995).

Smith (1996) proposes that utilizing the Internet as a research tool fosters creativity and promotes risk taking, inquisitiveness and problem solving. Locating references on the Internet leads to the higher order thinking skills of analysis, criticism and divergent

questioning. Students learn to approach problems creatively and inhibitions are freed allowing for students to make mistakes. This is due to the natural link between the real world and student knowledge when utilizing Internet resources.

Research Projects Utilizing the Internet

Internet resources are being used in elementary and secondary classrooms by students to access information and to incorporate reference material into student projects. For example, Karla Walters' students at Sumner Senior High School in Sumner, WA, located biographical information on writers of the Romantic period for their research projects on the Internet, and then utilized Internet resources to find art or music from the time period of their writer to incorporate into a multi-media presentation (McElmeel, 1996). Students at George Washington High School in Philadelphia, PA, downloaded images from the Voyager Space Mission as part of their multimedia term papers. Science teachers in that same school utilize NASA web sites and are able to show images to their students of space shuttle trips as part of the science curriculum (Hampel, 1993).

Kanyok & Green (1996) had two high school students at Batavia Public School in Batavia, IL, use newsgroups to locate information on nuclear power for their research paper. Their paper had to include background information, a survey, and an interview with one expert. The students posted the ten item survey questionnaire to newsgroups related to the topic of nuclear power and received an overload of responses. One recommendation by the experts was to use local reference materials first. They needed to read about the topic first before posting their questions. The activity developed into a critical thinking exercise for the students. They learned to evaluate the information received and to draw conclusions. They accomplished this by comparing the similarities in the answers to conclude what information was accurate and valid. The activity gave the two students an ample amount of information to complete their research paper and they achieved all the

objectives of the project.

Eighth grade students at Blacksburg Middle School in Montgomery County, VA, published a Montgomery County Multi-Media Magazine with articles written by the students about the towns of Montgomery County. They were able to accomplish this by utilizing the Internet to post inquiries on the areas of Montgomery County. They received answers from as far away as the West Coast and England. The students learned to conduct research using the Internet. They have also been involved with projects interviewing real experts such as Rosa Parks, astronauts, and other scientists. The student learning has been effective because the students feel like genuine participants rather than "just kids" watching from the sidelines (Sherman, 1995, p. 46).

Students develop a sense of responsibility and their self confidence is bolstered when they have the opportunity to train other students and teachers in using the Internet. The students at Daniel Elementary School in Kent, WA, serve on a Tech Team, an after-school program that trains them to locate information on the World Wide Web and evaluate web pages. They are then able to assist teachers and students in using the Internet. Their self-esteem is increased, while the social skill of working with others is taught and reinforced as they work with staff members and other students (Orishi, 1996).

Benefits of Integrating the Internet into the Curriculum

There are many benefits to integrating the Internet into the elementary curriculum. Students learn best by doing, and learning becomes meaningful when they interact with concrete materials. The concrete experiences help to make learning real for children. World events, foreign cultures, and societies become more than names and places in a textbook. Students can identify with students living in other parts of the United States or other countries through their Internet contact (Frazier, 1995).

The Internet allows students to become responsible for their own learning and in-

dividualizes learning because children can choose their own paths of learning, no longer being limited to the instructional materials of the school. The world is brought into the classroom, as the classroom is no longer limited to the physical constrictions of the classroom. Students can visit the Louvre museum or access Presidential statements or speeches without leaving their school (Frazier, Kurshan & Armstrong, 1996).

A spirit of cooperation develops when children share talents, time and resources with one another. They begin to take more interest in world events, foreign cultures, and societies. They begin to function as a global community instead of as an isolated community as they collaborate with their peers. This will be an important skill for them in the future as the world becomes more interconnected (Sherman, 1995).

The Internet integrates the skills of information problem-solving with the writing process through use of electronic mail. A deeper understanding of ideas is encouraged and the outcome is higher-level thinking skills. Students learn to communicate with adults and other students in the succinct language of electronic communication. They learn to develop effective questions and reply in an appropriate manner. E-mail leads students to mastering the life skill of effective communication (Sanchez & Harris, 1996).

Students develop analytical skills to evaluate the unlimited resources of the Internet. They show good judgment in determining the validity of information and they learn to process the information productively and intelligently. The Internet changes the focus of learning from processing of information to managing information. Students begin to synthesize information as they define problems, gather data and evaluate the data for its pertinence to their problems (Jansen, 1996).

The challenge for teachers is to have the technology serve the teaching and learning goals of the school curriculum. The Internet is a wonderful resource allowing students to communicate with other students in different schools, communities, states and countries. The Internet also allows students to access information databases, encyclopedias,

newspapers and magazines. However, without the guidance of teachers to help students select meaningful topics related to curriculum studies to research and analyze, the full potential of the Internet will not be used to reach the educational goals of the school (Dyrli & Kinnamen, 1996).

CHAPTER 3
Internet Projects

Description of Projects

Logan Township Elementary School has had Internet access for the past two school years. The following projects are the result of those two years of learning how to best incorporate the Internet into the elementary curriculum. The teachers have been supportive of joint library/classroom Internet projects and have helped to prepare the students for the activities. It has been a learning experience for everyone, as the teachers and the librarian are learning side-by-side with the students. A number of the Internet projects are from Scholastic Network, which is a wonderful resource for schools. All of the Internet projects are organized by curriculum areas and directions are clearly given for participation. Other Internet projects are an outgrowth of discussions with the classroom teachers as to their needs. The students have enthusiastically endorsed the Internet activities and are eager to be real participants in the learning process.

Authors On-line

Norman Bridwell, author of the Clifford books, was the focus of a cooperative project between the library and the first grade language arts classes. The students began the project with an author study and read several of Mr. Bridwell's books. The students learned a Clifford song and had a special red day celebration in honor of Clifford. The students made up questions to ask Mr. Bridwell and posted their questions to him on an electronic bulletin board through Scholastic Network. They learned much about Mr. Bridwell through this project and were delighted to receive answers

to their questions.

Poetry Project

Another first grade language arts project involved the poet Jack Prelutsky. The students began their unit with a study of the poet and his poetry during their library period. The teachers followed up with use of the CD-ROM, New Kids on the Block, in the classroom. The students were required to write a class poem before they could ask a question of Mr. Prelutsky. The students brainstormed, then as a class wrote poems and composed questions. One of their questions was whether Mr. Prelutsky preferred to use a computer to write or the traditional method of the typewriter. His response was that once he got used to the computer, he would never go back to the typewriter. In addition, he does keep a notebook of ideas using the old pencil and pen. The project was very successful, as all five first grade classes wrote poems and questions and each class received a response from Mr. Prelutsky.

Seventh and Eighth Grade Language Arts Author Study

Seventh and eighth grade students participated in author studies of Avi and Caroline Cooney and prepared class questions for these young adult authors. Both authors responded to the students' questions and were very open in their answers to the students. Students learned that Avi has a learning disability similar to dyslexia but does not let that affect his writing and he writes everyday. Students asked Caroline Cooney what career area she would consider if she was not a writer. Her response to them was that she would be interested in being a librarian. She would enjoy hanging out with seventh graders, helping them with their library projects.

Benefit of Author Projects

The authors are made very real to the students through the open discussion with the authors and the students learn that most authors incorporate real life events into their writing. The authors share personal experiences with the students making the authors real people to the students. In addition, every author encourages the students to keep a writing journal and tells them that the best advice for would-be writers is to practice writing.

Surfing Club

Students in grades seven and eight have the opportunity to join an after-school Internet club. The club meets on Wednesdays and Thursdays from 3:10 - 4:00 PM. The students have been trained to locate information on the Internet and they evaluate web sites for possible classroom use, establish bookmarks and assist teachers where needed. The students have learned to navigate on Netscape and to use search tools to locate information. In addition, the students have been given E-mail accounts and they have learned to send and receive E-mail messages. They have been very enthusiastic about the Internet and have been teaching other students.

4th Grade Project

Fourth grade students have been participating in a special Internet project. The students were divided into pairs and worked with the librarian in individual groups to locate Internet resources that coordinated with their curriculum studies. They then presented their findings to the class and became the teachers for that period. During their presentations they summarized the reading of the text materials and decided which pictures to show the class to illustrate their objectives. The students were responsible for leading their classmates to the website and sharing their findings. The

presentations have included the NASA StarChild site, the Unofficial Missouri Page, the Gateway Arch in St. Louis and the Saint Louis Zoo. The students learned to evaluate web sites to validate information as reliable sources. The students were very excited about sharing the information with their classmates.

Benefits of the 4th Grade Project

Students learned to locate and condense information on a topic on the Internet for their classmates. They saw photos of the planets taken from the Hubble telescope, the repair of the telescope and read important facts about each planet at the NASA StarChild site. The students also learned the difference between meteors and meteorites.

The students surfed the Net to get information about Missouri in order to correspond with penpals from St. Louis. The students were taken to the St. Louis Zoo by the first group. They learned that the zoo is free and saw pictures of individual exhibits and read important facts about the animals. The next group took the class to the Gateway Arch in St. Louis. The student teachers for that lesson lead the class to pertinent information about the structure, the sight-seeing tours and the men who designed the Arch. The class was able to recite facts about the height of the Arch, the depth into the ground and how far it sways in the wind.

Besides the facts, they have learned some very vital social skills. They were not necessarily paired with a friend; often there was a boy/girl partnership. They learned to deal with it and work as a team. They had to list instructions in sequence, and learn to listen and follow directions. The experience familiarized the students with the Internet and to realize its value as a reference source. Sometimes, they had to admit that the information could have been accessed faster from a reference book, although it would not have been as much fun.

The students also learned that the computer is a piece of machinery that does not always do what they wanted it to do. If they were unable to access the Internet or the computers crashed, the session was over. They had to wait until the next week to try again. The experience was a worthwhile learning project for all the students.

8th Grade History Project

Eighth grade students utilized Internet resources to complete a "museum exhibit" project on events related to the American Revolution. Using the Internet stations in the library they located background information on their events and were able to view primary documents. They also were able to import pictures and documents of their events from the Internet to incorporate in a HyperStudio presentation. The primary documents gave the students a real sense of history that a textbook could not do. The students saw the sloppy handwriting, the misspellings and the crossouts. The students enjoyed the variety of information presented and were able to synthesize the information for their HyperStudio presentations.

Penpal Projects

Special education students in grade six through eight were introduced to the Key Pals Penpal program through Scholastic Network and were matched with a group of students in California. The exchange between the two groups lasted for about six months and the program was an excellent writing motivator and a way for students to improve their communication skills. The students learned about the ups and downs of communication with computers. In addition, they were able to gain first hand knowledge of what daily life was like in another region of the United States.

Mentors

One seventh grade student was matched with a high school student and they began exchanging E-mail. The purpose of the exchange was to give the seventh grader confidence in using the computer and experience in utilizing E-mail. The seventh grader learned the importance of typing the E-mail address correctly and she gained tremendous confidence in her abilities through the individual attention she received from her mentor.

INTERNET SITES

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Caroline Cooney Interview. (1997, January). Authors On-line, [Online]. Available : http://network.scholastic.com/network/authors/gallery/cooney/transcript.htm [1997, February 24].

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CHAPTER 4
HyperStudio Project

The following pages designate a paper copy of the multimedia HyperStudio project. Each individual card in the different stacks are printed representing the curriculum integrated Internet projects of the students at Logan Township Elementary School. The stacks are designed to be used individually or as a whole. The multimedia project can be used for student instruction on the Internet or can be used for teacher in-servicing on practical applications of the educational uses of the Internet. In addition, the presentation can be used for parent open houses to highlight the student projects on the Internet.

Stacks

Title Page : 3 Cards

Table of Contents : 7 cards

Communication Projects : 9 cards

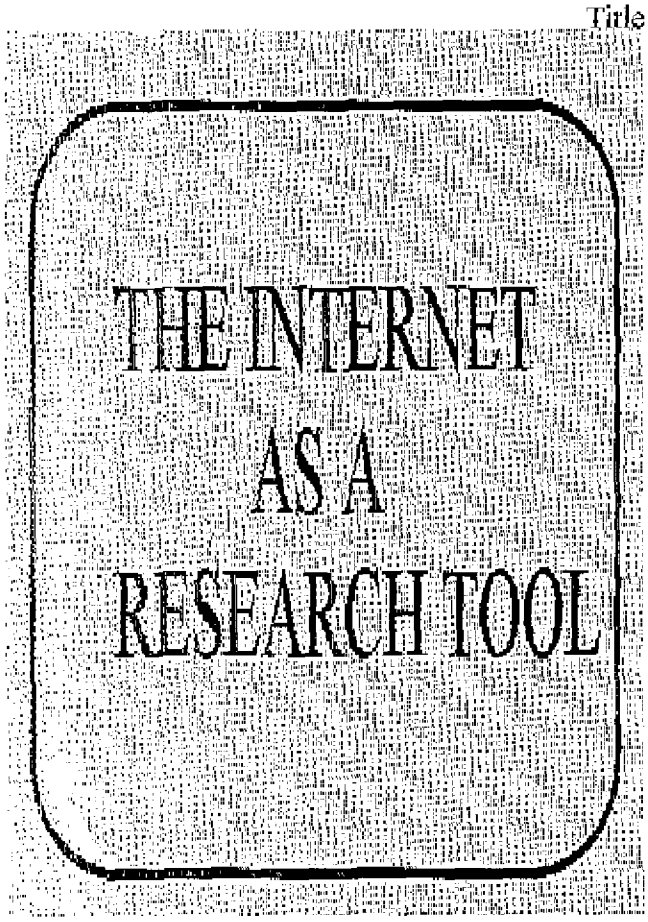
Research Projects : 4 cards

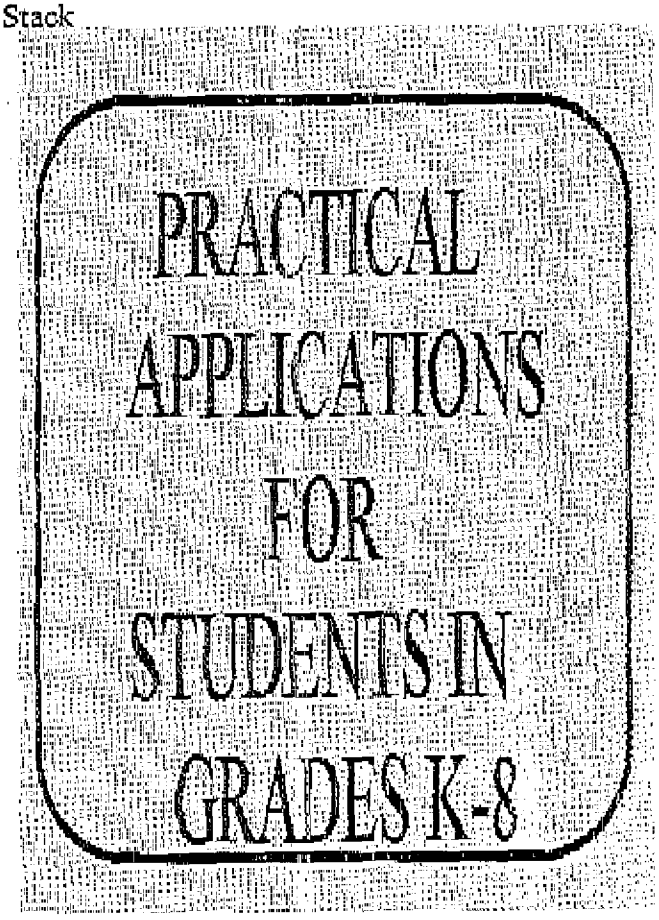
Language Arts - Jack Prelutsky : 7 cards

Social Studies : 3 cards

Web Sites, Author Page : 3 cards

Title Page Stack





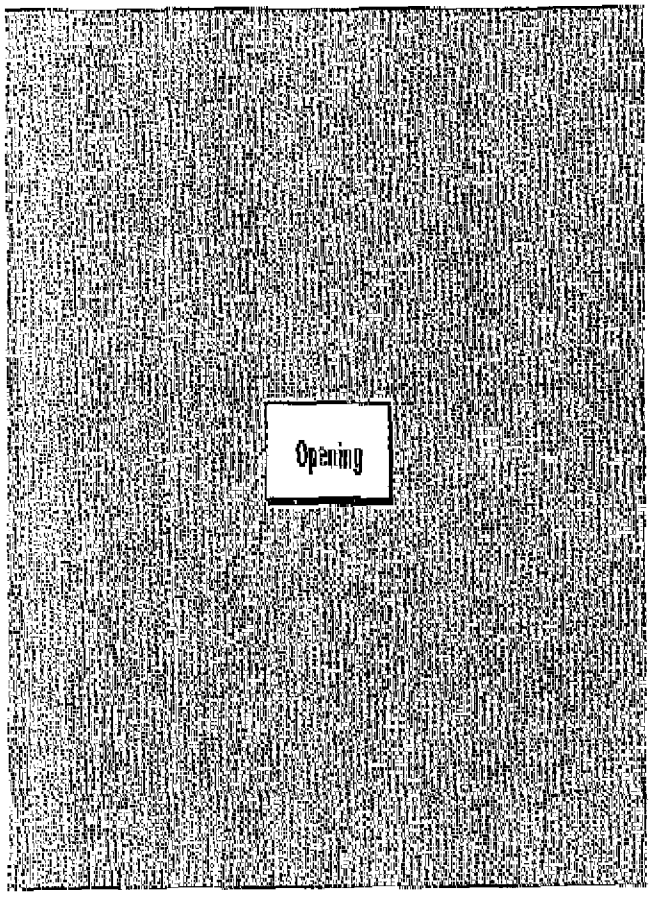
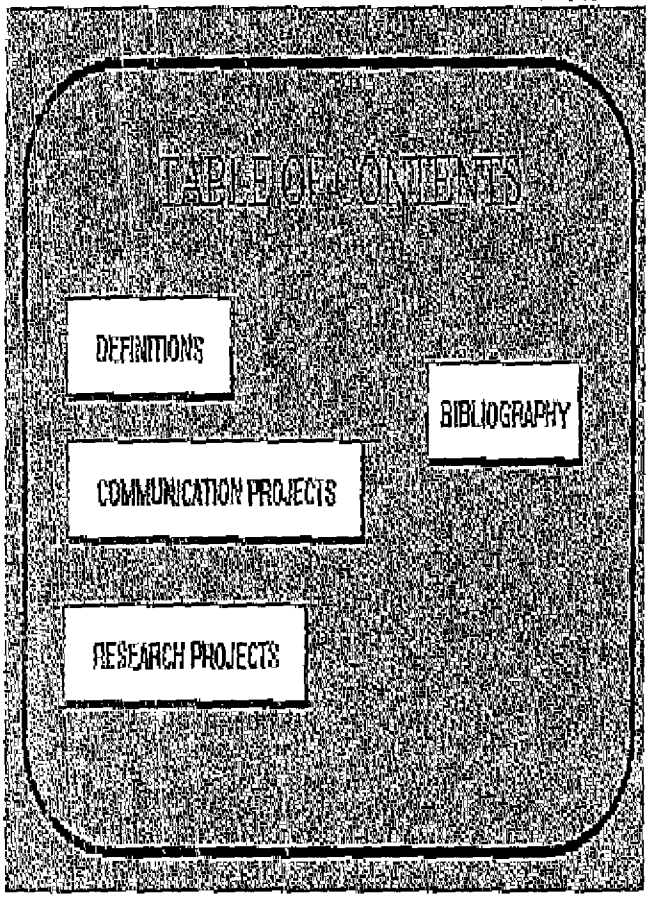
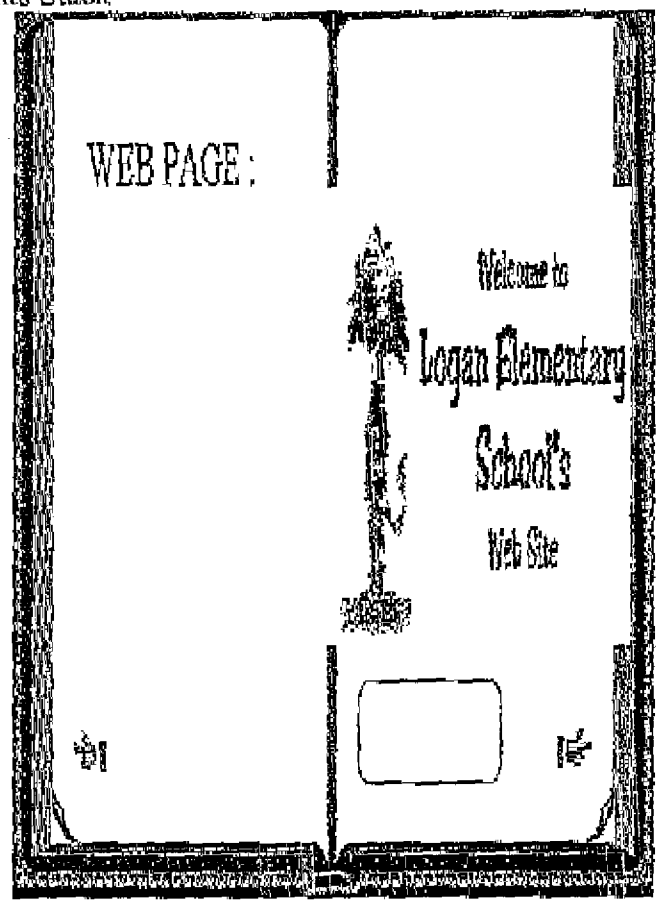
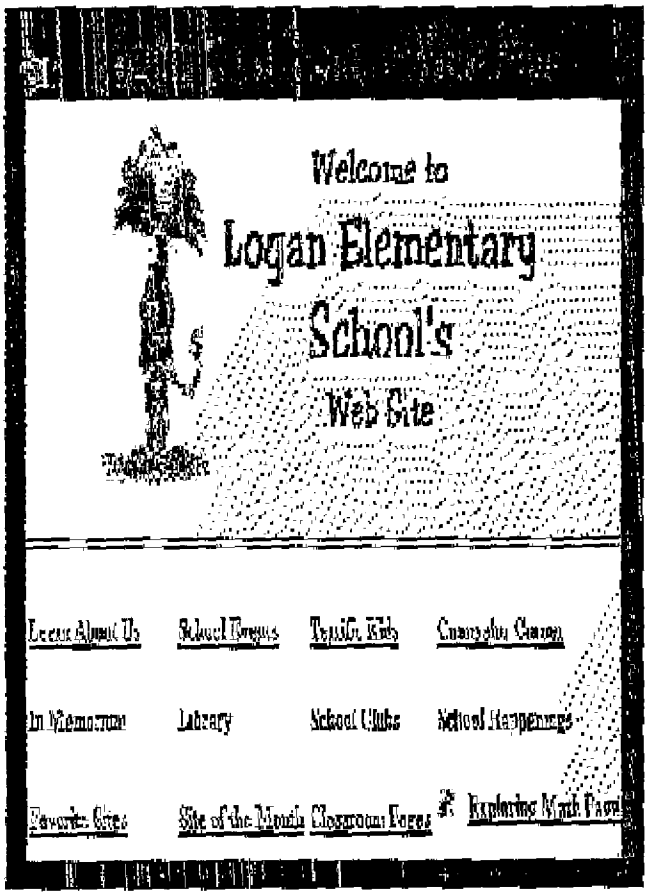
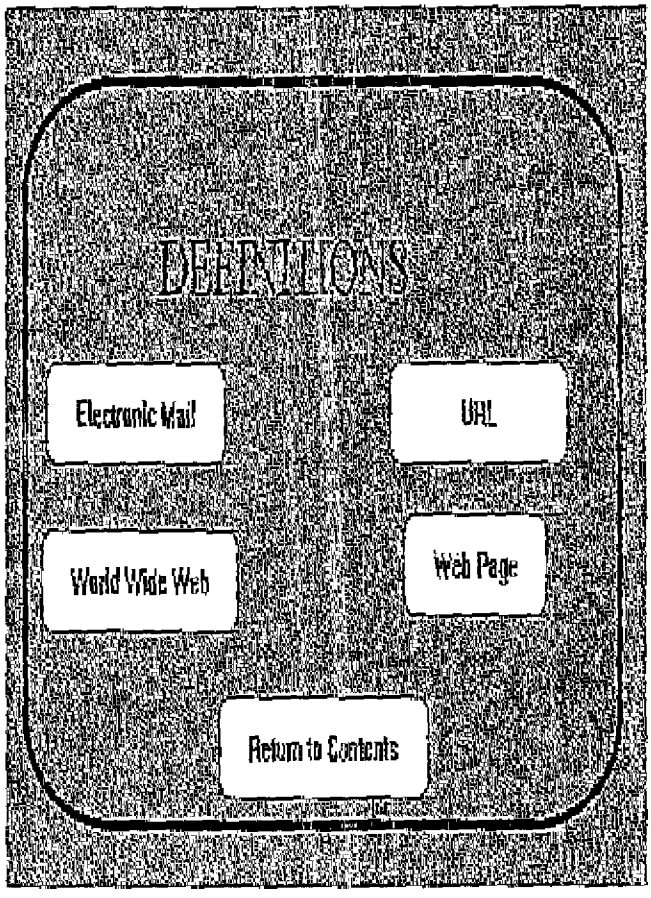


Table of Contents Stack



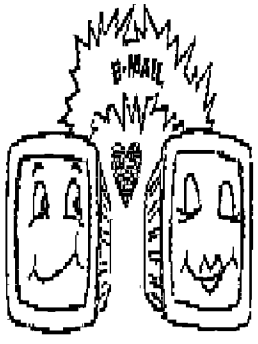






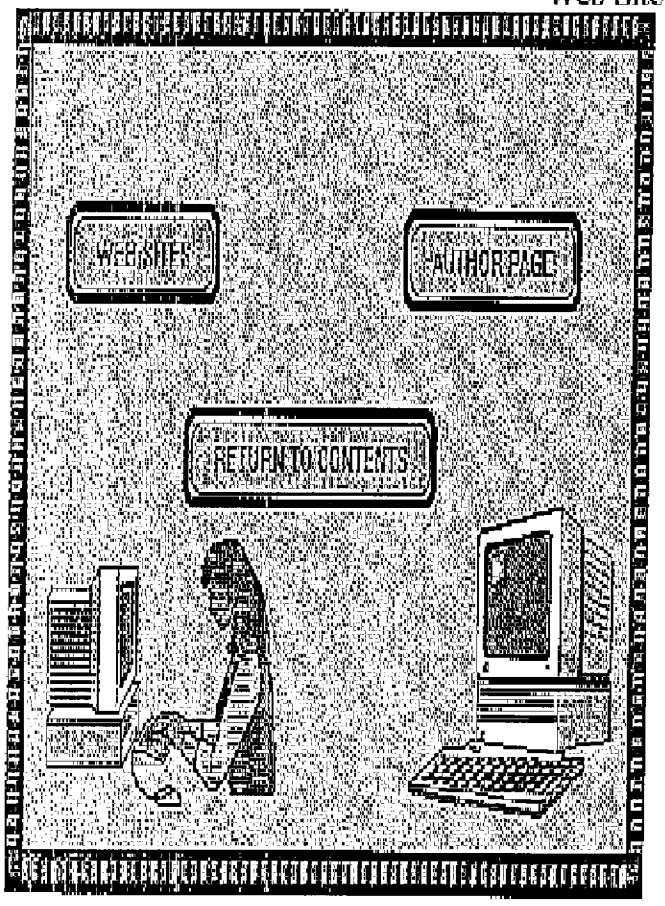
ELECTRONIC MAIL, OR E-MAIL :

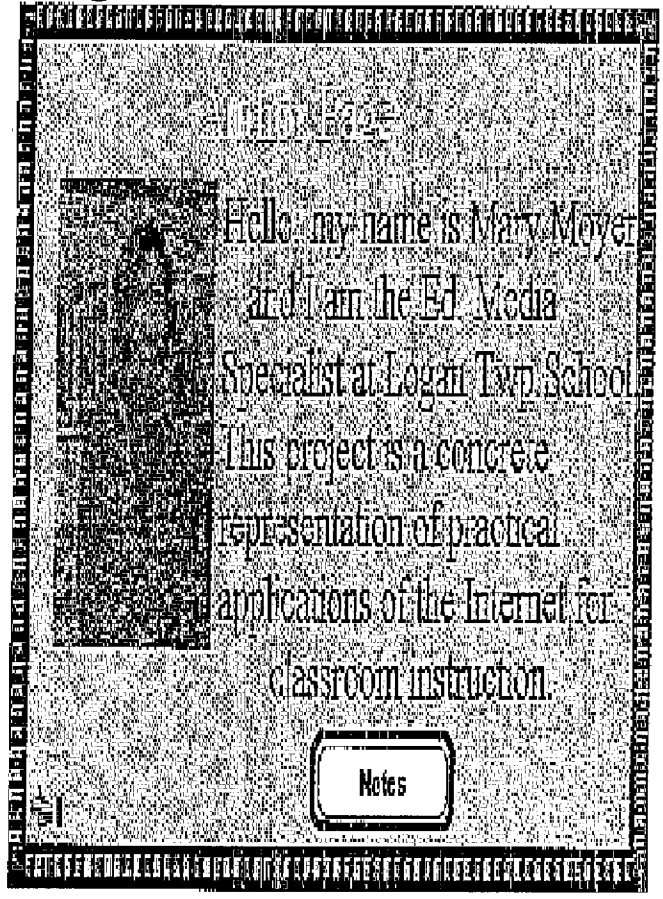
A form of communication by which people send messages to others on the computer using Internet

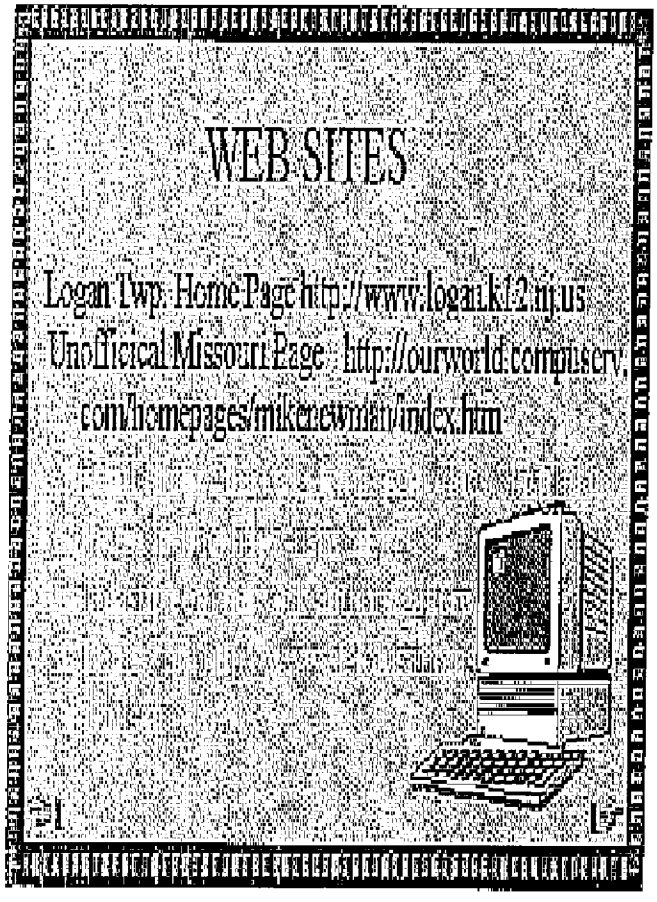


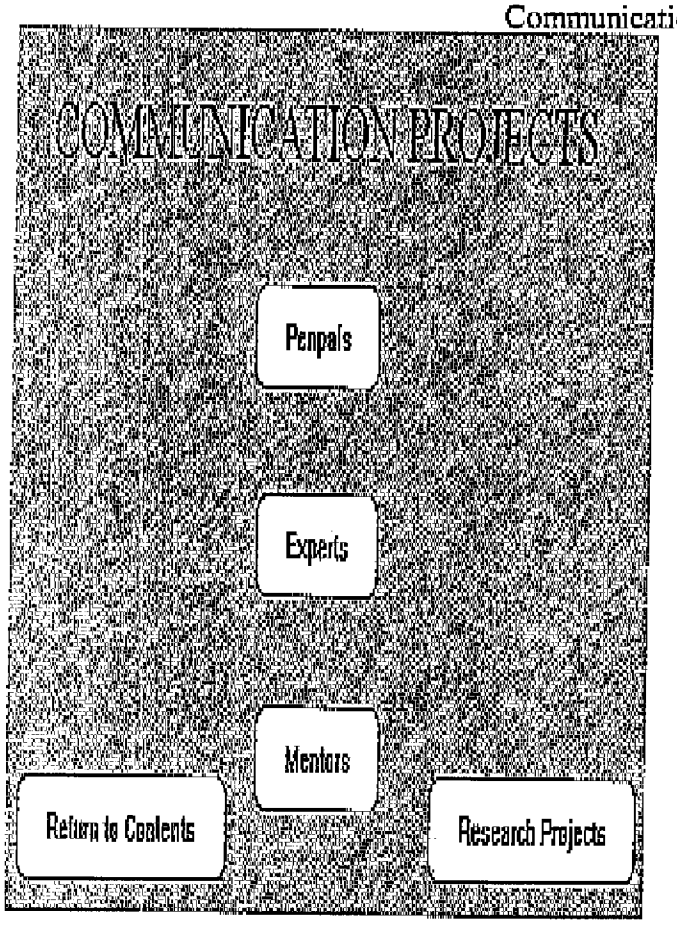
WORLD WIDE WEB OR WWW :

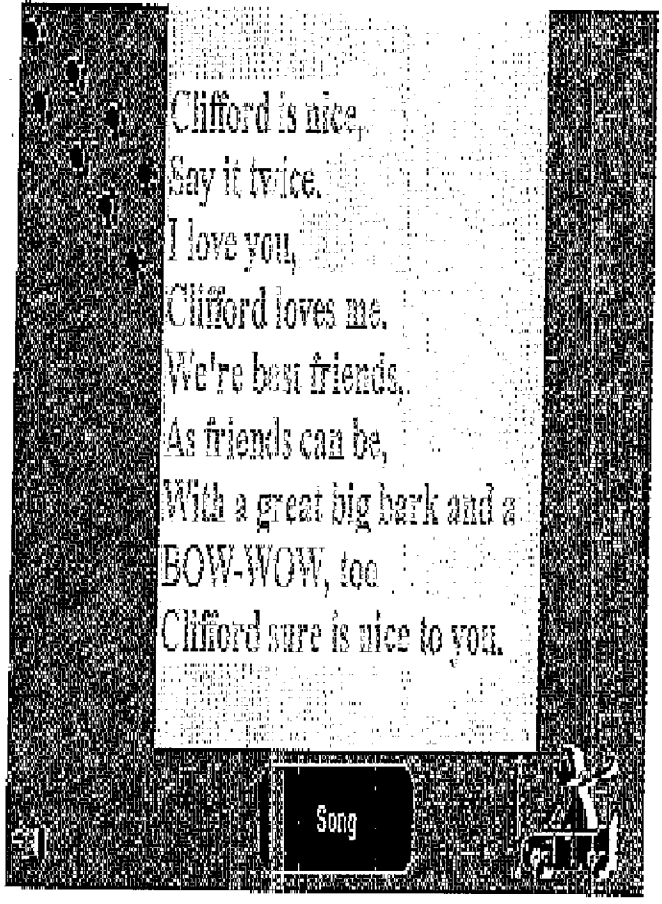
Combines text, graphics, and sound on the Internet. Links thousands of documents by key words and phrases.


WEB SITES
AUTHOR PAGE
RETURN TO CONTENTS

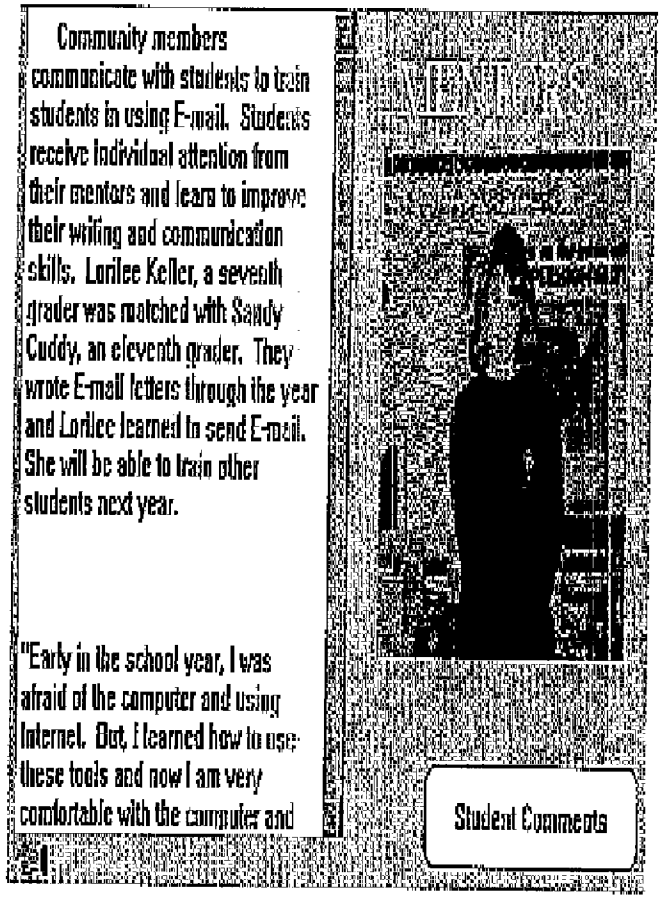

Author Page
Hello, my name is Mary Moyer and I am the Ed. Media Specialist at Logan Twp. School. This project is a concrete representation of practical applications of the Internet for classroom instruction.
Notes


WEB SITES
Logan Twp. Home Page http://www.logan.k12.nj.us
Unofficial Missouri Page - http://ourworld.compuserve.com/homepages/mikenewman/index.htm


COMMUNICATION PROJECTS
Penpals
Experts
Mentors
Return to Contents
Research Projects

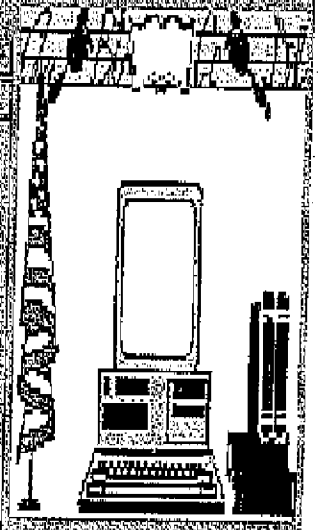

Clifford is nice,
Say it twice.
I love you,
Clifford loves me.
We're best friends,
As friends can be,
With a great big bark and a
BOW-WOW, too
Clifford sure is nice to you.
Song

Teacher comments:
The students learned
that Mr. Bravell is a
regular guy who did
achieve success. They
learned of his stories
and like how he used
family names and
circumstances for his
stories. Pat Prater
1st grade teacher


Community members communicate with students to train students in using E-mail. Students receive individual attention from their mentors and learn to improve their writing and communication skills. Lorilee Keller, a seventh grader was matched with Sandy Cuddy, an eleventh grader. They wrote E-mail letters through the year and Lorilee learned to send E-mail. She will be able to train other students next year.
"Early in the school year, I was afraid of the computer and using Internet. But, I learned how to use these tools and now I am very comfortable with the computer and
Student Comments

EXPERTS

Students can communicate with experts in subject areas to receive answers related to class projects. Students learn to ask meaningful questions by preparing background studies on the subject matter.



Teacher comment

EXPERTS

Clifford celebration

EXPERTS

Seventh and eighth grade students participated in author studies of Avi and Caroline Cooney and prepared class questions for these young adult authors. The students prepared individual questions that they shared with the class and the class then voted on the question to submit to the bulletin board on Scholastic Network.

The students learned that Avi has a learning disability similar to dyslexia and their question to him was about the impact of his

Student comment

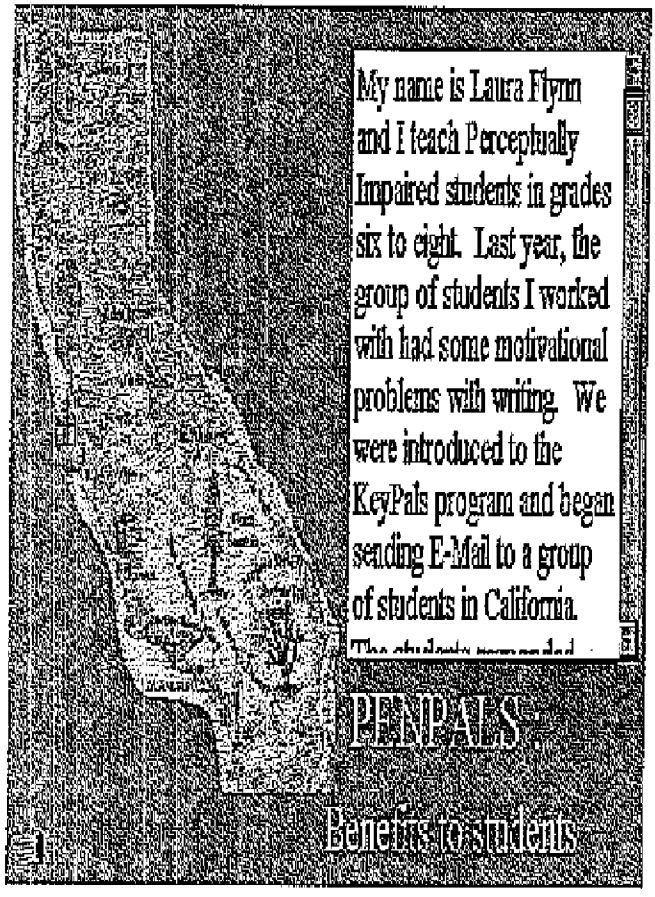
Teacher comment

PENPALS

Students conduct online correspondence with students from other states or countries. Students share ideas, personal experiences or complete cooperative learning assignments with other students.

"I thought it was fun because I got to meet someone new from a different state."

Comment by 7th grader Chuck Zane on his experiences corresponding with another student from California as part of his language arts program.


My name is Laura Flynn and I teach Perceptually Impaired students in grades six to eight. Last year, the group of students I worked with had some motivational problems with writing. We were introduced to the KeyPals program and began sending E-Mail to a group of students in California.
PENPALS
Benefits to students

RESEARCH PROJECTS

Social Studies

Language Arts

Science

Surfing Club

Return to Contents

LANGUAGE ARTS

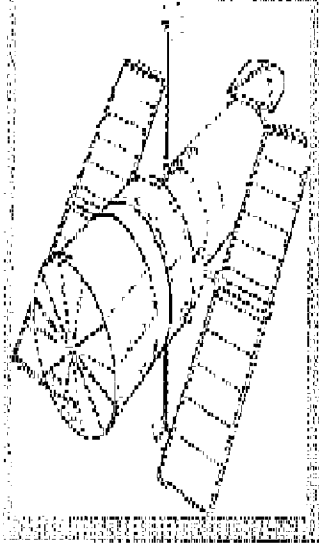
First grade students participated in a language arts project with the poet, Jack Prelutsky. They began the unit with an author study of Jack Prelutsky and his poetry. The students then wrote a poem using the poetry starter given by Jack Prelutsky: "Every day when I go out, I fill my shoes with sauerkraut." The students worked together cooperatively to create a class poem which was posted on

Teacher Comment

Class poems

SCIENCE PROJECTS

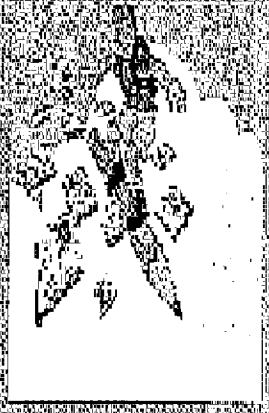
Hubble Telescope



Fourth grade students used the NASA StarChild site to enrich their study of the solar system and the planets. They worked in groups of two to locate information and then they presented the information to the class, serving as the teacher for that lesson. They summarized the

Student comment

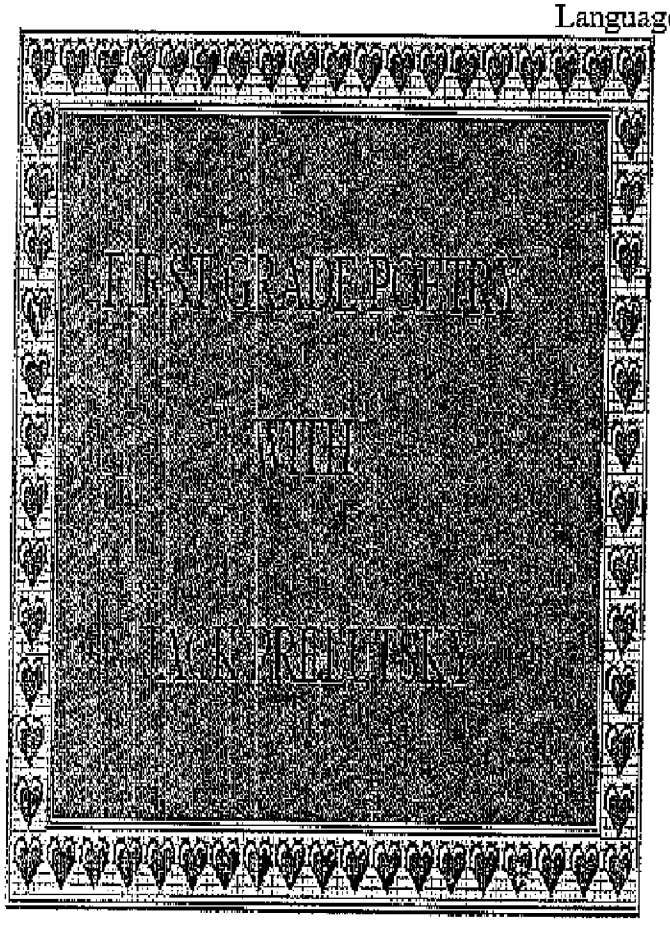
SURFING CLUB

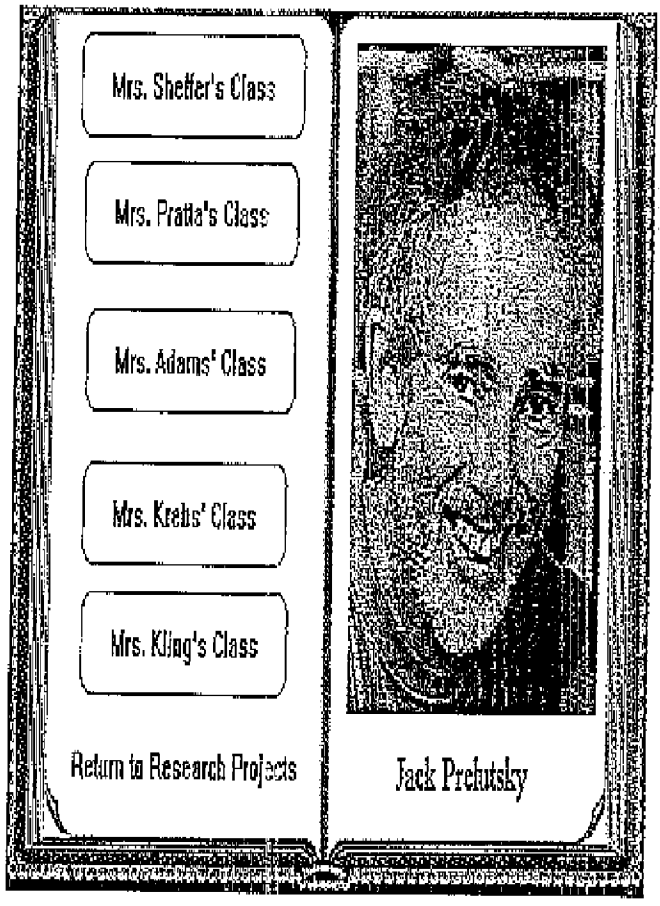


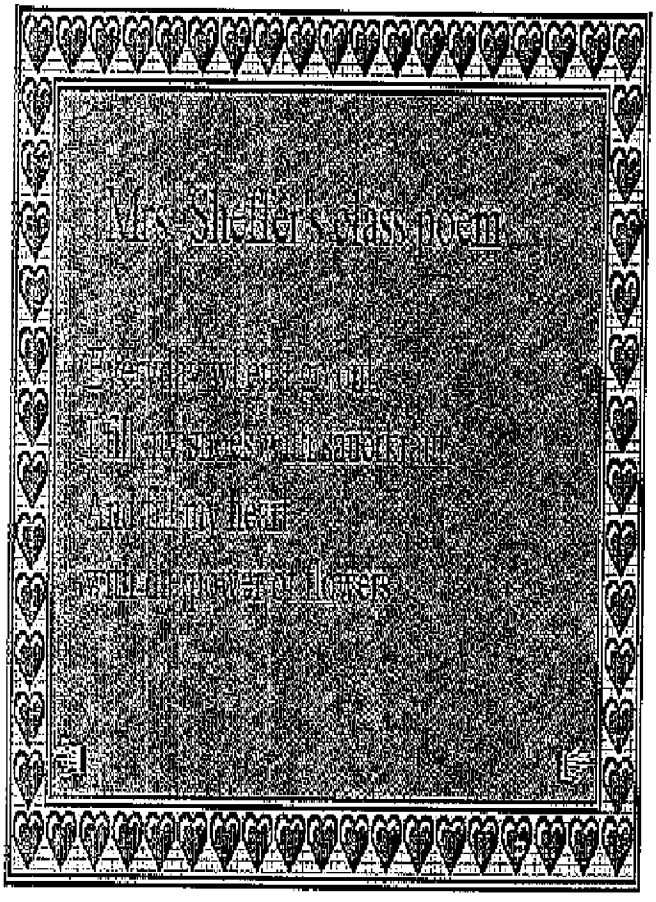
The Surfing Club is an after-school club composed of 7th and 8th graders who have been trained to locate information on the Internet and evaluate web sites for possible classroom use. They also establish bookmarks and assist teachers where needed. They have been a great help to teachers by providing assistance at incorporating technology into the

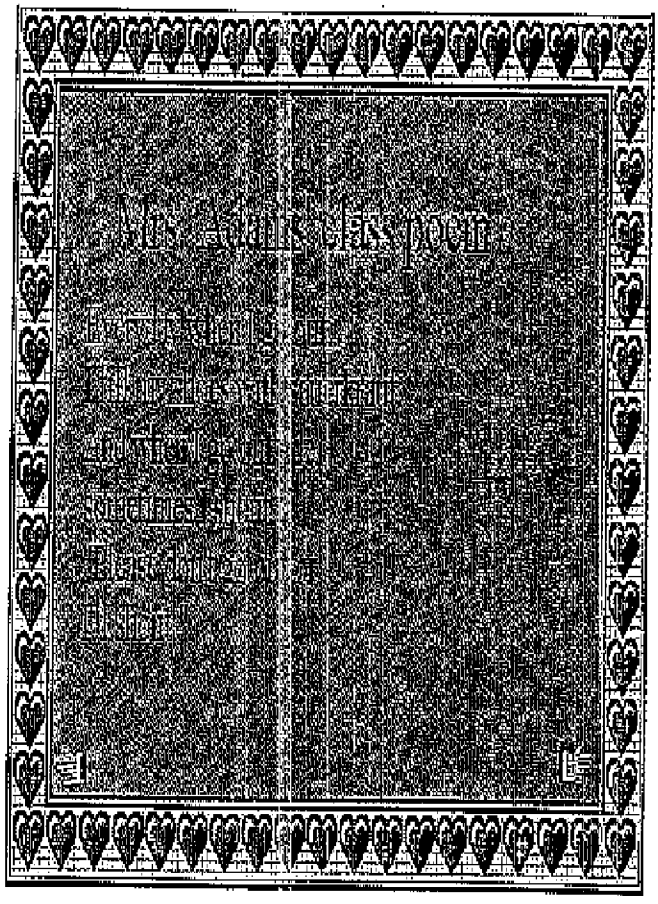
Student Comments

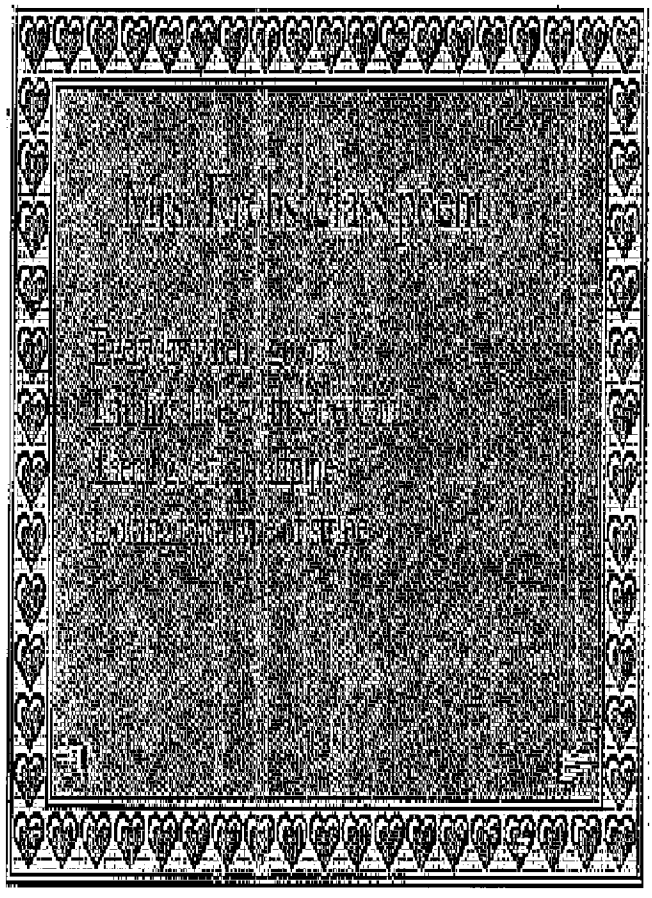
Student Comments

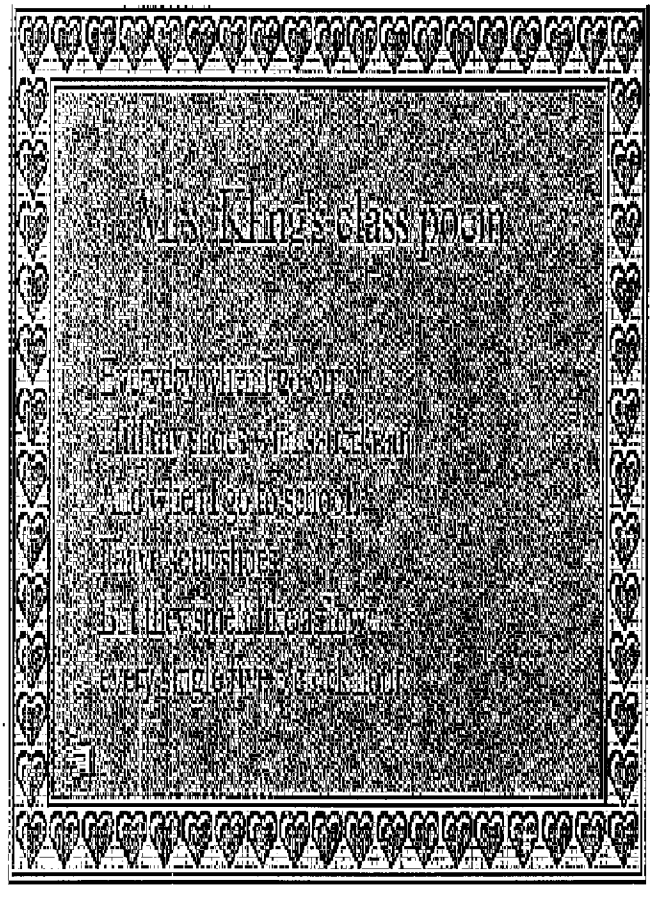

1ST GRADE POETRY
WITH
JACK PRELUTSKY


Mrs. Sheffer's Class
Mrs. Pratta's Class
Mrs. Adams' Class
Mrs. Krebs' Class
Mrs. Kling's Class
Return to Research Projects
Jack Prelutsky

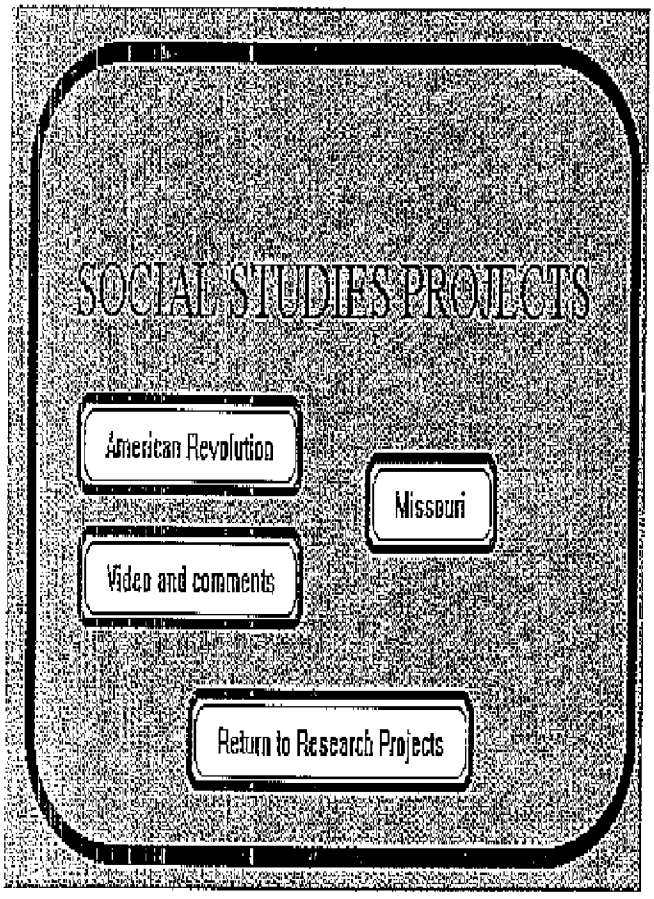

Mrs. Sheffer's class poem

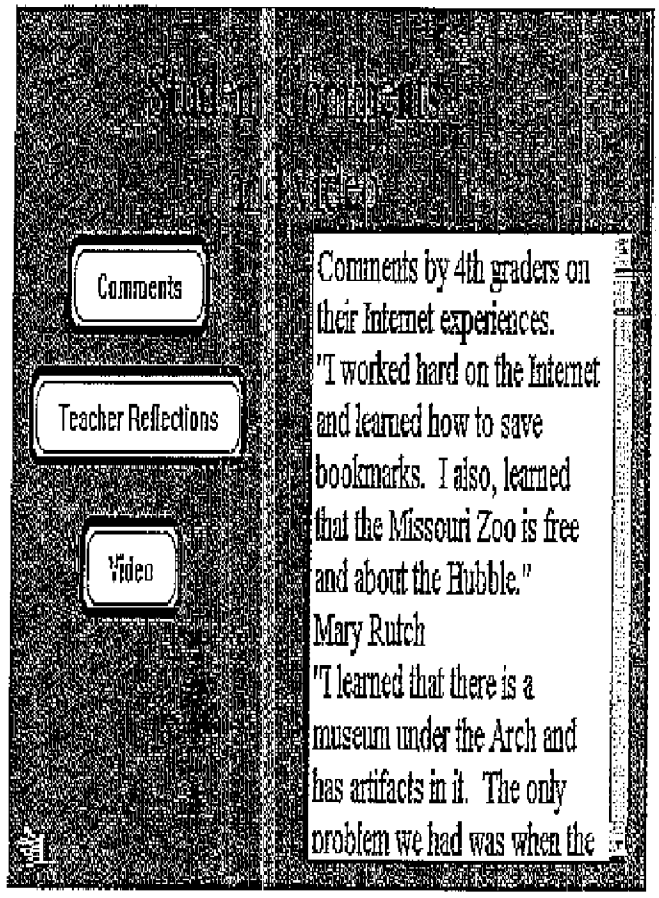

Mrs. Adams' class poem

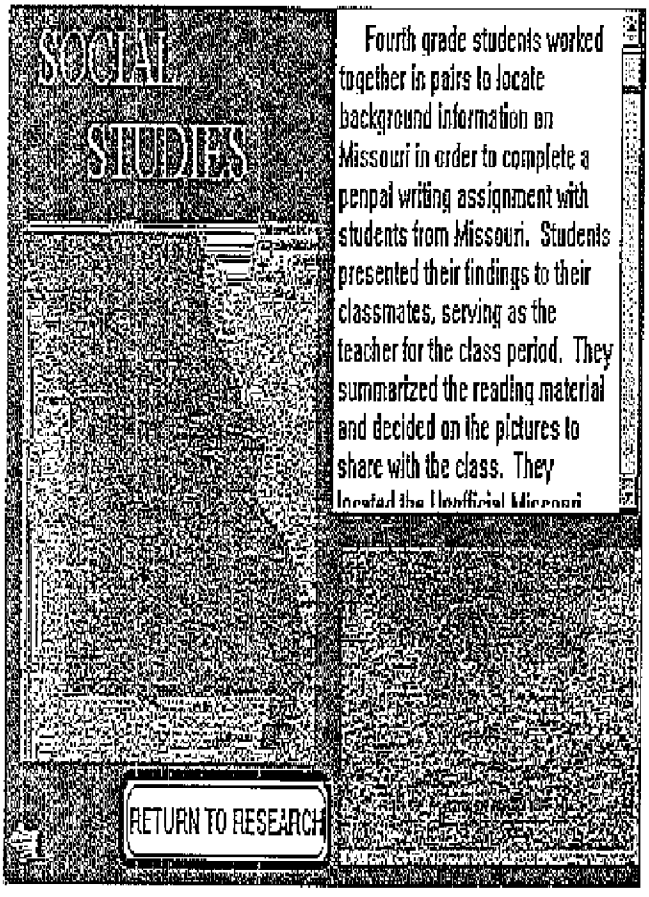


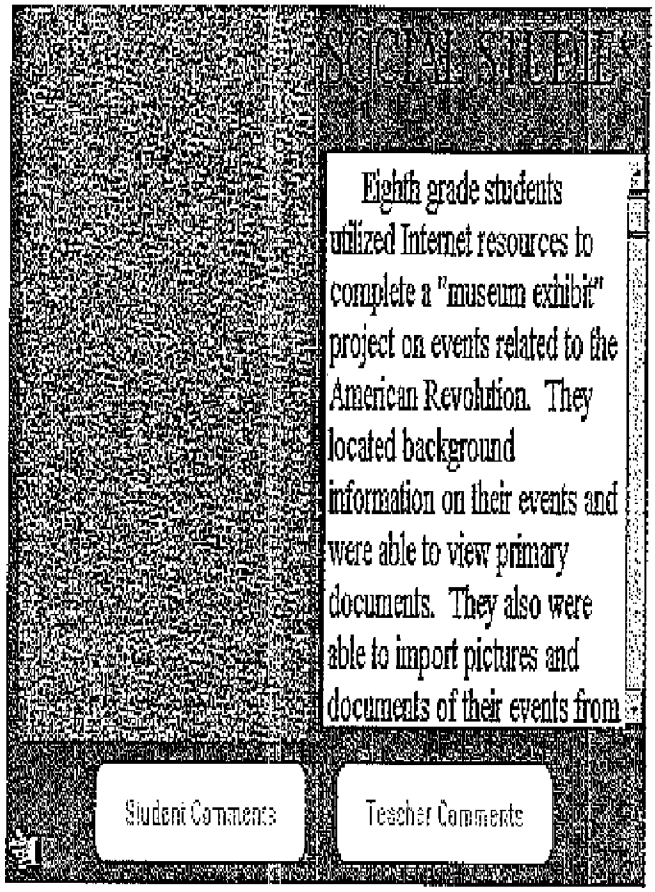


Mrs. Pratt's class poem
Everyday when I go out
I fill my shoes with sauerkraut
And if I don't I will cry
all the way to the sky
And if I go will try
not to fly too high


SOCIAL STUDIES PROJECTS
American Revolution
Missouri
Video and comments
Return to Research Projects


Comments
Teacher Reflections
Video
Comments by 4th graders on their Internet experiences.
"I worked hard on the Internet and learned how to save bookmarks. I also, learned that the Missouri Zoo is free and about the Hubble."
Mary Rutch
"I learned that there is a museum under the Arch and has artifacts in it. The only problem we had was when the


SOCIAL STUDIES
Fourth grade students worked together in pairs to locate background information on Missouri in order to complete a penpal writing assignment with students from Missouri. Students presented their findings to their classmates, serving as the teacher for the class period. They summarized the reading material and decided on the pictures to share with the class. They
RETURN TO RESEARCH


Eighth grade students utilized Internet resources to complete a "museum exhibit" project on events related to the American Revolution. They located background information on their events and were able to view primary documents. They also were able to import pictures and documents of their events from
Student Comments
Teacher Comments

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Registration Sheet Mode

- [x] Divide files
- [x] Add File ID

Storage Setting

- [x] FRONT SIDE
- [ ] F/B 2 PAGE
- [ ] F/B 1 PAGE
- [ ] NORMAL
- [ ] FINE
- [ ] TEXT
- [x] PHOTO

Dark [ ] [ ] [x] [ ] [ ] Light

Total Number of Marks

1	2	3	4	5	6
☐	☐	☐	☐	☒	☐