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ABSTRACT:

This capstone project is about how technology is used and can be used in the schools today. The first part of the paper is what I planned to do with technology for my senior honors project and what I accomplished. The paper explores methods of obtaining technology in schools. Also covered is the importance of training educators to use new technology. Included in this project is a complete unit on life cycles integrating technology with science, literature, and language arts. There are two main parts in this life cycle unit. The first part of the unit is about the plant life cycle. The second part of the life cycle unit covers animal's life cycles. Finally, there are evaluations of one schools available software.
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Chapter 1

PROJECT OVERVIEW

My senior capstone project was to be an observation during my senior clinical of how computers were utilized in the classroom and how I could use the computer and these technologies in my practice. Unfortunately, I was not able to observe computer use in a lab setting, as the lab in my assigned school was not set up until the latter part of my clinical experience.

I was further deterred from my quest by the limited computer time available to me. In addition, there were no computers in my assigned classroom. None of the classrooms in the school had computers. In the school I was assigned the computers sat in an empty classroom that was to become the lab. There were 16 Apple II Es waiting to be hooked up for this lab. The school had one CD-ROM Macintosh in the learning center but it was not set up for use while I did my clinical practice. There was one usable Macintosh computer in the teacher's lounge.

After the lab was set up there were computer moms that helped in the lab during our weekly half hour. My cooperating teacher asked the computer moms to have the children type a paper that they had written in September. This took two weeks of our computer time because the children had to share the computers. My cooperating teacher was
mainly interested in the children using the computers to learn keyboarding. That was her goal for the class with regard to the computers.

One project I was very anxious to try, but was unable to, was to have students communicate with each other through a sort of "simulated" e-mail. The sending student would write to another student in a different class, but instead of sending it through a modem the student would store the communication on a floppy disc. The teachers would exchange the floppy disc. Later, the receiving student could access the communication through a code name.

During reading time I was able to have an enrichment group of six work with sixth graders using The Oregon Trail software. The sixth graders helped the second graders in this group, learn the Oregon Trail program. The cross grade groups worked together for two weeks for a half an hour. The third week, the second grade enrichment group was able to do the Oregon Trail on their own. This was exciting because the program is not intended for primary elementary grades. The second graders had no problems working with the program after their tutelage with the sixth graders.

By October I realized that I would not be able to do my senior honors project as I had planned. I modified my objectives based on my situation to include isolated observations of technology used. I wrote a paper exploring the use of technology in the classroom then
discussed what I observed in my cooperating school and
district. Finally, I reviewed the software that was
available at my cooperating school.
CHAPTER 2

PERSPECTIVES ON TECHNOLOGY IN SCHOOLS TODAY

Teaching and enhancing skills are very exciting on the computer. When educational computer programs entered the classroom in the mid-seventies, many of them were not very interesting or if they were interesting, not very educational. Today, there are many very good programs to help students read better, as well as motivate them to read. The biggest change in software in recent years is the addition of CD-ROM. CD-ROM is great because of its storage capabilities. One CD-ROM can hold hundreds of books. There are CD-ROMs with entire encyclopedias on them. With all this storage capability, CD-ROMs are able to have more multisensory additions that add to the enhancement of a program. These additions include music, animation, video, sounds, and voice.

There is more interaction with this new media. You can find an interactive version of Rudyard Kipling's *The Jungle Book* and a talking version of *The Macmillian Dictionary For Children*. Interaction with these books on disc gives the children the advantage of hearing the words as they read them. Children can also experience action by the characters in the book as they read. Many of these newer programs let children decide what events will happen in the story expanding their reading, problem solving, and decision making.
skills.

Some of the newer programs also integrate reading, math, science, and other subjects. Examples of these are The Playroom and The Treehouse by Broderbund software. Using The Playroom software children can learn to tell time by clicking on the clock. A cuckoo warbles the time while eighth notes are displayed in the correct number of hours and a voice tells you what time it is. In addition, there is an ABC book and a phonics game called The Computer. The ABC book uses upper and lower case letters and pictures to teach the alphabet in an interactive way. There are also counting and strategy games within this program. There are a lot of good reasons to use computers as tools in teaching. In Pride's Guide To Educational Software (Pride, 1992, p.42) Bill and Mary Pride state,

Research has shown that people who read training materials retain about 10 percent of what they read. If they hear the material, the retention rate rises to about 20 percent. Adding visual aids to a narrated lecture adds another 10 percent. Watching someone else do the job yields 50 percent comprehension. Helping that someone do the job pumps comprehension up to almost 70 percent. Doing the job by yourself, even if you're just running through a simulation, increases comprehension to almost 90 percent. In other words, interaction plus sound and sight is the most powerful training method available! p.42

Based on this, we would be wise in using new multimedia technologies in our teaching.

Computers are wonderful support aids for teacher's instruction by helping students gain many valuable skills through their own learning styles. Children learn through
different modalities (visuals, auditory, or tactile) and computers can accommodate those different modalities. Children can work at their own speeds using the computer. If students are having difficulty learning a skill through traditional methods, the teacher could let them try a new way of learning that skill using technology. For example, there are phonics games that can assist students in attaining language skills. There are look-see types of games where pictures are shown and words are spoken along with the text to assist with sight reading. There is spelling software, software using the cloze technique, software to help reading comprehension, and software to write stories. Research states that children who are reluctant to write, will use the computer to write (Greenleaf, 1992, p.2).

Another possibility of computer use is it's aid in helping inclusion students. Programs have been developed especially for these children. Creative Learning, Inc. is a company started by a woman who's father suffered a stroke that left him aphasic. Trying to help her father communicate again, she discovered that he understood pictures. She had programmers create a program where the pictures could be touched using a touch screen to communicate. The created programs have been highly successful with brain damaged adults at all levels. Also, children with learning disabilities can easily use these programs.

Liquid crystal display panels (LCD panels) can be used in
the classroom while using the computer. They allow the teacher to project an image from the computer on to an overhead, thus to the whole class. There are endless possibilities for this technology.

With all the new children's literature becoming available on CD-ROMs, the LCD panels could be used like a big book. A benefit of this technique is the interactivity with the book. Teachers could also have the class make up stories while the teachers type their stories into the computer. The students would be reading and writing together along with the teacher. After the story was written the teacher could print it so that each child had his or her own copy. The story could also be left on the computer for the children to go back, read and illustrate in any way they wanted to. The students could then print the story after they personalize it. The students could also change the story or rewrite it if they were able. As long as the main story was saved, changing the story wouldn't hurt anything.

Obtaining Technology

School districts should carefully research technologies available before purchasing any hardware and/or software. School districts need to choose wisely because many districts have a limited amount of money and want the software to have lasting value. Software programs that are ten years old can still be entertaining and beneficial if well chosen to begin with. If the program is good and teaches what it's
objectives say, then even if it is no longer available, it could be worth the money it cost.

Programs like Reader Rabbit are still popular with children and good instructional tools even in their earlier versions. Districts could use software guides and magazines to help with this research. They could look in the library and book stores and would find more research and reviews than they would need to make the right purchases. Districts could also get sample software from many software distributors.

Importance of Training

In articles I have read, it is often claimed that it is just as important to spend money on training as it is to invest in the hardware. In the book Byting Back: Policies To Support The Use Of Technology In Education it is stated that "it is essential to have professional training in the use and application of technology (Ramirez and Bell, 1994, p.83)." The authors go on to say that "staff development must be a key component in the application of technology to support educational reform."

In a recent issue of Technology And Learning an article entitled "Begin With Teachers and Watch Students Benefit" it is reported that "providing educators with time and access to computers is essential if we are to expect them to integrate technology effectively into the classroom (Orwig, 1994, p. 74)."
The Lee County school district in Ft. Myers, Florida, provides teachers with time, instruction, and compensation for computer use. The state of Florida insists that 30% of technology grant money be used for staff development but the Lee County schools use 50% for staff development. The teachers are paid for their after school and Saturday training. For each 30 hour class they complete, the teacher is awarded a $200 personal stipend and a $100 stipend for software for their classroom (Orwig, 1994, p. 76). It is too bad all teachers can not get this kind of support and encouragement for the use of computers. The Ft. Myers schools are good models for other school districts.

In *Byting Back* it is reported that "Less than 20 years ago, only 50,000 computers existed. Today, the computer industry will sell more than 50,000 computers in one day (Ramirez and Bell, 1994, p.13)." As this trend continues, educators can expect that most families will have a computer or access to a computer in the near future.

Public schools are way behind in accessing the information highway. Four million homes are using information services such as CompuServe, Prodigy and America OnLine and Internet is reaching over fifteen million people (Ramirez and Bell, 1994, p. 14). To use these communication systems the computer needs a modem. The majority of public schools do not even have one modem for the entire school. "According to a research firm called Quality Education Data, out of the
83,790 public schools in the U.S., only 22 percent possess even one modem, and only 14 percent used educational networks in even one classroom in the last school year (Ramirez and Bell, 1994, p. 14)."

Observations at My Cooperating School

My entire class had been on the computers a total of four times since school started. That equaled two hours of computer time. I was able to secure an additional half hour a week for the three weeks that I used computers as an enrichment activity for six of my best readers (during our reading period). I was able to do this because of the help of one of the student's mothers.

Most of the teachers at my assigned school did not use a computer much. I saw evidence of one teacher in the building who used a computer to make posters for her classroom. The school installed one Macintosh computer in the teacher's lounge in November but I have seen few teachers working on it.

I am surprised by the lack of technology used in my assigned school. This school was in a very nice residential area with up-scale housing. Many of the students had computers at home. My assigned school had a videodisc player that as far as I knew, had never been used this year. At the staff meeting last month, the principal announced they had located the videodisc player in the building. Apparently it had been missing. In my clinical classroom we never used any
technology except the small amount of computer time I mentioned above and one small video clip I showed during a science unit.

Much of the problem was the teacher's lack of training in the use of technology. I talked to several teachers in the lounge at lunchtime and they admitted they lacked computer skills. The district held some classes after school, but I don't know if any teachers from my cooperating school participated in them. The teachers needed to have more workshops that were mandatory, such as during Institute Days.

I was talking to a teacher from another school, in the district I am working in, and she said she felt a lot of our technology was wasted money because it was never utilized. She said by the time someone figured out how to use it, it would be obsolete. It is as if the school needed to tell parents "yes, we have all the newest technology" but in reality it sits there unused. An example of this at my assigned school was the videodisc machine and the CD-ROM computer that was still not set up in the library.

As an educator, it is irritating that children do not get to experience these costly machines that the tax payers have paid for. I am irritated at the wasted money but I am more irritated at the wasted potential learning experiences.

I think many teachers are not aware of the software that is available to them in their own schools. I have given some
of the teachers in my assigned school, names of software they
could use for their curricula. The teachers I talked to do
not have any idea what CD-ROM computers are capable of. Many
teachers in my school think of the computer as a great
typewriter and that is all it is used for.

Summary

Ideally, computers at my cooperating school needed to be
in the classroom. If I had at least four computers in my
classroom, I could have had students working on a rotating
basis at the computer all day long. I would have had
students in the Chapter 1 reading group practice some bottom-
up reading activities such as Reading Rabbit 1 and 2 during
silent reading or journal time. I would have had the best
readers doing enrichment activities for science, geography,
problem solving, and history during our guided reading time.
They could have read the books we read during guided reading
time on their own. I would have let the remaining students
work on the same programs of drill and practice or enrichment
as the Chapter 1 and best readers had, during times other
than reading. Teachers could do the same with other
subjects, such as math. The children could work in groups
integrating several subjects for reports or presentations.

If the computers are only in a lab setting that the staff
has little access to, it is logical that the computers would
not be utilized to their best advantage. I read of a teacher
in a school that bought four of her own computers for her
classroom. She rents them to the students during holidays and summers. She has increased the number of computers in her classroom to 12. I plan on buying used computers for my class when I can find them at a reasonable price. I think letting the computers go to the student's homes during extended breaks is a great idea. Not only do the students benefit by using the computers, it keeps them safe from theft.

Some schools throughout the country are exploring the use of laptops. I know of an elementary school in Warrenville that has four computers in each room as well as a computer lab for the whole class. All the computers are networked in the building so it is possible to do projects with students in different classes.

At the elementary school in Warrenville, the "e-mail" project could be accomplished without passing discs because of their computer network. This project could have been accomplished in the school I was assigned if there were enough mother's helpers to watch small groups of children as they wrote and saved their "e-mail" onto discs. I did have one parent helper to work with, who volunteered her time once a week.

Logically schools and libraries should be the main receivers of Internet services. This information network could dramatically change the way we look at schools and public library systems. How exciting it would be to work on
projects with students across the country! If you were studying the ocean, you could work together with a class from a coastal state. The learning opportunities are endless. It would also allow students from rural or poor districts to access the same information available to affluent districts. This will only happen if poorer districts can get the technology the affluent districts have available.

If the government is serious about the Education Goals 2000, the inequalities between schools regarding technology must be addressed. In Byting Back, it is suggested that resources be pooled in local areas. It is also suggested that private industry work to improve education (Ramirez and Bell, 1994, p. 3).

This change in the use of technology will only happen if the administrators of schools realize its potential and they are supportive. School districts need to catch up with the rest of society. Teachers need to get the training they need to teach the students. As an educator, these are the goals I would like to see met.
CHAPTER 3
LIFE CYCLE UNIT

This is a life cycle unit incorporating technology as an instructional tool. The complete unit is in two parts. The first part of the life cycle unit addresses the plant life cycle. This is done through various science lessons, language arts activities, and using the book *Johnny Appleseed* for reading. The animal life cycle is the second part of the unit. This unit also incorporates science, language arts, and reading. The literature book used in the animal life cycle is *Frog And Toad Are Friends*. The reading books are used concurrently with the science lessons each day. The science section of the unit is based on the science curriculum by Scholastic.

Unit: Life Cycles

Grade Level: second grade

Objectives:
1. Read the book *Johnny Appleseed*.
2. Tell the life cycle of an apple tree and order it's yearly life cycle.
3. Define or explain what a plant life cycle is.
4. Read the book *Frog And Toad Are Friends*. 
5. Describe personification of characters.
6. Give some characteristics of Frog and Toad.
7. Define or explain what an animal life cycle is.
8. Describe differences in the life cycles of frogs, butterflies, and mammals.
9. Draw the different life cycles of a frog.
10. Describe differences between frogs and toads.

Materials needed:
From Sea To Shining Sea compiled by Amy L. Cohn
29 copies of Johnny Appleseed by Eve Bunting
29 copies of words to the Johnny Appleseed song
4 copies of Folktales CD-ROM by Discus
word cards made from the story and a few that are not in the story
pocket chart
cassette tape player
30 pieces of red construction paper
4 multimedia computers with CD-ROM
tape of Johnny Appleseed song (made previously)
LCD panel
overhead projector
full page scanner
14 plastic magnifying glasses
notebooks and pencils
4 copies of Animals And How They Grow CD-ROM by National Geographic
29 copies of Frog And Toad Are Friends by Arnold Lobel
The Seed by Eric Carle
A Puppy Is Born by Joanna Cole
The Caterpillar And The Polliwog by Jack Kent
4 copies of Story Book Weaver by MECC
The Lion King video and music cassette
Life Cycles Science Kit by Scholastic
5 different kinds of seeds
4 copies of Graphpower by Ventura
4 copies of A World Of Plants CD-ROM by National Geographic
4 copies of Dinosaur Adventure CD-ROM by Knowledge Adventure
4 copies of Dinopark Tycoon by MECC
Frogs And Toads And Tadpoles, Too by Allen Fowler
colored construction paper

PART 1: PLANT LIFE CYCLES

Johnny Appleseed:
Background:
Children will have heard several picture books on trees and fruit.

Anticipatory Set:
Teach students song about Johnny Appleseed from the book
From Sea To Shining Sea compiled by Amy L. Cohn. Read story about Johnny Appleseed from the same book.

Lesson:

Put all the words from the book *Johnny Appleseed* in the pocket chart. Ask students to predict what words will be in the book *Johnny Appleseed* from the words in the pocket chart. Sort the pocket chart words into two groups "yes" and "no". Begin guided reading of the *Johnny Appleseed* book. Scan book into the computer and use it like a big book via the LCD panel. Stimulate the students by asking questions to focus their attention on the first page. Be sure the students can find the answer to the questions on the first page. Have students read first page to themselves. Ask for a volunteer to read the page. Have students follow along with the reader. Repeat the anticipatory question or questions and allow for wait time. Choose a student or students to answer the question/s. Have the whole class read the page in choral fashion. Use this guided reading procedure for the rest of the book. Try to finish one chapter a day.

Additional Activities:

Four discs of Folktales with the story of Johnny Appleseed will be kept by the computer. The Folktales disc has a story of Johnny Appleseed using dramatic reading, music, and sound effects. In addition, it has the text and color
illustrations. Students will take turns using these discs during silent reading time. Also students that finish their work early will be able to go to the computers and work in pairs.

Students will make an apple for the tree that is already up in the class. This will be made with red construction paper. Students will write the title and author of a book they liked reading. Using the computer, they will print out the title and author's name and glue it on their apples. Then we will discuss the life cycle of the apple tree. We will also talk about the blossoms in the spring and how they grow into apples in the fall.

Assessment:
Performance based assessment
Informal check list based on reading and a check of the apple to see if it was completed.

Plant Life Cycle Science:

Background:
The students will have heard the picture book The Seed by Eric Carle.

Anticipatory Set:
The class and I will do a KWL together on the computer
using the LCD panel to project the information using the overhead. Read to the class from the big *Life Cycle* book about what a life cycle is. Stress the fact that life cycles have a beginning (birth), middle (change), and an end (death). Show the video about Life Cycles that is in the Life Cycle Science Kit.

Lessons:
Day 1:
Take students outside to look at plant and animal life outside the school in the prairie area. They will have small magnifying glasses and they will work in pairs either writing their findings or drawing pictures of their findings. We will stay outside approximately one hour. When we return to the classroom, we will discuss what we found. I will use the LCD panel on the overhead to type in the different plant and animal life that the students discovered outside. I will also use the CD-ROM Animals And How They Grow, if the students bring up any animal or insects that are on that video disc. Show the video clip from the movie The Lion King that explains the life cycle.
Day 2:
In table groups, give the students 5 different envelopes of seeds. Let the students examine each envelope of seeds. The students will list each seed on a data collection sheet, draw a picture of the seed, and count how many seeds are in
the envelope. Each table will go to the computer and make a representational graph of the seeds using Graphpower software.

We will discuss how seeds grow. I will use A World Of Plants CD-ROM with the LCD panel via the overhead, to show how a seed grows into a plant.

Day 3:

Use the Life Cycle book from Scholastic to show the parts of the flower. Give each student a lily to break apart and have them glue the pieces to a white paper. Have the students label the pistol, stamen, and the pollen that shakes off. After the students complete the activity I will use A World Of Plants CD-ROM on the overhead with LCD panel to show pollination. Place the four A World Of Plants CD-ROMs at the computer center for the class to look at when they are through with their work, when they have journal time, or during silent reading.

PART 2: ANIMAL LIFE CYCLES

Frog and Toad:

Background:

The class will be working on the Life Cycle unit in science as they read this book.
Anticipatory Set:

The teacher will make a banner the week before we start the book on Print Shop Deluxe CD-ROM that says THE AMPHIBIANS ARE COMING. The teacher will give word sheets from the book, made on the computer, for the children to cut into word cards.

Day 1:

The students will take the word cards and do a word sort with them. The students will find all the nouns, verbs, and adjectives. The class will begin reading Frog And Toad Are Friends. The class will read the first chapter silently. When they have finished reading, the class will read the first chapter aloud with their reading partners. After reading the first chapter the class will work in groups, at the computers, writing attributes of the students' friends. After they print out their sheet of attributes, each group will report what they think are attributes of friends.

Day 2:

Have the class discuss their favorite stories and have them write the name of that book and the author on the computers. They will print this out and glue it on a yellow or orange leaf. The leaves will be attached to the apple tree in the classroom. Have class read the next chapter called "The Story" the same way they read the first chapter. Have each table write a story together using the software, Story Book Weaver.
Day 3:

The class will read the next chapter, "The Button" in the same manner they have been reading this book. The groups will present the stories they wrote to the class using the LCD board and the overhead. The class will then make a frog out of construction paper, using a pattern.

Day 4:

The class will read the next chapter, "The Swim" as they have the previous chapters. The class will then design a new bathing suit for Frog on a picture of Frog. The class will then work together on personification. I will ask the class if Frog and Toad do things real frogs and toads do. We will list what they do that is like a real frog and toad, and what they do that is like a person. To develop understandings about the attributes of real frogs and toads, we will make the list together on the overhead using the LCD panel and computer.

Day 5:

We will finish the book reading the last chapter, "The Letter" in the same manner we have read the rest of the book. The class will then work throughout the day writing a letter to their reading partner. The class will take turns on the computers in the class or they may go one at a time to the computer lab. The students will work together in class on character webs of Frog and Toad. The class will do this using the LCD panel via the overhead as the teacher types in
the student's answers.

Assessment:

The assessment will be performance based. The teacher will check to make sure each of the children has participated in the class activities and completed each assignment.

Animal Life Cycle Science:

Background:
The students will have heard the picture books *A Puppy Is Born* by Joanna Cole, and *The Caterpillar And The Polliwog* by Jack Kent

Day 1:

We will begin with dinosaurs. How they were born (eggs) and different theories about why they are extinct. We will look at Dinosaur Adventure CD-ROM by Knowledge Adventure on the overhead using the LCD panel. I will show some of the more popular dinosaurs such as the tyrannosaurus rex or the triceratops. The children will be able to use this disk during writing time. They will choose the dinosaur of their choice from the disk. They will write a paragraph about the dinosaur they selected to share with the class later that day.
Day 2:

The class will work cooperatively in groups to develop their own dinosaur park using Dinopark Tycoon software. Each group will report what they learned about running their own dinosaur park after they have worked together for the morning. Additionally, have the groups make advertising posters for their parks, to put up in the classroom, using Print Shop Deluxe CD-ROM.

Day 3:

Class will begin working on animals with different metamorphic phases. Class will compare and contrast life cycles of amphibians and reptiles. I will show the metamorphic stages for a butterfly and a frog on the overhead via the LCD panel using the CD-ROM, Animals And How They Grow. I will teach the class the song, "A Froggy Grows Up" and the students will make a book using that song and drawing pictures of the stages of the frog metamorphosis. The students will have the option of making this book by themselves or making a multimedia presentation, working in a group, using Kid Pix Studio CD-ROM.

Day 4:

Scan the book Frogs And Toads And Tadpoles, Too onto the computer. Project the book on the overhead using the LCD panel and read it aloud with the class. After reading the book, the class will work together on a venn diagram comparing toads and frogs. The teacher will have the venn
diagram projected on the overhead with the LCD panel and will type in the answers as the children give them.

Day 5:

The students will listen and read along to pages in the *Life Cycle* big book about birds. I will show a couple of common birds eggs and how they change on the *Animals And How They Grow* CD-ROM, using the overhead projector and the LCD panel. The class will make a paper mache egg for an imaginary bird. When it is painted and dry, (later that week) they will tell about their imaginary bird, describe its life cycle, and show their egg to the class.

Day 6:

The class will listen to the book *A Puppy Is Born* by Joanna Cole and they will discuss the differences between mammals and the other kinds of animals they have studied in the last two weeks. The class will work on a classification chart in their table groups using a list of characteristics for amphibians, insects, birds, reptiles, and mammals. The group will work together on a classification poster using the different animal characteristics. The groups could use Print Shop Deluxe CD-ROM to make the graphics or the lettering for the poster.

Day 7:

The class will watch the video clip from *The Lion King* which discusses how life is a circle. The students will discuss what that means. After the discussion, the students
will draw an animal on one strip of construction paper, and a plant on another strip of construction paper. I will pick a group leader at every table to put the strips together in a chain alternating animals and plants. Each table will join their chain with another table. While they work on the chain, the class will listen to the music of The Lion King including the song "The Circle of Life." We will finish the unit by completing the KWL on the overhead using the computer and LCD panel. The teacher will then show the class the first part of the KWL and the class will be able to see how much they have learned.

Assessment:

It would be primarily informal, checking to make sure they did the assignments, participated in class. There would be a small individual written test that would show me that the students knew the order of the life cycles for the butterfly, frog, and an apple tree.
CHAPTER 4

SOFTWARE EVALUATIONS

I used an evaluation form that was adapted from The
Software Evaluation Form (Bullough, Robert V. and Beatty,
Merrill Publishing Co.)

For this project I evaluated only the software that was
available at my cooperating school. Most of it was very old.
I plan on keeping this form in my computer data base so
that I may continue to keep a record of software that is
available to me as an educator.
SOFTWARE EVALUATION

Program title: Hello, Mr. President
Version: 1.0  Producer: NA
Copyright date: NA
Required hardware: Apple II  Required software: 1 disc
Storage medium: ___3" ___X_5" ___CD-ROM

Program characteristics
Subject matter area: geography  Specific topic: states
Grade levels: ___Pre ___K ___1 ___2 x_3 x_4 x_5 x_6 ___7 ___8 ___9
___10 ___11 ___12 ___Adult
Objectives: Clearly stated? ___yes X___no
Is documentation provided? x___yes ___no
If provided, describe briefly: a sheet of paper with objectives and test procedures.
Appropriate number of users: x___individual x___pairs
___group ___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing ___Computer-managed instruction
___Tutorial ___Other (specify)

Description: No graphics. Learn states names and presidents
names and birth places. Lists are shown and tests are given
on lists.

Content

Key: Y=Yes  ?=Not sure N=No NA=Not Applicable

The content of the program is accurate. ___Y___
The content is appropriate for the objectives. ___N___
The content is consistent with expectations of school,
district. ___Y___
The level of sophistication is appropriate. ___N___
The content is free of bias. ___Y___

Running The Program
The instructions are clear and easy to understand. ___N___
The screen display is well designed. ___N___
The material is well organized and presented effectively. ___N___
Various ability levels are provided for. ___Y___
Graphics and sound are used to enhance the program rather
than as embellishments. ___N___
The student engages in ongoing interaction with the
computer. ___N___
Feedback, both negative and positive, is effective and not
demeaning. ___N___
The student is assisted through the program with appropriate
cues and prompts. ___N___
Pacing and sequencing can be controlled. _N_
Instructions can be skipped if desired. _N_
Instructions and help screens can be accessed at any
time. _N_
A tutorial or sample program is provided. _N_
The program achieves the stated objectives. _N_

Major Strengths and Weaknesses

Identify the major strengths of this program.
It is accurate.

Identify the major weaknesses of this program.
It is boring. There are no graphics. It really doesn't
teach geography like the objectives state.

Recommendation: _Excellent _Good _Fair _x_Poor
SOFTWARE EVALUATION

Program title: Dinosaur Dig
Version: 1.0 Producer: Neosoft, Inc. Mindscape
Copyright date: 1984
Required hardware: Apple II Required software: 2 discs
Storage medium: ___3" _x_5" ___CD-ROM

Program characteristics
Subject matter area: Science Specific topic: dinosaurs
Grade levels: ___Pre ___K ___1 ___2 x_3 x_4 x_5 x_6 ___7 ___8 ___9
___10 ___11 ___12 ___Adult
Objectives: Clearly stated? _x_yes ___no
Is documentation provided? _x_yes ___no
If provided, describe briefly: teacher's booklet and program booklet
Appropriate number of users: _x_individual _x_pairs
___x_group ___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing _x_Computer-managed instruction
___Tutorial ___Other (specify)

Description: There is a lot of information about different kinds of dinosaurs. You just read it and a small graphic in the corner is displayed. The program has a plastic keyboard with different kinds of dinosaurs on each button.

Content

Key: Y=Yes ?=Not sure N=No NA=Not Applicable

The content of the program is accurate._Y_
The content is appropriate for the objectives._N_
The content is consistent with expectations of school, district._?_
The level of sophistication is appropriate._Y_
The content is free of bias._Y_

Running The Program
The instructions are clear and easy to understand._N_
The screen display is well designed._N_
The material is well organized and presented effectively._N_
Various ability levels are provided for._N_
Graphics and sound are used to enhance the program rather than as embellishments._N_
The student engages in ongoing interaction with the computer._N_
Feedback, both negative and positive, is effective and not
The student is assisted through the program with appropriate cues and prompts.

Pacing and sequencing can be controlled.

Instructions can be skipped if desired.

Instructions and help screens can be accessed at any time.

A tutorial or sample program is provided.

The program achieves the stated objectives.

Major Strengths and Weaknesses

Identify the major strengths of this program.

None that I can see.

Identify the major weaknesses of this program.

Too much text and not enough interaction. You have to put this plastic keyboard cover on the computer and it kept slipping. It was very frustrating.

Recommendation: ___ Excellent ___ Good ___ Fair ___ Poor
SOFTWARE EVALUATION

Program title: Stickybear Opposites
Version: 1.0  Producer: Optimum Resources
Copyright date: 1983
Required hardware: Apple II  Required software: 1 disc
Storage medium: ___3" ___5" ___CD-ROM

Program characteristics
Subject matter area: language arts  Specific topic: opposites
Grade levels: x_Pre x_K x_1 ___2 ___3 ___4 ___5 ___6 ___7 ___8 ___9
___10 ___11 ___12 ___Adult
Objectives: Clearly stated?  _x_yes ___no
Is documentation provided?  _x_yes ___no
If provided, describe briefly: a small pamphlet
Appropriate number of users: _x_individual _x_pairs
___group ___class
Nature of the program (check as many as apply)
_x_Drill and practice  _x_Demonstration
___Game  ___Problem solving
___Simulation  ___Tool (i.e., word processing)
___Testing  _x_Computer-managed instruction
___Tutorial  ___Other (specify)

Description: Animated pictures of opposites, like fast, slow; stop, go; and in front of, in back of.

Content

Key:  Y=Yes   ?=Not sure N=No NA=Not Applicable

The content of the program is accurate. _Y_
The content is appropriate for the objectives. _Y_
The content is consistent with expectations of school, district. _Y_
The level of sophistication is appropriate. _Y_
The content is free of bias. _Y_

Running The Program
The instructions are clear and easy to understand. _NA_
The screen display is well designed. _Y_
The material is well organized and presented effectively. _Y_
Various ability levels are provided for. _N_
Graphics and sound are used to enhance the program rather than as embellishments. _Y_
The student engages in ongoing interaction with the computer. _Y_
Feedback, both negative and positive, is effective and not demeaning. _Y_
The student is assisted through the program with appropriate cues and prompts. _N_
Pacing and sequencing can be controlled. _N_
Instructions can be skipped if desired. _NA_
Instructions and help screens can be accessed at any time. _NA_
A tutorial or sample program is provided. _NA_
The program achieves the stated objectives. _Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
Great graphics for it's age. Fun to do. I had fun making pictures on screen do opposite functions.

Identify the major weaknesses of this program.
It would be better if there were audio as well.

Recommendation: _x_ Excellent ___ Good ___ Fair ___ Poor
SOFTWARE EVALUATION

Program title: Fun House Maze
Version: 1.0  Producer: Sunburst
Copyright date: 1984
Required hardware: Apple II  Required software: 1 disc
Storage medium: ___3"  _x_ 5"  ____CD-ROM

Program characteristics
Subject matter area: problem solving  Specific topic: strategies
Grade level: ___Pre  _X_ 1  _x_ 2  _x_ 3  x_4  x_5  x_6  x_7  x_8  x_9
x_10  x_11  x_12  x_Adult
Objectives: Clearly stated?  _x_  yes  ____no
Is documentation provided?  _x_  yes  ____no
If provided, describe briefly: a good teacher's manual
Appropriate number of users:  _x_  individual  _x_  pairs
__group  ___class
Nature of the program (check as many as apply)
__Drill and practice  __Demonstration
__Game  __Problem solving
__Simulation  __Tool (i.e., word processing)
__Testing  __Computer-managed instruction
__Tutorial  __Other (specify)

Description: There is a maze that you have to find your way out of. It looks as if you are walking around in different halls.

Content

Key: Y=Yes  ?=Not sure  N=No  NA=Not Applicable

The content of the program is accurate.  _Y_
The content is appropriate for the objectives.  _Y_
The content is consistent with expectations of school, district.  ?
The level of sophistication is appropriate.  _Y_
The content is free of bias.  _Y_

Running The Program
The instructions are clear and easy to understand.  _Y_
The screen display is well designed.  _Y_
The material is well organized and presented effectively.  _Y_
Various ability levels are provided for.  _Y_
Graphics and sound are used to enhance the program rather than as embellishments.  _Y_
The student engages in ongoing interaction with the computer.  _Y_
Feedback, both negative and positive, is effective and not
demeaning. Y
The student is assisted through the program with appropriate
cues and prompts. Y
Pacing and sequencing can be controlled. Y
Instructions can be skipped if desired. Y
Instructions and help screens can be accessed at any
time. Y
A tutorial or sample program is provided. N
The program achieves the stated objectives. Y

Major Strengths and Weaknesses

Identify the major strengths of this program.
The directions are very good. It is a very challenging
program.

Identify the major weaknesses of this program.
Sometimes I was very frustrated because of the way it moved
and you couldn't walk backwards.

Recommendation: Excellent X Good Fair Poor
SOFTWARE EVALUATION

Program title: Gertrude's Puzzles
Version: 1.0 Producer: The Learning Company
Copyright date: 1984
Required hardware: Apple II Required software: 1 disc
Storage medium: ___3"_x__5" ___CD-ROM

Program characteristics
Subject matter area: problem solving
Specific topic: sorting shapes and colors
Grade levels: ___Pre x_K x_1 x_2 ___3 ___4 ___5 ___6 ___7 ___8 ___9
___10 ___11 ___12 ___Adult
Objectives: Clearly stated? _x__yes ___no
Is documentation provided? _x__yes ___no
If provided, describe briefly: a booklet
Appropriate number of users: _x_individual _x_pairs
___group ___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Simulation ___Tool (i.e., word processing)
___Testing ___Computer-managed instruction
___Tutorial ___Other (specify)

Description: Logic and deductive reasoning puzzles for recognizing patterns and shapes.

Content
Key: _Y=_Yes _?=Not sure _N=No _NA=Not Applicable

The content of the program is accurate. _Y_
The content is appropriate for the objectives. _Y_
The content is consistent with expectations of school, district. _Y_
The level of sophistication is appropriate. _?=__
The content is free of bias. _Y_

Running The Program
The instructions are clear and easy to understand. _Y_
The screen display is well designed. _N_
The material is well organized and presented effectively. _N_
Various ability levels are provided for. _Y_
Graphics and sound are used to enhance the program rather than as embellishments. _N_
The student engages in ongoing interaction with the computer. _Y_
Feedback, both negative and positive, is effective and not
demeaning._Y_
The student is assisted through the program with appropriate
cues and prompts._Y_
Pacing and sequencing can be controlled._Y_
Instructions can be skipped if desired._Y_
Instructions and help screens can be accessed at any
time._Y_
A tutorial or sample program is provided._Y_
The program achieves the stated objectives._Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
The content of the program matches the objectives.

Identify the major weaknesses of this program.
It is boring and if you don't have a joystick, it is very
frustrating and slow.

Recommendation:_ _ _ _ _Excellent _ _ _ _ Good _x_ _ _ _Fair _ _ _ _Poor
SOFTWARE EVALUATION

Program title: The Playroom
Version: 1.0     Producer: Broderbund
Copyright date: 1989
Required hardware: Apple II     Required software: 2 discs
Storage medium: ___3"  ___5"  ___CD-ROM

Program characteristics
Subject matter area: all     Specific topic: none
Grade levels: x_Pre x_K x_1 2 3 4 5 6 7 8 9 x_10 x_11 x_12 x_Adult
Objectives: Clearly stated? x_Yes  ___No
Is documentation provided? x_Yes  ___No
If provided, describe briefly: a booklet
Appropriate number of users: x_individual  x_pairs
   x_group  x_class
Nature of the program (check as many as apply)
   ___Drill and practice  ___Demonstration
   x_Game  ___Problem solving
   ___Simulation  ___Tool (i.e., word processing)
   ___Testing  ___Computer-managed instruction
   x_Tutorial  ___Other (specify)

Description: Children learn about letter, numbers, and time
as they explore the playroom.

Content

Key: Y=Yes  ?=Not sure  N=No  NA=Not Applicable

The content of the program is accurate. Y
The content is appropriate for the objectives. Y
The content is consistent with expectations of school,
district. Y
The level of sophistication is appropriate. Y
The content is free of bias. Y

Running The Program
The instructions are clear and easy to understand. ?
The screen display is well designed. Y
The material is well organized and presented effectively. Y
Various ability levels are provided for. Y
Graphics and sound are used to enhance the program rather
than as embellishments. Y
The student engages in ongoing interaction with the
computer. Y
Feedback, both negative and positive, is effective and not
demeaning. Y
The student is assisted through the program with appropriate
cues and prompts. Y
Pacing and sequencing can be controlled. Y
Instructions can be skipped if desired. NA
Instructions and help screens can be accessed at any time. ?
A tutorial or sample program is provided. N
The program achieves the stated objectives. Y

Major Strengths and Weaknesses

Identify the major strengths of this program.
It is fun and children would enjoy it. It uses uppercase and lower case letters.

Identify the major weaknesses of this program.
It would be easier with a mouse and if it was installed on a hard drive. You have to change the disc too often for small children.

Recommendation: Excellent _x_Good ___Fair ___Poor
Instructions can be skipped if desired. _Y_
Instructions and help screens can be accessed at any
time. _Y_
A tutorial or sample program is provided. _?_
The program achieves the stated objectives. _Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
I enjoyed doing the program. Not a lot of bells and
whistles but I liked it anyway. Kept my attention.

Identify the major weaknesses of this program.
It may be hard to explain to younger children. You would
have to show them several times.

Recommendation: _x_ Excellent ___ Good ___ Fair ___ Poor
SOFTWARE EVALUATION

Program title: Mixed-up Mother Goose
Version: 1.0 Producer: Sierra
Copyright date: 1987
Required hardware: Apple IIe Required software: 2 discs
Storage medium: _3" _x_5" CD-ROM

Program characteristics
Subject matter area: literature
Specific topic: Mother Goose
Grade levels: _Pre x_K x_1 x_2 _3 _4 _5 _6 _7 _8 _9 _10 _11 _12 _Adult
Objectives: Clearly stated? _x__yes ___no
Is documentation provided? _x__yes ___no
If provided, describe briefly: a small pamphlet
Appropriate number of users: _x__individual _x_pairs
___group ___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing ___Computer-managed instruction
___Tutorial ___Other (specify)

Description: Character you choose walks through different scenes and helps find different items. The character returns the items to the characters they belong to.

Content

Key: Y=Yes ?=Not sure N=No NA=Not Applicable

The content of the program is accurate. _Y_
The content is appropriate for the objectives. _Y_
The content is consistent with expectations of school, district. _Y_
The level of sophistication is appropriate. _Y_
The content is free of bias. _Y_

Running The Program
The instructions are clear and easy to understand. _Y_
The screen display is well designed. _Y_
The material is well organized and presented effectively. _Y_
Various ability levels are provided for. _Y_
Graphics and sound are used to enhance the program rather than as embellishments. _Y_
The student engages in ongoing interaction with the computer. _Y_
Feedback, both negative and positive, is effective and not demeaning. _Y_
The student is assisted through the program with appropriate
cues and prompts. _Y_
Pacing and sequencing can be controlled. _N_
Instructions can be skipped if desired. _N_
Instructions and help screens can be accessed at any time. _?_
A tutorial or sample program is provided. _N_
The program achieves the stated objectives. _Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
Nice graphics, it keeps your attention. Fun game.

Identify the major weaknesses of this program.
On the Apple IIe it was very slow moving from 1 screen to another. It takes a long time to finish. I don't think it is that educational.

Recommendation: ___Excellent ___Good _x_Fair ___Poor
SOFTWARE EVALUATION

Program title: Those Amazing Reading Machines II and III
Version: 1.0  Producer: MECC
Copyright date: 1985
Required hardware: Apple II  Required software: 2 disc
Storage medium: ___3" ___x_5" ___CD-ROM

Program characteristics
Subject matter area: reading
Specific topic: finding details, comprehension, sequencing
Grade levels: ___Pre ___K ___1 ___2 ___3 x_4 x_5 x_6 ___7 ___8 ___9
___10 ___11 ___12 ___Adult
Objectives: Clearly stated? ___yes ___no
Is documentation provided? ___yes ___no
If provided, describe briefly: nice teacher's manual
Appropriate number of users: ___individual ___pairs
___group ___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing ___Computer-managed instruction
___Tutorial ___Other (specify)

Description: You read passages and choose different answers
for sequencing and detail.

Content

Key: Y=Yes  ?=Not sure N=No NA=Not Applicable

The content of the program is accurate. Y
The content is appropriate for the objectives. Y
The content is consistent with expectations of school,
district. Y
The level of sophistication is appropriate. Y
The content is free of bias. Y

Running The Program
The instructions are clear and easy to understand. Y
The screen display is well designed. Y
The material is well organized and presented effectively. Y
Various ability levels are provided for. N
Graphics and sound are used to enhance the program rather
than as embellishments. N
The student engages in ongoing interaction with the
computer. Y
Feedback, both negative and positive, is effective and not
demeaning. Y
The student is assisted through the program with appropriate
cues and prompts. Y
Pacing and sequencing can be controlled. Y
Instructions can be skipped if desired. Y
Instructions and help screens can be accessed at any
time. Y
A tutorial or sample program is provided. ?
The program achieves the stated objectives. Y

Major Strengths and Weaknesses

Identify the major strengths of this program.
Program meets its objectives and the machines in the program
are clever.

Identify the major weaknesses of this program.
Once you figure out the correct answers, you would not want
to do the program anymore.

Recommendation: Excellent _x_Good ____Fair ___Poor
SOFTWARE EVALUATION

Program title: Reading Klooz
Version: 1.0   Producer: Midwest Publications
Copyright date: 1984
Required hardware: Apple II   Required software: 1 disc
Storage medium: ____3" _x__5" ____CD-ROM

Program characteristics
Subject matter area: math and reading
Specific topic: story problems
Grade levels: ___Pre ___K ___1 ___2 x_3 x_4 x_5 ___6 ___7 ___8 ___9 ___10 ___11 ___12 ___Adult
Objectives: Clearly stated? ___yes ___no
Is documentation provided? ___yes ___no
If provided, describe briefly: it was missing
Appropriate number of users: ___individual ___pairs ___group ___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing ___Computer-managed instruction
___Tutorial ___Other (specify)

Description: A game like wheel of fortune with a story problem included.

Content

Key: Y=Yes ___?=Not sure N=No NA=Not Applicable

The content of the program is accurate. ___Y___
The content is appropriate for the objectives. ___?___
The content is consistent with expectations of school, district. ___Y___
The level of sophistication is appropriate. ___?___
The content is free of bias. ___Y___

Running The Program
The instructions are clear and easy to understand. ___N___
The screen display is well designed. ___Y___
The material is well organized and presented effectively. ___N___
Various ability levels are provided for. ___N___
Graphics and sound are used to enhance the program rather than as embellishments. ___N___
The student engages in ongoing interaction with the computer. ___Y___
Feedback, both negative and positive, is effective and not demeaning. ___N___
The student is assisted through the program with appropriate cues and prompts. _N_
Pacing and sequencing can be controlled. _Y_
Instructions can be skipped if desired. _Y_
Instructions and help screens can be accessed at any time. _?_
A tutorial or sample program is provided. _N_
The program achieves the stated objectives. _?_

Major Strengths and Weaknesses

Identify the major strengths of this program.
It is a better reading program than a math program.

Identify the major weaknesses of this program.
I kept wishing I could type in letters.

Recommendation: _Excellent _Good _Fair _Poor
SOFTWARE EVALUATION

Program title: Minus Mission
Version: 1.0  Producer: DLM
Copyright date: 1982
Required hardware: apple II  Required software: 1 disc
Storage medium: ___3" _x_5" ___CD-ROM

Program characteristics
Subject matter area: math  Specific topic: subtraction
Grade levels: ___Pre ___K ___1  ____x_2 x_3 x_4 x_5 ___6 ___7 ___8 ___9
    ___10 ___11 ___12 ___Adult
Objectives: Clearly stated? _x__yes ___no
Is documentation provided? _x__yes ___no
If provided, describe briefly: a teacher's manual
Appropriate number of users: _x__individual ___pairs
    ___group ___class
Nature of the program (check as many as apply)
_x_Drill and practice ___Demonstration
_x_Game   ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing ___Computer-managed instruction
___Tutorial ___Other (specify)

Description: Student places correct answer in space vehicle and shoots it at meteor subtraction problem.

Content

Key: Y=Yes  ?=Not sure N=No NA=Not Applicable

The content of the program is accurate._Y__
The content is appropriate for the objectives._Y__
The content is consistent with expectations of school, district._Y__
The level of sophistication is appropriate._Y__
The content is free of bias._Y__

Running The Program
The instructions are clear and easy to understand._Y__
The screen display is well designed._N__
The material is well organized and presented effectively._Y__
Various ability levels are provided for._N__
Graphics and sound are used to enhance the program rather than as embellishments._Y__
The student engages in ongoing interaction with the computer._Y__
Feedback, both negative and positive, is effective and not demeaning._Y__
The student is assisted through the program with appropriate cues and prompts._N__
Pacing and sequencing can be controlled._N__
Instructions can be skipped if desired._Y__
Instructions and help screens can be accessed at any time._?__
A tutorial or sample program is provided._N__
The program achieves the stated objectives._Y__

Major Strengths and Weaknesses

Identify the major strengths of this program. The program keeps the student's attention. It helps you get faster at doing subtraction in a fun way.

Identify the major weaknesses of this program. It would be very hard for some children because it moves so fast.

Recommendation:____Excellent _x__Good ____Fair ____Poor
SOFTWARE EVALUATION

Program title: Problem-solving With Nim
Version: 1.0 Producer: MECC
Copyright date: 1991
Required hardware: Apple II  Required software: 1 disc
Storage medium: ___3" _x__5" ____CD-ROM

Program characteristics
Subject matter area: problem solving
Specific topic: none
Grade levels: ____Pre ____K ___1 __2 x_3 x_4 x_5 x_6 x_7 x_8 ___9 ___10 ___11 ___12 ____Adult
Objectives: Clearly stated? _x__yes ____no
Is documentation provided? _x__yes ____no
If provided, describe briefly: a notebook manual
Appropriate number of users: _x__individual _x__pairs
_x__group ____class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game  ___Problem solving
___Simulation  ____Tool (i.e., word processing)
___Testing  ___Computer-managed instruction
___Tutorial  ____Other (specify)

Description: Four different problem solving games. Student can choose different characters to play with.

Content

Key: Y=Yes  ?=Not sure N=No NA=Not Applicable

The content of the program is accurate. _Y_
The content is appropriate for the objectives. _Y_
The content is consistent with expectations of school, district. _Y_
The level of sophistication is appropriate. _Y_
The content is free of bias. _Y_

Running The Program
The instructions are clear and easy to understand. _Y_
The screen display is well designed. _Y_
The material is well organized and presented effectively. _Y_
Various ability levels are provided for. _N_
Graphics and sound are used to enhance the program rather than as embellishments. _N_
The student engages in ongoing interaction with the computer. _Y_
Feedback, both negative and positive, is effective and not demeaning. _Y_
The student is assisted through the program with appropriate cues and prompts. _Y_
Pacing and sequencing can be controlled. _Y_

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Instructions can be skipped if desired. _Y_
Instructions and help screens can be accessed at any
time. _?_
A tutorial or sample program is provided. _N_
The program achieves the stated objectives. _Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
The program can be played alone or with a friend. It has
great intrinsic motivation.

Identify the major weaknesses of this program.
After you figure out how to beat the problems, it wouldn't be
fun any longer.

Recommendation: _____Excellent  _x___Good  ____Fair  ___Poor
SOFTWARE EVALUATION

Program title: Kidwriter
Version: 1.0 Producer: Spinmaker
Copyright date: 1984
Required hardware: Apple II Required software: 1 disc
Storage medium: ---3" _x__5" ___CD-ROM

Program characteristics

Subject matter area: writing
Specific topic: word processing
Grade levels: _x_Pre x_K x_1 x_2 x_3 x_4 _5 _6 _7 _8 _9
      _10 _11 _12 _Adult
Objectives: Clearly stated? _x__yes ____no
Is documentation provided? _x__yes ____no
If provided, describe briefly: a small pamphlet
Appropriate number of users: _x__individual _x_pairs
      _x__group _x__class
Nature of the program (check as many as apply)
      ___Drill and practice ___Demonstration
      ___Game ___Problem solving
      ___Simulation _x_Tool (i.e., word processing)
      ___Testing ___Computer-managed instruction
      ___Tutorial ___Other (specify)

Description: Students choose pictures and different backgrounds and then write a story for that page.

Content

Key: Y=Yes ?=Not sure N=No NA=Not Applicable

The content of the program is accurate._Y_
The content is appropriate for the objectives._Y_
The content is consistent with expectations of school, district._Y_
The level of sophistication is appropriate._Y_
The content is free of bias._Y_

Running The Program
The instructions are clear and easy to understand._Y_
The screen display is well designed._Y_
The material is well organized and presented effectively._Y_
Various ability levels are provided for._N_
Graphics and sound are used to enhance the program rather than as embellishments._Y_
The student engages in ongoing interaction with the computer._NA_
Feedback, both negative and positive, is effective and not demeaning._NA_
The student is assisted through the program with appropriate cues and prompts._Y_
Pacing and sequencing can be controlled. _Y_
Instructions can be skipped if desired. _Y_
Instructions and help screens can be accessed at any
time. _?_
A tutorial or sample program is provided. _Y_
The program achieves the stated objectives. _Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
The directions are very clear. It can be printed in color

Identify the major weaknesses of this program.
The graphics are very primitive. There are better programs
for this objective.

Recommendation: _____Excellent  _x__Good  ____Fair  ____Poor
SOFTWARE EVALUATION

Program title: The Incredible Laboratory
Version: 1.0 Producer: Sunburst
Copyright date: 1984
Required hardware: Apple II Required software: 1 disc
Storage medium: ___3" _x_5" ___CD-ROM

Program characteristics
Subject matter area: problem solving
Specific topic: science data collection
Grade levels: _Pre _K x_1 x_2 x_3 x_4 x_5 x_6 _7 _8 _9
__10 __11 __12 __Adult
Objectives: Clearly stated? _x_yes ___no
Is documentation provided? _x_yes ___no
If provided, describe briefly: a notebook teacher's manual
Appropriate number of users: _x_individual _x_pairs
__x_group __x_class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing ___Computer-managed instruction
___Tutorial ___Other (specify)

Description: Students choose different chemicals to find out which chemicals create different monster attributes.

Content

Key: Y=Yes ?=Not sure N=No NA=Not Applicable

The content of the program is accurate._Y_
The content is appropriate for the objectives._Y_
The content is consistent with expectations of school, district._Y_
The level of sophistication is appropriate._Y_
The content is free of bias._Y_

Running The Program
The instructions are clear and easy to understand._Y_
The screen display is well designed._Y_
The material is well organized and presented effectively._Y_
Various ability levels are provided for._Y_
Graphics and sound are used to enhance the program rather than as embellishments._Y_
The student engages in ongoing interaction with the computer._Y_
Feedback, both negative and positive, is effective and not demeaning._Y_
The student is assisted through the program with appropriate
cues and prompts._Y_
Pacing and sequencing can be controlled._Y_
Instructions can be skipped if desired._Y_
Instructions and help screens can be accessed at any
time._Y_
A tutorial or sample program is provided._N_
The program achieves the stated objectives._Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
It is fun and has good graphics and sound for its age.

Identify the major weaknesses of this program.
There is no place on program to enter data. You have to have
a paper and pencil.

Recommendation:____Excellent _x__Good ____Fair ____Poor
SOFTWARE EVALUATION

Program title: The Otters' Adventure
Version: 1.0 Producer: Knowledge Explorer, Grolier
Copyright date: 1985
Required hardware: Apple II Required software: 2 discs
Storage medium: _3"_x_5"_CD-ROM

Program characteristics
Subject matter area: problem solving
Specific topic: encyclopedia skills
Grade levels: _Pre__K__1__2__3 x_4 x_5 x_6 __7__8__9
__10__11__12__Adult
Objectives: Clearly stated? _x__yes ___no
Is documentation provided? _x__yes ___no
If provided, describe briefly: a small users guide
Appropriate number of users: _x__individual _x__pairs
__x__group ___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing ___x_Computer-managed instruction
___Tutorial ___Other (specify)

Description: Student helps two otters acquire different items such as balloons, by answering questions. The answers are all in the O encyclopedia by Grolier.

Content

Key: Y=Yes ?=Not sure N=No NA=Not Applicable

The content of the program is accurate._Y_
The content is appropriate for the objectives._?_
The content is consistent with expectations of school, district._Y_
The level of sophistication is appropriate._Y_
The content is free of bias._Y_

Running The Program
The instructions are clear and easy to understand._Y_
The screen display is well designed._N_
The material is well organized and presented effectively._N_
Various ability levels are provided for._N_
Graphics and sound are used to enhance the program rather than as embellishments._N_
The student engages in ongoing interaction with the computer._Y_
Feedback, both negative and positive, is effective and not
demeaning. _N_
The student is assisted through the program with appropriate
cues and prompts. _Y_
Pacing and sequencing can be controlled. _Y_
Instructions can be skipped if desired. _Y_
Instructions and help screens can be accessed at any
time. _?_
A tutorial or sample program is provided. _N_
The program achieves the stated objectives. _Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
The program meets it's objectives.

Identify the major weaknesses of this program.
It is very boring. The graphics do not change very much. I
would not use this program.

Recommendation: __Excellent ___Good ___Fair _x_Poor
SOFTWARE EVALUATION

Program title: The Oregon Trail
Version: 1.4 Producer: MECC
Copyright date: 1985
Required hardware: Apple II Required software: 1 disc
Storage medium: ___3" ___5" ___CD-ROM

Program characteristics
Subject matter area: history and problem solving
Specific topic: American history, Oregon Trail
Grade levels: ___Pre ___K ___1 ___2 x_3 x_4 x_5 x_6 x_7 x_8 ___9
___10 ___11 ___12 ___Adult
Objectives: Clearly stated? ___yes ___x___no
Is documentation provided? ___yes ___x___no
If provided, describe briefly: It was missing from the
program
Appropriate number of users: ___x___individual ___x___pairs
___x___group ___x___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game
___x___Simulation ___Tool (i.e., word processing)
___Testing
___Tutorial ___Computer-managed instruction
___Other (specify)

Description:

Content

Key: Y=Yes N=No NA=Not Applicable

The content of the program is accurate._Y_
The content is appropriate for the objectives._Y_
The content is consistent with expectations of school,
district._Y_
The level of sophistication is appropriate._Y_
The content is free of bias.?_

Running The Program
The instructions are clear and easy to understand._Y_
The screen display is well designed._Y_
The material is well organized and presented effectively._Y_
Various ability levels are provided for._N_
Graphics and sound are used to enhance the program rather
than as embellishments._Y_
The student engages in ongoing interaction with the
SOFTWARE EVALUATION

Program title: The Writing & Publishing Center
Version: 1.1 Producer: The Learning Company
Copyright date: 1988
Required hardware: Apple II Required software: 2 discs
Storage medium: _3"_x__5" _CD-ROM

Program characteristics
Subject matter area: Writing
Specific topic: Word processing
Grade levels: __Pre x_K x_1 x_2 x_3 x_4 x_5 x_6 _7 _8 _9 _10 _11 _12 _Adult
Objectives: Clearly stated? __yes _x_no
Is documentation provided? __yes _x_no
If provided, describe briefly: It wasn't with the program
Appropriate number of users: _x_individual _x_pairs
_x_group _x_class
Nature of the program (check as many as apply)
__Drill and practice __ Demonstration
__Game __ Problem solving
__Simulation _x_Tool (i.e., word processing)
__Testing __Computer-managed instruction
__Tutorial __Other (specify)

Description: It is a word processing program. Graphics can be included. It will also make a class newspaper.

Content

Key: Y=Yes ?=Not sure N=No NA=Not Applicable

The content of the program is accurate_.NA_
The content is appropriate for the objectives_.Y_
The content is consistent with expectations of school, district_.Y_
The level of sophistication is appropriate_.Y_
The content is free of bias_.N_

Running The Program
The instructions are clear and easy to understand_.Y_
The screen display is well designed_.Y_
The material is well organized and presented effectively_.NA_
Various ability levels are provided for_.Y_
Graphics and sound are used to enhance the program rather than as embellishments_.Y_
The student engages in ongoing interaction with the computer_.Y_
Feedback, both negative and positive, is effective and not demeaning_.Y_
The student is assisted through the program with appropriate cues and prompts_.Y_
Pacing and sequencing can be controlled_.Y_

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SOFTWARE EVALUATION

Program title: Tutorial Comprehension Details
Version: 1 Producer: Random House
Copyright date: 1984
Required hardware: Apple II Required software: 2 discs
Storage medium: ___3" ___x__5" ___CD-ROM

Program characteristics
Subject matter area: Reading
Specific topic: comprehension and details
Grade levels: ___Pre ___K ___l x_2 x_3 x_4 x_5 ___6 ___7 ___8 ___9 ___10 ___11 ___12 ___Adult
Objectives: Clearly stated? ___yes ___no
Is documentation provided? ___yes ___no
If provided, describe briefly: a booklet about the program
Appropriate number of users: ___individual ___pairs ___group ___class
Nature of the program (check as many as apply)
___Drill and practice ___Demonstration
___Game ___Problem solving
___Simulation ___Tool (i.e., word processing)
___Testing ___x_Computer-managed instruction ___Other (specify)

Description: A sentence or paragraph is on the screen. The student reads the selection, then answers a question pertaining that selection.

Content

Key: Y=Yes ?=Not sure N>No NA=Not Applicable

The content of the program is accurate. ___Y___
The content is appropriate for the objectives. ___Y___
The content is consistent with expectations of school, district. ___Y___
The level of sophistication is appropriate. ___Y___
The content is free of bias. ___Y___

Running The Program
The instructions are clear and easy to understand. ___Y___
The screen display is well designed. ___N___
The material is well organized and presented effectively. ___N___
Various ability levels are provided for. ___Y___
Graphics and sound are used to enhance the program rather than as embellishments. ___NA___
The student engages in ongoing interaction with the computer. ___Y___
Feedback, both negative and positive, is effective and not demeaning. ___N___
The student is assisted through the program with appropriate cues and prompts. ___Y___
Pacing and sequencing can be controlled. _N_
Instructions can be skipped if desired. _Y_
Instructions and help screens can be accessed at any time. _N_
A tutorial or sample program is provided. _Y_
The program achieves the stated objectives. _Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
It follows its objectives.

Identify the major weaknesses of this program.
No graphics, very boring, you could do this on a worksheet
The program would not let you give the wrong answer.

Recommendation: ___ Excellent ___ Good ___ Fair ___ Poor
SOFTWARE EVALUATION

Program title: Crossword Magic
Version: 1.0 Producer: Mindscape
Copyright date: 1985
Required hardware: Apple II Required software: 1 disc
Storage medium: ____3" _x_5" ___CD-ROM

Program characteristics
Subject matter area: Language Arts
Specific topic: Vocabulary
Grade levels: _x_Pre ____K x_1 x_2 x_3 x_4 x_5 x_6 x_7 x_8 x_9
x_10 x_11 x_12 _x_Adult
Objectives: Clearly stated? _x__yes ___no
Is documentation provided? _x__yes ___no
If provided, describe briefly: a small pamphlet
Appropriate number of users: _x__individual _x_pairs
_x_group ___class
Nature of the program (check as many as apply)
____Drill and practice __Demonstration
____Game __Problem solving
____Simulation _x_Tool (i.e., word processing)
____Testing __Computer-managed instruction
____Tutorial ___Other (specify)

Description: Teacher or student can make crossword puzzles
with the words they want to use.

Content

Key: Y=Yes ?=Not sure N=No NA=Not Applicable

The content of the program is accurate._Y_
The content is appropriate for the objectives._Y_
The content is consistent with expectations of school,
district._Y_
The level of sophistication is appropriate._Y_
The content is free of bias._Y_

Running The Program
The instructions are clear and easy to understand._N_
The screen display is well designed._?

The material is well organized and presented effectively._Y_
Various ability levels are provided for._Y_
Graphics and sound are used to enhance the program rather
than as embellishments._NA_
The student engages in ongoing interaction with the
computer._Y_
Feedback, both negative and positive, is effective and not
demeaning._Y_
The student is assisted through the program with appropriate
cues and prompts._Y_
Pacing and sequencing can be controlled._N_
Instructions can be skipped if desired. _N_
Instructions and help screens can be accessed at any time. _N_
A tutorial or sample program is provided. _?_
The program achieves the stated objectives. _Y_

Major Strengths and Weaknesses

Identify the major strengths of this program. It is a great program for teachers to make up their own puzzles using the vocabulary they want to teach. Students could make the puzzles for their classmates.

Identify the major weaknesses of this program. The directions are not clear. You need the booklet.

Recommendation: ___Excellent _X__Good ___Fair ___Poor
SOFTWARE EVALUATION

Program title: Bank Street Writer
Version: 1.0 Producer: Broderbund
Copyright date: 1982
Required hardware: Apple II Required software: 1 disc
Storage medium: _3"__x__5" ___CD-ROM

Program characteristics
Subject matter area: writing
Specific topic: word processing
Grade levels: __Pre x_K x_1 x_2 x_3 x_4 x_5 x_6 __7 __8 __9 __10 __11 __12 __Adult
Objectives: Clearly stated? ___yes _x_no
Is documentation provided? _x_yes ___no
If provided, describe briefly: a small booklet
Appropriate number of users: _x_individual _x_pairs
_x_group _x_class
Nature of the program (check as many as apply)
____Drill and practice ___Demonstration
____Game ___Problem solving
____Simulation _x_Tool (i.e., word processing)
____Testing ___Computer-managed instruction
____Tutorial ___Other (specify)

Description: A very basic work processing program. Almost like a typewriter. No graphics.

Content

Key: Y=Yes ?=Not sure N=No NA=Not Applicable

The content of the program is accurate.__NA__
The content is appropriate for the objectives._Y_
The content is consistent with expectations of school, district._Y_
The level of sophistication is appropriate._Y_
The content is free of bias.__NA__

Running The Program
The instructions are clear and easy to understand._Y_
The screen display is well designed._N_
The material is well organized and presented effectively.__NA__
Various ability levels are provided for.__NA__
Graphics and sound are used to enhance the program rather than as embellishments.__NA__
The student engages in ongoing interaction with the computer._N_
Feedback, both negative and positive, is effective and not demeaning.__NA__
The student is assisted through the program with appropriate cues and prompts._Y_
Pacing and sequencing can be controlled._Y_
Instructions can be skipped if desired._NA_
Instructions and help screens can be accessed at any
time._Y_
A tutorial or sample program is provided._N_
The program achieves the stated objectives._Y_

Major Strengths and Weaknesses

Identify the major strengths of this program.
You can easily write with this program.

Identify the major weaknesses of this program.
There is very little to it. There are no graphics to add to
the text. It is obsolete.

Recommendation:_Excellent _Good _Fair _x_Poor
A tutorial or sample program is provided. The program achieves the stated objectives.

Major Strengths and Weaknesses

Identify the major strengths of this program.

Identify the major weaknesses of this program.

Recommendation: Excellent Good Fair Poor
REFERENCES


Ramirez, R. & Bell, R. (1994). Byting Back: Policies To Support The Use Of Technology In Education. North Central Regional Educational Laboratory, Oak Brook, IL.
APPENDIX A
SOFTWARE COMPANIES

Broderbund Software
500 Redwood Drive
Novato, CA 94948-6121
1-800-521-6263

Compton's NewMedia
722 Genevieve, Suite M
Solana Beach, CA 92075
1-800-532-3766

Creative Learning, Inc.
P.O. Box 829
North San Juan, CA 95960
1-800-842-5360

Davidson & Associates, Inc.
19840 Pioneer Ave.
Torrance, CA 90503
1-800-545-7677

Discis Knowledge Research
45 Sheppard Ave. East, Suite 410
Toronto, Ont. M2N 5W9
CANADA
1-800-567-4321

Educational Resources
1550 Executive Dr.
Elgin, IL 60123
1-800-624-2926

The Learning Company
6493 Kaiser Drive
Fremont, CA 94555
1-800-852-2255

MECC
6160 Summit Drive N.
Minneapolis, MN 55430-4003
1-800-685-6322

Nordic Software
917 Carlos Dr.
Lincoln, NE 68505
1-402 488-5086