

TECHNOLOGY DOESN'T BYTE

Painless Technology for Primary Grades

BY ROXY HEINRICH

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I felt terrified three years ago when I realized that I would have to use 21st century technology in my classroom! My knowledge of computers did not even include how to turn on the machine. However, looking back, when I see how much fun I have had implementing the new technologies, how much the students have enjoyed using them, and how I've grown professionally, I feel fortunate to have been able to use many of the latest "gadgets."

The primary grades are a marvelous time to breathe fresh life and excitement into teaching through the use of technology. The children are usually not intimidated by new approaches to learning and are ready to use computers, laserdisk players, CD-ROMs, and even video camcorders. These tools offer new vistas in story dictation, creative writing, reading, science, geography, and math, but most vitally, in integrating faith and learning. Using technology has made my curriculum flow into an almost seamless day.

I started out gradually, getting comfortable with new equipment before incorporating it in my curriculum. My classroom currently has three Macintosh computers, one

The author shows two of her first graders how to access a program on the computer.

printer, a laserdisk player, a TV with an ITV cable hookup, and a VCR.

That first year, to simplify things, I used only two tools: a video laserdisk *Bio-Sci II*, and a computer software program, *Kid Pix*. In this article, I will share ways I use these tools, hoping that others will be inspired by the relative ease and versatility of each tool.

Bio-Sci II

Bio-Sci is a typical laserdisk that can augment any curriculum. This visual database has thousands of life-science images, video and still, that can be accessed using a bar code reader. I use this laserdisk in several subject areas:

Bible

- *Days of Creation*. As we look at gorgeous images of what God created each day, we better understand His love and imaginative powers.

- *Bible texts*. The frames on the disk provide lovely illustrations for Bible verses. We especially enjoyed finding images for the following texts: “Go to the ant, thou sluggard; consider her ways, and be wise” (Proverbs 6:6). “But they that wait upon the Lord shall renew their strength; they shall mount up with wings as eagles; they shall run, and not be weary; and they shall walk,

and not faint” (Isaiah 40:31).

Science

- *Animal habitats*. After asking the students to list on the chalkboard animals that live in the forest, I have them identify pictures of the animals, photocopy the bar codes for each one, and paste them on a piece of paper. Then, using the bar code reader, children flash the images up on the TV screen and recite in unison where each animal lives.

- *Animal attributes*. After I photocopy bar codes of various animals, I flash the pictures on the TV screen, and students identify each animal by its attributes: nocturnal or diurnal, viviparous or oviparous, flying or burrowing. Using the laserdisk is much more exciting for the children than cutting pictures out of a magazine.

- *Independent student use*. From a teachers’ supply house, I purchased wall charts. I then photocopied the bar code of each reptile from the support materials with the laserdisk, glued them on the posters, and laminated the posters. The children use the laserdisk player by clicking on the bar code and viewing the image during free choice or center-oriented time. This can be used with children’s books such as *Animals Born Alive and Well* and *Chickens*

Aren’t the Only Ones by Ruth Heller.

Language Arts

- *Writing books*. Students can write books about animals or plants and make a multi-media presentation about the book using their own drawings or pictures from the laserdisk.

- *Supplementing illustrations*. Projected pictures from the laserdisk can supplement children’s books like *Good Night, Owl* by Pat Hutchins, *The Mitten* by Jan Brett, *The Grouchy Ladybug* by Eric Carle, or *A House Is a House for Me* by Mary Ann Hoberman. We often complete the lesson by drawing our own pictures of the animals and comparing the versions—our own, the author’s, and God’s original as shown by the photos on the laserdisk.

- *Rewriting stories*. We enjoy re-writing stories from children’s literature. One favorite is *Rosie’s Walk* by Pat Hutchins, which tells about a fox chasing a hen through a farm yard. We change the characters from farm animals to a small fish pursued by a shark; a mouse pursued by an owl; or a zebra pursued by a lion in an African savanna setting. We also use a favorite book, *Mary Wore Her Red Dress and Henry Wore His Green Sneakers* by Merle Peek, converting the pattern to animals’

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One of the author’s students learns about reptiles by using the barcode scanner and laserdisk.

The author’s students really enjoy using the computer!

distinguishing characteristics—fox wore his sly face; bear wore his long claws; raccoon wore her dark mask; and skunk wore his black-and-white stripes.

- *Teaching the alphabet.* We find laserdisk pictures of animals, plants, flowers, insects, birds, and arachnids to illustrate, and chant the various letters from their names. Then we chant the names and sounds.

Math

- *Sorting and classifying.* I use the disk images with illustrated classification card sets for animals, transportation modes, and food. We sort and classify by characteristics such as number of legs, habitat, or eating habits. Students easily learn the correct vocabulary to accompany the classifications.

- *Sequencing.* Using technology to learn sequencing and ordinal numbers is more stimulating than cutting and pasting workbook pages. Laserdisks and computers help students to recall the order in which the images appeared.

Kid Pix, Kid Pix II, Kid Pix Studio

These highly versatile software programs can be used throughout the curriculum and at various grade levels. The software uses miniature “stamps”

of various pictures and for each numeral or letter of the alphabet. They are also excellent tools for painting and drawing with the computer. *Kid Pix Studio* (CD-ROM), the newest version, has full animation possibilities.

Science

- *Animal habitats.* Students use their own drawings of the stamps to create illustrations of animals and their homes.

- *Food chains.* Students use the stamps to write their own books about various animals and plants that comprise a food chain.

Language Arts

- *Typing names.* The individual letter stamps enable young students to learn to spell their names.

- *Reading or writing rebus stories.* I use the picture stamps to customize rebus stories within a thematic unit, then have students read them.

- *Teaching the alphabet.* Phonics integrates nicely with the stamps.

- *Spelling.* Words can be easily written using the letter stamps. Changing the initial letter teaches about rhyming and word families. Substituting vowels helps students distinguish between the short and long sounds.

- *Rewriting books.* We use Robert Kalan’s *Blue Sea* as one model. Instead of writing about fish as Kalan did, we use other animals such as spiders, bats, or snakes in their natural habitats.

Math

- *Patterns.* *Kid Pix* stamps are ideal for teaching about patterns. We make many patterns, such as fish-dog, fish-dog, or square-rectangle-triangle, square-rectangle-triangle, using letters to represent the order in which the items appear. Having students extend each others’ patterns stimulates higher-level thinking skills.

- *Sorting and classifying.* After I drew a beach scene on my computer, the students had a great time using the stamps to sort out what belonged in the water, on the sand, and in the air. Later, I divided the screen in half, putting a night scene on one side and a day scene on the other. The students placed nocturnal and diurnal animals on the correct side.

- *Adding and subtracting.* Combining the rubber stamps and numerals stimulates symbolic reasoning. Students create a stamp picture with several objects and place the corresponding number under the picture. They can add or delete the picture stamps one by

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Students at the author’s school display Quicktake camera pictures on the computer.

The author shows a first grader how to load the laserdisk player.

one and adjust the math symbols (-1, +2) on the screen.

- *Teaching vocabulary.* As the students place equations on the screen with the numeral stamps, I teach them the correct math terminology, such as *addend, sum, plus sign, equals sign*, etc. This helps them understand and remember abstract concepts.

- *Teaching personal facts.* The home address and telephone number of each student can be typed and copied using numeral stamps.

- *Size sequencing.* Since *Kid Pix* stamps can be made in four incremental sizes, it is simple to teach about small, smaller, smallest and big, bigger, biggest.

- *Making shape pictures.* This style of art works wonderfully on *Kid Pix*. *Color Zoo* and *Color Farm* are terrific starting points for this activity. In these books, Lois Ehlert creates a series of zoo and farm animal pictures using overlay cut-outs of various geometric shapes. *Kid Pix*'s draw-and-paint program allows students to make geometric shapes. Each student can create his or her own animal pictures using the shapes, thus reinforcing math and computer drawing skills simultaneously.

Social Studies

- *Map skills.* We linked map and reading skills by drawing maps of our school, classroom, and playground, and for the book *Rosie's Walk* by Pat Hutchins.

- *Multicultural studies.* The *Kid Pix Studio* CD-ROM contains many interesting stamps of other countries, dwellings, people, and customs. We use these to create collages of other cultures and to discuss ideas such as why certain kinds of dwellings are used in certain climates.

Other Useful Software

Classroom computers can dramatically improve teacher productivity. A word processor can quickly and easily create professional-looking notes and letters to parents. I use a database to record all the books, posters, bulletin boards, and art projects for each subject or teaching unit, and to organize

and coordinate materials according to authors, titles, and subject areas.

Some of the unexpected benefits of using technology in the classroom include higher-level thinking on the part of students, a more deductive and open-ended approach to curriculum, and enhanced self-concept as students see their ideas contribute to the learning process. Students discover different ways to solve problems, interact with classmates, and use cooperative learning to make decisions. Technology also inspires teachers to use their own creativity in enriching the curriculum.

I still do not consider myself an expert in using technology, but I feel more confident as I use the equipment and software in my classroom. I don't worry about what I do not know, but rather try to learn as I go along. ✍

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Other Suggested Software for Primary Classrooms

Thinkin' Things • Edmark; (800) 426-0856

Millie's Math House • Edmark; (800) 426-0856

Sammy's Science House • Edmark; (800) 426-0856

Bailey's Book House • Edmark; (800) 426-0856

The Playroom • Broderbund; (800) 521-6263

The Backyard • Broderbund; (800) 521-6263

The Treehouse • Broderbund; (800) 521-6263

Broderbund Living Books; (800) 521-6263

Kid Works II • Davidson & Associates; (800) 545-7677

Storybook Weaver Deluxe • MECC; (800) 685-6322

The Graph Club • Tom Snyder; (800) 342-0236

Educational Resources is a distributor of products from many different publishers; (800) 624-2926.

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A third grader at the Model Technology School uses the Kid Pix program.