# Spreading Success Using Palm Handhelds at Florida PreK-5

## When these fourth graders use handheld technology, they're all equal and accomplished

BY GINA ADAMS PALMER

Fourth graders in Barbara Preziosi's class at Sebastian Elementary School are so taken with their Palm Tungsten handhelds that they won't let them go. They carry them in holders around their necks, taking them from task to task, and from classroom to library.

"When the kids are using the handhelds, I have to pry them out of their hands," says Preziosi. "They take charge and keep a close watch over them. Every few days, they do have to turn them over to a TriBeam station for charging, but that's about it."

Around 700 students in grades PreK-5 attend Sebastian School, located in Indian-River County, a growing community along the Atlantic coast of Florida. Teachers must meet the needs of a diverse group of children, and the school has made it a priority to infuse the curriculum with a wide range of technology. Teachers and students are using technologies from desktop and laptop computer labs to smartboards, televisions, a digital art lab, computerized music keyboard lab, and even a mobile digital/video production lab and closed circuit television studio. The "Seat of Our Pants" student production crew has received county-wide acclaim for creativity and quality of broadcasts.

Now all eyes are on Preziosi's classroom, to see how she's integrating handhelds into activities across subject areas and meeting the different learning needs of all her students.

### Voyage into Tech

Preziosi's voyage into handheld technology began when she traveled to an NECC Conference with Principal Pat Donovan, Technology Specialist Rhonda Drum, and fellow teacher Paul Mucci. After presenting a Web technology project they had developed as a team, they attended a session featuring GoKnow software on hand-

held computers. They were so impressed they decided to implement their own handheld project.

"When we returned from the conference, we had the opportunity to write a Technology and Learning grant as a district in Indian-River County," says Drum. "We got funds for a classroom set of Palm Tungsten handheld computers with keyboards."

The team chose Palm handhelds because of the wide array of educational software available for them. They also liked the idea of using the GoKnow Handheld Learning Environment, which allows students to use software tools that integrate word processing, concept mapping, drawing, animation, and the downloading of Web pages. Students can sync their work to the GoKnow PAAM Classroom Synchronization Manger, where the teacher reviews and tracks their work.

"Our goal was to find out how many paper-and-pencil activities we could transfer to the handhelds," says Donovan. "As a principal, in the beginning I was concerned about elementary students using handheld technology. I wondered if fourth graders would have the dexterity and keyboarding skills. I also was worried about giving young students the responsibility of caring for the handhelds, making sure they didn't misplace them. But I saw them bringing other pocket technologies to school, and they weren't losing them. Now that I've seen them with the Palm handhelds, I'M converted. They've really taken to them."

In fact, the handheld implementation has gotten off to a remarkable start. Preziosi and her students

have found many ways to use the handhelds and GoKnow software in language arts activities. Using Freewrite, students write reading response journals and compose fractured fairy tales, typing on wireless Palm keyboards. They beam the tales around the class so that others can add to them.

Some days the students take their handhelds out to the school's literacy garden equipped with tables, beach chairs and umbrellas, close to butterfly and herb gardens. "We designed the area so that they could have an outdoor place to read and write," says Donovan.

One project involved conducting research on a person of choice, using IKWL for structured learning and FlingIt for moving Web pages Preziosi downloads from the Internet onto their handhelds. They then put their research work into a Freewrite document, animated in Sketchy, and create slideshows with ViewPoint. Preziosi is working towards providing her students with the ability to display their projects using the classroom laptop with a projector.

One more concern voiced by Donovan and other team members was providing students access to Internet sites without giving them free reign to surf the Web without adult supervision. They solved the dilemma when they bought WiFi network cards. Preziosi can preview the appropriate Internet material, capture it with FlingIt software, save it to the network cards, and then the students can work with that information on their handhelds at school or at home. She can actually create a Web quest by combining pages from many of the wonderful educational sites available for children.

Students also use the handhelds daily to reinforce their math skills. One mathematical puzzle game, Summing (by Yoshita Nagano), has created a bonding experience with the kids and Principal Donovan. They see her carrying her own handheld in the same kind of folder around her neck, so they brought her into a competition. She became the champion with the lowest score, and during the morning announcements on the school's closed circuit television studio, the following was broadcast: "Attention Web Heads. Mrs. Donovan has the lowest score."

"We're having a lot of fun together," says Donovan. "The kids are so focused when they are using the handhelds, I sometimes have to wonder, are they breathing? Our superintendent visited one day, and when we walked into the classroom, all you heard were

keys tapping. I hadn't prepared him to observe the one-to-one handheld experience ahead of time, and it didn't sink in with him until he saw all of the students totally consumed with various projects."

Recently, the students began building animations that they will enter in a Sketchy contest. They came up with the topics they wanted to cover, and many are producing sequences to teach math concepts, such as how to divide, multiply or even find the mean or median.

"One of the coolest things about the contest is that the majority of the kids are creating animated instructions on mathematical processes," says Drum. "Barbara plans on using these to teach her class next school year."

"If you consider Bloom's taxonomy of learning skills, these young students are taking a concept they've been taught, understanding and synthesizing it, and then putting it out there for others in a different medium," says Donovan. "It's amazing to see fourth graders developing these kinds of higher order thinking skills."

## The Handhelds Next Year

The team is exploring options for next school year. The handhelds may follow the students into fifth grade, or the school may purchase another set so that both fourth and fifth graders can use them in their learning. One thing is for sure: team member Paul Mucci will be receiving his own set of handhelds for his fourth/fifth grade combination class.

He can't wait. "Barbara's class is just around the corner from mine, and I've been able to observe what she's been accomplishing this year with the handhelds," says Mucci. "I've been gathering ideas, like using them for reading logs and writing projects, and bringing them in to reinforce math concepts."

Mucci envisions attaching science probes to the handhelds for outdoor experiments, and loading GPS software for global positioning and mapping activities. He's also thinking of ways to build electronic portfolios for his students that he can share with parents, such as spreadsheets that display the types of genres the students are covering in reading. In addition, he'd like to be able to send home behavior logs and progress reports, so that parents can view these and even sign off with an electronic signature.

The search for more applications to explore also continues. The team is looking into using Wireless Generation's mCLASS: Reading and mCLASS: DIEBELS software for monitoring student achievement in reading through running records and assessments.

Donovan has found that with handheld technology continuing to evolve, setting up Mucci's class will be half the cost of the set-up for Preziosi's classroom. They'll be buying some of the new Palm TX handhelds with built-in wireless capabilities, so he won't need wireless cards. New TriBeam stations offer both syncing and recharging capabilities, and the ViewPoint presentation program from GoKnow will allow them to eliminate the need for a document camera.

As far as technical support goes,

all the necessities for handhelds are in place. "We started as newcomers to this technology," says Drum. "Now when we add more handhelds in the school, the only thing we'll need to do is troubleshoot software applications."

"When I think of all the technology we've implemented at Sebastian, including mobile computer labs, desktops, and laptops, and the technical problems we've encountered, we've really not had any problems with the handhelds," says Donovan. "These kids run around this campus all day long with these handhelds around their necks or in their hands, and we've not had to repair or replace even one. Barbara has made the students responsible for their own handhelds, including charging, syncing, putting keyboards away, and even going through troubleshooting steps before approaching her. They've developed a definite sense of ownership."

According to Preziosi, when people stop by and begin asking students questions, they all jump up to show them what they're doing. "All the kids are successful using handheld technology, so they're all equal and accomplished," she says. "There is no feeling of inferiority or superiority. They all have the same assignments, and everyone is helping everybody. I even have students from other classes coming to my room to work on a couple of the extra handhelds that are available. You can't go back once you've used technology, especially handhelds." ■

*The author is a freelance writer based in Los Gatos, California.*

## For More Info

**Sebastian Elementary School**
www.indian-river.k12.fl.us/seb/

**Teacher Barbara Preziosi's Web Site**
http://preziosispride.sebastian.groupfusion.net/modules/groups/integrated_home.phtml?gid=13142&sessionid=b50a34145626b2d0a4d32af8417dfe39