

Teaching with Technology

By Betty Waters, Staff Writer
June 24, 2003



Behind the Scenes: Teacher Tammi Long leads students in editing video footage the Jones Elementary School students filmed while visiting the Caldwell Zoo. Staff Photo by D.J. Peters

Black suitcases on rollers became labs in bags for teachers of a science/math summer enrichment school for third- and fourth-graders, most from public schools in Tyler, although some are from Whitehouse and private schools.

Stocked with everything from probes and microscopes to computers, teachers utilize their "lab in a bag" in trying out what they learned in earlier training about how to integrate technology into the classroom.

For example, each bag has a set of probes that can hook into a laptop computer taken into a field to take soil and water pictures.

Children enjoy the hands-on activities so much that many run rather than walk to class; some don't want to go home, and one youngster was heard telling her mother, "This can't be summer school, it's camp."

"The kids are having a blast," Project Coordinator Katherine Wheat-Elmore said. And teachers say they will never be able to teach the same old way again.

While students participate two weeks during the summer, the "lab in a bag" project involved training for teachers this spring and early summer in use of technology in class, then getting experience with it while teaching the summer enrichment program.

They received about \$10,500 worth of "goodies" - hardware, software, supplies and

materials, textbooks and curriculum, a scanner, laptop computer, hand-held computer, microscope, probe set, geometric shapes/cubes, printer, projector, tuition and pay.

It's a "nice incentive package" for them to participate, said Ms. Wheat-Elmore. The teachers are allowed to keep all of the materials, hardware and software for use in their classroom, but must leave it behind if they move to another district.

The project's first year ends for students and teachers on Friday. But teachers will take their "lab in a bag" and what they have learned about use of technology in the classroom back to their home school for use in teaching regular school.

The Lab in a Bag Project was started with \$885,938 in first-year federal funding under the No Child Left Behind Act, allocated as a state grant, titled Technology Applications Readiness Grant Empowering Texas Students and Teachers.

Approximately \$665,000 has been authorized for the second year of operation next school year, when the focus will shift to fifth- and sixth-grades.

Application is planned for funding for a third year to involve sixth and seventh grades.

The grant proposal was written by members of Tyler Independent School District's technology staff last year - Ken Cramer, Jay Olson and Karen White.

They had noticed teachers sometimes receive training in use of technology, but not the equipment, or receive equipment but no training in how to use it.

From that observation sprang the idea of the Lab in a Bag Program to provide teachers the equipment, training and even hands-on classroom experience using the equipment and what they had learned.

In keeping with statewide emphasis on math and science education, the program focused its first year on utilizing technology in the teaching of math and science in third and fourth grades.

PARTICIPANTS

Ms. Wheat-Elmore, an educator with 14 years experience hired as project administrator/director, re-recruited third- and fourth-grade teachers last fall.

She visited elementary campuses, which were given opportunity to send two teachers each. After receiving applications, interviews were conducted. "We wanted people who are willing to do something different in their classroom," she said.

Forty-eight teachers are participating - 40 from Tyler ISD, three from Whitehouse ISD, three from Stepping Stone Academy and two from East Texas Christian Academy.

The teachers had to commit to attend class one night per week for a spring semester technology graduate course at The University of Texas at Tyler. It offered instruction in how to use hardware and software, a laptop computer, digital camera, probes, calculators and how to make PowerPoint presentations.

The five graduate credit hours teachers earn converts to 135 continuing education hours, substantially helping teachers meet a requirement for 200 continuing education hours.

They also had to commit to undergo two weeks of training in early June and to teach the two-week summer enrichment program in math and science.

Approximately 320 third- and fourth-graders attend the summer program - about 240 from Tyler ISD, 20 from Whitehouse ISD and 20 each from Stepping Stone and ETCA.

Applicants were accepted on a first-come, first-served basis and once the program was filled, about 30-40 were turned away.

"We are encouraging them to do inquiry learning ... to go out, have a question, research it and find the answer," Ms. Wheat-Elmore said. "The kids are engaged and learning ... it's very hands-on (with use of microscopes, probes and other technology.)"

The children spend part of their time at Jones Elementary School, host of the Lab in a Bag Project, and at Caldwell Zoo, where they perform experiments.

For example, they cored out a watermelon and put in mealworms, placed the melon in the habitat of anteaters and watched their reaction. Males were very aggressive, tried to burst it open and stuck their nose in to retrieve the mealworms.

The students took video footage of their zoo experiments and created and edited a movie in the computer lab.

At the same time, the project teaches teachers to integrate technology into their teaching and not just use it to keep up with grades and attendance.

"The end product, we hope, is they take it back to their classroom and use the technology as a learning tool in their classroom on a daily basis to teach," Ms. Wheat-Elmore said.

Ms. Wheat-Elmore said, "The cool thing is the kids get to come to a summer program and learn, but they are having so much fun, they don't realize they are learning."

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