

Little Oakers going digital

COVENTRY'S WASHINGTON OAK ELEMENTARY CONTINUES TO PUSH THE ENVELOPE



Submitted photo

Elizaveta Zhukov, a third-grader at Washington Oak Elementary, compares the ProScope HR with a traditional microscope at a Coventry School Committee Meeting in December.

LAUREN KNIGHT
lknight@ricentral.com

COVENTRY — Washington Oak Elementary is one of three schools participating in a study with Rhode Island College (RIC) on incorporating digital microscopes in the classroom.

Unlike a traditional microscope the digital microscope, called the ProScope HR, is a handheld device able to capture both video and still images. According to Dr. MacGregor Kniseley, the professor at RIC who is leading the study, the technology offers children the chance to become more interested and engaged in learning science.

"It's another kind of learning experience in the classroom," he explained. "I could argue that it would help them achieve higher test scores."

He added, "It's more than a toy or a gadget that wows kids. It broadens their observation so they can draw and write about

what they are seeing."

Janet Conti, one of the teachers participating in the study, said, "It's different than the traditional microscope where you have an eye piece... and it sits in one place and you put a specimen under it."

The microscope is a portable device, equipped with a LED light and interchangeable lenses. According to Kniseley, one of its benefits is that, without disturbing the computer setup, a student can grab the ProScope HR and take it wherever they want. The imaging can then be wirelessly linked to an iPad or iPhone so if a student wishes to view the bark of a tree or pond samples up close, they can.

And like a traditional microscope, students still have the opportunity to place a still object, such as fabric, hair or money, under the microscope to inspect it more closely, he explained.

In Conti's classroom, students have been studying beetles and

crayfish.

"They love it because it's something they can use at 50 times the image or 10 times the image," she said of her students, adding that they "love to do investigations."

The technology was initially developed by the Japanese in 1986. Kniseley explained that it has been used for research, manufacturing and in law enforcement for fingerprint analysis and anti-counterfeiting.

But at \$429 per microscope, Kniseley explained that "it's a relatively expensive piece of equipment, as opposed to a handheld magnifier." For that reason, Washington Oak, as well as B.F. Norton School in Cumberland and Henry Barnard School in Providence, have been loaned microscopes for the duration of the study, from February to April.

According to Conti, Washington Oak purchased two microscopes in October and are borrowing only one for the

study.

Although many school districts may not be able to afford them, there are opportunities to obtain the technology through grants or fundraising efforts, according to Kniseley.

Washington Oak is an example of this, he said.

"In my experience, this school has more technical resources than others—not because they had the money but because the principal has sought the funding through competitive grants," he said of Washington Oak.

At the end of the study in April, Kniseley will gather all of the information into a case study report. The study will become available to Bodelin Technologies, the company who loaned the microscopes, to publish as a "how-to-use" manual for an elementary classroom.

Kniseley stated that schools will be required to return the borrowed microscopes after the study is complete. Washington Oak will only return the one microscope they are borrowing.