

## Lawton students' field trips are in a stream

BY SHERRIE DUNHAM  
SPECIAL TO THE GAZETTE

LAWTON — Wading in a stream and catching critters is a science affair for some Lawton elementary students.

Sue Zygadlo's fourth-graders from Lawton Elementary School are being given that opportunity. The kids are visiting the same stream four times a year in summer, fall, winter and spring, to study its seasonal ecosystem.

Classmates observe, gather data, collect specimens and make comparisons with each visit to mark differences in the stream, resulting from seasonal changes.

The program is all part of a cooperative effort called the Kellogg Biological Station's K-12 Science Literacy Partnership.

It's designed to be a long-term collaboration between science teachers in rural southwestern Michigan school districts with research scientists at the Kellogg Biological Station, including graduate students and faculty from Michigan State University.

The project is being funded by the National Science Foundation and more than 60 teachers from 14 rural school districts in southwestern Michigan are participating. The project not only enhances science curriculum for students, it provides additional science training and professional development for teachers.

The stream being studied by the children is in Almena Township, not far from the Wolf Lake Fish Hatchery. It is on the property of Eileen Stryker and her husband Robert Endias. The couple also function as project evaluators for the Kellogg Biological Station program.

"This is actually the headwaters of the Paw Paw River," said Zygadlo.

Fourth-grader Rachel Keene explained what the students do on their visits.

"We are measuring the temperature of the water, also the air temperature. And we measure the depth and the width of the stream and the velocity of

the stream. We do that by floating a plastic Easter egg between two points and then we time it."

Class members have been assigned 10-foot sections, and they study the same site at each visit. They have been told to observe signs of life in the stream and surrounding area, called the riparian zone. The students look for things such as animal tracks, animal droppings, molds, fungus and lichens as well as small creatures. They make drawings of all the surrounding trees and features to create a stream map.

"We collect critters in the stream," said Rachel, "and take them back to class to study. Only not frogs and stuff — because they won't let us take frogs back. But little slugs and insects and stuff."

On one recent visit, fourth-grader Donnie Smith yelled out, "I got two beetles and a slug! Look what else I caught: That's one of those water-skier bugs."

The class also studied leaf decomposition during the fall visit.

On an earlier visit, students planted leaf-litter bricks to test decomposition.

Student Blaire Phillips said, "We had different kinds of leaves, and we just tied the leaves on the bricks with a string, and then we planted them in the stream. So we can see how the leaves have decomposed."

Tim Parshall, who is a post-doctoral researcher and scientist from Kellogg Biological Station, accompanies Zygadlo and her students on each visit. He also visits the classroom to answer questions.

"I'm coordinator of the project," said Parshall. "So I and four graduate students at Michigan State University visit teachers. We meet fairly regularly with them. It provides some consistency throughout the year if they have a person they can contact. This is a three-year project but the intention is to have something that continues even longer."

Zygadlo said her students have been excited to interact with a real scientist. The first day Parshall visited the classroom, they all raised their hands, pep-

pering him with questions. And on his visits to the stream, Parshall has said he has seen even more excitement.

"It's amazing how much energy they have when they start seeing things," he said. "There's actually quite a lot going on, a lot of life in the stream, especially in the fall. And this sort of trains kids how to act like scientists, to question the world and figure out how to answer what they might be curious about."

Other Lawton teachers who are involved with this project include Cal Every and Dennis VanWeelden of the middle school and Kathy Sipes and Betsy Howard of the high school.

Zygadlo said she was required to attend program training workshops.

"I have learned a tremendous amount," said Zygadlo. "I went to the Kellogg Biological Station in Hickory Corners, and we worked with scientists and education professors. They spent the mornings teaching us science and the afternoons teaching us how to teach it to our kids."

"And to tell the truth," said Zygadlo, "this is the first science education I've had since I left college, and of course, things have changed in so many years. So this has been just wonderful."

Zygadlo's situation is typical, Parshall said.

"It's very common that a lot of teachers, especially elementary teachers, had very little background in science. And this is a way for them to learn more," he said.

The enthusiasm of the students was obvious as they scribbled in their notebooks, hunted for specimens, and waded in the stream during the fall visit.

"The basic thing we're looking at is scientific inquiry," said Zygadlo, "where the kids are being taught to look at a problem and gather data, and learn from hands-on experience."

For more information on the Kellogg Biological Station's K-12 Science Literacy Partnership, log on to its Web site at: [www.kbs.msu.edu/k12\\_partnership/](http://www.kbs.msu.edu/k12_partnership/)



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Joey Proxmire, left, wades in a stream hoping to snare an aquatic creature with his fellow Lawton fourth-grader Zander Armstrong during their class' fall field trip to the headwaters of the Paw Paw River.