Testing the Waters
University of Dayton, Ohio (url: http://www.udayton.edu/index.php)

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12.11.2007 | Students, Campus and Community, Research  A public presentation of scientific findings is usually the final test of upper-level college students. Imagine doing it as a sixth grader.

That's just what a handful of Dayton teens did Dec. 5 when they joined a class of University of Dayton students to present the results of a joint study of the Wolf Creek watershed.

The teenagers, in grades six through 12, attend Adventure Central, the Wesleyan MetroPark education center in Dayton. They assisted the UD students in college-level research, used sophisticated equipment to study the creek and toured UD's science labs.

"The UD students served as mentors to the teenagers, and the younger students have had a unique opportunity to meet, plan and work alongside scientists and be exposed to a university setting," said Joanne Troha, director of community service learning for UD's Fitz Center for Leadership in Community. "They visited UD, discussed college and careers and will also extend their learning to others through a future service project they help design."

Throughout the semester, the two groups collected data on the plant and animal life of the creek and the quality, flow and chemical makeup of the water, said UD geology professor Katie Schoenenberger, who led the college course with UD biology professor Kelly Bohrer.

Wolf Creek is a tributary of the Great Miami River that runs past Adventure Central, where the students often met. There, they studied the fish population using electrofishing — passing an electric current through the water to bring the fish to the surface. On other visits, they collected insect life in the stream, examined glacial sediments and discussed the importance of environmental awareness.

"The two groups had so many conversations about 'Why should we care?' "Who does this affect?' 'What actions are we doing that add to the problem?' and 'How can we be kinder to the watershed?' " Bohrer said.

The team also learned about more than just the environment.

Anthony Williams, a 12th-grader at Tech Con Institute, learned to take shorter showers — to conserve water.

Dan Heschel, an environmental biology major in his fifth year, gained a new perspective on scientific study.

"You see the enthusiasm of the students who are studying something in their own backyard, and it just helps you to want to get in on this," he said.

Jayvahn Dixon, a sixth-grader at Resurrection Catholic School, learned new words and got a boost of confidence.

"Knowing those big words, it made me feel a little smarter," he said. "I was able to use them when I talked to my teacher and have a conversation. I felt like an adult."

The study revealed that the Wolf Creek watershed met all Environmental Protection Agency standards but lacked sufficient diversity of plant and animal life. It is also threatened by continued development. The students recommended that permanent water monitoring stations be installed and that the University continue to partner with Adventure Central.

The partnership was funded by a $5,000 grant secured by the University's Fitz Center, Troha said. The grant was a portion of a Learn and Serve America grant awarded to a statewide consortium led by Otterbein College, Ohio Campus Compact and the University of Cincinnati.

Adventure Central sponsors after-school programs for school-age children that include homework help, reading and working on hands-on projects that often feature an environmental education or community theme, Troha said.

The goal of the grant is to help young people feel more connected to their communities through learning projects that involve
service and incorporate working with community partners in designing and carrying out the project.

Part of the grant went to purchase testing equipment for Adventure Central students to continue studying the creek and encourage them to take responsibility for the environment, Schoenenberger said.