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FEATURED

Sixth-graders spend week at the creek

Students learn human and environmental impacts on water quality

By STACEY HAIRSTON Staff Writer Oct 7, 2016



Staff Photo by Stacey Hairston

Tara Poelzing (right) with Western Virginia Water Authority shows middle school students how chart the findings of the test run on the creek.

Sixth-graders at Benjamin Franklin Middle School recently wrapped up a week at the creek, learning about human and environmental impacts to watersheds and water quality.

Creek Week has taken place annually since 2013 with the help of environmental outreach educators from the Western Virginia Water Authority, Blue Ridge Soil & Water Conservation District and environmental science professors and students from Ferrum College.

Nearly 600 students participate in the lessons, which take place in two parts – classroom and outdoors.

Before spending a week at the creek, students participate in the classroom portion, which includes a review of watershed concepts, a simulation of human activities and their impacts within a watershed and a discussion of best management practices to protect water quality. Students also prepare for Part II of the program, Creek Week, by discussing water quality testing parameters and performing a simulation of a benthic macro invertebrate analysis.

During Creek Week, students spend their class period at Powder Mill Creek, located on the middle school property behind the home plate of the softball field, collecting and analyzing the benthic macro invertebrate population, using probeware and conducting chemical tests to measure pH, dissolved oxygen, turbidity and water temperature.

The Water Authority received a U.S. Environmental Protection Agency grant in 2013 to purchase sets of probeware that tests the temperature, pH level and dissolved oxygen content of a sample of water from the creek. The scientific equipment gives a digital reading of each measurement.

Kits purchased from World Water Monitoring Day use chemical indicator tablets to test for pH and dissolved oxygen content. Thermometers are used to test for air and water temperature.

The students draw conclusions about the creek's water quality and relate their observations of the immediate watershed to their data.

“Working alongside students and faculty from Ferrum College’s environmental science program, middle school students have the opportunity to learn about ways they can further their science education,” said Sarah Baumgardner with Western Virginia Water Authority. “Since an entire class of students comes to the creek at once, we divide them into three smaller groups to rotate through three different stations. All students get an opportunity to participate in each station.”

The Western Virginia Water Authority offers educational outreach programs about water for over 13,000 students annually in its service area, which includes Roanoke City and the counties of Roanoke, Franklin and Botetourt.