VT Geosciences Outreach & Montgomery County Public Schools Learn & Serve America

www.montcowatersheds.org

ENVIRONMENTAL SERVICE LEARNING PROGRAM

Education about local watersheds is fostered through hands-on participation in environmental service.

Not only does this program educate students on watersheds and the use of the scientific method, it also helps to raise awareness of local water quality to the community.

By learning about the importance and effects of local watersheds, students learn about a larger, more integrative picture of the overall environment, such as habitats, ecology, and conservation.

This program also helps with the devleopment of globally necessary skills, including communication (writing, presenting, and reporting), observation, and reasoning (question asking and hypothesis testing).

SCIENCE OF WATERSHEDS: MONTGOMERY COUNTY PUBLIC SCHOOLS (MCPS)

VT Geosciences Outreach is working with MCPS to develop service learning around local watersheds.

This cooperative program takes advantage of the proximity of the New River, Roanoke River, and James River drainages to facilitate hands-on education about watersheds.

TEACHER PROFESSIONAL DEVELOPMENT

With this program, teachers get the opportunity to construct partnerships with universities and other environmentally-conscious organizations.

These partners can provide support to teachers both in the classroom and out in the field.

In addition to the Museum of Geosciences, many other organizations within Virginia Tech are project partners, as well as organizations such as the Town of Blacksburg, the VA Department of Environmental Quality, and the Conservation Management Institute.

Montgomery Co. Planning Office

DEQ Virginia Department of Environmental Quality

DCR

Town of Christiansburg

CGIT Center for Geospatial Information Technology

Virginia Cooperative Extension

Virginia Association of Soil & Water Conservation Districts

Department of geosciences at Virginia Tech

Virginia Water Resources Research Center

HANDS-ON FIELD AND LAB EXPERIENCE FOR K-12

The key projects performed by students are water monitoring, watershed restoration, and environmental protection.

All four branches of STEM are integrated within this program during student participation:

SCIENCE:
Testing hypotheses through experiments and observations

TECHNOLOGY:
Using modern tools to investigate and solve problems in nature

ENGINEERING:
Creating solutions for environmental problems

Photo by Rich Mason, USFWS

MATHEMATICS:
Analyzing and presenting data collected in the field and lab