

Teacher's Conservation Corner

John Marshall Soil and Water Conservation District

SCBI Field Trip Opportunities Available

The Smithsonian Conservation Biology Institute (SCBI) in Front Royal, VA is the conservation and research arm of the National Zoo. SCBI focuses on research of threatened and endangered species. The institute currently offers free tours to groups of between 8 and 26 people. Participants must be 13 or older. No tours are held on weekends.

SCBI studies animal behavior and reproduction, ecology, genetics, migration, and conservation sustainability. Animals currently housed at SCBI include maned wolf, cheetahs, scimitar-horned oryx, and black-footed ferrets among others.

If you are interested in scheduling a tour, the District can provide you with the tour request form. You can also contact Nick Davis with SCBI at DavisNic@si.edu or call 540-635-0495 for more information or to help schedule a tour. More information about SCBI can be found on their [website](#).



The SCBI Research Station.

JMSWCD Strategic Plan Update

The John Marshall SWCD will be updating our Strategic Plan in the next few months. As part of this, we want to gain input from educators in Fauquier County. A 5-minute survey will be sent out in the next few weeks with a few questions about participation in District Programs. Some educators may also be invited to participate in a short, 15-minute interview to gain a better in-depth understanding of educator needs.

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Leaf Pack Project

Some of you have done the Leaf Pack Project in the past while others may be new to it. This project is an experiment that students can conduct about life in local streams without ever having to leave the school. Falling leaves in October and November collect in streams and provide the energy that fuels the aquatic food chain.

The Leaf Pack project involves placing mesh bags that have been filled with leaves into a stream for 3-4 weeks. After that time period, the bags are brought back to the classroom and students examine the bags and pick out the critters that they find in the leaves.

Many types of macroinvertebrates (aquatic insects) feed on and in the packs of leaves. Macroinvertebrates have varying tolerances to water pollution. Some of them are very sensitive to pollution, so their populations can be used to evaluate water quality.

It's a great hands-on activity and the District has all of

the necessary equipment to help your school make it happen.

This experiment can have many different variables including comparing two different streams, comparing types of leaves, and comparing different types of in-stream habitats. It can also be done any time of year. The project works with a wide range of grade levels, but fits well with 5th grade SOLs 5.1 and 5.5 (hypotheses, variables, classifying organisms using physical characteristics, invertebrates vs. vertebrates, and adaptations of organisms). The project also works well with after school ecology or environmental clubs.



A filled leaf pack bag is lashed to rock and ready for placement in a stream.

Enviroscape

The Enviroscape is an interactive table top model used to demonstrate soil erosion, watersheds, land use, and pollution.

Students take turns spreading different “pollutants” - soil, pesticides, fertilizers, etc. - on the model and then see what happens when it rains (a spray bottle is used to simulate rainfall).

We typically use the Enviroscape model for grades 3-6, but can be adapted for older grades as well. The presentation is similar for all grade levels, but different features are emphasized based on what specifically is being studied.

We encourage teachers to participate so they can help emphasize what is being covered in class. This

activity takes between 30 and 60 minutes to complete, depending on the specific subjects that students are studying as well as available class time.

This model is a great visual representation of rainfall transporting pollutants through a watershed, and students always enjoy seeing what happens.

Please contact the District if you are interested in learning more or scheduling a program.



The Enviroscape model.