

Teacher's Conservation Corner

John Marshall Soil and Water Conservation District

Enviroscape Model

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).

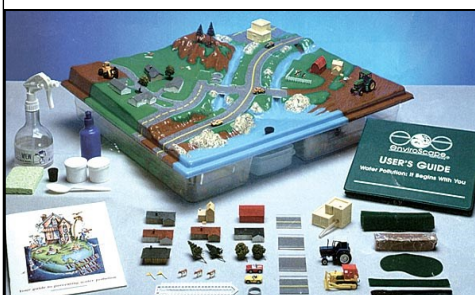
We typically use the Enviroscape model for grades 3-6, but can be adapted for older grades as well. The presentation is similar for all grade levels, but different features are emphasized based on what specifically is being studied.

We encourage teachers to participate so they can help emphasize what is being covered in class. This activity takes about 40 minutes to

complete, but again, can be adapted to take more or less time depending on what students are studying.

This model is a great visual representation of what actually happens in 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.

Grant Opportunities

The Chesapeake Bay Trust is offering grants of up to \$5,000 to schools or other organizations. The application deadline for this cycle is January 15, 2016.

More information and the RFP can

be found online by clicking this [link](#).

The District can provide assistance to teachers with grant writing as well as implementation. Other grants are available through the EPA, NOAA, and NEEF.

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Chesapeake Bay Interpretative Buoy System (CBIBS)

The Chesapeake Bay Interpretative Buoy System (CBIBS) is a network of buoys located in the Chesapeake Bay and tidal portions of major rivers that collect meteorological, oceanographic, and water quality data. This program is funded and overseen by the National Oceanic and Atmospheric Administration.

The data and information about the buoys is displayed in real time (data is collected every 10-60 minutes depending on the parameter) and can be found by visiting: <http://buoybay.noaa.gov/>. Graphs can be created on the website itself or data can be

downloaded and used for analysis.

Through this website, students have an opportunity to look at and analyze real-world data while learning more about the Chesapeake Bay and its tributaries.

Right: One of the buoys in the network in the Bay.



Leaf Pack Project

The Leaf Pack 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 3-4 weeks are up, 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. Check out the Leaf Pack website at: www.stroudcenter.org/lpn/ to learn more about the leaf pack network and monitoring program and to view macroinvertebrate data from around the world.



Above: A filled leaf pack bag is lashed to rock and ready for placement in a stream where it will spend 3-4 weeks.

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 especially 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.

Call or email the District if you would like more information or would like to schedule a program.