

Watershed Modeling Lesson Plan

Students will create a watershed model.

By observing how surface water flow is determined by the shape of the land, students will visually and dramatically observe the physical characteristics of a watershed, and investigate the impacts of human land use decisions.

Students will be able to define the term watershed, create and use a model to show an understanding of watersheds, describe how pollution can get in to our waterways through runoff, and think of ways to improve water quality within their own watershed.

What is a watershed?

As precipitation runs downhill it carry whatever is on the land with it to the closest creek or river. What land uses in the Toe-Cane watershed do you think impacts water quality?

Toe-Cane River Watershed

Your school is in the Toe-Cane Watershed. This means that all of the precipitation that falls and creates runoff from the land in your area ends up in the Toe River or Cane River. The two rivers meet and form the Nolichucky River about 10 miles before it enters Tennessee.

Materials needed per group

One sheet of wax paper
One package non-permanent
Eye-dropper or pipette
Spray bottle
Cookie sheet or aluminum pan

Crumple up the piece of paper your teacher gave you, and then smooth it back out most of the way. Identify valleys and ridgelines.

Use a washable blue marker to color along the ridgelines on your "land." Spray water over your watershed model and observe how the water travels.

What observations did you make during this experiment?

Next dry off your model, draw the blue lines on the ridgeline, and use other colors to depict land uses in the Toe-Cane watershed that you believe impact water quality. Write down the color of each land use. Again spray water over your watershed model and observe how the water travels.

What observations did you make during the second experiment?

How did the second experiment differ from the the first?

What do you think landowners within the watershed can do to improve water quality in the North Toe and Cane Rivers?