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 Watauga River watershed do you think impacts water quality?

**Watauga River Watershed**

Your school is in the Watauga River Watershed. This means that all of the precipitation that falls and creates runoff from the land in your area ends up in the Watauga River. The headwaters of the Watauga River straddle Avery and Watauga counties. Major tributaries to the Watauga River include Boone Fork, Cove Creek, Beech Creek, Beaverdam Creek, and the Elk River. The water then flows into Tennessee and the Watauga River Dam otherwise known as Watauga Lake. The Watauga River officially ends when it’s water enters the South Fork of the Holston River in 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?