

Science and a Sense of Place: Watershed Education

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Raindrop Rollplay Activity

Drainage basins and *watersheds* are abstract concepts, and therefore often hard for students to fully understand. One of the biggest problems is scale: typically the examples of watersheds presented to students are huge (e.g., the Mississippi basin, the Chesapeake basin, etc.). This activity is designed to be small in scale so the students can see an entire drainage basin at once. Because it involves the students moving around, it also gets the blood flowing at the beginning of class.

Objective: Students will learn the definition of *drainage basin*, how to recognize a small drainage basin in a landscape, and which processes play a role in the water cycle

Materials:

Outdoor space that has interesting topography

Optional: Sports jerseys (or other designation) to distinguish the students in different drainage basins; cones; clipboards

Time: one hour

Steps:

Each student is a raindrop that has just reached the ground. Randomly distribute the “raindrops” across the study area. At “Go,” each student will follow the path that they think the raindrop will go. Stop the students when they have converged to one or two points. Discuss the results. Repeat, if needed. Then, have the students map out the extent of one or two drainage basins by standing on the drainage basin divides.

Discussion questions:

1. How do you know which path the raindrops will take?
2. Do all the raindrops reach the lowest part of the drainage basin?
3. What role does evaporation, vegetation, and groundwater play in dictating the flow of water in the drainage basin?
4. What is an appropriate definition of a drainage basin? Of a drainage divide?