

## Make a Watershed

**Level:** Grade 1 - 6

### Overview

This activity illustrates the basic properties of a watershed: how water flows from higher elevations to lower elevations, and how watersheds are interconnected. The students will learn how the placement of buildings, roads and factories can be important to watershed runoff and how careless use and disposal of harmful contaminants can have a serious effect on downstream watershed communities.

### Materials:

- Tray or large plastic container
- Several large rocks (to serve as mountains and plateau)
- Sheet of plastic (compostable bag) or aluminum foil (large enough to cover tray and rocks)
- Spray bottle (the rain!)
- Blue food colouring (so the water flow is more visible)
- Towel (to wipe up the inevitable water leakage!)
- Red modeling clay or plasticine, or beads (to serve as salmon eggs)
- Items to place in the watershed (eg., small car, tractor, house)
- Black waterproof marker to draw on items such as roadways
- Cocoa powder (to represent fertilizer and manure pollution)
- Cinnamon (to represent pesticide pollution)
- Soy sauce (to represent motor oil)
- Sesame seeds or cake sprinkles (to represent trash)

### Steps:

1. Place students into groups of 4, and hand out materials to each group: tray, rocks, plastic sheet or aluminum foil, spray bottle, towel, cars, marker, etc.
2. Have students place an assortment of rocks of varying sizes on the tray or in the container. These will be their mountains and plateaus.
3. Have students cover the rocks with the plastic sheet, making sure the sheet is formed tight around the rocks, and tucked into the tray.
4. Place items to represent houses, schools, farms on the landscape and draw on roadways and other items.
5. Using the spray bottle on the 'spray' mode, students will simulate rain from above onto their landscapes. Watch as the water flows down, creating rivers, lakes and watersheds.

6. Distribute several red salmon eggs to each group: placed in 'spawning' channels in the watershed
7. Visiting each group, ask students where the sources of potential pollution may be, and then, place the substances representing pollution at the appropriate locations (eg., pesticides, fertilizer, trash, motor oil).
8. Have the students provide the rain with the spray bottles again, noting how the pollution flows through the watershed.

### **Questions for Students**

- Ask the student to note how the pollution travels down through the watershed, contaminating all downstream areas.
- Discuss with the students why the pollution is a problem and what can be done to fix the problem.