



Activity 9: Watershed in Your Hand

Age:

Grades 4-8

Time:

10-30 minutes

Setting:

Indoors

State Essential Learning Requirements

Science: 1.2

Geography: 2.1, 2.2, 2.3, 3.1, 3.2,

**Procedure:**

1. Crumple a piece of paper into a tight ball. Gently open up the paper but don't smooth it out. The highest points of the paper represent mountaintops, and the lowest wrinkles represent the valleys.
2. Pick a marker that is not waterproof and mark the highest points on the paper. These will correspond to mountain ridge lines.
3. With a second marker, mark where creeks, rivers, lakes and bays might be.
4. With the last marker, mark four or five places that will represent where people are: farms, houses, factories, shopping centers, hospitals, schools, etc.
5. Use the water bottle to lightly spray the finished model. The spray represents precipitation falling into the watershed.

Overview:

Students use crumpled paper to make a mini-watershed model that shows the basic geography of a watershed, how water flows through it, and the effect people can have on water quality.

Objectives:

- To introduce the concept of water flow in watersheds.
- To predict the effects of certain kinds of pollution on salmon life cycle in a watershed.

Materials:

One 8 1/5 x 11 inch sheet of paper for each student
Three different colors of markers that are not waterproof
Several spray bottles of water

Critical Questions Addressed:

2. Salmon are Endangered

Introduction:

When you create your mini-watershed, use markers that are not waterproof because you want them to "bleed." This will simulate how rain moving through a watershed—the runoff—can carry wastes further downstream.

Discussion Points

What changes did you see after you sprayed the water? What happened to the water that fell on the ridgetops? How might contaminants or other wastes near the top of a watershed affect land near the bottom of the watershed? How are salmon impacted? What path did the water follow? Were there any buildings in the way? What might happen to buildings that are in the way of a raging river or a crumbling hillside? How does the flow of water through a watershed affect our choice of building sites? How does the flow affect salmon?

Follow-Up Activities

Look at a topographic map of your neighborhood and trace the ridge lines, creeks and rivers in your school's watershed (contact your local Soil and Water Conservation District to obtain a map). Create an imaginary watershed model out of clay, with high points for mountains and low areas for creeks, rivers and bays; construct different land uses (farms, towns, industrial areas) and place them in the model where they would have the least impact on water quality and salmon habitat.

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