

Facilitator Notes

Watershed Models- Potomac River

Welcome/Introduction (1 minute)

- Today we're going to learn about where the water that you drink comes from.

The Potomac River- show them the watershed map.

- The Potomac River flows over 383 miles from Fairfax Stone, West Virginia to Point Lookout, Maryland.
- The watershed drains approximately 14,670 square miles of land, covering four states.
- Major bodies of water in the area include the Potomac, Anacostia, Cacapon, Monocacy, the North Branch, the South Branch, the Occoquan, and the Shenandoah Rivers.
- Major cities in the watershed include Washington, D.C, Bethesda, Cumberland, Frederick, Gettysburg and Alexandria. Forest is the major land use, followed by agriculture.

What is a Watershed?

- It's the land and other surfaces that drain water into a body of water.
- Everyone lives in a watershed, and every place on the earth lies in one watershed or another.
- You may live in the Potomac Watershed, the Patuxent Watershed, the Patapsco Watershed or others. All the rivers in our area lead to the Chesapeake Bay.
- To help you visualize what we mean by a watershed I want you to picture a tree branch or the veins in our body. They are made up of branches and water flows through those branches the same way our blood moves through the veins in our body as it flows back to our hearts.

Explain that watersheds are determined by elevation because water can only move downhill.

Watershed Models- 10 minutes

Participants will have a chance to construct their own watershed to explore how water moves over the land.

1. Break students up into even groups of 3 or 4 students
2. Explain that each of them will have 2 minutes to work together and use the materials given to them to construct a watershed.
3. Have them come to their station and have them crumble up newspaper, packing bubbles, etc. and place it on their container to create various landforms.
4. Cover their land with a white table cloth. Make sure it's covering all the paper.
5. Give them bits of paper towel to spread across their model.
6. Have groups think about where the water will collect on their model.
7. Hand out the spray bottles and instruct students to select one person to be the rain.
8. The other two people will observe how and where the water moves.
9. Give them about 30 seconds to do this.
10. Then walk around to each group's watershed and explore similarities. Give each group time to describe their watershed and discuss where water moved.

Wrap Up

Ask the participants the following questions:

1. what the paper towels did.
 - i. They acted just like the soil and trees by absorbing water and holding it in place.
 - ii. Tree roots help hold soil in place so it doesn't erode into the waterways which make the water cloudy and then mean that light can't get to the plants to make food.
 - iii. Soil acts as a filter so as it rains water seeps through the soil and filters out pollutants, it also holds water in place so it doesn't overflow the lakes and reservoirs and therefore slows down the rates that water moves through the system.
2. Did the water go where your group expected it to go?
3. Looking around the room do all the watersheds look the same?
 - a. Why or why not?
 - b. What's different about each model?
 - i. Everyone used the same materials but built their land in a different way.