

Create Your Own Watershed Models Activity Guide

These easy to do activities can be done in the classroom, at home, or in your own backyard with simple materials you may have on hand.

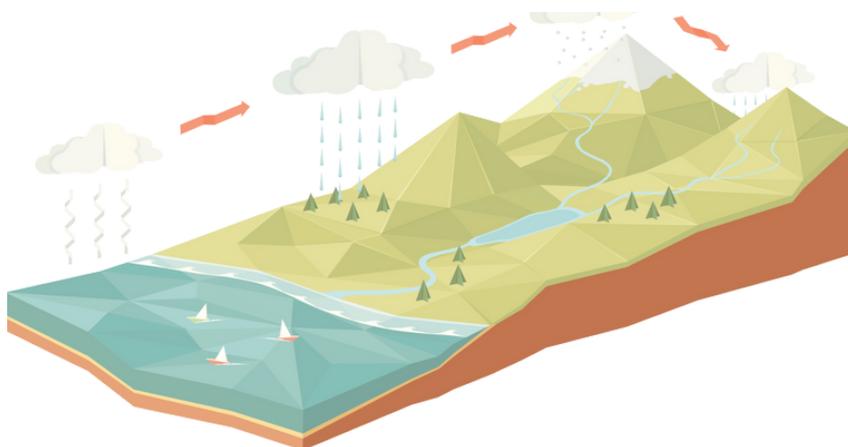
What Is A Watershed?



Cup your hands to hold water. You just made a watershed!

A watershed is an area of land where all water drains to a common location or waterway. Water moves, or sheds, downhill. In some parts of a watershed, water flows. In other parts of a watershed, water is stored.

Using your hands as a model, cup your hands to hold water. Your thumbs and fingertips are the watershed boundaries. The high areas would be ridgelines. All the water falling inside your watershed flows down to a common area in your palm.



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Tutorial: Crumpled Tin Foil Model

1. Prepare your model by lining the flat tray with paper towels. These will represent aquifers, or areas where water collects underground.

2. Arrange the tin foil spheres all over the tray, and cover them with another sheet of foil. This represents the watershed's hills, mountains, and valleys.



3. Next, use the markers to color where you think river and streams would flow along creases into the low valleys. Now you have a basic landscape of hilltops and valleys. Can you see where rain water would run off the land? Do you see a common location where water will collect?



4. Add other features to your landscape by drawing in houses, fields, and buildings with different colored markers. Then, use the fork to poke holes all over the tinfoil to allow water to flow underground.

5. Make it rain! Spray the watershed using the spray bottle. If you don't have a spray bottle, you can drop water carefully with a spoon, or soak a sponge and squeeze out water drop by drop all over the model.

6. Look where the water has collected on the watershed's surface. Finally, remove the top layer of tinfoil to see how much water collected in the paper towel aquifer underneath!



MATERIALS:

- Tin foil, crumpled into different sized spheres
- Markers
- Spray bottle filled with water and blue food coloring
- Tray, cookie sheet, or bin lid
- Paper towels
- Fork

QUESTIONS:

1. Is the water flowing downhill in the creases as you expected?
2. Does it gather in rivers, lakes or reservoirs as predicted?
3. Do you have flat areas that would be considered floodplains?
4. Where would you build a house? Would you like a mountain view, along a river, near a pond? Why?

VIDEO GUIDE:



Check out this tutorial's video guide and find more activities on our Youtube page!

Glossary

Aquifer - An underground layer of rock and sand that contains water

Flood - An excess of water that overflows the boundaries of a stream, river, or other body of water onto normally dry land

Floodplain - The flat area of land next to a river or stream that floods with water

Groundwater - Water naturally stored below the surface of the earth, supplying wells and springs

Precipitation - Any kind of water that falls to the earth as part of weather events, including rain, snow, sleet, fog, and hail

Surface Water - Water that is on the Earth's surface, such as in a stream, river, lake, or reservoir

Water Cycle - - The movement of water from the atmosphere to the earth and back to the atmosphere through precipitation, runoff, infiltration, percolation, storage, evaporation, and transpiration

Watershed - An area of land that channels water into a stream, river, lake, or other body of water

Waterways - Paths for water to travel across the land, such as a channel, lake, stream, river or sea

Wetlands - Areas that are covered with water during at least part of the year



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