UAMN Virtual Family Day: Water

Create a Watershed

Explore how watersheds work by making a model!

A watershed is an area of land where all water flows to a specific stream, river, or lake, and from there to the ocean.

Materials Needed:

White paper (one-sided scrap paper works well), piece of recycled cardboard (about 10 inches by 10 inches), tape, markers, spray bottle (or eyedropper)

Instructions:

Step 1: Gently crumple a sheet of paper. Crumple it loosely, not tightly wadded together.

Step 2: Uncrumple the paper and place it on the cardboard piece. Tape the edges of the paper on the cardboard.

Step 3: Imagine the paper is a landscape, with mountains, valleys, and plains. If it rained on this landscape, where would the water go? Use a marker to draw where you think the rivers, lakes, and oceans are. *Hint:* Start from the top of a mountain and pretend to be a drop of water slowly moving downhill.

Step 4: Test your predictions! Use the spray bottle to mist the paper. Observe where the water goes. Did it flow where you expected it to?
Try misting lightly to represent a gentle rainfall, or spraying more heavily to mimic a storm!

Step 5: Let your watershed dry!

Activity adapted from Oregon Museum of Science and Industry: omsi.edu/sites/all/FTP/files/expeditionnw/4.E.1.Crumple.pdf

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Optional Extensions:

- Use a different color of marker to add towns, roads, farms, or other areas of development to your watershed. Spray the paper with water again. How do your additions change the ways the water flows through the landscape?
- Color a small section of your watershed with a brown marker. This represents a source of pollution. Watch how the "pollution" spreads throughout the watershed. How does pollution in the higher points of the watershed affect the water quality in lower points?

Think and Discuss:

- Did the water flow where you expected it to? How did the geographical features of your landscape (mountains, valleys, plains, etc.) affect where the water flowed?
- How can you tell where the boundaries of a watershed are?
- If you were going to live in the watershed you created, where would you want to live? Why? Where would you get your water?

Portion of the Yukon River watershed, as seen from Dawson City, Canada. Courtesy Wikimedia Commons.

- What are some ways people affect the watersheds they live in?
- How are small watersheds connected to larger watersheds?
- Why is it important to keep watersheds healthy and clean?

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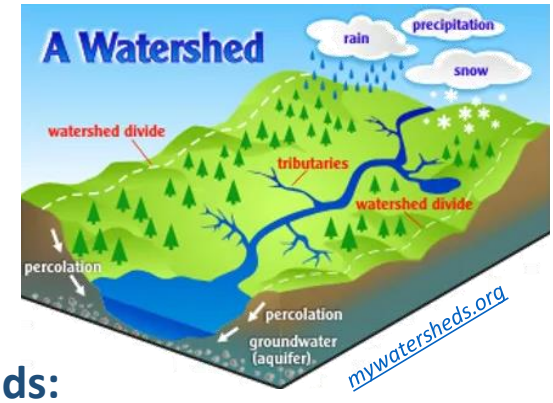
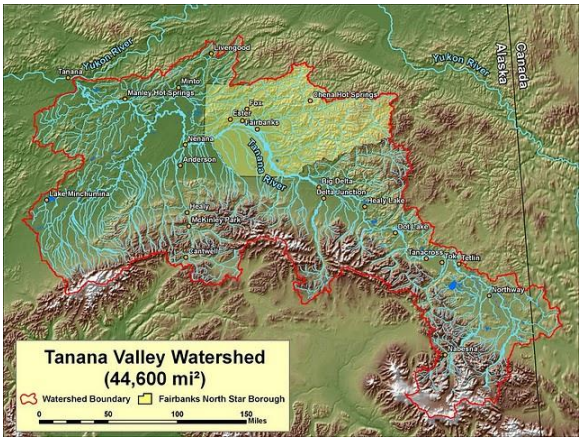
What is a Watershed?

A **watershed** is an area of land where rainwater and snowmelt flows to a central point like a lake, river, or stream, and from there to the ocean. The boundary of a watershed is determined by the landscape, such as hills or mountain ridges. Every piece of land on Earth is in a watershed.



Watch a video to learn more about watersheds:

pbslearningmedia.org/resource/ket09.sci.ess.water.wshed/what-is-a-watershed/



Tanana Valley Watershed Association: www.tvwatershed.org

Larger watersheds contain many smaller watersheds. Fairbanks is in the Chena River watershed, which is part of the Tanana River watershed, which flows into the Yukon River watershed. The Yukon River watershed is the fourth largest in North America, at about 300,000 square miles!

Which watershed do YOU live in? Go to this site to find out:

water.usgs.gov/wsc/reg/19.html

(Hint: Hold the mouse over the map to see the name of each watershed.)

Healthy watersheds are important for a healthy environment. They provide habitat for plants and animals; water for drinking, irrigation, and transportation; and opportunities for recreation, including swimming, boating, and fishing. We all need to help take care of our watershed.

Go to this site to discover ways YOU can help protect watersheds:

www.cwp.org/watershed101/

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