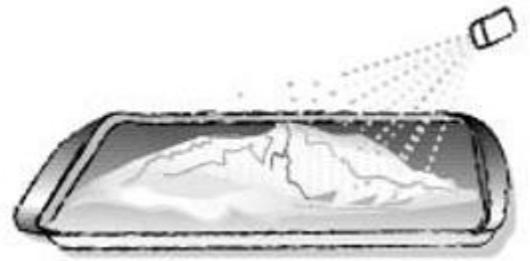


Make your own Watershed

Where does the water go when it rains?

In this activity, you will build a simple model of a landscape to mimic a watershed. See how watersheds channel rainfall and how pollution impacts water health.



Materials Needed

- 1 shallow tray to build model in and hold water during demonstration (examples: baking dish, large tupperware container, large storage container lid)
- Newspaper/ magazine/ recycled paper, crumpled, you can also use bowls or cups (to create higher elevation in model)
- 1 sheet of water-resistant material (examples: plastic shopping bag, wax paper, tin foil, trash bag, dry-cleaner bag)
- 1 spray bottle filled with water
- various items to represent pollution (examples: spices, cake sprinkles, oatmeal, cocoa powder, jello and koolaid mix, more liquid items such as soy sauce, food coloring also works well)
- towels to place under bin in case of spills

STEP 1: Understanding our connection with water

Discuss all the ways you use water in your daily life.

Questions to consider:

- What are some ways that you used water today?
- What are some other ways people might use water?
- Who/what else uses water daily? How?
- Where do you think all that water comes from?
Perhaps you thought of a lake, river, or groundwater. Your water comes from rain or snow that falls on your watershed: an area of land that collects precipitation (rain, sleet, snow, etc.) and channels it into a body of water that provides your local drinking water source (a creek, river, bay, lake, ocean, etc.).
- In our area, the main source of our drinking water is the Schuylkill River.

Does everyone live in a watershed?

Yes! No matter where you live, you live in a watershed. All areas of Earth channel rain into different bodies of water as a function of Earth's water cycle. Watersheds are our fresh water systems that provide us with drinking water.

Learn more about the watersheds located in PA here:

<https://www.dep.pa.gov/Citizens/JustForKids/Water/Watershed/Pages/Live.aspx>

To learn more about the watersheds of the United States, visit here:

https://water.usgs.gov/wsc/map_index.html

STEP 2: Build your Watershed Model

Brainstorm some ideas with your child on how you can build a model with hills, valleys, and rivers with the materials you have.

- 1 Make larger and smaller “balls” of crumpled paper
- 2 Arrange crumpled paper/ cups or bowls throughout pan
- 3 Make a “mound” with peaks, ridges, and valleys by draping water-resistant material (plastic bag or another example from above) over the paper balls

Discuss the model you created. Can you identify mountains and valleys? What do you think will happen when you spray water on the tops of the mountains, acting as rain?

Optional- Make it your own:

Add cars, people, and other small figurines to have your model reflect your community.

You can also use a permanent marker to label or draw on buildings on your watershed.

Step 3: Conclude

Finally, talk about how this connects with the drinking water that comes out of your sink. Where does that water come from? Our tap water supply comes from watersheds. The status of the water health in rivers and streams is directly connected to the actions of humans on land. What are some things you can do to decrease water pollution? Make a list of things you can do to protect the Schuylkill River Watershed.

Take It Outside: Understanding Stormwater Runoff

Natural vs. Man-made landscapes

- 1 Pour a pitcher of water on an unpaved area, like a lawn. Where does the water go?

In a natural setting, rain falls in a grassy field or forest.

The natural area **soaks** in the water, helping it **infiltrate** into the ground forming groundwater, or is taken up by plants.

STEP 3: Here Comes the Rain

- 1 Have your child begin spraying the model with the spray bottle and watch how the water flows over the “land”
- 2 As it begins to flow, discuss what is happening. How and where is the water “shedding” off the land and collecting at the lowest point.

Questions to consider:

- Where is the water flowing?
- Can you find some low points filled with water that are representing rivers or lakes?

Water Pollution:

- 1 Choose your spices, sprinkles, oatmeal, etc. and assign them different pollutant names (litter, pesticides, etc). Explain what each represents and where those pollutants come from.
- 2 If you sprinkle oatmeal (litter) and cake sprinkles (animal waste) on the land and make it rain, where does the pollution go? How does human action on land affect the health of watersheds?

Stormwater Runoff: When rainwater travels over roof tops, streets, and driveways it mixes with pollution such as plant fertilizers, pet or animal waste, debris, litter, chemicals, pesticides, and soil before reaching creeks or rivers.