

# Build a Watershed



## What Is this Activity?

Where does the water go when it rains? Find out by making it rain, right in your own home! In this activity, you and your child will build a simple model of a landscape to see how water droplets flow and how the shape of the land helps collect water.



Exploring your world,  
one mission at a time  
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**Topic**  
evaporation,  
watersheds,  
human impact on  
the environment

**Activity Type**  
indoor

**Activity Time**  
60 minutes

## ACTIVITY

### What You'll Need

- 1 large plastic tray or shallow tub (e.g., sweater-storage tub, large storage container lid)
- 4 tall containers (e.g., 16-oz. cups or soda bottles, oatmeal container, milk bottle, etc.)
- 1 large sheet of clear or light-colored plastic (e.g., tarp, shower curtain, or cut-open garbage or dry-cleaner bag)
- 1 spray bottle
- 2 bottles of food coloring (in different colors)
- cooking oil
- glitter, spices, cake sprinkles, or other small particles to represent "litter"
- towels for cleaning up spills

### Part A

## Water, Water, Everywhere

Talk with your child about all the ways you use water in your daily life.

### Ask:

- How did you use water today?
- How else do you think people in our community use water?
- Where do you think all that water comes from?

A lake? A river? Groundwater? Whatever the source, your water ultimately comes from rain or snow that falls on your watershed: the land area that collects rain and snowmelt and channels it into a body of water, such as a lake, river, or ocean.



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## Part B

### Build a Watershed

Show your child the materials, and ask, “How might we use these materials to build a model landscape with hills, valleys, rivers, and lakes?” Brainstorm for a few minutes, then build your model:

- 1 Stack the containers on a large tray into a pile that’s 1 to 2 feet high.
- 2 Make an irregular mound with peaks, ridges, and valleys by draping a tarp or large plastic sheet over the containers.
- 3 Talk with your child about the model. Look for hills, mountains, and valleys, and predict what might happen if you spray water on the tops of the hills and mountains



Be sure that the edges of the sheet are contained within the tray to prevent water from pouring onto the ground when you spritz the tarp with water.

## Part C

### Make It Rain

Have your child begin spritzing the model with the spray bottle, and watch where the water goes. As it begins to flow downhill and collect, discuss what’s happening with your child.

#### Ask:

- Can you find some lakes? Any rivers?
- Choose a lake in this landscape. Which rivers flow into it?

Then, show your child the glitter, cooking oil, cake sprinkles, and food coloring. Experiment with them to model what happens to pollution in a watershed. If you drip food coloring or glitter into one of the rivers, where does it go when it rains? Are there any places in the landscape where it doesn’t go?

Finally, talk about what this all might have to do with the water that comes out of your faucet. Where does that water come from? It comes from a watershed—which is why it is important to try not to pollute land and water.



## EXPLORE SOME MORE

### Follow the Water

Pour a bucket or two of water on a driveway or along a curb and follow where it goes.

#### Ask:

- What kind of path does the water follow? Is the water carrying anything away?

Pour a bucket on an unpaved area, like a lawn. How does this water behave compared to the water you poured on the paved area?

### How’s my Water?

Find basic information about your community water supply with the Environmental Protection Agency’s How’s My Waterway? tool. You also can learn about the quality of your region’s drinking water using the E.P.A.’s interactive map. For more about water, check out the U.S. Geological Survey’s Water Science Activity Center, where you and your child can try to challenge yourselves with questions such as, “How many baths can you get from a rainstorm?”

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