



# Activity 1: Watershed Model

## Introduction

Rain has to go somewhere. The land that drains precipitation into a body of water — such as a river — is its watershed. How the land is shaped — its hills, mountains, and valleys — determines how the water flows. Kids can use items from the recycling bin to create a model that helps them explore how water drains in a watershed.

## Supplies

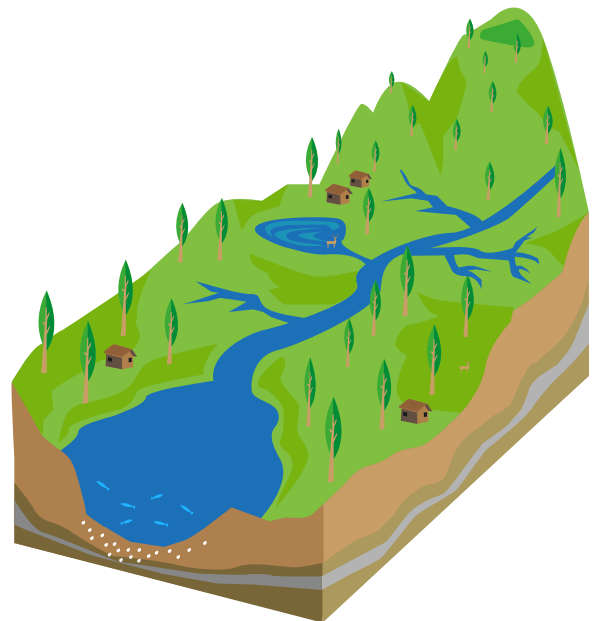
- A large, shallow plastic bin or storage container and a large sheet of plastic, such as a light-colored plastic shower curtain or large white garbage bag slit open. To do this activity outside on a larger scale, you can use two plastic tarps.
- Clean objects of different sizes from the recycling bin to create watershed topography, such as plastic containers, boxes, cans, and bottles. Natural items such as rocks and sticks can be used too.
- A spray bottle filled with water
- Marker
- Pencil, paper, or journal for recording observations

## Get kids thinking ...

**Start by asking a couple of questions:** How does water get into a river? Where does all the water in the river come from? Talk about where water goes when it rains. What does that look like? Build a model watershed together to see where water flows when it falls on land.

**Watch:** What Is a Watershed?

<https://www.youtube.com/watch?v=QOrVotzBNto>





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### Let's get started!

Think and talk about what your model will look like. Tall mountains, lots of hills and valleys? Stack and arrange the containers and other objects in your bin (or on your tarp outside). You can stack items on top of each other for high elevation!

Take a look at your model and ask kids to identify its hills, mountains, and valleys. Then ask for predictions about what will happen if it "rains." You can use a marker to draw lines on the plastic to show predictions. Spray the model with water. Where does the water go?

After you arrange your items, drape the large sheet of plastic (or the second tarp) over your objects. Push the plastic down where there are gaps between items to form mounds, peaks, ridges, and valleys.



Have paper and pencil handy to record observations and spray the model.

**Ask the kids:** What happens? Where did the water travel? Where did the water collect? Were predictions correct? Have kids write and draw their observations. They can even create a map and name the rivers and lakes that formed in their model.

**Save the watershed model** for future explorations on pollution in watersheds and rivers!



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## More watershed activities

Build a Watershed and Explore Effects of Pollution (PBS Kids)

[http://pbskids.org/plumlanding/educators/activities/build\\_a\\_watershed\\_ed.html](http://pbskids.org/plumlanding/educators/activities/build_a_watershed_ed.html)

<https://www.youtube.com/watch?v=IBMgGWM-8mQ>

Crumpled Paper Watershed (Ferguson Foundation)

[http://fergusonfoundation.org/teacher\\_resources/crumpled\\_paper.pdf](http://fergusonfoundation.org/teacher_resources/crumpled_paper.pdf)

Shower Curtain Watershed (Monterey Bay Aquarium)

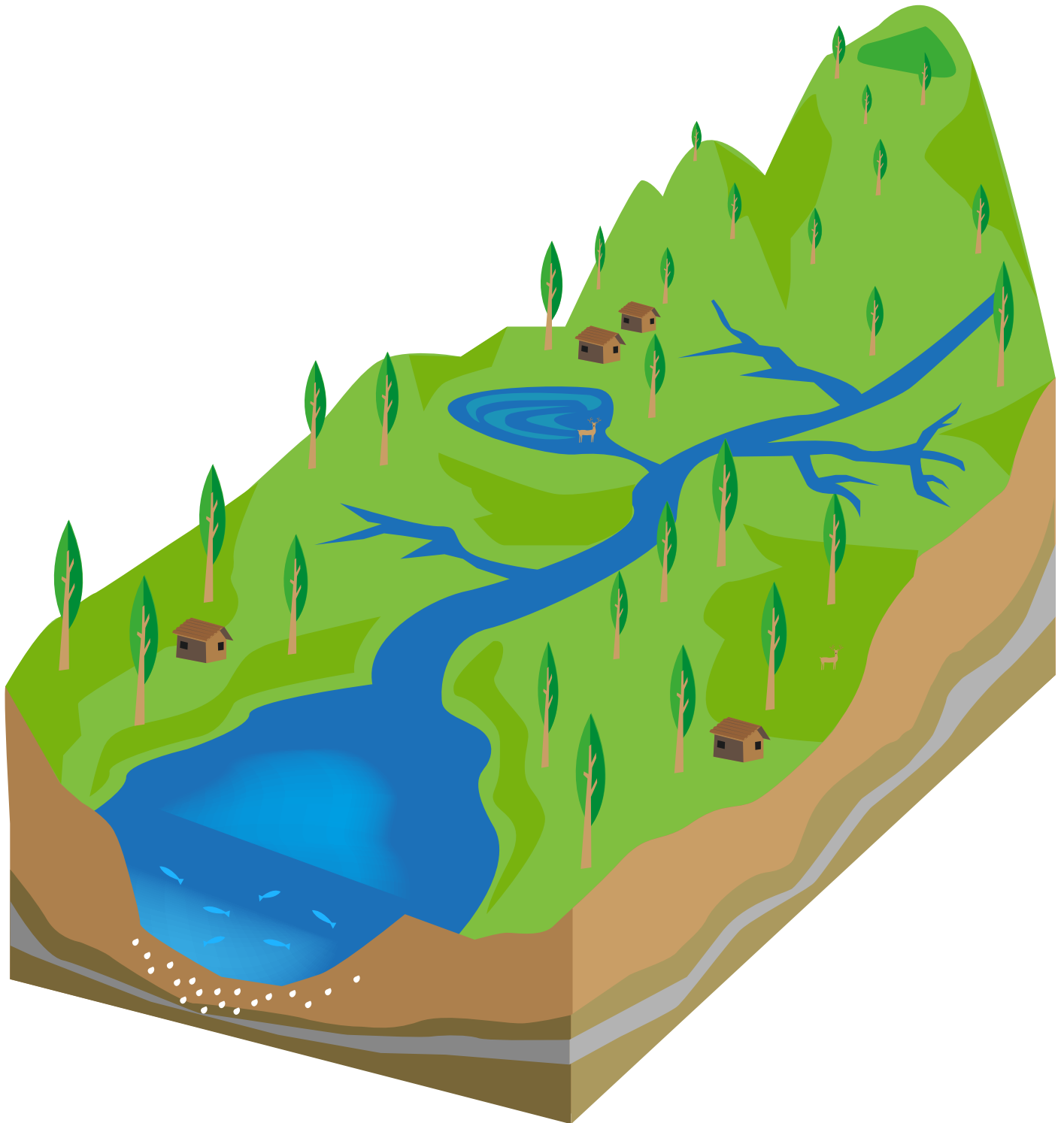
[https://www.montereybayaquarium.org/-/m/pdf/education/curriculum/shower\\_curtain\\_watershed.pdf](https://www.montereybayaquarium.org/-/m/pdf/education/curriculum/shower_curtain_watershed.pdf)

Mapping the World's Watersheds (National Geographic)

<https://www.nationalgeographic.org/activity/mapping-watersheds/>



# Diagram of a Watershed



Find more River Rangers activities on the Start with a Book website:  
[www.startwithabook.org/river-rangers-book-based-science-adventure](http://www.startwithabook.org/river-rangers-book-based-science-adventure)