What is a Watershed?

Raccoon Creek Explorers Activity 1

Supplies:

- 1 tray or shallow tub
  (dishes tub, large storage container lid, or even the sink)
- 2 tall containers (12-oz. cups or soda bottles, coffee can, etc.)
- 2 short containers (soup or soda can, yogurt container, etc.)
- 1 sheet of clear/light-colored plastic (cut-open garbage or shopping bag)
- 1 spray bottle
- food coloring, kool-aid drink mix, and or dish soap
- cooking oil
- glitter, dried spices, sprinkles, pieces of confetti, or other small objects
- towels for cleaning up spills
- Large garbage bag or tarp to put under your watershed to reduce messes

Time: 40 - 60 minutes

Vocabulary:

Watershed: the land area that collects water and delivers it to a specific area.

Pollution: materials introduced into the environment that may be harmful to the organisms living there.

Elevation: height above or below sea level.

Precipitation: water released from clouds in the form of rain, freezing rain, sleet, snow, or hail.

Background:

All over the world there are watersheds. Watersheds are areas where water from snow, rain, or any other form of precipitation gathers to a specific stream, river, lake, or ocean. Each large watershed is made up of many smaller watersheds. The Raccoon Creek watershed in southeast Ohio is the area where water comes together to form Raccoon Creek and then drains into the Ohio River. In this activity you will learn how watersheds work and how pollution can affect them by making a model of a watershed. With your model you will where rain gathers and what influences the rains movement. Materials used to simulate pollutants will show how pollution travels and how pollution from one source can negatively affect the whole watershed.

Let's Start!

1.) Gather all the supplies, it's time to make your watershed.

2.) Spread your large garbage bag or tarp on the floor or table where you plan to build your watershed. Stack and or place the containers on the large tray. Create peaks, ridges, valleys, lakes, and mountains by draping a tarp or large plastic sheet over the containers. Make sure that the sheet is inside the tray that way there will be less mess.

3.) Make predictions! Where do you think the rainwater will go? Where will it collect in the landscapes? Will the pollution stay where you put it, or will it move downstream when it rains?

4.) Place the pollution (the food coloring, Kool-Aid, cooking oil, small objects, etc.) throughout your model watershed. Different object can symbolize different types of pollutants. For example the food coloring could be pesticides from farm run off and the small objects could symbolize litter.The cooking oil could represent oil leaks from cars and trucks on the road.

5.) Let it rain! Use the spray bottle to spray water all over your watershed. For best results spray the water directly above the watershed so that it's more like rain. Watch the rain gather together and travel.

Reflect:

Does all of the water end up in the same place? Where are the streams and rivers in your model?

Where did the pollutants go? What happens when pollutants combine?

How did the elevation of your watershed affect where the water traveled and gathered?

Apply:

Why is it important for people to know about pollution in a watershed?

Can you think of any ways to reduce pollution and water use?

Why is it important to keep our watersheds clean?

Wrap Up:

Watersheds are important to everybody and everything living in it. Wildlife, plants, and people all need and affect their watersheds on a daily basis. The water we drink everyday comes from a watershed.

What happens upstream of a creek or river can affect the water quality downstream for miles and miles. Pollution can harm wildlife and people that use water that has been polluted. Rain can pick up all kinds of pollutants and deliver them into creeks, rivers, lakes/ponds, and even groundwater. Preventing pollution and reducing water use can help protect watersheds and allow plenty of clean water to continue its journey downstream!

Next time it rains, watch where the rain water travels. Notice how rain travels on different surfaces and elevations. After it rains, are there any puddles or standing water? Why do you think the water ended up there.

Thanks for exploring with us! If you would like to share your watershed models and observations with Raccoon Creek Partnership email us at: raccooncreekpartnership@gmail.com. See you next time!