

# WEEKDAY WONDERS



Content developed by the  
Tennessee Aquarium  
Education Department



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## Watershed Wisdom: Day 4

This week, Weekday Wonders encourages young scientists to explore the movement of water through a watershed. They will learn about the different parts of a watershed, the water cycle, and how to protect and care for our most important natural resource and the plants and animals that depend on it.

These curated activities are listed in a suggested sequence but may be done in the order that works best for you and your young scientists. Learn more about this series in the [Introduction to Weekday Wonders](#).



### Question of the Day

**What else lives in your watershed?**



### Daily Nature Journal

Ask your young scientist to spend some time outside making new observations about water and how it might affect living things in the environment. Then have them complete an entry as described in the [Guide to Nature Journaling](#).



### Making Inferences

Remind your scientist that observations are an essential part of doing science. Making inferences from those observations is another important skill. Explain to your scientist that an inference is an opinion or idea that is formed based on known evidence such as observations. In this activity your young scientist will make his or her own inferences based on their observations of the habitat around them.

Ask your young scientist to think about all the living things they have noticed during their Water Walks. Have your scientist refer back to the lists and drawings s/he have done and encourage your scientist to venture outside to make new observations.

Based on the information your scientists have collected, ask them to draw or write inferences about which living things might benefit from water moving through the area around where you live. For each inference, he or she should also include the specific benefit the living thing would get.

Discuss your young scientist’s ideas about what might happen to living things if there is a flood or a drought. What might be different for the living things and how might they cope with the change?

To extend this lesson, older scientists might do some of the following ideas.

- Even a simple earthworm has complex adaptations to help them when soil moisture changes. Have your scientist investigate these adaptations by doing some “digging” online.
- Ask your scientist to consider the impacts humans have on life in a watershed. Your scientist now knows that plants and other wildlife live in our watershed, but there are lots of people living there, too! Which actions do people take that affect the water—both positively and negatively?



## Creekside Café

If your young scientist has been working through this week’s Weekday Wonders, he or she has had a chance to think about where water comes from, where it goes, and what a watershed is. In this activity, they will have a chance to explore another aspect of a watershed.

For this activity, your young scientist will need a baking dish, plastic tub, or other shallow dish that can get wet and dirty.

Tell your young scientist that there is a special area in watersheds where water meets the land. This could be the bank along a stream or a river.

Have your young scientist build a stream in the dish. They should add dirt, sand, or soil to the dish and make a long trench in the middle, all the way to the bottom of the dish. Ask your scientist to prop one end of the dish up a little using a pencil, pad of paper, or other small object. Then your scientist should pour water down the “stream.” Have them write down or describe some observations of what happens.

Tell your scientist that the banks of streams and rivers are not usually just made of dirt. This area, called a *riparian zone*, has many different features and functions.

Share the list of features and functions with your young scientist. For each one, he or she should find materials indoors or outdoors to represent each of the statements then use the materials to build their own riparian zone.

- Riparian zones have a lot of plants. The ground is almost all covered in green plants.
- There are many different kinds of plants and animals because riparian zones have water because of the stream or river, food because of the many plants and animals that live there, and shelter because of the many plants.
- There are trees in a riparian zone which help to shade the water and keep it cooler.
- The many tree roots can help to strengthen the stream bank.
- The many plants help to keep the bank from washing away or eroding.
- The area stores water, much like a full sponge.

Once your young scientist has built a riparian zone with materials to fit the statements, ask him or her to again pour water through the stream. S/he should again observe what happens and describe any

differences from the first time they built the stream. Give your scientist an opportunity to continue building and revising if he or she feels like there are areas for improvement. To extend this challenge, you can have your scientist also record which materials s/he chose to address each statement and why s/he chose those materials.



## Water Walk #4

If you are able to, take your young scientist to a creek, stream, or river. Give him or her a chance to explore the riparian zone. Be sure they are safely and quietly walking along the edge of the water.

Have your scientist engage as many senses as possible to make observations. Most observations will come by listening for movement or by hearing vocalizations such as bird songs. Young scientists must be quiet, diligent, and patient if they hope to make any observations through their sense of sight. Your scientist can use touch to turn rocks and logs in search of hidden critters or rummage through leaf litter and dig around in the dirt. Turning rocks and logs is a fascinating activity, but to do so safely, young scientists must tilt these items toward his or her body in case a critter needs to get away from them quickly. Make sure your scientist is recording any data they collect by writing or drawing it in their nature journals.

Once the walk is complete, have scientists pick a good spot to sit that's out of the way from the water to allow the living things to resume life as normal. While you wait, you may want to engage the senses of taste and smell and have a picnic and relax in the sun, but remind your scientist that s/he should still be collecting data as they find it. Good scientists always have their eyes open and have their heads on a swivel.



## Riparian Charades

Ask your scientist to brainstorm plants and animals that might live in a riparian zone in your area. You may wish to have your scientist do some research to make the list. Once they have a number of plants and animals, write them on slips of paper and play a game of charades.



## A Different Point of View

Creativity is an important part of doing science. Have your scientist choose a plant or animal s/he has observed this week that interests them. Have him or her recall the observations they made about the living thing, encouraging your scientist to think of ideas related to each of the five senses. Ask your young scientist to write a poem or short story from that plant or animal's perspective. S/he can describe what daily life is like in the watershed, how things look and feel, or maybe something that happened to the living thing.