

WEEKDAY WONDERS



Content developed by the
Tennessee Aquarium
Education Department



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Watershed Wisdom: Day 3

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 watershed do I live in?



Daily Nature Journal

Ask your young scientist use the ideas in the [Guide to Nature Journaling](#) to create an entry for his or her nature journal. Ask your scientist to pay attention to the ways living things are changing as the weather gets warmer.



Watershed Works

If you were following along with Weekday Wonders during the Diversity in Ecosystems week, your young scientist may have done an [activity](#) that helped him or her learn about where water goes and the effect of putting chemicals or trash in water. Now, a very similar investigation will help your scientist gain an understanding of what a watershed is and how it works.

Ask your young scientist to gather some plain white paper, two colors of washable makers, and a spray bottle of water.

Have your young scientist crumple the paper lightly and then open it back up, so it lays on a table. It should still have some crumples in it to represent high elevations and low elevations. Tell your scientist that this paper is a section of land and ask them where the high elevations or peaks, called ridgelines are. Have your scientist gently trace the ridgelines with a marker.

Then have him or her gently trace all of the lowest elevations using a different colored marker.

Ask your young scientist to gently spray water to create rain. S/he should watch for the water to move downhill taking the color with it. Have him or her make observations with every spray to see how and where the water is traveling.

After a few sprays, have your scientist find a lake where the water has collected. He or she should then find a stream that leads to the lake and follow that stream all the way back up to a ridgeline. Your scientist has found the edge of the watershed, or the land area that drains into a body of water.

Ask your scientist to trace the entire edge of the watershed with their finger by following the ridgeline. Watersheds include all of the streams that flow into the body of water, so there may be more than one stream within the boundaries.

You and your young scientists may have noticed that small streams can join to form bigger streams and those can join to eventually form rivers. Ask your young scientist to see if there are other watersheds on the paper. Smaller watersheds join to form bigger watersheds. Even bigger watersheds may be called basins. The state of Tennessee has 6 watershed basins. All but one of these eventually drain into the Mississippi River and lead to the Gulf of Mexico.

To extend this lesson for older scientists, have them research the watershed basin you live in. If you are in Tennessee, pages 2 and 3 of [A Guide to Traveling Tennessee's Watersheds](#) may help.



Water Drops Are Going 'Round...

Write the following words on small slips of paper and put them into a bowl or cup: clouds, river, animal, plant, soil, groundwater, ocean, lake, and glacier. Water moves freely through the water cycle but tends to get “stuck” in three places; glaciers, groundwater, and the ocean. For younger scientists, you may wish to use blue ink for the places that water can move freely and red ink for places water gets stuck.

This movement game is similar to “London Bridge.” You will need to decide how to create a bridge. This could be two scientists, one scientist standing against a tree or wall, or two chairs or trees that are close together. Your young scientist will become a drop of water by moving in a circle around one side of the bridge flowing “under the bridge” once for each circle completed.

Everyone should sing the following words to the tune of “London Bridge” while the water drop flows.

Water drops are going 'round, going 'round, going 'round.

Water drops are going 'round,

'til they're NOT!

On the word, “NOT” the water drop must freeze, trapped under the bridge. If two scientists are playing the bridge, they may gently trap the water drop between its arms. Otherwise, the drop should simply stay still between the sides of the bridge.

The water drop must then choose one of the slips of paper to determine where it is in the water cycle. If the water drop chooses one of the places where water does not stay for very long (clouds, river, animal,

plant, soil, or lake), the scientist says, “Flow free!” and the game can resume. If the water drop chooses glacier, groundwater, or ocean, it gets “stuck” in the bridge and everyone sings,

*You are stuck and you must stay, you must stay, you must stay
You are stuck and you must stay,
For a while now.*

How long this goes on depends upon the stamina of the bridge and the enjoyment of the water drop.



Water Walk #3

Ask young scientists to walk the perimeter of the watershed around your home and draw a picture or map of it. Notice where the high points are and where the low points are. Can they find evidence of water collecting or running-off on a regular basis? If they can't find them, ask if they can remember a time when it was raining or after it had been raining a lot. Do they remember where they saw puddles or flowing water? If so, go to those areas and search for evidence again. Make observations while remembering to use all the senses, not just sight.



Nature Journal

Have scientists look at the watershed of your yard, neighborhood, or park and draw a picture of it. Then have them draw arrows to show which way the water flows. Remind them that scientists have careful observation skills, so they may need to draw their ideas and then revisit the drawing and arrows the next time it rains.