



RAIN, RAIN...

PRECIPITATION ACTIVITY

With the help of an adult, try out the precipitation demonstration from our video. Test out the activity with different colors and different sizes and shapes of shaving cream clouds. For each new version, predict what you think will happen, run your experiment, record your observations and then see if your predictions matched what you observed.

ADVENTURES OF RICKY THE RAINDROP AT BRISTOL MARSH

Follow along as we explore all the different places that a raindrop may go at Bristol Marsh. To learn more about Bristol Marsh, watch the Heritage Conservancy video about the marsh. This is a choose your own adventure activity, so you can follow a different path each time you try it. Start at #1 then pick which path to take and go to that number.



1. Start as a rain drop – it rains (**precipitation**)! You fall to the ground (**collection**) and land on the pavement (go to 2) or directly into the Delaware River (go to 3).
2. You land on the pavement and run downhill toward Bristol Marsh. You seep into the groundwater (go to 4), wash into the Marsh water (go to 5) or are taken up by a plant (go to 6).
3. You land in the Delaware River and start to move down stream toward the Marsh. As you move down stream you are either taken up by an aquatic plant like the arrow arum (go to 6) or you remain out in the open water (go to 5).
4. As you percolate down through the soil in the flood plain next to the Marsh, you pick up minerals, pollutants and other chemicals. You enter an underground aquifer and become groundwater. A thirsty American beech tree needs you to continue photosynthesis (go to 6) or you are pulled into the Water Treatment facility (go to 7).
5. It's a nice sunny day out and you start to warm up. Through **evaporation**, you turn into vapor and enter the atmosphere (go to 8) or you are pulled out of the Marsh with the tides and enter back into the Delaware River (go to 9).
6. The plant undergoes photosynthesis to make its own food. In the process you are transpired and enter the atmosphere as vapor (go to 8).



7. You move through the water treatment plant. You're treated with chemicals, filtered and distributed into the pipes that go to houses for drinking water. You are consumed by a human for drinking (go to 10) or you travel through a hose to water the garden (go to 2).
8. Brrr...the air high up in the sky is cold! You start to **condense** and form a cloud. Many other water droplets in the atmosphere join you and eventually the cloud gets too heavy for all of the water and **precipitation** starts to occur. The water cycle starts over again! Go back to 1.
9. You move along the Delaware River out of Pennsylvania, along the coast of New Jersey, past Philadelphia and Delaware. Finally after the long journey you end up in the Atlantic Ocean! (Many things can happen here such as ocean currents taking you to another continent, a plant using you, or evaporation. For simplicity's sake, the raindrop evaporates.) You warm up and evaporate into the atmosphere (go to 8).
10. The human who drank you exercises, warms up and loses moisture through the skin by sweating and you enter the atmosphere as vapor (go to 8).



EXTENSIONS

For older students

- Pick out the bold words and other terms that are new to you within the Ricky the Raindrop story. Then look up what each word means.
- Draw a picture of the water cycle using the terms in the activity.
- Make up a different story about where Ricky the Raindrop might go when it rains. Consider focusing on a different body of water, like a river in another country.

For younger students

- Pick one part of Ricky the Raindrop's story and draw a picture about it. Write the details of the story too.
- Imagine other places that Ricky the Raindrop could end up when he lands on the ground after it rains. Maybe when he's in the air he even ends up in a rainbow for a while. Draw a picture and write a story about it.
- Come up with a list of other animals and plants that may live in Bristol Marsh or the Delaware River.