

WETLANDS ARE LIKE SPONGES

GRADES 3-5

This activity was designed as a companion for the music video “Wetlands Have Real Important Jobs To Do.”

BACKGROUND

In the music video “Wetlands Have Real Important Jobs To Do,” students learn about the many functions of wetland ecosystems, including slowing the flow of water over the land, acting like a sponge to soak up excess water, filtering and purifying water, allowing sediment to settle out, trapping nutrients and other chemicals, and providing habitat for countless birds, mammals, insects, amphibians, and microbes.

This activity will help students better understand the ability of wetlands to act like a sponge, soaking up water. Wetlands contain hydric soils that have a large capacity to hold water. In times of excess rainfall and flooding, wetlands can provide a much-needed storage basin out on the land, allowing the water a place to go before it rushes downstream in overflowing rivers. In times of less rainfall or drought, wetland soils slowly release the water that had previously been held.

MATERIALS

- 4-5 1-2 cup jars (peanut butter jars are a good size)
- 4-5 small pots (3/4 inch diameter) or large paper coffee cups
- Soil (If you use potting soil, mix half and half with garden soil)
- 4-5 bowls to set the pots in (big enough to hold up to a cup of water without spilling over)
- 4-5 saucers or lids from recycled containers large enough to set the pots on
- 4-5 stopwatches or kitchen timers
- 1 250 mL graduated cylinder OR 1-cup liquid measuring cup (groups can share)
- Wetlands Are Like Sponges Data Sheet (on next page)

TEACHER PREPERATION

1. Make sure the soil is mostly dry before you begin this activity.
2. If using paper coffee cups instead of pots, poke small drainage holes in the bottoms of the cups.
3. Fill cups or pots with soil, packing it down so that it is pretty compact, leaving about 1 inch between the top of the soil and the top of the pot.
4. Duplicate Wetlands Are Like Sponges Data Sheet (following page) for each group or write questions on board.
5. Divide class into 4 or 5 groups and distribute pots with soil, jars, saucers, and stopwatches/timers. Guide students in carrying out the “Wetlands Are Like Sponges” experiment on the following page.

WETLANDS ARE LIKE SPONGES DATA SHEET

Name _____

INSTRUCTIONS

1. Measure 1 cup (236 mL) water and pour it into the jar.
2. Record the time in the data table below (left column Day 1) and pour water into pot until it covers the soil and is almost level with the top of the pot.
3. When all of the water has soaked in, pour more water into the pot. Continue doing this until you have poured all of the water into the pot. Record the total volume of water poured into the pot.
4. When the water has stopped draining into the bowl, take the pot out and set it on the saucer or lid.
5. Record the ending time.
6. Measure the volume of water in the bowl and record the amount in the data table below.

Data Observations

Day 1	Day 2
Starting time:	Starting time:
Volume of water poured into pot:	Volume of water poured into pot:
Ending time:	Ending time:
Volume of water drained out of pot:	Volume of water drained out of pot:

ANSWER THESE QUESTIONS

1. How much water did you pour into the pot?
2. Did all of the water drain out?
3. If not, where is the water?
4. How long did it take for the water to stop draining?

Wait a day, and repeat the experiment. Compare and contrast how the soil behaved when it was fairly dry and when it was saturated. How does this experiment demonstrate that wetlands (specifically wetland soils) are like sponges?