

Soil activity

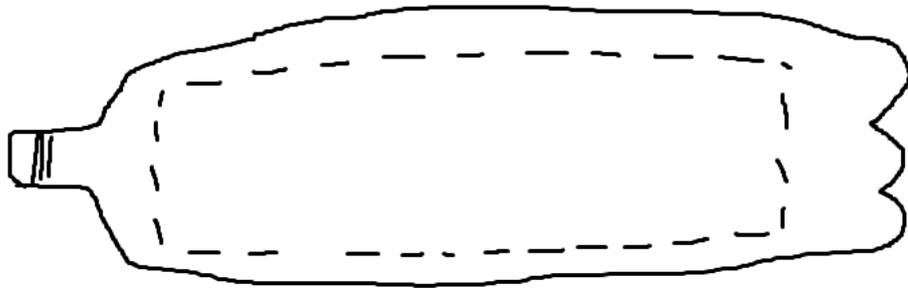
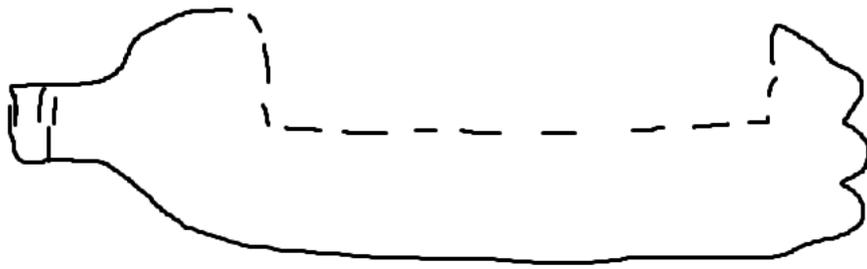
Materials needed:

- 1 small bag of **soil** (soil from your yard or potting soil from the store will work, as long as all three containers have the same soil).
- 3 empty **1-liter clear plastic bottles**
- 3 empty **12oz clear plastic bottles**
- For **grass** (either buy a quick sprouting seed like perennial ryegrass and grow it a week before the experiment or use a plug from turfgrass that is about 2''x 7'')
- String (at least 30 inches)
- Half a grocery sack of **dried dead leaves** (if dead leaves aren't available straw or mulch can be used).
- **Scissors**
- Three **containers** the same size to pour the water from.
- **Water**

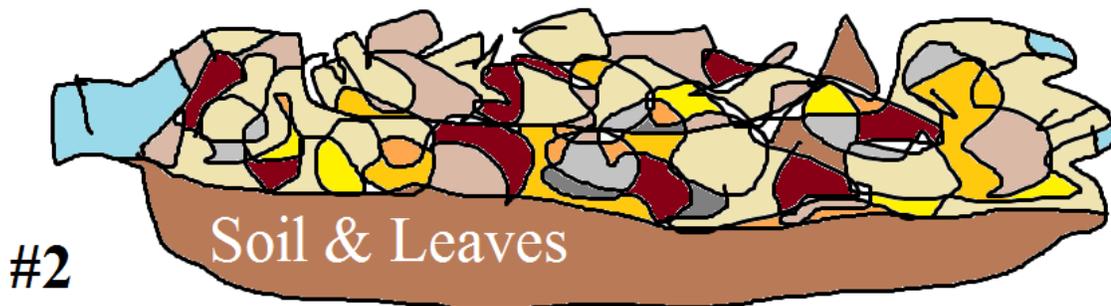
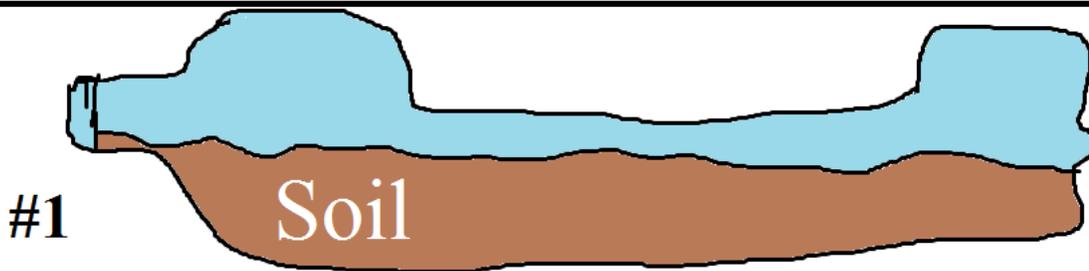
Instructions:

- 1.) If you do not have a plug of turf grass. Purchase any type of quick germinating seed in a rectangle container use the same dirt you're going to use for the experiment and
- 2.) Empty the 3 1-liter clear plastic bottles and 3 12oz clear plastic bottles, rinse and dry.
- 3.) With scissors cut the same opening on all three large bottles. (See photo)
- 4.) Lay the bottles cut side up and fill the bottles with the same amount of soil. Fill them to just below the bottom of the spout.
 - a. For the second bottle add leaves to the remaining portion of the bottle. Make sure to get the leaves in the front and back crevasse of the bottle.
 - b. For the third bottle, transfer your grass seed (either the newly grown seed or the turf plugs). Make sure the grass fills the bottle.
- 5.) Next cut the smaller bottles. (See photo)
 - a. In each small bottle, puncture two small holes towards the top of the bottle on opposite sides from each other. (See photo) Make sure they are large enough to run a piece of string through it.
- 6.) Cut about 10 inches of string and tie to large bottle, on the neck. When you tie the string make sure there's an even amount on each side. Tie the excess string to one of the small bottles by threading one piece of string into one side and securing a knot. Then tie the second piece of string into the other hole. (See photo)
 - a. Repeat for all three.
- 7.) After the bottles have been filled and tied place them on the edge of a sturdy, flat surface. Let the smaller bottle dangle off the side. Make sure it lines up to the spout because the smaller bottle will catch the over flow of water. (See photo)
- 8.) Once everything is in place. Fill three separate containers with equal parts of water. Beginning with the bottle with **ONLY** soil in it, begin to slowly pour water, evenly into the container. The water should start to mix with the soil and overflow into the smaller cup.
 - a. Repeat for the next two bottles.
 - b. With each bottle your overflow water should become more clear.



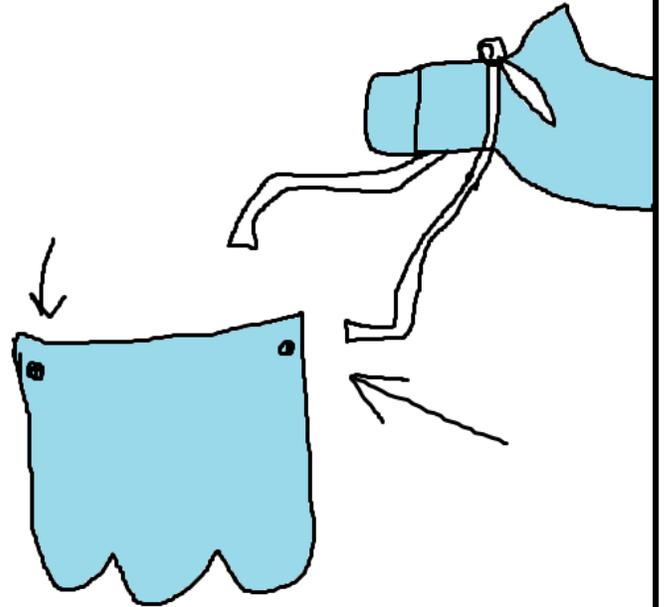


Cut along dashed line.

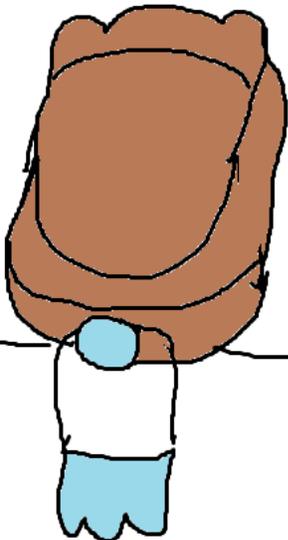




Cut along dashed line. Keep bottom.



Tie string around liter bottle neck. Punch two holes into small bottle bottom, on either side. Thread string through each hole on small bottle, so the bottom bottle hangs evenly.



#1



#2



#3

The three large bottles should be placed on the edge of a flat, sturdy surface, so the small bottom bottle can hang off the edge. Make sure the small bottles are hanging evenly so water doesn't flow out.