



Soil's Part in the Rain Cycle



Raccoon Creek Explorers Activity #11

Supplies:

- Two paper cups
- Measuring scales
- Enough soil to fill one cup
- Measuring cup
- Pin
- Paper

Vocabulary:

Soil: is the combination of organic matter, minerals, gases, liquids, and organisms that together support plant life.

Evaporation: the process of turning from a liquid into vapor.

Atmosphere: is the envelope of gases surrounding the earth or another planet.

Groundwater: is the water found underground in the cracks and spaces in soil, sand, and rock.

Background:

Soil plays an important part in the storage and distribution of the water that reaches it. The role the soil plays in the water cycle is important because helps to provide water for plants, animals, and humans. There are three main outcomes for the water that reaches the soil surface: flow over its surface to reach the streams, lakes, and rivers; entering the soil and partially filling pores from which position it provides water for plant roots and ultimately for the above-ground parts of plants; and passing straight down through the soil, into the aquifers and rock bodies below.

In this activity, you will be able to observe what some water does when it is captured by soil and then see how it evaporates back into the atmosphere.

Let's Get Started:

- 1.) Fill one of the cups with soil until you have one-half an inch of space left from the top of the cup. Weigh the filled soil cup and record the weight.
- 2.) Poke some small holes in the bottom of the cup with soil. This will allow water to run through and drain out of the cup.
- 3.) Measure and gently pour two cups of water over the soil surface. While pouring the water place the empty cup under the cup with holes in order to catch the water.
- 4.) Weigh the soil-filled cup and again record the weight of the now wet soil cup.
- 5.) For the next three days measure and record the weight of your soil.

Reflect:

How does this activity compare to the actual situation of rain falling on the ground?

What happened to the water held by the soil initially?

How much lighter did your cup get will the last weight measure when compared to the first measurement?

Apply:

Where does the evaporated water go?

Why does soil hold water?

Why is soil an important part of the water cycle?

Wrap-Up:

Soil helps retain water so plants and animals can use that water. Even though soil holds water well evaporation does happen. Even in the soil!

