

Lesson 1

How Is Water Collected and Saved for Us?

Key Idea

Water is collected and stored by natural and man-made systems.

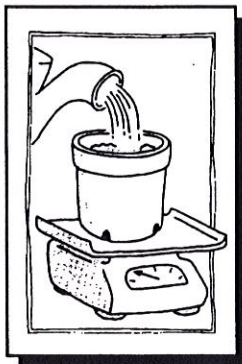
Activity

Students will learn how the ground collects and stores water.

Materials

Plastic pot full of soil
Five small plastic glasses
Quart of water
Tray to catch excess water
Funnel
Kitchen scale

Procedure



- 1** To show how soil holds water like a sponge, weigh the pot of soil and record the weight on the board.
- 2** Place the pot on the tray. Fill the plastic glasses with water and select five children to "rain" (sprinkle water) on the pot. Ask:
 - What is the water doing?
 - Where is it going?
 - Will the pot weigh the same or differently? More or less?
- 3** Reweigh the pot and compare the figures.
 - Why does water move downward through the soil? (gravity)
- 4** Pour the excess water not absorbed by the soil back into the quart container.
 - Did we get all the "rain" back? If not, where did we lose some?

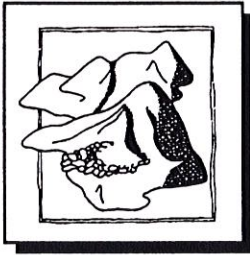
Procedure (cont.)

- Why is soil something like a sponge when it rains?
- When it rains, which will store the most water? The paved streets, the sidewalks, the packed playground, the garden soil, or the forest soil?
- How could plants help us save rain? Which part of the plants hold back the most water? (roots) Why can soil be called a kind of water "bank"? (Water is stored in the open spaces between soil particles.)

Extension

Students will understand how runoff water is collected by nature.

Materials needed: 2 quarts of water, two small watering cans with fine spray heads, a collection of small pebbles or a bag of soil, sandbox or uneven school yard area, 3 feet square.



Take the class and the materials to a selected area. En route, children may collect more pebbles.

Explain: Imagine that this area is a miniature model of some place on earth with high and low spots, mountains and valleys. Which spots could be the mountains; which could be the valleys?

Next, have two children fill the watering cans and "rain" on the area until the can or one container of water is used up.

- What is happening to our rain? How much of it ran off? How much soaked in? Did it collect in some places?

To make more soak in, help the children select small wrinkles or folds in the surface where low rows of pebbles can be piled across to form small catch basins. Again, try "raining" with the second container and note less runoff and water loss. This simple method has been used for centuries by people living in lands where there is very little rain.

To continue your students' studies on groundwater, review the "Groundwater Model" activity in Book Two.