

ACTIVITY #4

EVAPORATION

Purpose: Demonstrates the slow evaporation rate in a cave system.

Materials: Large Plastic Cups
Plastic Wrap
Measuring Cups
Measuring Spoons

Procedure:

1. Place a specific, measured quantity of water in each cup. Use the same amount for each cup.
2. Cover one cup tightly with plastic wrap.
3. Poke 2 or 3 pinholes in the top of the plastic wrap to simulate the natural openings to a cave system.
4. Set the cups in a spot, not in direct sunlight, where they can remain undisturbed for a week.
5. At the end of 5 days, carefully pour the water from the covered cup into the original measuring cup.
6. Use the measuring spoons to add water to the measuring cup until the water is at the original level.
7. Record the amount of water added to the measuring cup.
8. Repeat the measuring procedure with the uncovered cup.

Comments:

If this activity is being done as a teacher demonstration, it may be helpful to use containers larger than plastic cups. (Cake pans are ideal.) Keep the containers in an accessible spot so the students may observe the evaporation process. The covered pan will lose less water because it is not exposed to air currents. Any condensation that occurs inside the plastic wrap will demonstrate the process of water evaporating from the mud floor of a cave or cavern during a dry season to keep the environment moist. For younger students, it may be useful to mark the original water level in each container at the beginning of the experiment to make the evaporation more visible. For older students, daily observations and records may be made. Older students may also be asked at the beginning of the activity to hypothesize which container will lose more water to evaporation.