

Name _____

Observing the Water Cycle

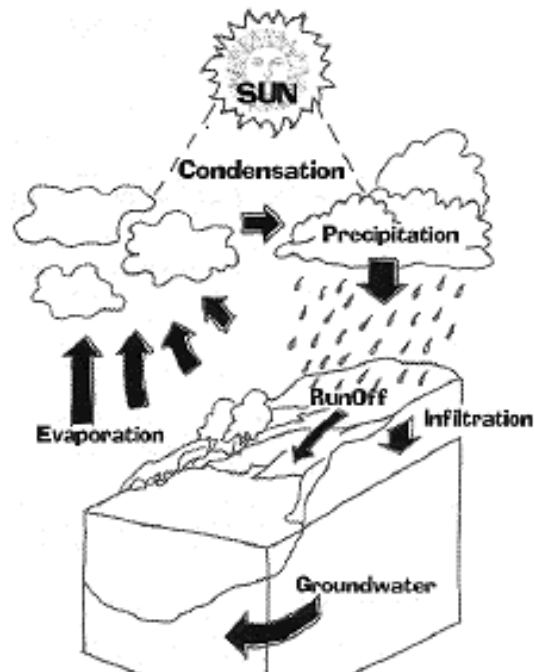
Problem: To create a model of the water cycle in a closed environment to gain a better understanding of the processes involved.

Background Information: Water is one of the basic building blocks of all life. It is also one of the basic ingredients of our weather. About 71% of the Earth's surface is covered by water. It is present in oceans, rivers, lakes, the polar ice caps, clouds, rain or snow, ground water and living things such as plants and animals.

Water is always moving. Surface water, warmed by the sun, evaporates into the atmosphere. Water vapor is carried by the wind all over the globe. Eventually the water vapor cools and condenses into clouds, fog, dew or various forms of precipitation. Once on the ground the water can evaporate directly or travel as runoff into the ocean, rivers, lakes or a ground water system eventually to evaporate again. This pathway of water is called **THE WATER CYCLE**.

All of the earth's water goes through this cycle in which the water changes its location or physical state through five different processes. Water can be found in all three states of matter during the cycle: solid (ice caps), liquid (lakes) and gas (water vapor).

The processes by which water moves through the cycle can be described like this: Water in oceans and lakes evaporates into the air. Cool air in the atmosphere causes this water vapor to condense into a cloud. Precipitation from the cloud falls to the ground as rain, sleet or snow. The water on the ground infiltrates & percolates through the soil and some of it is absorbed by plants. As the plants go through photosynthesis (converting sunlight, water and carbon dioxide for their own food), they absorb water from the soil and release some of it back into the air through transpiration.

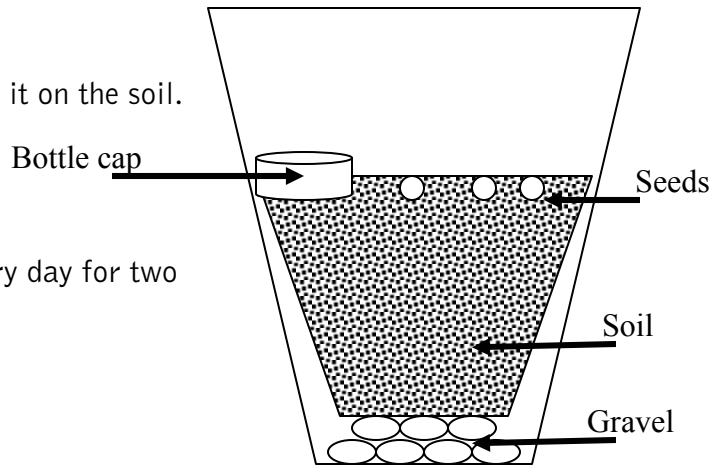


Materials:

2 large plastic cups	Gravel	Seeds
Potting soil	Plastic wrap	Water
Lamp	Rubber band	Plastic lid from soda bottle

Procedure:

1. Put a layer of gravel in the bottom of your cup.
2. Add soil to fill about 2/3 of the cup.
3. Gently plant 2 – 3 seeds in the soil.
4. Add two spoons of water.
5. Fill the bottle cap with water and set it on the soil.
6. Cover the top of the cup with plastic wrap. Use a rubber band to secure the wrap.
7. Set the cup in a sunny spot.
8. Observe and record observations every day for two weeks.



Data:

Date	Observations

Conclusion: Write a paragraph describing the water cycle in your cup. Be sure to explain how *evaporation*, *condensation*, *transpiration*, *precipitation*, and *infiltration* occurred.

