



Water Cycle

CONTENT STANDARD: Earth Science

CONTENT TOPIC: Meteorology

CONCEPT: Weather is a result of changing atmospheric conditions.

CONTENT OBJECTIVE: To understand condensation and evaporation and their relationship to the water cycle

INSTRUCTIONAL OBJECTIVES: The learner will:

- Define condensation.
- Define evaporation.
- Define precipitation
- Explain what occurs in the water cycle process.

OUTLINE OF CONTENT:

- I. Water evaporates and condenses
- II. Water is old
- III. Water is reused
- IV. Water cycle

GOAL: To enable students to acquire scientific knowledge by applying concepts, theories, principles and laws from earth science.

STANDARD(S): The learner will understand that:

Everything is constantly changing; rates of change vary over a wide scale with a great variety in patterns of change.

BENCHMARK: Some things may stay constant while others change.

Cycles of change can be extended in scales of time, space, and material.

BENCHMARK: Changes occur in various ways and may be altered by controlling some variables.

CLASSROOM CONNECTORS

TIME REQUIRED : 35 minutes

MATERIALS: Baby food jars, plastic wrap, rubber bands, and water.

SET: Raise your hand if you've seen anyone riding a bicycle. Today you will learn about the **water cycle**. A water cycle is like the wheels on a bicycle, it goes around and around. You will see what happens to water on earth.

INSTRUCTION:

Say to students: "Get down on the floor and curl up into a ball. Close your eyes and turn on your imagination. I am going to take you on a journey that you have taken many times before and you will take many times again. I want you to pretend that you are a small drop of water in the mud puddle on the sidewalk outside our window. You are a tiny drop of water just sloshing around with all the other drops of water. Go ahead and "slosh." All of a sudden the bright sun comes out from behind a fluffy white cloud and shines her warm light on you. How do you feel now? (Warm or hot) What's happening to you now? (Disappearing, evaporating) Hey! Where are you going? (Into the air, up into the sky). Put out your arms and gently float upward. Brr, now it is getting cold. What is happening to you? (Condensing back into a water droplet) Bring yourself back together again. You are once again a drop of water, but now you are high up in the sky. All around you, you can see and feel other drops of water floating around. Where are you? (In a cloud) Teacher summarizes the water cycle and draws it on the chalkboard with student input. Use arrows to show cycle.)

1. Water from the rivers, oceans, lakes and ponds changes from a liquid to a gas and rises. (*Evaporation*)
2. This forms clouds. (*Condensation*)
3. *Precipitation* (Rain, snow) falls from the clouds back to the ground.

Where does all the water go? (response) All the water that was ever on earth is still here. It is very, very old. We use the water over and over. As the water falls in the form of rain, sleet, snow or other ways it goes into the ground or it will be evaporated into the air. This cycle goes on and on. Water is very old and we can't get new water. What questions do you have? (response)

SUPERVISED PRACTICE:

1. Fill a baby food jar half full of hot water.
2. Cover with plastic wrap.
3. Put rubber band around jar to hold in place.
4. Place an ice cube on top of plastic covered jar.
5. Predict what will happen inside the jar.

CLOSURE:

Refer to drawing on the chalkboard. Say words "evaporation, condensation, and precipitation." Have students tell which word on diagram is being described, 1, 2, or 3. Tell your neighbor one reason weather changes. How could you speed up the cycle in the jar? (By heating the water or by cooling the plastic wrap.)