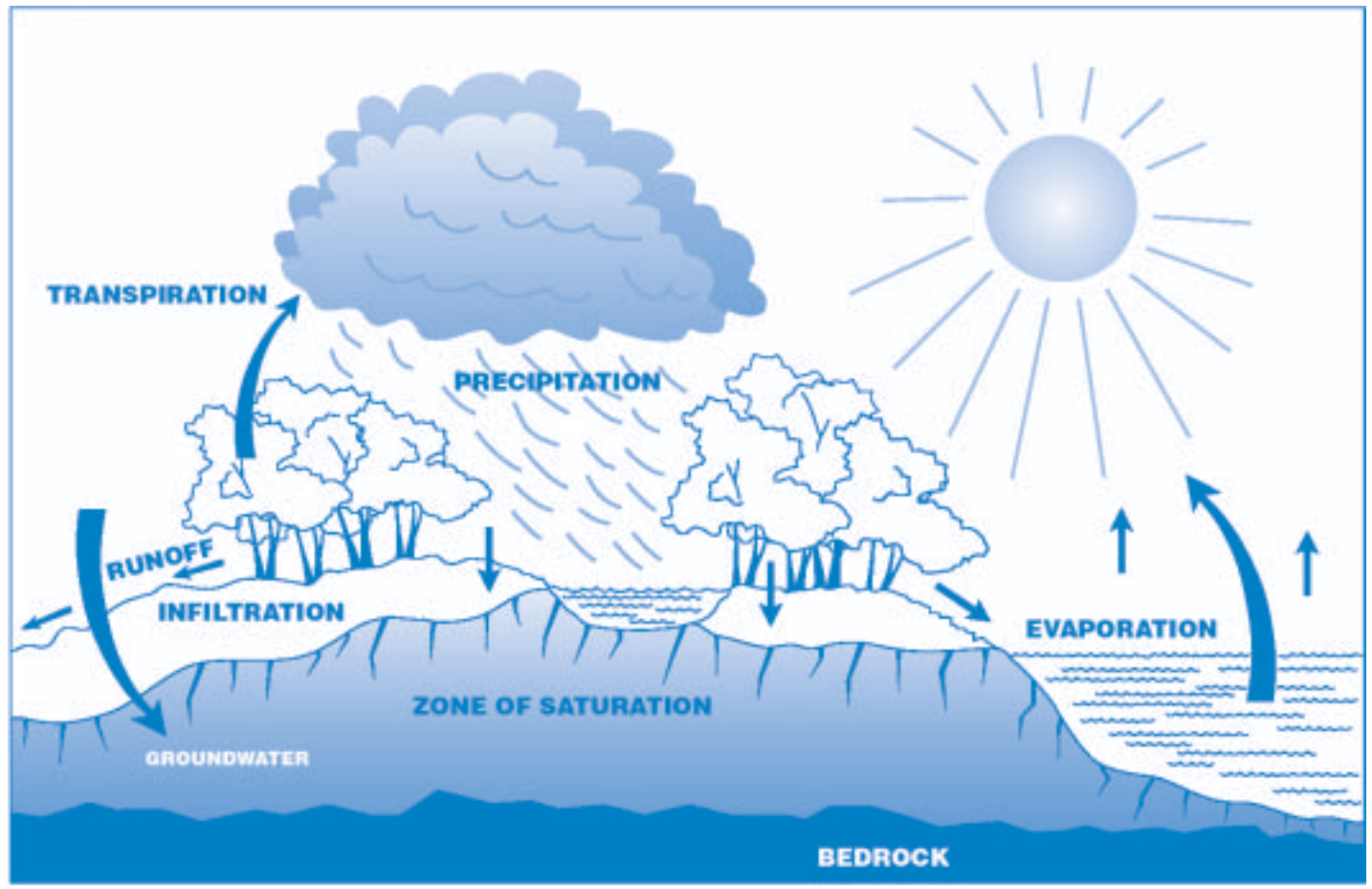
GRADES 3-5

UNDERSTANDING THE WATER CYCLE



SUBJECTS:
Science

OBJECTIVES:
Students will demonstrate the water cycle.

TIME:
1 class period, then a few minutes followup for two weeks

MATERIALS:
- Colored pens or crayons in red, blue, green, yellow
- Handout of water cycle for each student (Copy graphic to the right)
- Two recycled 2-liter bottles
- Small houseplants
- Soil
- Sand
- Water
- 2 small recycled bottles

KEY WORDS
• Evaporation • Transpiration

BACKGROUND INFORMATION

In order to understand the way that pollutants move through the ecosystem, one must understand the hydrologic cycle.

PROCEDURE

1. Prepare the two 2-liter bottles by cutting around the shoulder of the bottle, forming a "lid". This will be taped back on once the bottle is filled with terrarium items.

2. Have students review the water cycle and focus on the words evaporation, transpiration, precipitation and runoff. Go to the website listed below to learn about the various components of the water cycle.

3. Ask students to show the movement of water using colored arrows. Use red for precipitation, blue for surface water, green for groundwater, and yellow for water that is evaporating or transpiring back into the atmosphere.

4. **Ask:** How do plants affect the water cycle? How do animals? Where does water pick up impurities? How? What human activities affect the water cycle?

5. Perform a demonstration using the two 2-liter bottles. Label one "transpiration", the other "evaporation". Put sand and soil in each, and a plant in the "transpiration" bottle. Fill the little bottles half full with water. Place one in each 2-liter bottle.

6. Mark the water levels of each little bottle each day. Have the students record their observations.

Adapted from *TVA: A World of Resources,* 1989

http://www-k12.atmos.washington.edu/k12/pilot/water_cycle/where_the_water_goes.html