



## The Water Cycle Filling Instructions

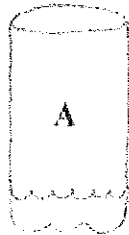


### Materials

- soil
- hand shovel
- water
- measuring cup
- grass seed

**1.** Wet both strips of cloth. This will allow water to travel along the cloth through capillary action.

**2.** Add about 250 ml of water to Bottle A. This will be your source of water for the cycle.



**3.** Fill Bottle B with enough premoistened soil to cover the loop of the string (about 250 cc or a little more than 1 cup)

**4.** Sprinkle a bottle cap of grass seed into the soil in Bottle B.

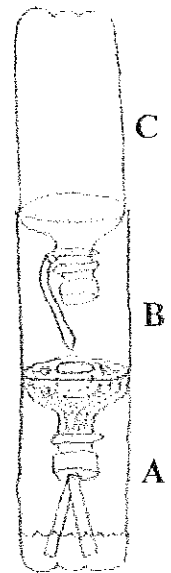
**5.** Press the remaining bottle cap into the soil to act as a collection point (pond, lake, etc.) for water.



**6.** Trim the wick hanging from Bottle C like a necktie so that it hangs over the "pond."

**7.** Fill Bottle C with 200 ml of water and cap it tightly.

**8.** Assemble the model and place where it can receive light for growth.





## The Water Cycle Building Instructions



### Materials

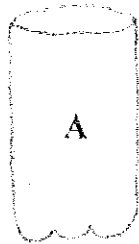
- three two-liter bottles with caps
- a drill with a large (1/4" or so) drill bit
- pliers
- drywall screw or old style compass
- two 30 cm strips of cotton shirt, sock, or rag

### Before you begin:

Have an adult drill a 1/4" hole in one of the three bottle caps.

1. Remove labels from bottles.

2. Cut Bottle A just below the upper curve.



3. Cut Bottle B just above the curved bottom.

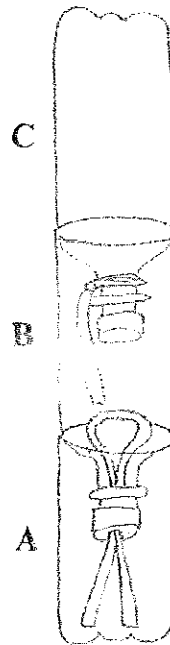
4. Place the predrilled cap on Bottle B. Insert a 30 cm looped strip of rag, sock, or old shirt, so about 10 cm hangs down from the cap.



5. Tie a 30 cm looped strip of rag, sock, or old shirt around the neck of Bottle C so one end hangs down about 5 cm.



6. Assemble.

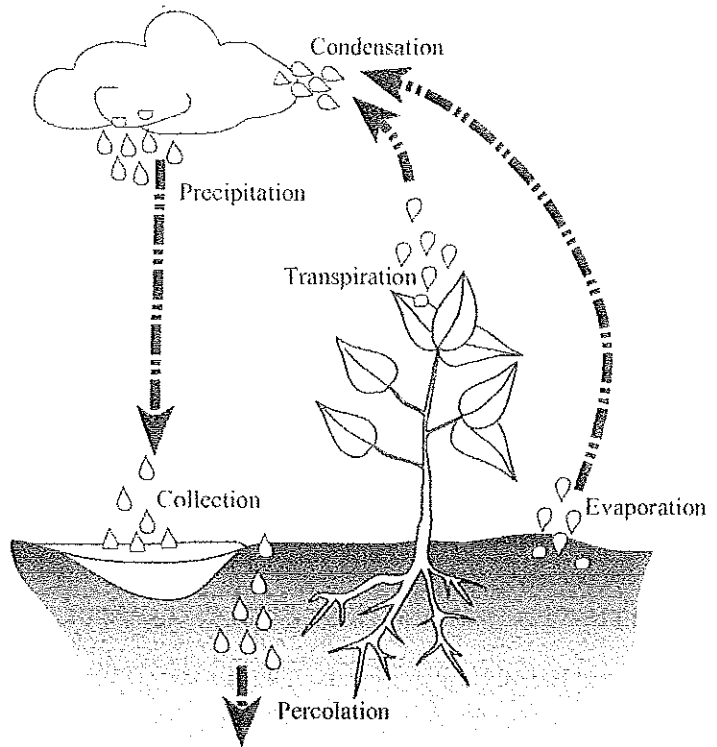
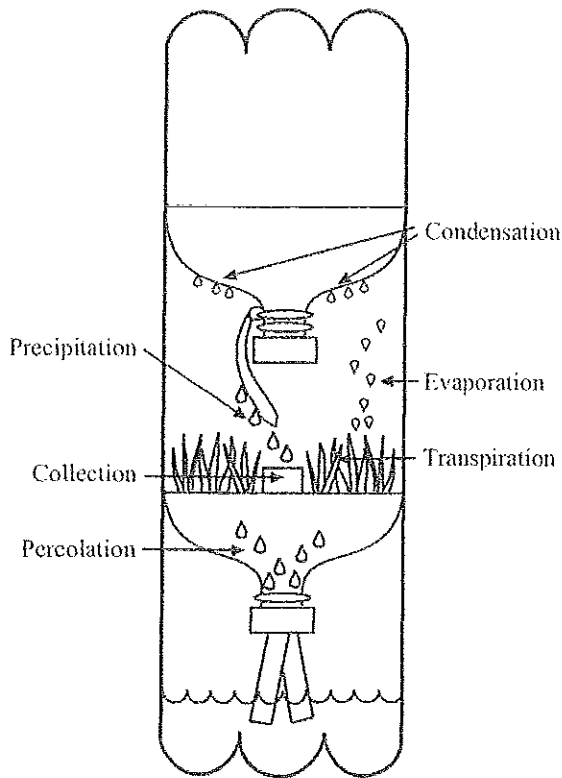




# The Water Cycle Processes



**Directions:** Cut out the two drawings and attach them to opposite sides of the top bottle.



**Directions:** Write the six water cycle processes on the small labels below and attach them in their appropriate locations on the model. Use the above drawings as a guide.

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**Directions:** Write "drinking water" on the large label to the right and attach it near the water in the bottom bottle.

**Directions:** Attach the water cycle process terms opposite the "drinking water" label on the bottom bottle.

- evaporation:* water traveling upward as a gas
- condensation:* water collecting in clouds as a solid or liquid
- precipitation:* water falling from the sky as rain, snow, etc.
- collection:* water collecting in puddles, ponds, rivers, oceans, glaciers, etc.
- percolation:* water mixing with the soil
- transpiration:* water evaporating from the leaves of plants

Name \_\_\_\_\_

Date \_\_\_\_\_



## The Water Cycle Proficiency Assessment



**Directions:** Use the diagram as you answer questions 1-6.

Extended multiple choice.

1-2) What provides energy for the water cycle?

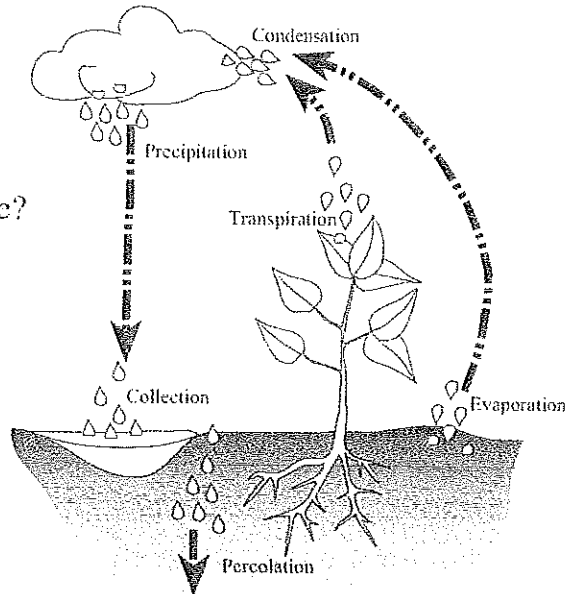
- a) the wind
- b) the soil
- c) the sun
- d) the water

Explain \_\_\_\_\_

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3-4) Chemical lawn fertilizer sprayed on a lawn is found in underground drinking water. Which processes allowed the fertilizer to get into the groundwater?

- a) evaporation and condensation
- b) precipitation and evaporation
- c) transpiration and condensation
- d) precipitation and percolation

Explain \_\_\_\_\_

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**Directions:** Short Answer.

5-6) Which two processes in the water cycle are most similar? Explain.

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