

## Materials:

Sand    Water    Ice    Model Bottle    Water-based Marker Pen    Bottle Bottom

## Background:

Scientists call the constant endless movement of water from the atmosphere to earth to groundwater to river to ocean the **hydrologic cycle**. How long it takes water that falls from the clouds to return to the atmosphere varies greatly. Scientist predict it would take nine days to replace all of the atmospheric water and 37,000 years to replace all of the water in the ocean. In this activity we will create a **hydrologic cycle**.

## Procedure:

1. Put the screen into the model bottle and put a cap on it.
2. Fill your model bottle with sand to the 1,000 milliliter mark.
3. Holding the bottle with your hand or a ring stand, slowly pour in 200 milliliters of water.
4. Let the water settle.
5. Turn the cut out bottle bottom upside down and insert it into the top of the model bottle, so you can add material to the bottle bottom.
6. Put some crushed ice into the bottle bottom (which is at the top of the model bottle).
7. Set the bottle in a ring stand in sunlight or beside a strong lamp and observe.
8. With your marker, based on your observations and the descriptions above, label the groundwater model bottle with the following:  
*Groundwater*  
*Surface water*  
*Evaporation*  
*Condensation*  
*Precipitation*
9. Draw the water cycle on a piece of paper.
10. Clean up.

