

Water Cycle in a Bag

Simple STEM Activity

Purpose:	To understand the water cycle.
Standard(s):	<p>S4E3. Obtain, evaluate, and communicate information to demonstrate the water cycle.</p> <p>b. Develop models to illustrate multiple pathways water may take during the water cycle (evaporation, condensation, and precipitation). (<i>Clarification statement:</i> Students should understand that the water cycle does not follow a single pathway.)</p>
Materials:	<ul style="list-style-type: none"> • a zip type plastic bag • color markers (e.g. Sharpie Permanent Markers or any non-erasable markers) • water • blue food coloring (optional) • packing tape
Procedures:	<ol style="list-style-type: none"> 1. Draw the water cycle on a zip-type bag. 2. Add blue food coloring into the water, if desired. 3. Place water into the bag and zip it closed. 4. Hang the bag upright on the window using packing tape. (ground water) 5. As the water evaporates, vapors rise (evaporation) and condense at the top of the bag. You may be able to “clouds” form near the top of the bag. (condensation) 6. After a few days, water droplets appear on the inside of the bag. As they become bigger, they will eventually slide downward. (Precipitation) 7. If the water cycle bag is left in the window and sunlight hits it, it will keep cycling through the different stages of the water cycle.
Science Behind It:	<p>The water cycle, or hydrologic cycle, is continual movement of water. The water cycle is driven by heat from the sun. Water molecules continually cycle through evaporation (liquid or solid water to water vapor), condensation (liquid or solid water) and precipitation (liquid or solid water) to earth’s surface. Water stored at ground level (ground water) and underground water is also cycled through the continuous process.</p>
Questions to Ask:	<ul style="list-style-type: none"> • What are the four stages of the water cycle? • Does the water cycle follow the same path each time?