

Activity #1: Rainmaker

1. **Summary:** The child will be able to create a miniature water cycle in a bottle and record the process of how long it takes for it to “rain”.
2. **Learning Foundation or Common Core:**
3-ESS2 Earth’s Systems
Represent data in tables and graphical displays to describe typical weather conditions expected during a season

ESS2.D: Weather and Climate

Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next.

3. **Materials Used.**
 1. Empty soda bottle
 2. Hot tap water
 3. Ice
4. **Your role.** The caregiver would engage the child by saying “Have you ever tried to make your own weather?” Next would be to explain what the water cycle is and how you are going to make a data chart of and keep track of the different stages of the cycle.

Assist the child by

1. Take the top part off your empty soda bottle, leaving the cap screwed on tightly
2. Fill the bottom part of the empty soda bottle half full of hot tap water
3. Turn the top [part of the bottle so it is upside down and fill it with ice. Set this into the bottom part of the empty soda bottle and wait
4. Observe

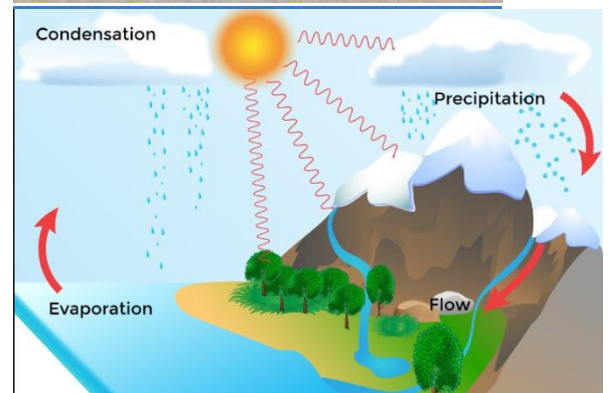
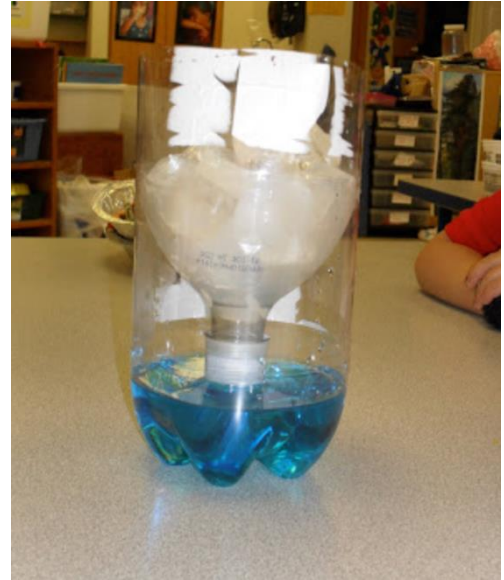
Key language and literacy development.

Vocabulary: Data, evaporation, condensation, and precipitation.

Guide the child in explaining what is happening and allow the child to make their own interpretation. Explain that “Evaporation turns liquid water into water vapor gas that rise into the air. Heat causes the water to evaporate.

As the vapor cools, it turns back into a liquid. This is called condensation. In your Soda bottle, the water vapor rises until it reaches the cold zone caused by the

Visual(s) of Activity #1



ice. You can see the droplets forming and hanging from the plastic. In nature, condensed water vapor shows up in our sky as clouds.

Clouds in the sky collect water droplets until all the droplets are too heavy to float in the air. Then water falls from the sky as rain. This is called precipitation. In your soda bottle the droplets get heavier and heavier until they fall back down into the bottom of the bottle.” (Brunelle 81).

Child’s Interaction.

**The child is to research about what the water cycle is.
The child should become familiar with the terms**

Reference:

Brunelle, L., & Meisel, P. (2004). *Pop Bottle Science: 79 amazing experiments and science projects*. New York: Workman Publishing.