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ACTIVITY: WATERSHED IN A BAGGIE

Introduction:

What is the water cycle? The water cycle is the process through which water moves continuously through the earth and its atmosphere. It is also called the hydrological cycle. There are three main parts of the water cycle: evaporation, condensation, and precipitation. All living things rely on the water cycle to keep our surface waters full and our groundwater replenished. This activity creates a hands-on demonstration of the water cycle for students.

When the weather gets warm or hot, water from lakes, rivers or streams evaporates and rises into the air. Then, when enough water evaporates the molecules begin to condense together to make a cloud. When the cloud gets heavy enough with water molecules, it comes back down to the earth in the form of precipitation (rain, snow, sleet, or hail).

Supplies List:

- Plastic zip baggie
- Permanent marker
- Tape
- Window with sunlight
- Food coloring (optional)

Activity:

1. Use the permanent marker to draw and label the water cycle on the plastic baggie.
 - a. Draw a body of water, like a lake or river, across the bottom of the bag.
 - b. Then draw the sun at the top of the bag, and some clouds nearby.
 - c. Label the water cycle parts with arrows showing evaporation, condensation, precipitation.
2. Fill the baggie with water.
3. If you have food coloring, add a couple of drops.
4. Seal the baggie.
5. Tape the baggie to a window that gets a lot of sun.
6. On a sunny day, or after a few hours in the sun, you should be able to see the water evaporating from the bottom of the bag, condensation forming at the top of the bag, and water “raining” or precipitating back to the bottom of the bag.

Wrap-up:

Leave the baggie up for one to two weeks, and log or journal your observations about the water level, temperature, and cloud cover over time.

- Does the water level ever change? In nature, what might change the amount of water available?
- Does more water evaporate on a sunny day or a cloudy day?
- Do you see more “rain” or precipitation on a very warm day or a cool day?
- If you added food dye, does the color of the water ever get darker or lighter?

Write down your hypothesis - or your educated guess - when you tape up your baggie. Review your log at the end of two weeks and see if your hypothesis was correct.