

Creating a Rain Gauge

Supplies

For each rain gauge made, you will need

1 2-Liter soda bottle with even, symmetrical sides

sand

water

ruler

permanent marker

scissors

plastic mailing/ insulation tape

****Warning – An adult needs to be responsible for the cutting and taping of the bottle.****

Directions

1. Cut the top 1/3 of the bottle off. Set aside.
2. Fill the bottom of the bottle with sand to even out the curved areas. The sand also acts as an anchor.
3. Fill the bottle with enough water to reach the very top of the sand. This is your base line for measurements.
4. With the ruler and marker, make measuring markers along the side of the bottle starting at the base line. Use smaller measurements to get a more accurate reading.
5. Invert the top of the bottle onto the bottle. Tape the edges to hold it together as well as prevent cuts from the sharp edges. The top of the bottle serves as a funnel and prevents evaporation.
6. Rain gauge complete!!!!
7. Set the rain gauge outside in a spot free from trees and buildings. To compare the effects of tree leaves and branches on falling rain, a second rain gauge could be placed under a tree.
8. Monitor rain fall amounts. It is best to check the measurements at the same time of day for a more accurate reading. Activity sheet below.

Extension Questions for Students

- Why was the inverted lid taped? (2 reasons – to hold it in place and for safety)
- Why was sand placed in the bottle? (2 reasons – to help create a base line and to serve as an anchor)
- How does the top of the bottle aid in collecting information? (2 reasons – to serve as a funnel and to prevent evaporation)
- Why was the rain gauge placed away from trees and buildings? (so that when it rains, the trees and buildings don't block the rain, causing the measurements to be incorrect)

Extension Activity

- Gather data for a month. Use the information to create graphs.

Georgia Performance Standards

S1E1. Students will observe, measure, and communicate weather data to see patterns in weather and climate.

b. Investigate weather by observing, measuring with simple weather instruments (thermometer, wind vane, rain gauge), and recording weather data (temperature, precipitation, sky conditions, and weather events) in a periodic journal or on a calendar seasonally.

