

INV. 5 ACTIVITY—DESIGN A RAIN GAUGE

Challenge: Design your own rain gauge that will accurately collect rain data.

A rain gauge is a funnel-shaped tool designed to measure the amount of rain fall in a given area. It is a closed system except for the opening at the top and must be watertight; it can't leak out any water or absorb any water into the system. It also must have ruled markings to measure the amount of rainfall it collects.

Materials

- Household materials to design and create your rain gauge

Instructions

1. Research rain gauges. Research the following information.
 - a. What kind of materials are rain gauges made from?
 - b. How big (holding capacity) is a rain gauge?
 - c. How wide (circumference) is the opening at the top of a rain gauge?
 - d. How do you make the measurement markings on the rain gauge?
 - e. What is the best location to place the gauge to collect rainfall?
 - f. How long do you leave the gauge out before recording data?
2. Based on your research, find materials in your house that be used to create your own rain gauge. Your materials should be waterproof and leakproof. Don't forget to include a system to measure the rainfall.
3. Place your rain gauge outside in preparation for rainfall (or snowfall).
4. Record the amount of rain you collect.
5. Compare the amount you collected with the amount of rainfall that your local meteorologist says your area received on that date.
How do the amounts compare?
Can you explain any discrepancy in the amounts?

INV. 5 ACTIVITY—SEVERE WEATHER

Focus Question: Where does severe weather occur in the world?

What kind of severe weather occurs?

Severe weather is defined as weather that occurs that is not normal or is “out-of-the-ordinary” for a region and is often extreme. Severe weather includes tornadoes, cyclones, monsoons, typhoons, hurricanes, heavy thunderstorms, blizzards, and temperature extremes.

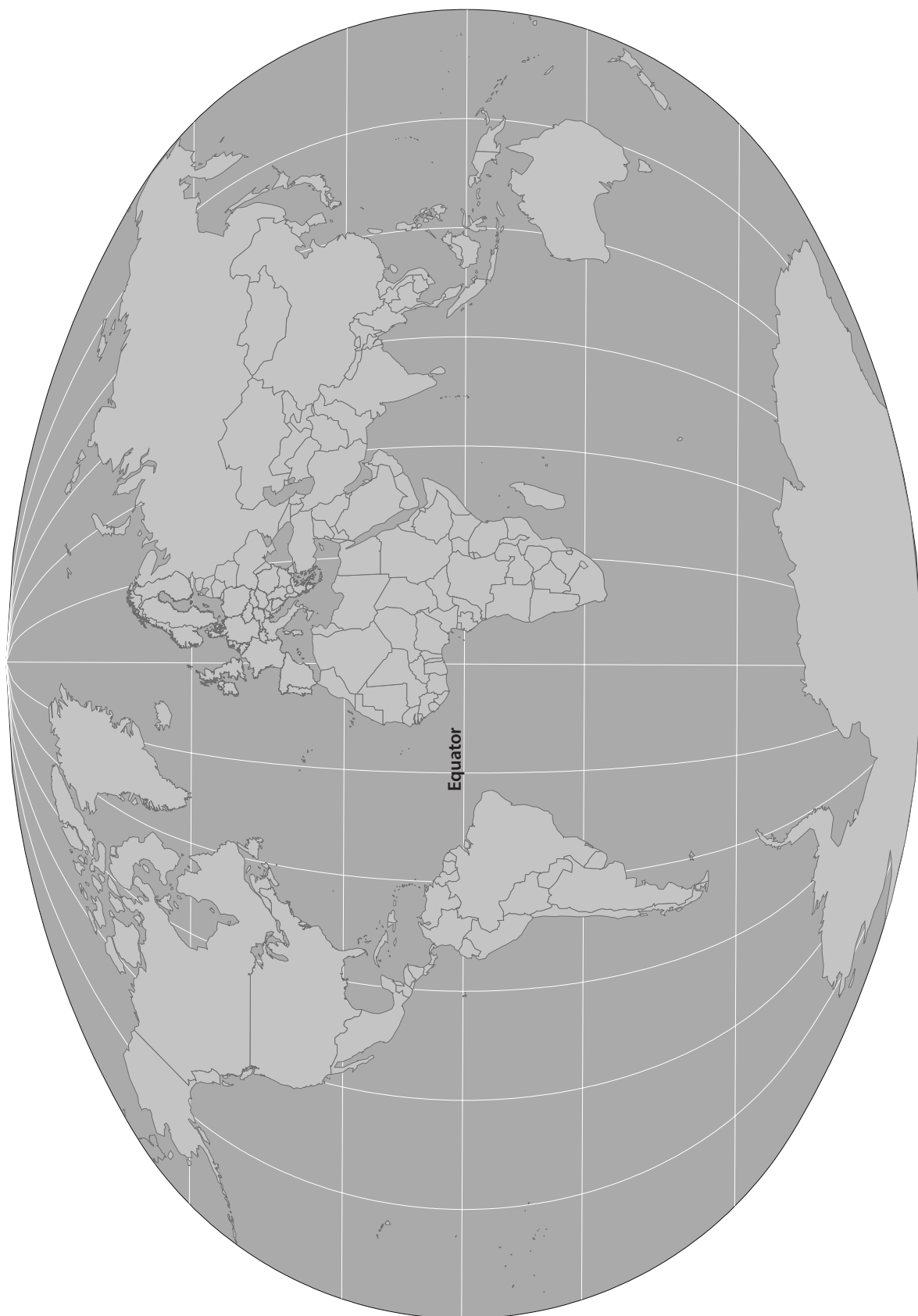
Not everywhere on Earth experiences severe weather, but some locations experience it more than others. Those areas also experience severe weather at certain times of the year.

Instructions

1. Research severe weather. Does your area get severe weather? What kind? What time of the year?
2. Find out which areas in the world have received severe weather over the past year. What kinds of severe weather occurred? What time of the year?
3. Plot the occurrences on the world map (on the next page). Do you see any patterns in the severe weather occurrences?

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INV. 5 ACTIVITY—SEVERE WEATHER (Continued)



INV. 5 ACTIVITY—WATER CONSERVATION

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**Challenge: Brainstorm a list of ways to conserve water at home.
Enact a plan to make water conservation a routine for you and your family.**

Water is a natural resource that we all need. Clean water is a valuable resource. We all need to do our part to use water wisely and conserve it whenever we can. Polluted waters and drought can limit our clean water supplies so conserving water is very important.

Instructions

1. Work with your family to come up with a list of ways to conserve water at your house.
2. Once you have a list, how can you make sure everyone is doing their best to conserve water? Design a plan that will help remind you and your family on how conserve water. Here are some suggestions.
 - a. Post self-stick notes in places where water can be conserved. For example, a self-stick note on the bathroom mirror to not let the water run in the sink when brushing your teeth.
 - b. Draw pictures/posters of how to conserve water and post them around the house.
 - c. Take pictures of you and/or your family conserving water and post them around your house or even on social media. You could even send these pictures to friends and relatives to get them to conserve water at their homes.

INV. 5 ACTIVITY—WATER MEDIA RESOURCES

Online Resources on FOSSweb (Must log in to FOSSweb with your username and password.)

Use these online resources to help review content from **Investigation 5 of Earth and Sun**. The tutorials and virtual investigations provide interactive resources that review concepts from the FOSS active investigations. The virtual investigations often mimic the active investigations that were done in class.

For the articles in *FOSS Science Resources*, access the **interactive eBook** and make sure to click on the interactive links within the readings. Be sure to take notes on what you learn from all online resources and answer the questions from the articles in your science notebook.

Investigation 5 Resources

Online Activities

- Water-Cycle Game
- Climate Regions Map

Media Library

• eBook readings (Interactive eBook)

- *Condensation*
- *Where Is Earth's Water?*
- *The Water Cycle*
- *Severe Weather*
- *Earth's Climate*
- *Global Climate Change*

• Streaming Video

- *Water Cycle*
- *Climate and Seasons*