

SfS Away from the Classroom!

ES17: Meteorology and Weather (Recommended for Grades 6-8)

Please use the following resources to learn about meteorology and the weather.

Watch this Video: https://www.youtube.com/watch?v=XirAUvS 29I

Answer these questions:

- What causes wind?
- How do clouds form?
- What is the difference between weather and climate?

<u>Activities</u>: One tool you can use to predict the weather is a barometer. Barometers measure the air pressure around you. Build a barometer and keep track of the air pressure for a week or two. After some practice, you might be able to make your own forecasts!

You will need:

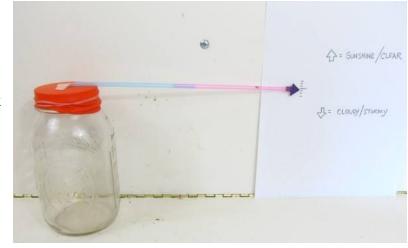
_	4	Caianaa	notehook
•	1	Science	notenook

- 1 Large balloon
- 1 Glass jar with wide mouth
- 1 Rubber band
- Scissors
- 2 Plastic Straws

- 1 Piece of paper
- Pen or pencil
- Tape

Follow these directions to make a barometer.

- 1. Cut the neck off the balloon and stretch it tightly over the mouth of the jar.
- 2. Secure the balloon in place by wrapping the rubber band around the mouth of the jar.
- 3. Make one long straw by inserting the end of one straw into the open end of the other straw.
- 4. Tape one end of the long straw to the middle of the balloon and allow the other end of the straw to stick off the side of the jar.
- 5. Cut a small arrow out of paper and insert it into the open end of the straw.
- 6. Put the jar against a wall in an undisturbed place. An inside location will work OK but a covered porch or deck will work best.
- 7. Tape the sheet of paper to the wall and mark the level of the arrow on the paper with a marker. Don't forget to add the date. Mark the paper above your arrow "Fair Weather: Sunny/Clear Skies" and the paper below your arrow "Unsettled Weather = Cloudy/Rainy"





- 8. A few times everyday for a week, record the level of the arrow in your science notebook.
 - a. Also record the date, the time, and the actual weather conditions (sunny, windy, rainy, etc).
- 9. After a little bit of observation, over a week or two, you will be able to see how the pressure changes before a storm moves in or moves away.
- 10. Try to make predictions about the weather coming when the pressure changes!

Hint: When the air outside the jar presses down on the balloon (high air pressure; dry pleasant weather), it will make the straw go up. The opposite happens when the air pressure outside the jar is low (rainy weather). Here's a great explanation of what you should see on your barometer.

Make observations & use Claims, Evidence, and Reasoning!

- 1. **Claim**: Over the week, I observed a relationship between the weather and my barometer.
 - Evidence:
 - Reasoning:
- 2. Claim: When my barometer went up, the air pressure was high and the weather was sunny and dry.
 - Evidence:
 - Reasoning:

