

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

**Watch this Video:** [https://www.youtube.com/watch?v=XirAUvS\\_29I](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?

**Activities:** 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:

<ul style="list-style-type: none"> <li>● 1 Science notebook</li> <li>● 1 Large balloon</li> <li>● 1 Glass jar with wide mouth</li> </ul>	<ul style="list-style-type: none"> <li>● 1 Rubber band</li> <li>● Scissors</li> <li>● 2 Plastic Straws</li> </ul>	<ul style="list-style-type: none"> <li>● 1 Piece of paper</li> <li>● Pen or pencil</li> <li>● Tape</li> </ul>
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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:**