



Build a barometer

See changes in the weight of the air!

You may think the air weighs nothing. In fact, it's quite heavy! What's more, there's lots of air and it extends many kilometres above us. That's a lot of atmospheric pressure on our shoulders—about 1,200 kilograms, or the weight of a rhinoceros. A barometer is used to measure this pressure. Build one yourself and observe day-to-day variations.

To build it, you'll need:

- An elastic band
- Adhesive tape
- Scissors
- A glass jar with a 7-centimetre opening
- A straw 15 centimetres long
- A party balloon
- A small ruler or measuring tape
- A fixed vertical surface, such as a cereal or tissue box

1.



2.



3.



4.



Step-by-step instructions:

1. Cut the balloon in half crosswise at the widest part.
2. Stretch the bottom half of the balloon—be careful not to tear it—over the top of the glass, covering it as tightly as possible.
3. To hold it firmly on the glass, wrap an elastic band over the balloon around the edge.
4. Tape the straw to the middle of the balloon surface.
5. Tape a ruler to a fixed vertical surface, and set the open straw end near the ruler.
6. Note where the straw is against the ruler each day. The straw may go up or down from day to day, which indicates changes in weather conditions.

When the straw has gone down ...

you will see a bulge in the balloon. This is because the pressure of the air sealed inside is greater than that outside the jar. Generally, this indicates that windy, rainy or variable weather is on its way.

When the straw has gone up ...

You will see a dip in the balloon. This is because the pressure of the air sealed inside is lower than that outside the jar. This indicates that fine weather is on its way.

5.



Important note: This barometer is not an accurate meteorological instrument, but it can indicate what conditions you might expect.

