Make an air barometer

Brief summary:

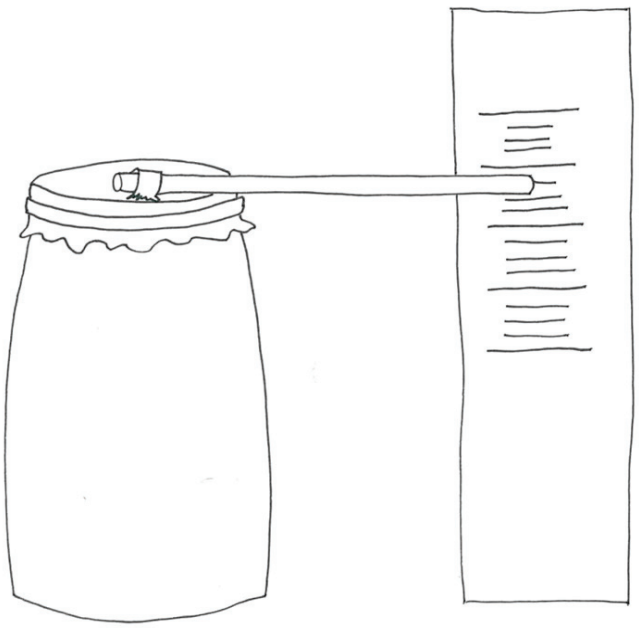
In this experiment you will make an air barometer to measure air pressure.

You will need:

- Help from an adult
- A wide topped jar
- Balloon
- Rubber band
- Drinking straw
- Scissors
- Cardboard
- Pen
- Sticky tape
- Ruler

What to do:

Step 1. Cut the balloon open and fix it tightly over the opening of the jar. Secure with a rubber band. Ask an adult to help you with this bit because it can be tricky.



Step 2. Trim the end of the straw to a point and attach the other end of the straw to the centre of the balloon topped jar using sticky tape.

Step 3. Draw a scale on the piece of card and prop the card in front of the pointy end of the straw. Mark on the scale where the straw meets the card.

Step 4. Over the course of several days watch as the straw rises and falls. Why is this? The air inside the jar expands or contracts as the air pressure rises or falls, making the straw pointer move.

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Explanation

How does this apply to weather? When air pressure is high, it prevents clouds from forming, and the weather is likely to be fair. When air pressure is low, clouds form more easily and there is a greater chance of unsettled weather and maybe even rain.

Take it further:

Record your air pressure over a longer period of time (e.g. a week or fortnight) and compare it to data on the Bureau of Meteorology website (www.bom.gov.au). Focus in particular on observations and forecasts and see how your barometer correlates to this data (e.g. high pressure events mean unsettled weather, low pressure means fine weather).

Big questions:

- How do meteoroligists use air pressure?
- What is air made of?
- What role do trees play in keeping our air clean?