

BUILD YOUR OWN BAROMETER

Antarctica is like the Earth's barometer: what happens there tells us how the world's climate will change in the future. A barometer is used to measure atmospheric pressure. This influences rainfall, temperature, winds and storminess. In this activity you will make your own barometer to measure the atmosphere around you.

🕒 1 hour

Skills unlocked: Observant, Creative, Collaborative

📦 Kit list

A 2-litre see-through plastic water bottle (empty)

Clear plastic tubing (approx. 50cm)

Ruler and pen

Sticky tape and blu tack

Water

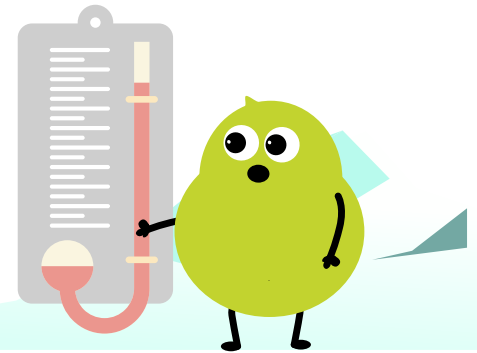
Food colouring

Scissors



📖 Instructions

- To build your own barometer:
 - Cut off the curved upper part and neck of the bottle.
 - Fix the ruler on the inside with the numbers going up.
 - Tape the tube inside the bottle a few centimetres from the bottom to allow water to be sucked through it. Secure the tube near the top of the bottle using tape, making it in line with the ruler. The rest can be left to hang loose.
 - Fill the bottle up to the halfway mark with water and add food colouring to make it easier to see.
 - Suck water halfway up the tube and trap it with your tongue. Use blu tack to seal the end of the tube and lock the water in. You are now ready to measure!
- The water level will rise and fall depending on the air pressure. When there is higher pressure, the water will rise. This means there is increased chance of clear weather. When air pressure lowers, the water will fall. This means there is increased likelihood of clouds and rain.
- Monitor the changes for a set period of time – this could be a week, a month or a whole term. Make a note of what the weather was like following the reading. How good is your barometer at predicting changes in the weather?



⚠️ Watch out

- Take care when using materials, particularly when cutting the plastic bottle and using glues and tapes.
- Ensure the equipment you make is used safely and responsibly.
- Store somewhere secure and not liable to being knocked over.
- In the interest of hygiene, choose one person to suck water through the tube rather than passing this around.

➡️ Next steps

The UK Antarctic Heritage Trust (UKAHT) is a unique charity working to help everyone discover, understand, value and protect Antarctica. They care for 6 historic bases on the Antarctic Peninsula representing the birthplace of British climate science on the continent. Find out more at www.ukaht.org 🌟

🏠 At home

You can make your own barometer and carry out your own weather monitoring at home. Do you get different measurements at home compared to school?

↔️ Career options

Lots of different types of people are needed to monitor and protect the climate in Antarctica:

- Biologists, geologists and meteorologists collect and study data.
- Conservators, carpenters and electricians look after the historic bases.
- Architects, engineers and inventors design new buildings and equipment.

BUILD YOUR OWN BAROMETER DIAGRAM

