

#LifeGoesONline

Bringing Life Science Centre to you!



How to make a Weather Station - Barometer



What is air pressure?

Even though we can't see it, or smell it, or feel it, air is all around us, and it has weight, and it is constantly pushing down on everything. Air pressure can help us to forecast the weather. Low pressure usually causes clouds, rain and wind. High pressure usually causes clear skies and dry days. When air moves from a high pressure area to a low pressure area, we get wind. Air pressure is closely linked to temperature.



Introduction:

Happy Earth Day! This year's theme is Climate Action, which means looking at changes we can all make to help our planet. We want you to take action by joining a worldwide network of scientists! You don't need a lab: you can do this from home, right now, by building a weather station with things you may have around the house.

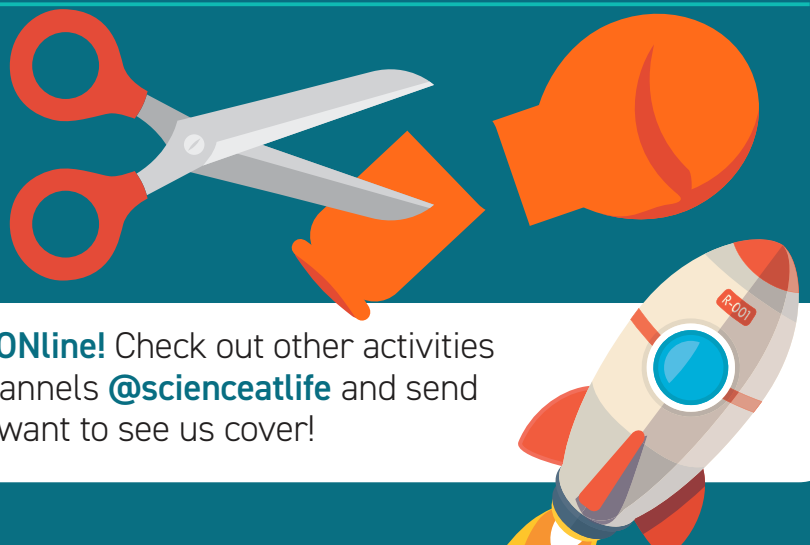
You will need:

- Empty can. • Balloon.
- Straw or stick (e.g. lollipop stick).
- Pin. • Scissors. • Tape.

What to do:

STEP 1

Cut the neck off a balloon.



We are stuck at home, but **#LifeGoesONline!** Check out other activities to try at home on our social media channels **@scienceatlife** and send us a message if there's anything you want to see us cover!

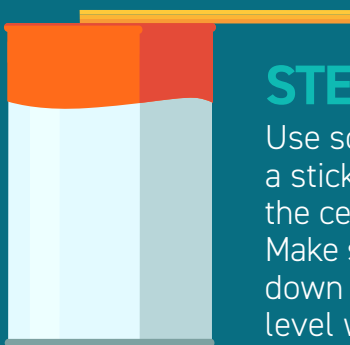
STEP 2

Take your empty can (making sure the lid has been removed and that there are no sharp edges) and stretch the balloon over the top. You might need some help to do this as it is quite fiddly.



STEP 3

Use some tape to attach a stick/ straw/ pencil to the centre of the balloon. Make sure it is well stuck down so that it stays level when you let go.



STEP 4

If you want to make your barometer really accurate, push a pin into the end of your stick (you may need to glue it if you use a straw or a lollipop stick). This makes it easier to notice tiny changes in air pressure.

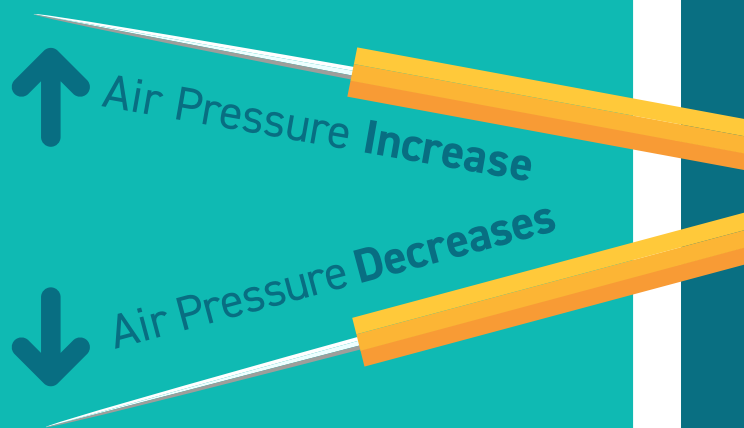


STEP 5

Place your completed barometer outside in your garden or yard. You want to place it in the shade, where the temperature is going to stay very similar, otherwise you will see the effects of temperature, and not air pressure!

HOW DOES OUR BAROMETER WORK?

Our barometer is different to most, as they usually contain a liquid. With ours, when air pressure increases, it pushes down on the balloon more, so the stick and pin move upwards. When air pressure decreases, the stick and pin move downwards. With our barometer we aren't collecting numerical data, we are comparing how one day's pressure compares to the previous days.



- If you want to record your results, you could try marking on a piece of paper where the pin is each day.
- Why not head to the Met Office WOW website www.metoffice.gov.uk, and see how the changes in air pressure you have measured compare to those measured by the Met Office!

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