## QUESTION: How can you predict the weather using a barometer?

What is a barometer? Barometers are used by weather forecasters to help predict the weather. These devices are used to measure the atmospheric pressure of a place. A barometer usually contains a small vacuum chamber that will expand and contract with the changing air pressure.


Follow these links to learn a little more about air pressure:
Gravity and air pressure: https://www.youtube.com/watch? $\mathrm{v}=\mathrm{c} 86 \mathrm{xKDcy-TQ}$
Here are some examples of what they look like. Measuring air pressure: https://www.youtube.com/watch?v=pL6BthjvTZ4

Task: You are going to conduct an experiment throughout the week to record the atmospheric pressure and predict what the weather will be. Look out to see if you can identify a pattern.

## Instructions:

1. Cut the bottom half off the balloon. sicpl
2. Pull the top half of the balloon tight over the jam jar. sipp
3. Use the elastic band to keep the balloon tight over the jar.
4. Fix the straw to the centre of the balloon skin using a piece of sticky tape. [E].
5. Place the paper so that it is lined up against the straw. Draw a line at this position. (this is your starting point)
6. Above the line write the word "high" and below the line write "low". "spe?
7. Note down the pressures each day to see if you can notice a pattern between your air pressure readings and the weather outside. You can make a mark above or below your starting point and write the day to remind you of the changes. [se?

## You will need:

- A glass jar or similar
- A balloon
- A rubber band
- Scissors
- A straw
- Sticky tape
- Paper
- Pen



## Predictions:

|  | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Prediction <br> (Looking at <br> the pressure <br> reading, <br> predict how <br> you think the <br> weather will <br> be) |  |  |  |  |  |  |

Results:

|  | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Air pressure <br> reading <br> (High or low) |  |  |  |  |  |  |  |
| Weather <br> outside <br> (Description <br> of the <br> weather <br> outside) |  |  |  |  |  |  |  |

## Evaluation:

Did your predictions match your results?
Where you able to identify a pattern?
What did you learn from this experiment?

