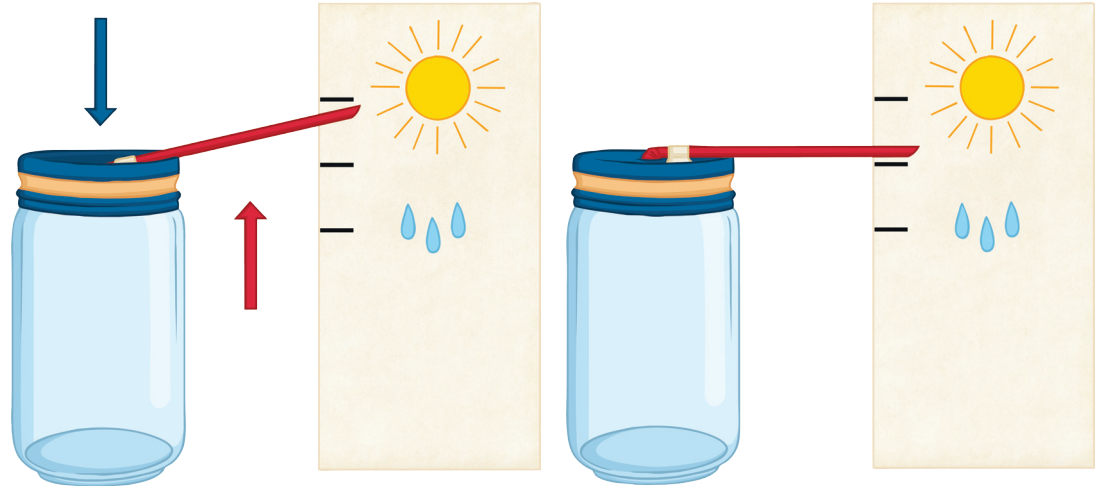


# Make Your Own Barometer

## Equipment

- A glass jar
- A new balloon
- A rubber band
- Sticky tape or glue
- A long drinking straw
- Some card
- Felt tip pens
- Scissors



## How to make your own barometer:

1. Place the glass jar on a flat surface indoors.
2. Cut off the neck of the balloon.
3. Stretch the balloon tightly over the opening of the jar making sure the rubber is as flat as possible.
4. Use the rubber band to secure the balloon in place. The jar should be well sealed, with no air leaking in or out.
5. Cut the bendy part off the drinking straw so you are left with a straight section. Cut a point into one end of the straw.
6. Fix one end of the straw to the middle of the balloon using glue or sticky tape.
7. On a piece of card, draw on high and low pressure labels and weather symbols as shown in the diagram. Stick the card to a wall.
7. Place your barometer next to the card. Make a mark to show where the straw is currently pointing.
8. Watch your barometer over a week. Record the air pressure at the same time each day. Does it match the weather?

## How does your homemade barometer work?

When you sealed the glass jar, air was trapped inside it. The air pressure inside the jar was exactly the same as the air pressure outside of the jar. The air pressure inside the jar will not change as the jar is sealed; but as the weather changes, the atmospheric air pressure (outside of the jar) will change.

When there is sunny, warm weather, there will be higher air pressure. This means that the outside air will press on the balloon cover as it is stronger than the air inside the jar. This causes the balloon to cave in but the tip of the straw will rise upwards.

When there is wet and windy weather, there will be lower air pressure. The air pressure inside the jar will be higher and the balloon cover will bulge outwards. This pushes the tip of the straw downwards.

# Recording Sheet

Day	Air Pressure	Weather
1		
2		
3		
4		
5		
6		
7		

## Notes

Did the barometer work? What did the barometer show? How could you improve the design to make it more accurate?