



Science Investigations

Y5 Summer 2 Wk 5

Science



FLOATING PAPER CLIP



FLOATING PAPER CLIP

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The brief

Make a paper clip float on water.

The method

1. Fill the bowl with water.
2. Tear off some tissue paper (around 10cm x 5cm).
3. Gently place the tissue paper onto the surface of the water so that it floats.
4. Place the dry paper clip on top of the tissue.
5. Use the rubber end of the pencil to carefully poke until the tissue sinks and the paperclip is left floating.

Materials

Water
A bowl
Tissue paper
A paper clip
A pencil with a rubber on the end



How does it work?

The paper clip is held afloat by the surface tension of the water. Water molecules are polar, so the molecules pull on each other. This creates a tension – like a thin, flexible membrane on the surface – which helps hold the needle afloat. The tissue paper allows you to lower the paperclip onto the water gently, without breaking the surface tension.

Did you know?

Insects such as pond skaters use water tension to appear to walk on water.



WEATHER BALLOON

The brief

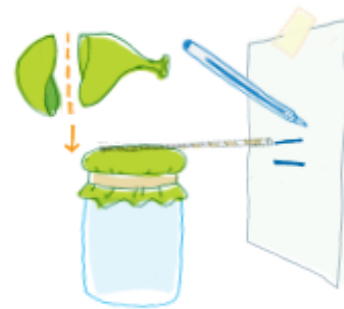
Make a barometer and predict the weather.

The method

1. Cut the bottom half off the balloon.
2. Pull the top half of the balloon tight over the jam jar.
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.
5. Place the paper so that it is lined up against the straw. Draw a line at this position.
6. Above the line write the word "high" and below the line write "low".
7. Note down the pressures each day to see if you can notice a pattern between your air pressure readings and the weather outside.

Materials

- A glass jar
- A balloon
- A rubber band
- Scissors
- (with adult supervision)
- A straw
- Sticky tape
- Some paper
- A pen



How does it work?

As the air is sealed inside the jar, any changes to the air pressure outside the jar will result in direct movement of the balloon rubber. As the outside air pressure increases, the rubber will be forced down into the jar. The straw pivoting on the glass will rise upward. The opposite is true when the pressure decreases.

Design icons

Barometers are used by weather forecasters to help predict the weather.

