

SCIENCE
CHALLENGE

15

FLOATING PAPER CLIP



THE
JAMES
DYSON
FOUNDATION

FLOATING PAPER CLIP

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

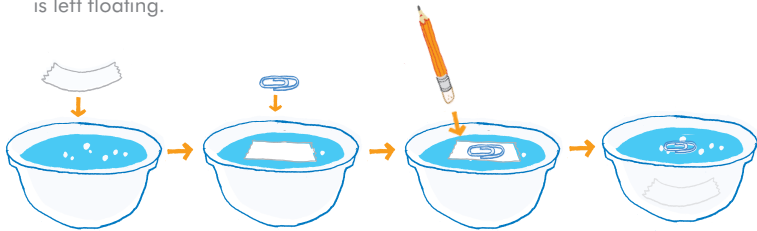
Water

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.

