

Teacher-led activity

FLOATING PIN

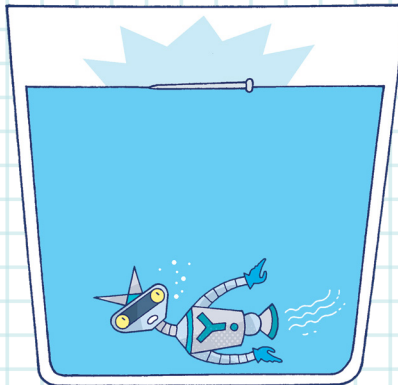


You will need:

- A pin
- Water
- A glass

What you do:

1. Fill a glass with water.
2. Lay a pin on it and observe what happens.



You should find:

The pin floats because water molecules on the surface are attracted more strongly to the water molecules below than the air molecules above them. The water surface is pulled inwards like a stretchy skin. We call this **surface tension**.

Pupil activity

MAKE YOUR OWN POND SKATER

You will need:

- Very light, thin bendy wire (you could ask an adult to help you recycle an old cable, such as a phone charger or headphones)
- Scissors
- Bowl of water

You should find:

Your pond skater rests on the water! It's not floating because no part of it is underneath the water (to float, something has to push water out of the way, so the water pushes back). The pond skater's secret is that water is sticky! Each drop clings to nearby drops, and they cling together most strongly at the surface. This makes a 'film' called **surface tension**.

What you do :

1. Cut out three pieces of wire the same length.
2. Twist them together at the centre to form a pond skater with six legs.
3. Bend the end of each leg to make six long, curved feet. Put it on a table to test that all six are even. As much wire should be touching the table as possible.
4. Place your pond skater carefully on top of the water, putting all six feet on the water at exactly the same time – try not to break the surface.
5. If your pond skater sinks, adjust the feet and try again.



Try the paper version of the pond skater. Which one works the best?