






How to make a homemade compass

Equipment

Needle, magnet, greaseproof paper, water, bowl, red and blue felt tip, scissors

<p>1. Rub one end of the needle with a magnet. Do this for 30 seconds. Then use the red felt tip to colour the end.</p>	
<p>2. Repeat with the other end of the needle. This time colour the end blue. The two ends represent the north and south poles that you would find on a bar magnet.</p>	
<p>3. Cut out a small circle from the greaseproof paper – the diameter needs to be about 2.5cm</p>	
<p>4. Thread the needle through the paper, so that both ends of the needle are showing through the top.</p>	
<p>5. Fill a bowl with water and carefully lay the needle and paper onto the surface, so that it floats.</p>	

6. Watch with amazement as your needle spins in the water to face north! If you have access to a real compass, or have an app on your phone, you can check to see how accurate your homemade version is.



What is happening?

Rubbing the needle with the **magnet** leaves a slight residue behind. This causes the needle to become **magnetised**. The earth's **magnetic field** creates an invisible **force**, which **pulls** on the needle, which makes it turn in the water, to face north.

*Key vocabulary is written in red.

Find out more about magnets...

What are the 2 ends of a magnet called and what colour are they?

What are the most powerful magnets in the universe called?

How do magnets affect animals in the sea?

Name 3 objects that would be attracted to a magnet.

Which of these is the odd one out and why?

