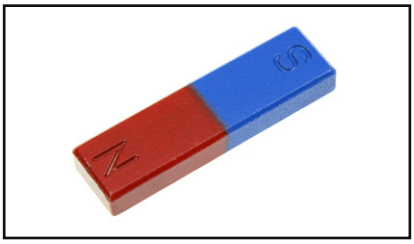
Magnets and magnetic forces

What is a magnet?

Have you ever used a fridge magnet to hold a picture or note?
A magnet is a special object that can pull some things towards it.
Magnets are often used in toys, washing machines and even computers!



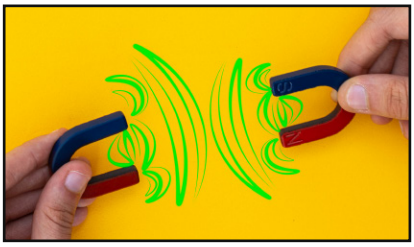


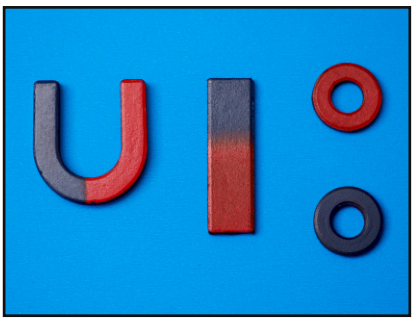
How magnets push and pull

Magnets have a kind of power called magnetic force. This force can make things move without touching them. It is a non-contact force.
Magnets can do two things:
attract – pull things towards them
repel – push things away

Attract and repel: What do these words mean?

When a magnet attracts something, it pulls it closer.
For example, a paper clip moves towards the magnet and sticks to it.
If you put the same ends of two magnets together, they repel or push away from each other.





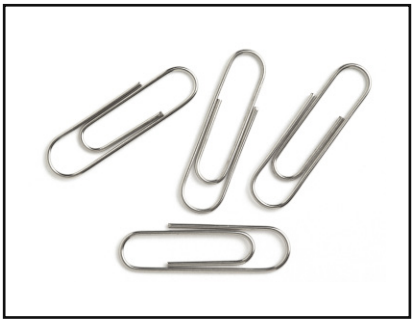
Types of magnets

Magnets come in different shapes:
- **bar magnet** – long and straight
- **horseshoe magnet** – shaped like a "U"
- **ring magnet** – round with a hole
- **button magnet** – small and round

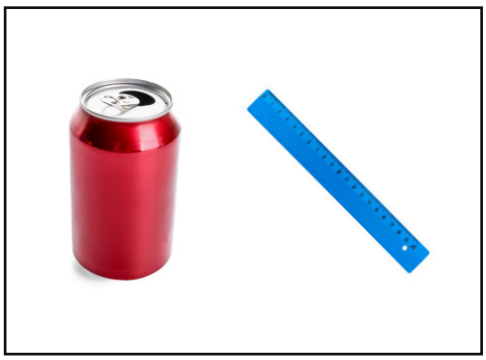
All of them can attract and repel.

Magnetic materials

Not everything sticks to a magnet. Only some metals are magnetic.
These include:
- **iron**
- **steel** (because it contains iron)
- **nickel**
- **cobalt**



Magnets and magnetic forces



Non-magnetic materials

Some materials **never** stick to magnets:

- **wood**
- **plastic**
- **rubber**
- **paper**
- **aluminium**, **gold**, **silver**, **copper**

Magnetic and non-magnetic metals

Metal	Magnetic?	Will it stick to a magnet?
iron	yes	yes
steel	yes (because of iron)	yes
nickel	yes	yes
cobalt	yes	yes
aluminium	no	no
copper	no	no
gold	no	no
silver	no	no

Why don't fizzy drink cans and aluminium foil stick to magnets?

Fizzy drink cans and aluminium foil are both made from aluminium. Aluminium is a metal, but it is not magnetic.





Did you know?

Some coins look like they are made of copper, but many have steel inside. Because steel is magnetic, some coins can stick to a magnet even if they look like copper on the outside!