



Knowledge Organiser

Science—Forces and Magnets Year 3

Forces

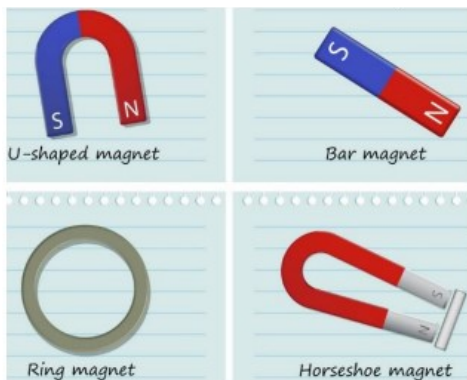
Gravity - the force that pulls things to the ground. Gravity also holds Earth and other planets in their orbits around the sun.

Friction - friction is a force between 2 surfaces that are sliding or trying to slide across each other. Friction works in the opposite direction to which the object is moving. It slows down the moving object.

Smooth surfaces create less friction e.g. polished wood.

Rough surfaces create more friction e.g. carpet.

Different types of magnets



Key Vocabulary

| | |
|--------------------------|---|
| Force | A push, pull, twist or turn. |
| Gravity | A pushing force exerted by the Earth, it attracts objects towards the centre of the Earth. |
| Friction | The force between 2 moving surfaces. |
| Magnetism | the force of attraction and repelling caused by a magnet |
| Magnet | A material or object that produces a magnetic field, it attracts or repels magnetic objects |
| Poles | 2 sides of a magnet where the magnetism is strongest. |
| Attract | To pull towards (opposite of repel) |
| Repel | To push away (the opposite of attract) |
| Contact force | A force that requires physical contact to occur e.g. kicking a ball. |
| Non-contact force | The magnet does not need to touch the object it attracts |

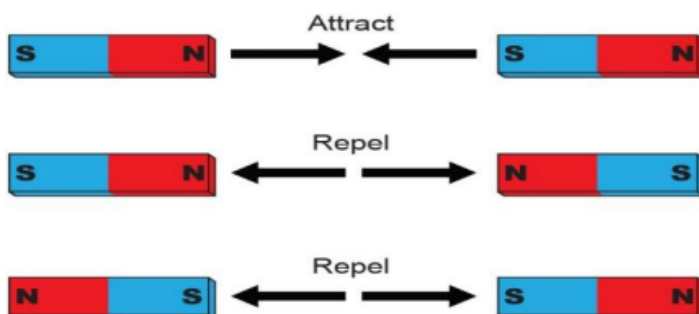
Magnets

Magnets are objects or materials that produce a magnetic field and attract or repel magnetic objects.

Magnets have 2 poles: north and south.

If you put magnets towards each other:

- 1 south pole and 1 north pole will attract
- 1 south pole and another south pole will repel



What I can do at home

Explore

Not all materials are magnetic.
Can you find some everyday materials which are magnetic?

Communicate

Talk to an adult at home about the things below. You don't need to record this.

I wonder which materials are attracted to magnets?

I wonder if bigger magnets are stronger?