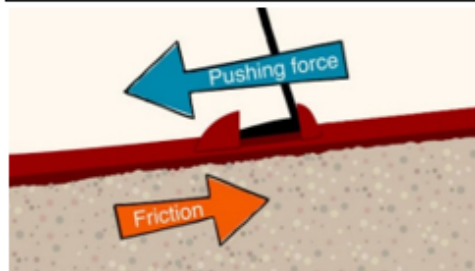


Forces and magnets - How are magnets used?

A force is a push or a pull.

Forces make things move faster, slower or stop.

There are many types of force.



Friction is a force *between two surfaces* that are sliding, or trying to slide, across each other.

Friction always works in the direction *opposite* to the direction in which the object is moving, or trying to move.

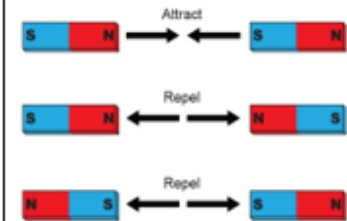
Friction always *slows* a moving object down.

Magnetic forces act at a distance, which means that the magnet does not have to touch an object to apply a force.



Magnets have two poles, North (N) and South (S).

On a magnet, same poles repel, opposite poles attract.



Magnetic materials are always made of metal, but not all metals are magnetic.

Iron is magnetic, so any metal with iron in it will be attracted to a magnet. Steel contains iron, so a steel paperclip will be attracted to a magnet too.



Bar magnets



Button magnets



Horseshoe magnets



Ring magnets

There are a range of different types of magnets.

A compass uses a magnet to find north.



Force - A push or pull on an object.

Push - Moving something away by pressing.

Pull - Bringing something closer by tugging.

Move - To go from one place to another.

Stop - To bring movement to an end.

Slow down - To move more slowly.

Speed up - To move faster.

Change direction - To move in a different way.

Friction - A force that slows objects when they touch.

Surface - The top layer of something.

Slide - To move smoothly across a surface.

Key Vocabulary

Material - What something is made of.

Rough - A surface that feels bumpy.

Smooth - A surface that feels flat.

Plastic - A material that can be shaped and is often light.

Wood - A strong material from trees.

Metal - A shiny, hard material that is strong.

Paper - A thin material used for writing.

Ceramic - A hard material made by baking clay.

Question - Something you ask to find out more.

Fair test - A test where only one thing is changed.

Method - A set of instructions

Conclusion - What you learn after an experiment.

Design - A plan for how something will work.

Useful - Something that helps or is helpful.

Dangerous - Something that can harm or hurt you.

Experiment - A test to find something out.

Investigate - To look closely to find out more.

Record - To write down or show what you have found.

Magnet - An object that can attract certain materials.

Pole - The ends of a magnet.

Attract - To pull towards something.

Repel - To push away from something