

Forces and Magnets Knowledge Organiser – Year 3

Sticky Knowledge

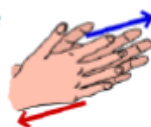
- ✓ Forces will change the motion of an object. They will either make it start to move, speed up, slow it down, make it stop or change direction.
- ✓ Different surfaces creates different amounts of friction. The rougher (more bumpy) a surface, the higher the friction becomes.
- ✓ Magnets have a North pole and a South pole.
- ✓ Like magnetic poles (NN and SS) repel and opposite poles (NS and SN) attract one another.
- ✓ Magnetic field lines are invisible. They are a non-contact force which causes magnets to attract or repel.
- ✓ Not all metals are magnetic. Iron, nickel and cobalt are.
- ✓ The Earth has a magnetic field which keeps us safe from many of the Sun's harmful particles.

This term, the key texts which link to our topic are:



Important facts to know by the end of the Forces and Magnets topic:

- Friction affects how things move across surfaces.



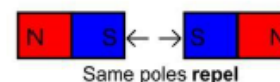
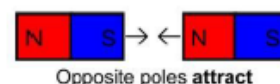
- Magnets can be used to separate magnetic materials (the metals iron, nickel and cobalt) from non-magnetic materials such as wood, glass and plastic.



- If a magnet is cut in half, it makes two magnets, each with two poles.



- Understand that magnets can attract or repel one another.



- Know that magnets have two pole (North and South)

- The Earth has a magnetic field, having a North Pole and a South Pole.



Vocabulary

Forces: Power or energy used to move something, usually by pushing or pulling.

Push: An object is moved away from something.

Pull: An object is moved towards something.

Contact Force: A push or pull which touches the object being moved.

Non-Contact Force: A push or pull which does not touch the object being moved.

Magnet: An object that has the power to pull items made of iron towards it. These can come in different shapes: bar, ring, button and horseshoe.

Attract: Pulls objects together. Opposite poles attract (North and South).

Repel: Repulsion is a force what pushes objects away from one another. Similar poles repel (North-North and South-South).

Magnetic: Objects which are attracted to a magnet are magnetic. They usually contain the metals iron, nickel or cobalt.

Magnetic Strength: The pull strength of a magnet.

Pole: The North and South poles are opposite ends of a magnet. The magnetic field flows from North to South.

Iron: A common type of metal, which is magnetic. The Earth's magnetic field is due to the core and mantel being made out of iron.

Surface: The top layer of something.

Friction: A force acting between two surfaces moving, or trying to move, past each other.

