



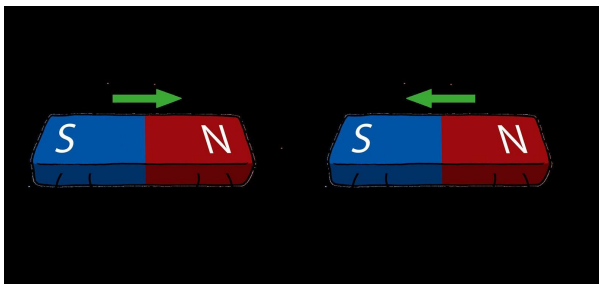
Year 3 Autumn - How do magnets work?

Key Vocabulary

Forces	Power or energy used to move something, usually by pushing or pulling.
Push	When an object is moved away from something
Pull	When an object is moved towards something
Contact force	A push or pull which does not touch 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 certain items towards it
Attract	A force that pulls objects together. Opposite poles attract (North and South)
Repel	A force that pushes objects away from one another. Similar poles repel (North-North and South-South)
Friction	A force acting between two surfaces moving, or trying to move, past each other

Key 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.

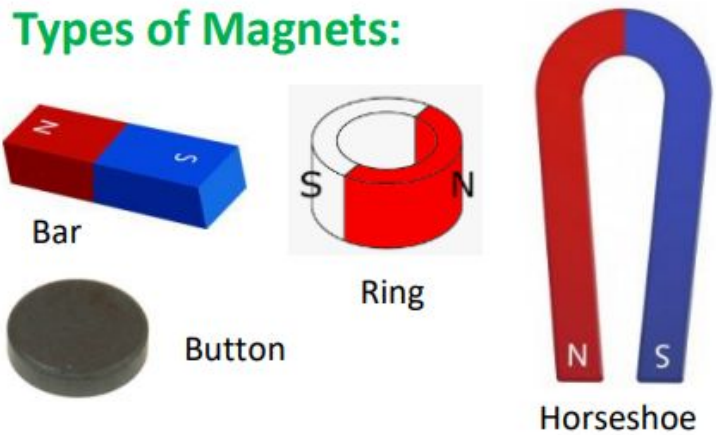


Opposite poles attract.

How do different surfaces affect the motion of an object?

Forces act in opposite directions to each other. When an object moves across a surface, friction acts as an opposite force. Friction is a force that holds back the motion of an object. Some surfaces create more friction than others which means that objects move across them slower. On a ramp, the force that causes the object to move downwards is gravity. Objects move differently depending on the surface of the object itself and the surface of the ramp.

Types of Magnets:



Magnetic ✓

These objects contain iron, nickel or cobalt. Not all metals are magnetic.

Non-magnetic ✗

These objects do not contain iron, nickel or cobalt.