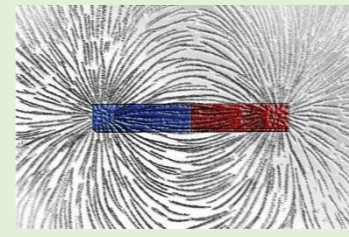


Cunningham Hill Junior School - Science Knowledge Organiser - Forces - Year 3

Key Vocabulary:

1	forces	Pushes or pulls.
2	gravity	A pulling force exerted by the Earth (or anything else which has mass)
3	friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
4	surface	The top layer of something
5	air resistance	A type of friction caused by air pushing against any moving object.
6	water resistance	A type of friction caused by water pushing against any moving object.
7	magnetic	Objects which are attracted to a magnet are magnetic. Objects containing iron, nickel or cobalt metals are magnetic.
8	magnetic field	The area around a magnet where there is a magnetic force which will pull magnetic objects towards the magnet.
9	magnet	An object which produces a magnetic force that pulls certain object towards it.
10	poles	North and south poles are found at different ends of a magnet.
11	repel	Repulsion is a force that pushes objects away. For example, when a north pole is placed near the north pole of another magnet, the two poles repel (push away from each other).
12	attract	Attraction is a force that pulls objects together. For example, when a north pole is placed near the south pole of another magnet, the two poles attract (pull together).

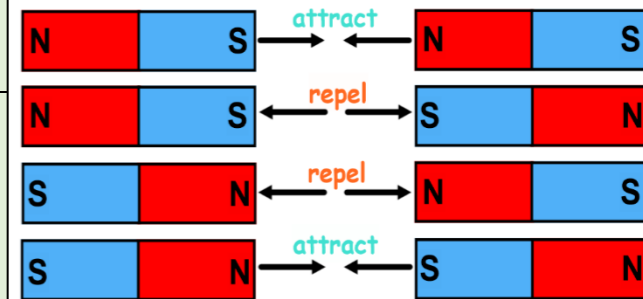
Magnetic Field and Magnetism:



Poles that are the same repel. Poles that are different attract.



The needle in a compass is a magnet. A compass always points north - south on Earth.



A magnetic field is invisible, however we can see it using iron filings on a piece of paper with a **magnet** underneath.

Magnetic

Objects that contain iron, nickel or cobalt. Not all metals are magnetic.



Not Magnetic

Objects that do not contain iron, nickel or cobalt are not magnetic.



Types of Magnets

Ring **magnet**



Horseshoe **magnet**



Bar **magnet**



U shaped **magnet**



Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object and the **force** between them.

The cyclist applies **force** to the pedals that push the bike forwards.



The **friction** of the tyres on the ground and air resistance both work to slow the bike down.



Grass

Sand

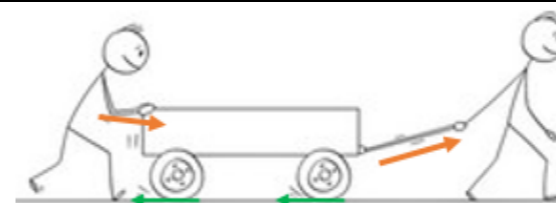
Gravel

Road

Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.



Push / Pull



Can you tell which **forces** are working here?

Scientist Study

William Gilbert was doctor to Queen Elizabeth I. Although the effects of magnets was thought to be first noticed in Ancient Greece, it was Gilbert's work that explained magnets and the fact that the Earth's core contained iron and was like a giant magnet.

William Gilbert

