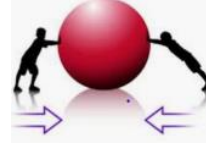




Key Vocabulary	
force	a push, pull, twist or turn
gravity	a pushing force exerted by the Earth, it attracts objects towards the centre of the Earth.
friction	the force between two moving surfaces
magnet	a material or object that produces a magnetic field, it attracts or repels magnetic objects
magnetism	the force of attraction and repelling caused by a magnet
poles	two sides of a magnet where the magnetism is strongest
attract	to pull towards (opposite of repel)
repel	To push away (the opposite of attract)
surface	The top layer of something
Magnetic field	an area around a magnet, or something functioning as a magnet, in which the magnet's power to attract things is felt
Contact force	Forces that act when two or more objects touch each other, eg friction
Non contact force	Forces that do not need contact. They can act at a distance, eg magnetic force

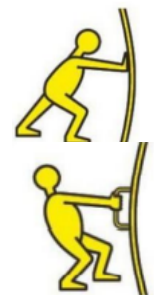
What are Forces?

- A force is the push or pull of an object in a particular direction.
- Forces are shown by arrows in diagrams.
- The bigger the arrow, the bigger the force.
- The direction of the arrow shows the direction of the force.



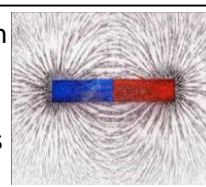
Pushes and Pulls

- A push is the force that moves an object away from something.
- A pull is the force that brings an object towards something.
- A push and a pull are opposite forces, moving objects in different directions.



Magnetic Field

A magnetic field is the area in which a magnetic force can be felt. A magnet will only attract or repel a magnetic object when it enters its magnetic field.



Focused Scientist – Mary Somerville
 Mary Somerville (1780-1872) was fascinated by magnets and carried out lots of experiments with them. She was also one of the first popular Science writers - selling many books in her lifetime. She was the first woman to be elected to the Royal.



Friction

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.

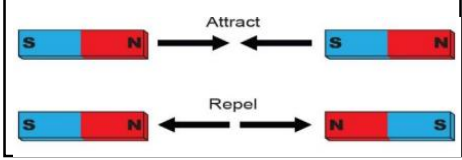
The driving force pushes the bicycle, making it move.

Friction pushes on the bicycle, slowing it down.

Magnets

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

The two ends of a magnet are known as the north pole (N) and the south pole (S). The same poles repel— opposite poles attract.



Different Types of Magnets

Bar Button Horseshoe

Cylindrical Ring Arc / Crescent

Focused Scientist – Sir Isaac Newton
 Isaac Newton was a physicist and mathematician who developed the principles of modern physics, including the laws of motion and is credited as one of the great minds of the 17th-century Scientific Revolution. Isaac Newton came up with the law of gravity after seeing an apple fall from a tree in his mother's garden.

