

Year 3 Science Knowledge Organiser - Forces and Magnets

<u>Word</u>	<u>Definition</u>
Attract	To pull together with a physical force.
Contact Force	A force that must directly touch another object to affect it.
Force	The pushes and pulls which on our bodies and the things around us to make things move and stop moving.
Friction	A 'sticking' force - the resistance that a surface or object encounters when moving over another surface or object.
Magnet	An object that has a magnetic field, it attracts or repels objects.
Magnetic Force	An invisible force created by electrons. Magnetic force controls magnetism.
Materials	The matter or substance that objects are made from.
Non-Contact Force	A force that affects something at a distance for example magnetism or gravity.
Poles	Magnets have two poles, a north pole and a south pole.
Pull	Any action moving an object towards you.
Push	Any action moving an object away from you.

MAGNETS:

A magnet is a special object which produces an area of magnetic force around itself called a magnetic field. If a metal object enters this magnetic field, they will be attracted towards the magnet and end up sticking to it - non-metallic objects would not be attracted to it. N.B. some forces need contact between two objects, but magnetic forces can act at a distance. 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. Nickel and Cobalt are also magnetic. Steel contains iron, so a steel paperclip will be attracted to a magnet too. Most other metals, for example aluminium, copper and gold, are NOT magnetic.

FRICITION

When objects are pushed or pulled, an opposing force can be felt. This opposite force is called 'friction'. Friction causes things to slow down or stop. The grip on our shoes stops us slipping. Therefore, friction is great. Ice-skates on an ice-rink will move for a long time because there is very little friction. The rougher the surfaces, the greater the friction. This rubbing of two surfaces can release energy, causing heat.



Types of magnets:

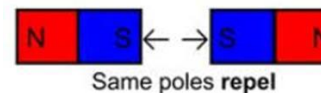
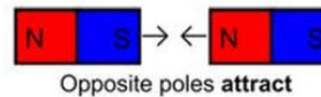
Bar 	Ring
Button 	Horseshoe



A significant Scientist - Linked to the topic of Forces & Magnets:

Michael Faraday (1791 - 1867)

He was an English scientist. In 1831 he discovered electromagnetic induction. This was a very important discovery for the future of science and technology.



Sticky Knowledge is in red!