

What do I already know?

What do I know now?

1

2

3

1. Magnets work by...

2. Some magnetic and non-magnetic materials are...

3. Items may move differently on a surface because...

KNOWLEDGE ORGANISER

THEME: Forces and Magnets

YEAR GROUP / CLASS: 3

TERM: Spring 1

What I have learnt before:

To distinguish between objects and materials

To name a variety of everyday materials and describe their physical properties

To compare and group everyday materials based on their properties



Key Vocabulary:

Words		Definitions
Force		Forces are pushes and pulls in a particular direction.
Gravity		The force that pulls things to the centre of the earth.
Friction		Friction is a force between two surfaces that are sliding, or trying to slide across each other.
Surface		The top layer of something (carpet, concrete, grass)
Magnet		A piece of metal (or rock) that can pull certain types of metal towards itself.
Attract		A force that pulls two objects towards each other
Repel		When magnets push away from each other
Pole		The two ends of a magnet. There is the North Pole and the South Pole.
Field		The area around a magnet in which there is a magnetic force.



What skills will I be using?



Questioning



Predicting



Testing & Investigating



Observing & Measuring



Recording



Analysing



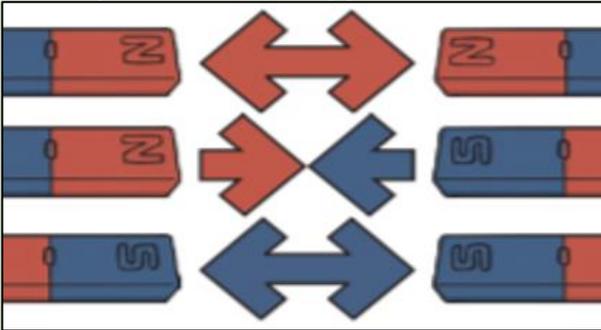
Evaluating



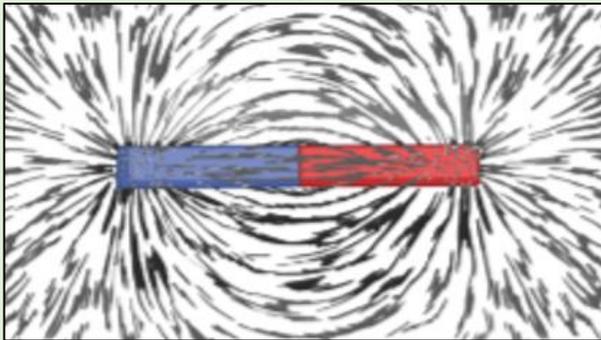
1) Magnets



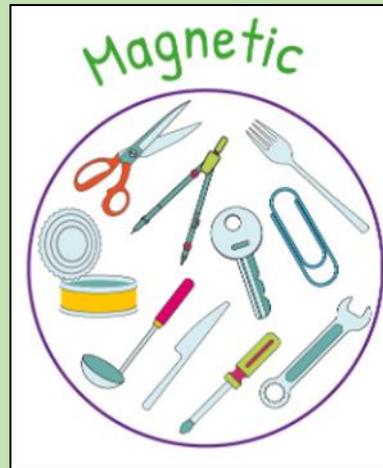
Two poles that are the same 'repel'
Two poles that are opposites 'attract'



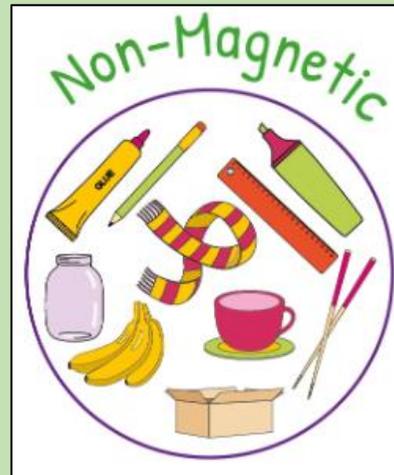
A **magnetic field** is invisible. When iron fillings are used with a magnet, you can see the **magnetic field**.



2) Magnetic and non-magnetic materials



Items that contain iron, nickel or cobalt are **magnetic**.



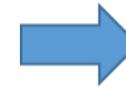
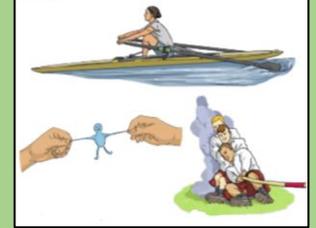
Items that are made from other materials (not iron, nickel or cobalt) are **non-magnetic**.

3) Forces

Pushes



Pulls

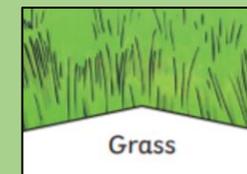


A driving force pushes the bike to make it move



Friction pushes on the bike, slowing it down

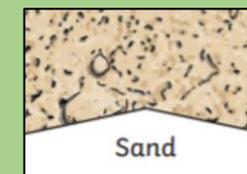
Different surfaces cause different amounts of friction with objects moving over them.



Grass



Gravel



Sand



Road