

**What We Need to Know**

What is a force?	A force is either: a push or a pull.
What do forces do?	Forces can make objects: speed up, slow down, change shape or change

**Examples of Forces**

A lady is pushing a car to speed it up.



A man is pulling a dog to slow it down.



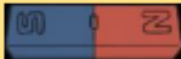
A can is being squeezed (pushed) so it changes shape.



The racket has hit (pushed) the ball to change its direction.

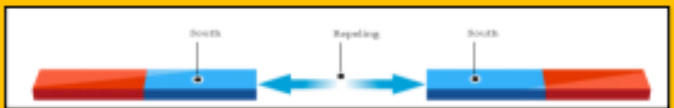
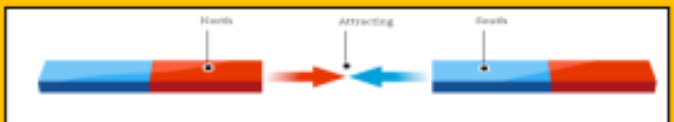


**Magnetic Forces**






Why is magnetism different?	Magnetic forces do not need contact between two objects for them to happen. Magnetic forces can act at a distance.
Facts about magnets:	Magnets have a North Pole and a South Pole. 
Attract	North and South Poles attract which means they pull together.
Repel	Same poles (North and North or South and South) repel which means they push away from each other.

**Key Vocabulary and Phrases**

contact	Physically touching something
magnetic	Can be attracted to a magnet



**Types of Magnets**

Bar	Ring	Ball	Horseshoe	Wand
				

**Group According to Magnetic Attraction**

Magnets only attract certain types of metals. Other materials such as wood, glass and plastic do not attract.



Metal such as nickel, cobalt and iron are attracted to magnets



Most metals are not attracted to magnets. These include silver, gold, copper, magnesium, platinum, aluminium to name a few.



Key Vocabulary and Phrases

ask questions	Use the question words <b>What, where, when why, how</b>
compare and contrast	Look at two or more objects and describe similarities (what is the same) and differences (what is different)
classify, sort and group	Organise objects by their features (e.g colour, size, shape).
diagram	A labelled picture
record data	Drawings, scientific diagrams, photos, classification keys, tables, bar graphs and line graph, writing and numbers are ways to show what I have found out.
reporting and presenting findings	Giving reasons, explaining causes and relationships, explaining results and trusting its accuracy

What I could investigate

Do different surfaces affect the distance a car travels?



Are all metals magnetic?



Do all magnets have the same magnetic strength?

Equipment I could use

Ramp to test different surfaces.



Moving objects (cars) to test on each surface.



Various Magnets



Camera  
Pencil and paper



How I could record my findings

**Pictures For EXPLORING**

Use this if you want to tell the story of what you did or what you observed, e.g. bread going mouldy

**Table For FAIR TESTING/PATTERN SEEKING**

What I Change (Height of slope)	What I measure (Distance travelled)

Use this to record your information. You can transfer it into some of the other forms as well. It could be all numerical or words

**Bar Chart For FAIR TESTING**

Use this if you have only 1 set of numerical (continuous) data and the other is words, e.g. type of material and volume of water it can hold