

Science Focus:

Forces and Magnets

Year 3

Spring

What? (Key Knowledge)

Forces

What is a force?	A force is either: <ul style="list-style-type: none"> • A push or • A pull 	
Forces can make things...	<ul style="list-style-type: none"> • Speed up • Slow down • Change shape • Change direction 	
A force that speeds something up	The child is pushing the car to speed it up.	
A force that slows something down	The girl is pulling the dog to slow it down.	
A force that changes the shape of something	The can is being squeezed so that it changes shape and becomes smaller.	
A force that changes the direction of something	When the ball is hit with the racket, it will change direction.	

Magnetic Forces

Why is magnetism different?	All of the forces above needed contact between two objects for them to happen. Magnetic forces can act at a distance.	
Magnets have a North Pole and a South Pole	South Pole	North Pole
Magnets attract or repel each other	Attract:	
	Repel:	
	North and South attract. But North and North or South and South will repel.	

Types of magnets

Bar	
Ring	
Button	
Horseshoe	

Can magnets only attract magnets?

No - Magnets can attract other things too. See the diagram on the opposite side.

What? (Key Vocabulary)

Spelling	Definition/Sentence
Squeezed	Firmly press (usually with the fingers)
Contact	Physically touching something
Magnetic	Can be attracted to a magnet
Attract	To come together
Repel	To force away/apart

Diagrams and Symbols

Magnets only attract certain types of metals, other materials such as glass, plastic and wood aren't attracted.



Metals such as iron, nickel and cobalt are attracted to magnets.



Most metals however are not attracted to magnets, these include copper, silver, gold, magnesium, platinum, aluminium and more.



Prior Learning

- *describe the simple physical properties of a variety of everyday materials
- *compare and group together a variety of everyday materials on the basis of their simple physical properties.
- *identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- *find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

