

Science Knowledge Organisers

Science Focus

Forces and Magnets Year 3

Spring 1

Key Knowledge	
What is a force?	A force is either: ☐ A push or A pull
Forces can make things	☐ 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.
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	
Magnets attract or repel each other	
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
Possible Experiences	
☐ Explore the uses of magnets in everyday objects ☐ Group everyday objects into magnetic and nonmagnetic by testing with magnets ☐ Design a mechanism that requires a magnet to enable it to work	

Key Vocabulary	
Squeezed	Firmly press
Contact	Physically touching something
Magnetic	Can be attracted to a magnet
Attract	To come together
Repel	To force away

Diagrams and Symbols
<p>Magnets only attract certain types of metals, other material such as glass, plastic and wood aren't attracted.</p> 
<p>Metals such as iron, nickel and cobalt are attracted to magnets.</p> 
<p>Most metals however are not attracted to magnets, these include copper, silver, gold, magnesium, platinum, aluminium and more.</p> 

Greater Depth Thinking

- Think independently and raise questions about working scientifically and the knowledge and skills that it brings.
- Be confident and competent in the full range of practical skills, taking the initiative in, for example, planning and carrying out scientific investigations.
- Demonstrate excellent scientific knowledge and understanding in written and verbal explanations, solving challenging problems and reporting scientific findings.
 - Show high levels of originality, imagination or innovation in the application of skills.