Uplands Manor Primary School - Science Unit Organiser

Science Topic:	Forces		Year 3		

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.

Recommended Experiments

A minimum of two experiments should take place during this unit of work with one final written outcome linked to the scientific enquiry skills and approaches used.

???	Exploring the strength of magnets by comparing how close a paper clip needed to be before it was attracted to the magnet
	Planning an investigation to test if different surfaces made a difference to the distance the plastic margarine tub would travel down the ramp
	Using a Newton meter to investigate how shoes moved on different surfaces
	Releasing a car down a ramp and measure the distance it travelled on different surfaces at the bottom.

What? (Key Knowledge)

Forces

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. 

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	The child is pushing the car to speed it up. 
Ring	The girl is pulling the dog to slow it down. 
Button	The can is being squeezed so that it changes shape and becomes smaller. 
Horseshoe	When the ball is hit with the racket, it will change direction. 

Can magnets only attract magnets?

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

Builds on: learning in Year 2 - Spring - Unit: Uses of Everyday Materials	Learning links	**Leads to:** learning in Year 4 - Summer - Unit: Sound and Electricity