

What? (Key Vocabulary)	
Spelling	Definition/Sentence
Streamlined	A shape that presents least resistance to air or water
Surface	The top layer of something
Grip	To have a good connection with a surface
Drag	To cause to slow down
Centre	The middle

### Diagrams and Symbols

#### Diagrams of forces in action

### 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.

	Identify the effects of air resistance by designing and testing a parachute which would slow a car down a ramp
	Testing water resistance when swimming (during Year 5 swimming lessons)
	Recognising the impact of mechanisms on forces when using pulleys, levers and gears during technology lessons
	Choosing a feature of a spinner to investigate, for example, size of wings, height dropped or number of paper clips

What? (Key Knowledge)	
Forces	
What is a force?	A force is either: push or a pull
Forces can make things...	Speed up, slow down, change shape and 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 girls 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
Types of force	
Magnetism	Attract: Repel: Magnets attract or repel each other or other objects North and South attract. But North and North or South and South will repel.
Air Resistance	<ul style="list-style-type: none"> <li>Air resistance slows down moving objects, because air slows you down as you move through it</li> <li>To travel faster through the air, things need to be streamlined</li> </ul>
Water Resistance	<ul style="list-style-type: none"> <li>Water resistance slows down moving objects, because water slows you down as you move through it</li> <li>To travel faster through the water, things need to be streamlined</li> </ul>
Friction	<ul style="list-style-type: none"> <li>Friction happens when two surfaces touch each other</li> <li>Friction gives us grip</li> <li>Friction produces heat</li> <li>Rougher surfaces slow things down a lot</li> <li>Smoother surfaces don't slow things down as much</li> </ul>
Gravity (another force)	
What is gravity?	Gravity is the forces that <b>pulls</b> objects <b>down</b> towards the centre of the Earth. Gravity stops things from floating away into space. When things go into the air (like a football) gravity pulls them back down.

**Builds on:** learning in Year 3 - Summer - Unit: Sound and Electricity

**Learning links**

**Leads to:** learning in Year 5 - Summer 2 - Unit: Earth and Space