







Paganel Primary School –Knowledge Organiser

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	<p>The child is pushing the car to speed it up.</p> 
A force that slows something down	<p>The girls is pulling the dog to slow it down.</p> 
A force that changes the shape of something	<p>The can is being squeezed so that it changes shape and becomes smaller.</p> 
A force that changes the direction of something	<p>When the ball is hit with the racket, it will change direction.</p> 
Types of force	
Magnetism	<p>Attract: </p> <p>Repel: </p> <p>North and South attract. But North and North or South and South will repel.</p>
Air Resistance	<ul style="list-style-type: none"> • Air resistance slows down moving objects, because air slows you down as you move through it • To travel faster through the air, things need to be streamlined.
Water Resistance	<ul style="list-style-type: none"> • Water resistance slows down moving objects, because water slows you down as you move through it • To travel faster through the water, things need to be streamlined.
Friction	<ul style="list-style-type: none"> • Friction happens when two surfaces touch each other. • Friction gives us grip. • Friction produces heat. • Rougher surfaces slow things down a lot. • Smoother surfaces don't slow things down as much.
Gravity (another force)	
What is gravity?	<p>Gravity is the forces that pulls objects down towards the centre of the Earth.</p> <p>Gravity stops things from floating away into space.</p> <p>When things go into the air (like a football) gravity pulls them back down.</p>

What? (Key Vocabulary)	
Spelling	Definition/Sentence
force	a force is a push or a pull
gravity	gravity is a force of attraction that pulls together all matter (anything you can physically touch).
air resistance	air resistance is a force that acts in the opposite direction of a moving object and is a type of friction
water resistance	Water resistance is a type of force that uses friction to slow things down that are moving through water. It is often called drag
friction	Friction is the resistance of motion when one object rubs against another. Anytime two objects rub against each other, they cause friction
levers	A lever is a long, sturdy body that rests on a support called a fulcrum. The fulcrum is the place where the lever pivots.
pulley	a wheel over which a belt, rope, or chain is pulled to lift or lower a heavy object
mechanisms	a piece of machinery

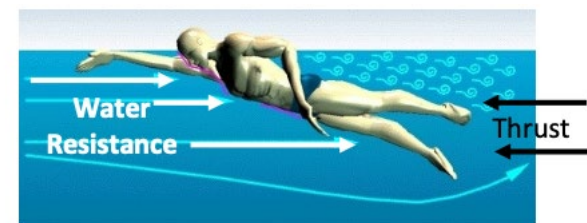
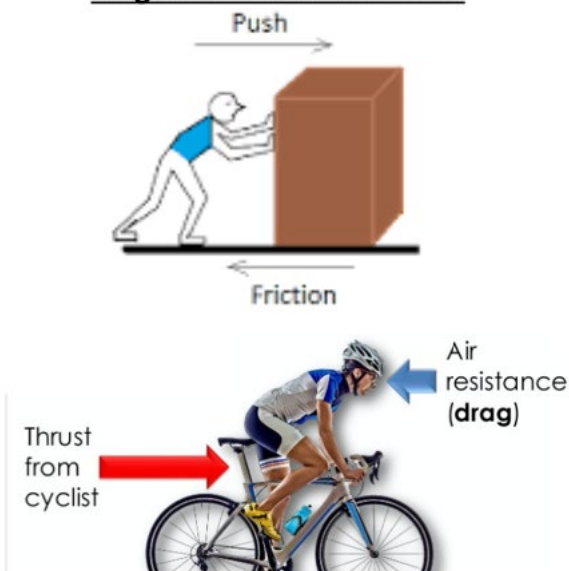
Year Group: 5 Topic: Forces

Take it further at home...

- Experiments to find properties of materials, e.g. does it attract to a magnet, can heat pass through it...
- Design an everyday item (oven glove, pan stand) based on the properties it would need.
- Experiment with irreversible changes, e.g. vinegar and bicarbonate of soda.
- Fill in the vocabulary chart – try and do this from memory with them!

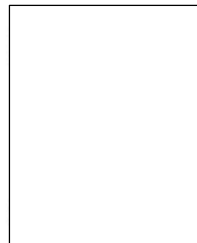
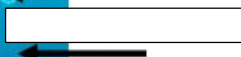
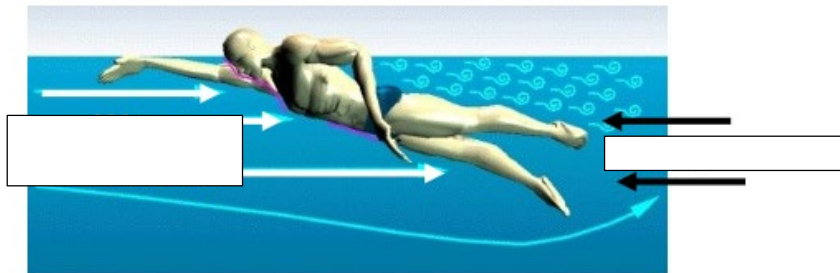
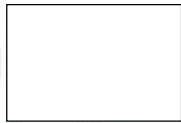
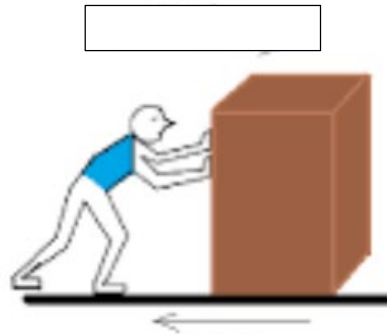
Diagram and symbols

Diagrams of forces in action



Gravity pulls us towards the centre of the Earth.

Diagrams of forces in action



What? (Key Vocabulary)

Spelling	Definition/Sentence
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	gravity is a force of attraction that pulls together all matter (anything you can physically touch).
air resistance	
	Water resistance is a type of force that uses friction to slow things down that are moving through water. It is often called drag
friction	
	A lever is a long, sturdy body that rests on a support called a fulcrum. The fulcrum is the place where the lever pivots.
	a wheel over which a belt, rope, or chain is pulled to lift or lower a heavy object
mechanisms	