







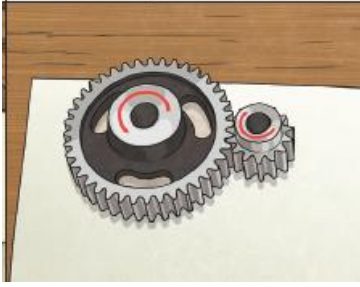



Crofton Junior School – Curriculum Knowledge Organiser

Unit of Work	Science – Physics – Year 5	
Key Strand	Understand movement, forces and magnets	
Overview of the Unit of Work	This concept involves understanding what causes motion.	
Prior Learning & Vocabulary	<p>Year 2 Materials: push(ing), pull(ing),</p> <p>Year 3 Forces and Magnets: force, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, non-magnetic, poles, north pole, south pole</p>	
Sticky Knowledge	<p>Forces can make an object.....</p> <ul style="list-style-type: none"> • start to move • stop moving • move faster • change direction • change its shape • move more slowly. <p>Gravity is a pulling force exerted by Earth or anything else which has mass.</p> <p>Mass is how much matter is inside an object and measured in kilograms, grams, tonnes.</p> 	<p>Issac Newton is famously thought of to have developed the theory of gravity and went on to write the Newton's laws.</p> <p>1st Law: An object will remain at rest, unless acted on by an unbalance force. An object in motion continues in motion with the same speed and in the same direction , unless acted upon by an unbalanced force.</p> <p>2nd Law: Acceleration is produced when a force acts on mass.</p> <p>The greater the mass (of the object being accelerated), the greater the amount of force needed (to accelerate the object).</p> <p>3rd Law: For every action, there is an equal and opposite reaction.</p>  <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">  1st Law </div> <div style="border: 1px solid black; padding: 5px; text-align: center;">  2nd Law </div> <div style="border: 1px solid black; padding: 5px; text-align: center;">  3rd Law </div> </div>

	 <p>Weight is how strongly gravity is pulling an object down and measured in newtons (N).</p>	<p>Water resistance and air resistance are forms of friction. To work with or against these, some things are built to be streamlined so that air/water can move smoothly around the object.</p> 	
	<p>Pulleys</p> 	<p>Gears/Cogs</p> 	<p>Levers</p> 
	<p>Pulleys use wheels to allow a small force lift a heavier load.</p>	<p>Gears or cogs can be used to change speed, force or direction of a motion.</p>	<p>Levers can be used to make a small force lift a heavier load by resting on a pivot.</p>
<p>New Vocabulary</p>	<p>fall, Earth, gravity, air resistance, water resistance, water resistance, friction, moving surfaces, mechanisms, levers, pulleys, gears, transfers, weight/mass</p>		
<p>Post Learning</p>	<p>KS3 – Motions & Forces and KS3 – Electricity and electromagnetism</p>		