


Leamington Primary Science Knowledge Organiser Year 5 – Forces – Strand - Physics

What I should already know	What I will learn	Important words to help me. (vocabulary)		Ideas for Scientific Enquiry																																								
<p>There are different types of forces including; push, pull and twist.</p> <p>There is a force called gravity that pulls you down. This is how we stay on Earth.</p>	<p>There are lots of different types of forces all around us and we use these in everyday life.</p> <p>Isaac Newton (scientist) had a massive impact on physics and developed the theory of gravity.</p> <p>Weight is a measure of how strongly gravity pulls and is measured in newton's (N). Mass isn't a measure of gravitational pull and your mass would be the same even in space.</p> <p>There are different forces that act between moving surfaces. These include; air resistance, water resistance and friction.</p>	<table border="1"> <tr> <td>Attract</td> <td>To draw by a physical force causing or tending to cause an approach.</td> </tr> <tr> <td>Data</td> <td>Evidence collected through scientific testing.</td> </tr> <tr> <td>Earth</td> <td>Spherical planet that can hold life.</td> </tr> <tr> <td>Fair test</td> <td>Scientific enquiry carried out with certain variables staying the same for each test.</td> </tr> <tr> <td>Fall</td> <td>When an object drops in a downward motion.</td> </tr> <tr> <td>Force</td> <td>Force is a push or pull on an object. A force can cause an object to accelerate, slow down, remain in place, or change shape.</td> </tr> <tr> <td>Gravity</td> <td>Gravity is a force of attraction that pulls together all matter (anything you can physically touch). 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Can a pattern be identified between Newtons or G or KG?</p> <p><u>Fair test</u></p> <p>Planning and conducting a fair test to see whether the ramp surface, vehicle or height of ramp affects the distance the vehicle travels.</p> <p><u>Fair test</u></p> <p>Planning and conducting a fair test to see whether the size of the parachute affects the time it takes to reach the floor.</p> <p><u>Fair test</u></p> <p>Planning and conducting a fair test to see whether the shape of blu tac affects the time it takes to reach the bottom of the tank.</p> <p><u>Classifying and grouping</u></p> <p>Sorting examples of pulleys, levers and gears into correct mechanism group.</p>
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Interesting Facts	<p>Friction occurs when objects move through water or air.</p> <p>Air resistance is a type of friction between air and another material.</p> <p>Water resistance is a type of friction between your skin and the water particles.</p> <p>Streamline is the shape of something so it has less friction acting on it in water. This will provide an object to move smoothly in water. Upthrust is a force that acts on an object to keep it afloat.</p> <p>There are a range of mechanisms that are used that allow a smaller force but can have a greater effect. These are; pulleys, gears and levers.</p>																																											
<p>Isaac Newton discovered gravity. He described it as a pulling force that keeps people on the ground rather than floating off. He also noted that gravity keeps the moon in orbit.</p>																																												

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		Upthrust	An upward force that a liquid or gas exerts on a body floating in it.	
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