

## Year 9 Science

### Learning Programme 5

<p>The LORIC skill focus for his LP is: COMMUNICATION. The Moral Virtues focus for this LP are: COURAGE and HUMILITY.</p> <p>Courage - Acting with bravery and overcoming fears. Humility - Having a modest view of oneself.</p> <p><b>What will I be learning about in this Learning Programme?</b> Describing motion, speed and the quantitative relationship between average speed, distance and time (<math>\text{speed} = \text{distance} \div \text{time}</math>), the representation of a journey on a distance-time graph and relative motion of trains and cars passing one another.</p> <p><b>Where have I seen this learning before?</b> KS2 Forces and KS3 forces</p> <p><b>What could I use it for?</b> GCSE science: forces and motion, how forces impact movement of objects and car safety features.</p>		<p><b>Literacy:</b></p> <ul style="list-style-type: none"> <li>Capital letters must be used at the start of sentences and for the first letter of proper nouns</li> <li>Full stops must be used at the end of a sentence</li> <li>Question marks must be used at the end of a question</li> <li>Apostrophes should only be used for possession or omission</li> <li>Days of the week and months must be spelled correctly</li> <li>Key words must be spelled correctly</li> </ul>
<p><b>In LP5.1, I will know:</b> 11/05/26 - (WK 1)</p> <p>how to analyse results of density practical and draw a graph; how to explain that internal energy is the total kinetic energy and potential energy of all the particles that make up a system; how to explain the difference between scalar and vector quantities, with examples.</p>	<p><b>Key Vocabulary</b></p> <p>scalar</p>	<p><b>Homework</b></p> <p>Complete Sparx Science task</p>
<p><b>In LP5.2, I will know:</b> 18/05/26 - (WK 2)</p> <p>how to practice increased difficulty <math>s=d/t</math> equation with multiple examples; how to draw and interpret distance/time graphs; how to explain the difference between acceleration and deceleration.</p>	<p><b>Key Vocabulary</b></p> <p>speed</p>	<p><b>Homework</b></p> <p>Complete Sparx Science task</p>
<p><b>LP5 RLW, I will:</b> 01/06/26 - (WK 1)</p> <p>review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.</p>		
<p><b>In LP5.3, I will know:</b> 08/05/26 - (WK 2)</p> <p>how to investigate the acceleration of an object; how to explain how to use a velocity time graph to deduce whether or not accelerating or decelerating; how to explain how resultant forces acting on an object change</p> <p>Extended Task.</p>	<p><b>Key Vocabulary</b></p> <p>acceleration</p>	<p><b>Homework</b></p> <p>Complete Sparx Science task</p>
<p><b>In LP5.4, I will know:</b> 15/06/26 - (WK 1)</p> <p>how to revise LP4 content for summative assessment; how to complete summative assessment; my strengths and areas of development.</p>	<p><b>Key Vocabulary</b></p> <p>assessment</p>	<p><b>Homework</b></p> <p>Complete Sparx Science task</p>
<p><b>In LP5.5, I will know:</b> 22/06/26 - (WK 2)</p> <p>how to analyse why parachutes can reduce terminal velocity; how to analyse results of terminal velocity practical and draw a graph; how to explain what can increase or decrease the stopping distance of a vehicle.</p>	<p><b>Key Vocabulary</b></p> <p>terminal velocity</p>	<p><b>Homework</b></p> <p>Complete Sparx Science task</p>
<p><b>In LP5.6, I will know:</b> 29/06/26 - (WK 1)</p> <p>how to explain what can increase or decrease the stopping distance of a vehicle; how to understand what relative motion is; how to describe what momentum means for a closed system.</p> <p>Extended Task.</p>	<p><b>Key Vocabulary</b></p> <p>stopping distance</p>	<p><b>Homework</b></p> <p>Complete Sparx Science task</p>
<p><b>In LP5.7, I will know:</b> 06/07/26 - (WK 2)</p> <p>how to explain that momentum is conserved in a collision; how to understand that the time taken for a complete stop reduces impact; how to describe how safety features in cars reduce the risk of injury.</p>	<p><b>Key Vocabulary</b></p> <p>car safety</p>	<p><b>Homework</b></p> <p>Complete Sparx Science task</p>
<p><b>Resources to support learning:</b> Sparx science, EPC Knowledge organiser, BBC bitesize momentum, Synergy and KS3 revision resources.</p>		
<p><b>FFET Award Challenge for this Learning Programme:</b> Design a resource about stopping distances in cars. Speak to parents/carers about the highway code and explain what factors increase/decrease stopping distances in cars.</p>		

