

Year 13 Modelling Physics Learning Programme 2

<p>The LORIC skill focus for his LP is: ORGANISATION The Moral Virtues focus for this LP are: COMPASSION and HONESTY Compassion - the quality of feeling pity and concern for the sufferings or misfortunes of others. Honesty - the quality of being truthful.</p> <p>What will I be learning about in this Learning Programme? How to describe the motion of objects moving in circular paths. How objects undergoing simple harmonic motion behave.</p> <p>Where have I seen this learning before? You will have experienced some of the fundamentals of circular motion in Y12. Simple harmonic motion is new learning.</p> <p>What could I use it for? Circular motion is foundational knowledge to understand planetary motion, and appears in many areas of physics and engineering. Simple harmonic motion is used to understand any system with vibrations, and can be applied to music, mechanical and civil engineering.</p>		<p>Literacy:</p> <ul style="list-style-type: none"> Capital letters must be used at the start of sentences and for the first letter of proper nouns Full stops must be used at the end of a sentence Question marks must be used at the end of a question Apostrophes should only be used for possession or omission Days of the week and months must be spelled correctly Key words must be spelled correctly
<p>In LP2.1, I will know:</p> <p>How to explain the differences between linear and angular velocity; how to calculate angular velocity given the frequency or period;</p>	<p>21/10/24 - (WK 2)</p> <p>Key Vocabulary</p> <p>Angular velocity</p>	<p>Homework</p> <p>Angular velocity exam questions</p>
<p>In LP2.2, I will know:</p> <p>How to explain centripetal acceleration, and how to calculate it; how to calculate centripetal force and apply this to a range of contexts.</p>	<p>04/11/24 - (WK 1)</p> <p>Key Vocabulary</p> <p>Centripetal, acceleration, force</p>	<p>Homework</p> <p>Circular motion exam questions</p>
<p>LP2 RLW, I will:</p> <p>review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.</p>		
<p>In LP2.3, I will know:</p> <p>How to define and calculate angular frequency; how to use explain and use the simple harmonic motion equations;</p> <p>Extended Task.</p>	<p>18/11/24 - (WK 1)</p> <p>Key Vocabulary</p> <p>Simple harmonic motion</p>	<p>Homework</p> <p>Angular frequency exam questions</p>
<p>In LP2.4, I will know:</p> <p>How to investigate the factors that affect the period of a simple harmonic oscillator; LP2 summative assessment.</p>	<p>25/11/24 - (WK 2)</p> <p>Key Vocabulary</p> <p>Oscillator</p>	<p>Homework</p> <p>Revision</p>
<p>In LP2.5, I will know:</p> <p>How to use the simple harmonic motion equations to calculate velocity and displacement; how to describe the interchange between kinetic and potential energy during SHM; my strengths and areas for developments following the LP2 summative assessment and PRT.</p>	<p>02/12/24 - (WK 1)</p> <p>Key Vocabulary</p> <p>Velocity, Displacement, energy</p>	<p>Homework</p> <p>Simple harmonic motion exam questions</p>
<p>In LP2.6, I will know:</p> <p>How to describe the effects of damping, and the differences between free and forced oscillations; how to describe the causes of resonance, and give examples of resonance in action.</p> <p>Extended Task.</p>	<p>09/12/24 - (WK 2)</p> <p>Key Vocabulary</p> <p>Damping, resonance</p>	<p>Homework</p> <p>Damping and resonance exam questions</p>
<p>In LP2.7, I will know:</p> <p>How to describe the behaviour of gravitational fields; how to use Newton's Law of Gravitation; my strengths and areas for developments following the LP2 summative assessment and PRT.</p>	<p>16/12/24 - (WK 1)</p> <p>Key Vocabulary</p> <p>Gravitation</p>	<p>Homework</p> <p>Newton's Law of Gravitation exam questions</p>
<p>Resources to support learning: Knowledge organiser, Isaac physics, www.physicsandmathstutor.com, text book</p>		
<p>FFET Award Challenge for this Learning Programme: LP2 Year 13 Physics : Support with lower school STEM Club</p>		

PRT Task 1

PRT Task 2