

## Year 10 Physics

### Learning Programme 5

<p>The LORIC skill focus for this LP is: COMMUNICATION.</p> <p>The Moral Virtues focus for this LP are: COURAGE and HUMILITY.</p> <p>Courage - Acting with bravery and overcoming fears.</p> <p>Humility - Having a modest view of oneself.</p> <p><b>What will I be learning about in this Learning Programme?</b> The uses and dangers of nuclear radiation, nuclear fission and fusion.</p> <p><b>Where have I seen this learning before?</b> You have learnt about the particle model in KS3 and LP3. The structure of the atom is a fundamental concept that you learnt in KS3 and have since reviewed in Chemistry. During LP4, you learnt about radioactive decay and alpha, beta and gamma radiation.</p> <p><b>What could I use it for?</b> You will learn more about the particle model and the nucleus in greater depth in A-level Physics and Chemistry. Nuclear power will be crucial as we look to move to more carbon neutral energy.</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></p> <p>how to explain how contamination and irradiation can cause a risk to human health. Name common sources (natural and manmade) of background radiation; how to evaluate the perceived risks of using nuclear radiation - Alexander Litvinenko story.</p>	<p><b>13/05/24 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>contamination</p>	<p><b>Homework</b></p> <p>Background radiation and contamination worksheet.</p>
<p><b>In LP5.2, I will know:</b></p> <p>how to describe and explain uses of alpha, beta and gamma radiation in industry; how to describe medical uses of radiation.</p>	<p><b>20/05/24 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>Becquerel</p>	<p><b>Homework</b></p> <p>Uses and risks of radiation worksheet.</p>
<p><b>In LP5.3, I will know:</b></p> <p>Revise LP5.1 and 5.2 Response to assessment</p> <p>Extended Task.</p>	<p><b>03/06/24 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>irradiation</p>	<p><b>Homework</b></p> <p>PPQ on Medical uses of radiation.</p>
<p><b>In LP5.4, I will know:</b></p> <p>how to describe the process of nuclear Fission; how to describe the working of a nuclear power station.</p>	<p><b>10/06/24 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>fission</p>	<p><b>Homework</b></p> <p>PPQ on Nuclear fission and power stations.</p>
<p><b>In LP5.5, I will know:</b></p> <p>how to describe the process of nuclear fusion; how to evaluate the perceived risks of using nuclear radiations for medical or energy in relation to given data and consequences.</p>	<p><b>17/06/24 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>fusion</p>	<p><b>Homework</b></p> <p>Fission and Fusion worksheet.</p>
<p><b>In LP5.6, I will know:</b></p> <p>Revision for exams Response to assessment</p> <p>Extended Task.</p>	<p><b>24/06/24 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>random</p>	<p><b>Homework</b></p> <p>revision for exams.</p>
<p><b>In LP5.7, I will know:</b></p> <p>how to describe the difference between a vector and a scalar quantity, with examples of scalars and vector; how to use scale diagrams to add two or more forces. How to resolve forces into horizontal and vertical components;</p>	<p><b>01/07/24 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>vector</p>	<p><b>Homework</b></p> <p>Forces worksheet.</p>
<p><b>In LP5.8, I will know:</b></p> <p>how to describe the motion of an object by interpreting distance-time graphs; how to calculate the velocity of an accelerating object by finding the gradient of a tangent to a curve.</p>	<p><b>08/07/24 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>displacement</p>	<p><b>Homework</b></p> <p>Resultant vector worksheet</p>
<p><b>Resources to support learning:</b> Knowledge organisers, booklets.</p>		
<p><b>FFET Award Challenge for this Learning Programme:</b> Complete a practice paper as part of your revision.</p>		

PRT Task 1

PRT Task 2