

Year 12 Exploring 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? Electrical circuits and how to use Kirchhoff's laws to explain observations in electrical circuits.</p> <p>Where have I seen this learning before? Electricity is studied at GCSE and you will have looked at the behaviour of current and potential difference in circuits.</p> <p>What could I use it for? In future, when we study the photoelectric effect and in Yr13 when you look at electric fields and capacitance</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: 21/10/24 - (WK 2)</p> <p>how to describe and calculate the resistivity of a material; how to determine resistivity by investigating how the resistance of a wire changes with length.</p>	<p>Key Vocabulary</p> <p>Resistivity</p>	<p>Homework</p> <p>Resistivity exam questions]</p>
<p>In LP2.2, I will know: 04/11/24 - (WK 1)</p> <p>how to calculate electrical power using equations $P=VI$, $P=I^2R$, $W = Vit$; how to calculate the cost of energy using kWh.</p>	<p>Key Vocabulary</p> <p>Power</p>	<p>Homework</p> <p>Electrical power exam questions</p>
<p>LP2 RLW, I will: 11/11/24 - (WK 2)</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: 18/11/24 - (WK 1)</p> <p>how to describe the conservation of energy and apply Kirchhoff's first and second laws to circuits; how to calculate the resistance of resistors in both series and parallel; complete an investigation into resistance in series and parallel arrangements.</p> <p>Extended Task.</p>	<p>Key Vocabulary</p> <p>Kirchhoff's laws</p>	<p>Homework</p> <p>Circuits exam questions</p>
<p>In LP2.4, I will know: 25/11/24 - (WK 2)</p> <p>how to analyse complex circuits using Kirchhoff's laws and $V=IR$; how to define internal resistance, terminal pd and lost volts;</p>	<p>Key Vocabulary</p> <p>Electromotive force, terminal PD</p>	<p>Homework</p> <p>Revision</p>
<p>In LP2.5, I will know: 02/12/24 - (WK 1)</p> <p>use the internal resistance equations; my strengths and areas for developments following the LP2 summative assessment and PRT.</p>	<p>Key Vocabulary</p> <p>Internal resistance</p>	<p>Homework</p> <p>Internal resistance exam questions</p>
<p>In LP2.6, I will know: 09/12/24 - (WK 2)</p> <p>how to use Kirchhoff's laws to explain the distribution of pds in a potential divider. calculate pds in potential dividers.</p> <p>Extended Task.</p>	<p>Key Vocabulary</p> <p>Potential divider</p>	<p>Homework</p> <p>Potential divider exam questions</p>
<p>In LP2.7, I will know: 16/12/24 - (WK 1)</p> <p>how to investigate the relationship between resistance and pd in a potential divider circuit; my strengths and areas for developments following the LP2 formative assessment and PRT.</p>	<p>Key Vocabulary</p> <p>Sensing circuits</p>	<p>Homework</p> <p>Applied potential divider exam questions</p>
<p>Resources to support learning: Knowledge organiser, Isaac Physics, Turnbull Physics YOUTUBE, physicsandmathstutor.com</p>		
<p>FFET Award Challenge for this Learning Programme: Support with lower school STEM Club</p>		

PRT Task 1

PRT Task 2