



## Year 10 Physics (combined)

## Learning Programme 2

PRT Task 1

PRT Task 2

The LORIC skill focus for his LP is: ORGANISATION		Literacy:
The Moral Virtues focus for this LP are: COMPASSION and HONESTY		<ul> <li>Capital letters must be used at the start</li> </ul>
Comparison - the quality of feeling out and concern for the sufferings or misfortunes of others		of sentences and for the first letter of
Longet, the quality of realing bits and concern for the sufferings of misfordanes of others.		proper nouns
Honesty - the quality of being in utility.		<ul> <li>Full stops must be used at the end of a</li> </ul>
what will I be learning about in this Learning Programme? How current and neutratial difference behavior is coriage and parallel signific how registance affects the behaviour of signific		sentence
The Neticeal Grid and here detricities to used departicularly.		<ul> <li>Question marks must be used at the</li> </ul>
The National Grid and now electricity is used domestically.		end of a question
		<ul> <li>Apostrophes should only be used for</li> </ul>
Where have I seen this learning before?		possession or omission
You have covered electrical circuits at KS3, in particular building circuits and investigating electromagnets		<ul> <li>Days of the week and months must be</li> </ul>
		spelled correctly
		<ul> <li>Key words must be spelled correctly</li> </ul>
What could I use it for?		
Electricity and circuits is a key idea in physics and electronics. This knowledge is built upon in year 11 when studying electromagnets. It i	s also built upon in A	
level physics in the module; electrons, waves and photons.		
In 122.1 Lwill know: 21/10/24(WK 2)	Key Vocabulary	Homework
metzici, twinknow.	Rey Vocabulary	Energy resources even questions
how to describe the advantage and discuss or energy transferred and power (using under transferred) by the selection of the s		Energy resources exam questions
now to describe the auxiliages and disadvantages of renewable energy sources (while, waves, flues, hydroelectricity, the solar, acatherenia and his factors)	Renewable	
geotrierina and biorderiy. how to describe the advantages and disadvantages of non-renewable energy resources (fossil fuels and nuclear fuels).	nenemable	
now to describe the advantages and disadvantages of non-renewable energy resources (rossin ders and nuclear ders).		
In LP2.2, I will know: 04/11/24 - (WK 1)	Key Vocabulary	Homework
how to recall and draw the standard circuit diagram symbols;	.,	circuit diagrams exam question
describe how to build working circuits using standard circuit diagrams:		
how to describe conventional current and to define current as the rate of flow of charge, applying the equation $O=It$ .	Component	
non to accurate contentioned contention and to content on the face of non-original physical physical descent of the		
LP2 RLW, I will: 11/11/24 - (WK 2)		
review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.		
In LP2.3, I will know: 18/11/24 - (WK 1)	Key Vocabulary	Homework
how to define Potential difference as the energy per unit charge;		ohms law calculations
how to describe and explain the factors that can affect resistance, and apply and rearrange the equation V=IR;		
how to apply the rules for current and potential difference in series and parallel circuits.	Resistance	
Extended Task.		
Extended Task. In LP2.4, I will know: 25/11/24 - (WK 2)	Key Vocabulary	Homework
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Extended Task.         In LP2.4, I will know:       25/11/24 - (WK 2)         how to calculate the total resistance in circuits that contain components connected in series;         factors that effect resistance required practical's - Resistors in series and parallel & length of wire;         LP2.symmative assessment.         In LP2.5, I will know:       02/12/24 - (WK 1)         how to draw and explain current/voltage graphs for a resistor (ohmic), diode, and filament lamp (non-ohmic)- required practical         how to draw and explain graphs to show how resistance varies with temperature in a thermistor and brightness with an LDR;         my strengths and areas for developments following the LP2 summative assessment and PRT.         In LP2.6, I will know:       09/12/24 - (WK 2)         how to describe the difference between alternating and direct current;         how to describe and explain the correct wiring of a 3pin plug and the safety functions associated with it;         how Porergy is transferred in electrical devices and apply the equations P=IV and P=I^2xR;         how Energy is transferred in domestic appliances, and apply the equations E=QV and E=Pt;         Extended Task.       16/12/24 - (WK 1)         how explain why step-up and step-down transformers are used to prevent energy losses;         my strengths and areas for developments following the summative assessment and PRT.         Resources to support learning:         Knowledge organisers, BBC Bitesize, Booklet	Key Vocabulary         Series, parallel         Key Vocabulary         Ohmic         Key Vocabulary         Alternating current         Key Vocabulary         Transformer	Homework         required practical exam question         Homework         IV graphs exam question - required practical         Plugs and electrical safety question         Homework         plugs and electrical safety question         National Grid and transformers questions
Extended Task.       IN LP2.4, I will know:       25/11/24 - (WK 2)         how to calculate the total resistance in circuits that contain components connected in series;       factors that effect resistance required practical's - Resistors in series and parallel & length of wire;         LP2 summative assessment.       02/12/24 - (WK 1)         how to draw and explain current/voltage graphs for a resistor (ohmic), diode, and filament lamp (non-ohmic)- required practical         how to draw and explain graphs to show how resistance varies with temperature in a thermistor and brightness with an LDR;         my strengths and areas for developments following the LP2 summative assessment and PRT.         In LP2.6, I will know:       09/12/24 - (WK 2)         how to describe the difference between alternating and direct current;         how to describe and explain helectrical devices and apply the equations E=QV and E=Pt;         Extended Task.       16/12/24 - (WK 1)         how explain why step-up and step-down transformers are used to prevent energy losses;         my strengths and areas for developments following the summative assessment and PRT.         Resources to support learning:         Knowledge organisers, BBC Bitesize, Booklet         FET Award Challenge for this Learning Programme:         LP2 Year 10 Science: Create a revision resource on a topic of your choice	Key Vocabulary         Series, parallel         Key Vocabulary         Ohmic         Key Vocabulary         Alternating current         Key Vocabulary         Transformer	Homework         required practical exam question         Homework         IV graphs exam question - required practical         Homework         plugs and electrical safety question         Homework         National Grid and transformers questions
Extended Task.       In LP2.4, I will know:       25/11/24 - (WK 2)         how to calculate the total resistance in circuits that contain components connected in series;       factors that effect resistance required practical's - Resistors in series and parallel & length of wire;         LP2 summative assessment.       In LP2.5, I will know:       02/12/24 - (WK 1)         how to draw and explain current/voltage graphs for a resistor (ohmic), diode, and filament lamp (non-ohmic)- required practical how to draw and explain graphs to show how resistance varies with temperature in a thermistor and brightness with an LDR; my strengths and areas for developments following the LP2 summative assessment and PRT.         In LP2.6, I will know:       09/12/24 - (WK 2)         how to describe and explain the correct wiring of a 3pin plug and the safety functions associated with it; how Power is transferred in electrical devices and apply the equations P=IV and P=I^2xR; how Energy is transferred in domestic appliances, and apply the equations E=QV and E=Pt; Extended Task.         In LP2.7, I will know:       16/12/24 - (WK 1)         how to explain they over stations to consumers using the National Grid; how to explain why step-up and step-down transformers are used to prevent energy losses; my strengths and areas for developments following the summative assessment and PRT.         Resources to support learning:       Knowledge organisers, BBC Bitesize, Booklet         HP2 Year 10 Science: Create a revision resource on a topic of your choice       LP2 Year 10 Science: Create a revision resource on a topic of your choice	Key Vocabulary Series, parallel Key Vocabulary Ohmic Key Vocabulary Alternating current Key Vocabulary Transformer	Homework         required practical exam question         Homework         IV graphs exam question - required practical         Phomework         plugs and electrical safety question         Homework         Questions
Extended Task.       25/11/24 - (WK 2)         how to calculate the total resistance in circuits that contain components connected in series;       factors that effect resistance required practical's - Resistors in series and parallel & length of wire;         LP2 summative assessment.       02/12/24 - (WK 1)         how to draw and explain current/voltage graphs for a resistor (ohmic), diode, and filament lamp (non-ohmic)- required practical how to draw and explain graphs to show how resistance varies with temperature in a thermistor and brightness with an LDR; my strengths and areas for developments following the LP2 summative assessment and PRT.         In LP2.6, I will know:       09/12/24 - (WK 2)         how to describe the difference between alternating and direct current;       how to describe and explain the correct wiring of a 3pin plug and the safety functions associated with it; how Power is transferred in electrical devices and apply the equations E=QV and E=Pt;         Extended Task.       16/12/24 - (WK 1)         how to explain why step-up and step-down transformers are used to prevent energy losses; my strengths and areas for developments following the summative assessment and PRT.         FEET Award Challenge for this Learning Programme:       LP2 Year 10 Science: Create a revision resource on a topic of your choice	Key Vocabulary Series, parallel Key Vocabulary Ohmic Key Vocabulary Alternating current Key Vocabulary Transformer	Homework         required practical exam question         Homework         IV graphs exam question - required practical         Phomework         plugs and electrical safety question         Homework         National Grid and transformers questions
Extended Task.       11/22.4. [WK 12)         how to calculate the total resistance in circuits that contain components connected in series;       factors that effect resistance required practical's - Resistors in series and parallel & length of wire;         LP2 summative assessment.       02/12/24 - (WK 1)         how to draw and explain current/voltage graphs for a resistor (ohmic), diode, and filament lamp (non-ohmic)- required practical how to draw and explain graphs to show how resistance varies with temperature in a thermistor and brightness with an LDR; my strengths and areas for developments following the LP2 summative assessment and PRT.         In LP2.6, I will know:       09/12/24 - (WK 2)         how to describe the difference between alternating and direct current;       how to describe and explain the correct wiring of a 3pin plug and the safety functions associated with it;         how Power is transferred in domestic appliances, and apply the equations E=QV and E=Pt;       Extended Task.         In LP2.7, I will know:       16/12/24 - (WK 1)         how to explain why step-up and step-down transformers are used to prevent energy losses;       my strengths and areas for developments following the summative assessment and PRT.         Resources to support learning:       Knowledge organisers, BBC Bitesize, Booklet         FEET Award Challenge for this Learning Programme:       LP2 Year 10 Science: Create a revision resource on a topic of your choice	Key Vocabulary         Series, parallel         Key Vocabulary         Ohmic         Key Vocabulary         Alternating current         Key Vocabulary         Transformer	Homework         required practical exam question         Homework         IV graphs exam question - required practical         Homework         plugs and electrical safety question         National Grid and transformers questions