

Prior Learning		At KS3 and in unit 1 of the GCSE physics course, students have learned about electrical energy, electrical current, and electricity in the home.		
Lesson Number	AQA Spec	Title	Content	Assessment
1	4.2.3.1 4.2.3.2	Electricity in the home	<ul style="list-style-type: none"> Know that the domestic supply in the UK is a.c. at 50 Hz and about 230 V. Describe the main features of live, neutral and earth wires. 	
2	4.2.1.1 4.2.1.2 4.2.1.3	Electric current	<ul style="list-style-type: none"> Know circuit symbols. Know that current is a rate of flow of electric charge. Use series circuits to test components and measure current. (Build series circuit) Explain how an electric current passes round a circuit. 	
3	4.2.2	Investigating circuits	<ul style="list-style-type: none"> Know that current (I) depends on resistance (R) and potential difference (V) Carry out calculations on a single component in a series circuits. GRAPH 	Quiz (not recorded)
4	4.2	Maths skills: Using formulae and understanding graphs	<ul style="list-style-type: none"> Recognise how algebraic equations define the relationships between variables. Solve simple algebraic equations by substituting numerical values. Describe relationships expressed in graphical form 	Add resources (gradient)

5	4.2.1.4	Circuit components	<ul style="list-style-type: none"> Set up a circuit to investigate resistance. Investigate the changing resistance of a filament lamp. Compare the properties of a resistor and filament lamp. Graph/gradient 	
6	4.2.2	Series and parallel circuits	<ul style="list-style-type: none"> Recognise series and parallel circuits. Describe the changes in the current and potential difference in series and parallel circuits. 	
7	4.2.1.3	Required practical: Prac 3 Investigate factors affecting resistance	<ul style="list-style-type: none"> Use circuit diagrams to set up and check appropriate circuits to investigate the factors affecting the resistance of electrical circuits, including the length of a wire at constant temperature and combinations of resistors in series and parallel 	Assessment 1: Written assessment 15 Marks Feedback: Teacher
8	4.2.1.4	Control circuits	<ul style="list-style-type: none"> Use a thermistor and light-dependent resistor (LDR). Investigate the properties of thermistors, LDRs and diodes. 	
9	4.2.1.4	Required practical: Prac 4 Investigate the I–V characteristics of circuit elements	<ul style="list-style-type: none"> Investigate, using circuit diagrams to construct circuits, the I–V characteristics of a filament lamp, a diode and a resistor at constant temperature 	
10	4.2.4.2	Power and Electrical energy transfers	<ul style="list-style-type: none"> Describe the energy transfers in different domestic appliances. Recall that power is a rate of energy transfer. Describe power as a rate of energy transfer. Calculate the energy transferred. 	

11	4.2.4.1 4.1.1.1 4.1.1.2 4.1.1.3	Calculating power	<ul style="list-style-type: none"> Calculate power. Consider power ratings and changes in stored energy. Know that energy companies use kWh. Calculate the cost of using appliances. 	Assessment 2: Multiple choice Quiz 25 Marks Feedback: Auto/Self-assessed
12	4.2.4.3	Transmitting electricity	<ul style="list-style-type: none"> Describe how electricity is transmitted using the National Grid. Explain why electrical power is transmitted at high potential differences. Understand the role of transformers. 	
13	4.2.1	Key concept: What's the difference between potential difference and current?	<ul style="list-style-type: none"> Trilogy students do not need to know and understand the content on static charge Understand and be able to apply the concepts of current and potential difference. Use these concepts to explain various situations. 	
14 TRIPLE ONLY	4.2.5.1	Static electricity	<ul style="list-style-type: none"> Describe how insulating materials can become charged. Know that there are two kinds of electric charge. Explain these observations in terms of electron transfer. 	
15 TRIPLE ONLY	4.2.5.2	Electric fields	<ul style="list-style-type: none"> Explain what an electric field is. Draw an electric field pattern for a charged sphere. Use the idea of an electric field to explain electrostatic attraction and sparking. 	
End of Unit test Assessment: Teacher				
Where we will use these ideas again		P7 – Key concept: Electricity and Magnetism Electric motors		