



P2 Electricity Revision Checklist



Topic	Content	✓
Circuit diagrams, current and potential difference	Define current, potential difference (voltage), and resistance. Explain how current depends on resistance and potential difference. Discuss how different materials affect resistance and how temperature can influence conductivity.	
	Identify standard circuit symbols. Interpret circuit diagrams. Explain the importance of using standard symbols in designing and analysing circuits.	
	Define charge flow using $Q = It$. Explain the factors affecting current in a circuit. Discuss how charge movement in metallic conductors enables the function of electrical devices.	
	Required practical activity 3: Use circuit diagrams to set up and check appropriate circuits to investigate the factors affecting the resistance of electrical circuits.	
	Explain how resistance affects current. Use $V = IR$ to perform calculations. Discuss practical applications of Ohm's Law in electrical components.	
Resistors	Describe the behaviour of different resistors, including ohmic conductors, filament lamps, and diodes. Compare the characteristics of linear and non-linear circuit elements.	
	Required practical activity 4: use circuit diagrams to construct appropriate circuits to investigate the I-V characteristics of a variety of circuit elements, including a filament lamp, a diode and a resistor at constant temperature.	
Series and Parallel Circuits	Compare series and parallel circuits. Describe the rules for current and potential difference in each type of circuit. Explain how circuits are designed to ensure appropriate current flow for different applications.	
Domestic Use and Safety	Explain the difference between alternating current (AC) and direct current (DC). Describe the function of the live, neutral, and earth wires. Discuss how fuses and circuit breakers improve safety.	
Energy Transfer	Calculate energy transferred in electrical appliances using $E = P \times t$ and $E = Q \times V$. Explain the importance of energy efficiency in appliances and how ratings inform consumer choices.	
	Explain how electricity is transmitted efficiently using transformers. Describe the role of step-up and step-down transformers. Discuss the advantages of high-voltage transmission.	
Static Electricity	Explain how static charge is produced and its effects. Describe the behaviour of electric fields around charged objects. Discuss real-world applications, such as photocopiers and air purification.	



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	Define charge flow using $Q = It$. Explain the factors affecting current in a circuit. Discuss how charge movement in metallic conductors enables the function of electrical devices.	
	Required practical activity 2: Use circuit diagrams to set up and check appropriate circuits to investigate the factors affecting the resistance of electrical circuits.	
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