

Physics Electricity combined

Content	RAG
Know all the standard circuit diagram symbols and draw and interpret diagrams	
Define electrical charge and calculate it by recalling and using the equation: charge flow = current x time ($Q=It$)	
Define current, potential difference and resistance.	
Recall and apply the equation: potential difference = current x resistance ($V = IR$)	
REQUIRED PRACTICAL: Describe how to investigate the factors affecting resistance of electrical circuits including length of a wire and resistors in series and parallel	
Recognise current-potential difference graphs for a resistor, filament lamp and diode.	
REQUIRED PRACTICAL: Describe how to investigate current-potential difference characteristic of a filament lamp, diode and resistor at constant temperature	
Describe what happens to current, potential difference and resistance in a series circuit	
Describe what happens to current, potential difference and resistance in a parallel circuit	
Draw series and parallel circuit diagrams	
Know that mains electricity supply has a frequency of 50Hz and is about 230V	
Explain the difference between direct and alternating potential difference	
Explain what each of the wires in a 3 core cable does.	
Relate power in a circuit to potential difference and current	
Recall and apply the equations: power = potential difference x current ($P = VI$) and power = current ² x resistance ($P = I^2 \times R$)	
Describe the energy transfers of different domestic appliances	
Recall and apply the equations: Energy transferred = Power x time ($E = Pt$) and Energy transferred = charge flow x potential difference ($E = QV$)	
Explain how the national grid transfers electrical power	