



Lessons Sequence							
TOPIC (S) ELECTRICITY	1. Circuit diagrams 2. Charge and current 3. Resistance 4. Resistance (Required practical) 5. I-V characteristics (Required practical) 6. LDRs, thermistors and diodes 7. Resistors in series and parallel 8. Current and potential difference in series and parallel 9. Mains electricity 10. Wiring a plug 11. Electrical power 12. Energy transfers in electrical appliances 13. The national grid 14. Electric field 15. Static electricity						
Knowledge & Skills development	<ul style="list-style-type: none"> Knowledge of the circuit symbols for a variety of electrical components as well as why we use them Understanding of the terms current, voltage, potential difference and resistance Recall, using and rearranging equations for various electrical quantities Measuring electrical quantities with appropriate meters The function and uses of LDRs, diodes and thermistors Understanding of AC and DC electricity The wires and safety features in a standard British plug Understanding of the need for transformers in the national grid Understanding of the nature of electric fields and the causes and effects of static electricity 						
Assessment / Feedback Opportunities	<table border="1"> <tr> <td>Targeted questioning throughout topic</td> <td>Teacher assessment of practical skills during investigation - verbal</td> <td>Knowledge Recall Quizzes</td> <td>Deep marking of written task in students books</td> <td>Topic Test</td> <td>Targeted exam questions – teacher or self-assessed</td> </tr> </table>	Targeted questioning throughout topic	Teacher assessment of practical skills during investigation - verbal	Knowledge Recall Quizzes	Deep marking of written task in students books	Topic Test	Targeted exam questions – teacher or self-assessed
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Cultural Capital	<ul style="list-style-type: none"> Life skills - Opportunity to wire a plug 						
SMSC / Promoting British Values <small>(Democracy, Liberty, Rule of Law, Tolerance & Respect)</small>	<ul style="list-style-type: none"> Listening to others during presentations Working in groups during practicals or research tasks 						
Reading opportunities	<ul style="list-style-type: none"> Recommended Read: All About Physics (Richard Hammond) Recommended Read: Storm in a Teacup: The Physics of Everyday Life (Helen Czerski) 						
Key Vocabulary	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest Symbol, Diagram, Charge, Current, Potential Difference, Resistance, Coulomb, Joule, Volt, Amp, Diode, Characteristic, LDR, Thermistor, Series, Parallel, Alternating, Direct, Power, Field, Electron, Non-contact, Attract, Repel						
Digital Literacy	SharePoint resources including topic quizzes Possible use of excel to plot graphs and analyse data, powerpoint, word, etc to present information, internet for research						
Cross-Curricular Links	Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators						
Careers	Electrician, Electrical Engineer, Robotics, Computer Scientist						