



Subject	Year	Term												
Physics	12	1												
Topic														
Practical Skills, Electricity, Particles, and Quantum														
Content (Intent)														
Prior Learning (Topic)	GCSE Science													
AQA A Level Physics														
<ul style="list-style-type: none"> Practical and maths skills D.C. Electricity Particles Quantum behaviour 														
Future Learning (Topic)	Waves, Mechanics, and Materials													
What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)													
<p>Practical and Maths skills in physics: Rearrangement and application of formula, using standard form, identifying prefixes, using A level physics measuring equipment, learning about uncertainty analysis.</p> <p>D.C. Electricity: Applying Kirchhoff's laws, learning about potential dividers and their use in sensor-type circuits, internal resistance and EMF, resistivity, power dissipation, I-V characteristics of components, resistance, current and pd.</p> <p><i>Required practical's 5 & 6</i> Determination of resistivity and Investigation of the emf and internal resistance of electric cells and batteries.</p>	<p>Early Hurdle Exam – October of year 12. A level grading and formative feedback given.</p> <p>End of topic tests - A level grading and formative feedback given.</p> <p>Homework – a percentage, A level grade and Formative feedback provided.</p> <p>Data recorded on teacher tracking sheet</p>													
<p>Particles Basic Radioactivity leading onto particle theory such as hadrons, leptons, baryons, mesons and applying rules to determine characteristics of new particles. Antimatter, pair production, photons and Feynman diagrams.</p> <p>Quantum Introduction to the photoelectric effect, energy levels, ionisation and de Broglie wavelength.</p>	<p>Early Hurdle Exam – October of year 12. A level grading and formative feedback given.</p> <p>End of topic tests - A level grading and formative feedback given.</p> <p>Homework – a percentage, A level grade and Formative feedback provided.</p>													
How can parents help at home														
<p>Ensure all class notes and content files are complete and homework submitted on time</p> <p>Encourage pupils to revise for tests and exams and to create revision resources such as flash cards and posters.</p> <p>Encourage pupils to actively research future University courses and careers.</p>														
Helpful further reading/discussion (including Reading and Vocabulary Lists)														
<p>Reading Text Book – Collins AQA Approved Physics Year 1 & AS Student book by Dave Kelly Websites</p> <ul style="list-style-type: none"> www.physicsandmathstutor.com www.antonine-education.co.uk AQA website <p>Books – Practice in Physics by Akrill et al. CGP revision guides</p>	<p>Vocabulary Lists</p> <table> <tr> <td>Hadrons</td> <td>Antimatter</td> </tr> <tr> <td>Leptons</td> <td>Excitation</td> </tr> <tr> <td>Photons</td> <td>Work function</td> </tr> <tr> <td>EMF</td> <td></td> </tr> <tr> <td>Resistivity</td> <td></td> </tr> <tr> <td>Muons</td> <td></td> </tr> </table>		Hadrons	Antimatter	Leptons	Excitation	Photons	Work function	EMF		Resistivity		Muons	
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