

Unit Overview: Module 3 – electricity								
Half- Term:	AUT 1	AUT 2	SPR 1	SPR 2	SUM 1	SUM 2	No of Lessons:	18
<p><b><u>Key Focus for Unit:</u></b>  <i>What is the key knowledge being delivered?  What is the intent of this unit?</i></p>								
<p>Students learn about how the basic rules of electricity can be applied to more complex circuits by breaking them down into smaller, more simple sections. Students learn about the function and application of potential dividers and super conductors. Students complete two required practicals, one about the intrinsic property, resistivity, and the other about determining the internal resistance and EMF of a cell.</p>								
<p><b><u>Key Knowledge and Big Ideas:</u></b>  <i>What <b>Powerful Knowledge</b> and <b>Big Ideas</b> are explored in this Unit?  How have these progressed from previous learning? What <b>gaps in knowledge</b> have you identified from <b>baselining</b> and how are they being closed?</i></p>								
<p>BIG IDEA: Energy - the law of conservation of energy is a fundamental law of physics which holds together many different branches of physics.</p> <p>Students have previously learnt about electricity in yr7,8 and 10. The rules used in this topic are the same as learnt in yr7 just applied in novel situations.</p> <p>Student baselines are assessed through retrieval practice in the starter to identify gaps initial gaps in student knowledge. Lessons are adapted over the unit to address and bridge these gaps to ensure all students have the requisite understanding to access the next units in the big idea.</p>								
<p><b><u>Unit Assessment:</u></b>  <i>How will this unit be assessed?  What is the frequency of assessments – baselines etc?</i></p>								
<p>Formative assessment:</p> <ul style="list-style-type: none"> <li>• 6 mark extended writing task</li> <li>• Assesses powerful knowledge and literacy</li> <li>• Feedback and response time built into lesson</li> </ul> <p>Summative assessment:</p> <ul style="list-style-type: none"> <li>• 45minutes assessment</li> <li>• Assesses powerful knowledge through past exam questions</li> <li>• Feedback and response time built into lesson</li> </ul>								
<b><u>Key Skills Explored</u></b>			<b><u>Vocabulary Selected for DVI</u></b>			<b><u>Links to Previous Unit</u></b>		

<p><u>Practical skills</u>  <u>Calculating uncertainty</u>  <u>Real world applications for abstract concepts.</u></p>	<ul style="list-style-type: none"> <li>• Progressive waves</li> <li>• Stationary waves</li> <li>• Longitudinal</li> <li>• Transverse</li> <li>• Diffraction</li> <li>• Refraction</li> <li>• Reflection</li> <li>• Critical angle</li> </ul>	<ul style="list-style-type: none"> <li>• Waves – yr8</li> <li>• Waves – Yr11</li> </ul>
<p><u>Links to Careers/Employability</u></p>	<p><u>How does this unit prepare students for the next unit?</u></p>	
<ul style="list-style-type: none"> <li>• <u>Electrical engineer</u></li> <li>• <u>Robotics</u></li> <li>• <u>Lab technician</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Yr13 fields</u></li> <li>• <u>Paper 3 section A</u></li> </ul>	