

Progression Model: GCSE Combined Science Physics Year 11 Higher

Module Title: Forces and static electricity	Module Title: Electricity and electromagnetism	Module Title: Consolidation
<p>Learning Intent for this module: Students will learn apply what they Newton’s knowledge of laws of motion to explain how objects can transfer energy and the conservation of momentum. They investigate how the work done by a force on a spring can lead to elastic deformation. Students will learn how electric charge is a fundamental property of matter everywhere. Understanding the role of conductors and insulators and how to design and construct circuits to see the relationships between current and potential difference in a variety of components.</p> <ul style="list-style-type: none"> • Forces • Current Electricity 	<p>Learning Intent for this module: Students will learn about electrical power and energy transferred in circuits. They will apply their knowledge of these circuits to understand the role of mains electricity in our everyday life. Building on work from year 7 students will explain how electromagnetism and its many applications.</p> <ul style="list-style-type: none"> • Electrical • Mains electricity • Magnets and electromagnetism 	<p>Learning Intent for this Module: Students are provided the opportunity to revisit and review key ideas and provide revision, consolidation and examination practise prior to examination.</p> <ul style="list-style-type: none"> • Energy • Waves • Atomic structure • Electromagnetic spectrum • Electricity • Particles of matter • Electromagnetism
<p>Key Content to be learned: Students will learn about the work that has to be done in stretching a spring or an elastic object by Hooke’s law practical. Momentum builds on their year 10 knowledge of forces and motion when they will study momentum, collision and explosions to explain the conservation of momentum. Students will learn about how the properties of electrical circuits including current, potential</p>	<p>Key content to be learned: Students will learn about electrical power and energy transferred in circuits. They will apply this to mains electricity and the national grid. Students will expand their knowledge of the magnets and electromagnetism to explain how many things that include the loudspeaker. By applying their knowledge of Fleming’s left hand law students will be able to explain how a motor works.</p>	<p>Key content to be learned: Students will retrieve and practice application of their Physics knowledge by completing exam preparation and revision.</p>

<p>difference and resistance. They will also learn the difference between series and parallel circuits.</p>		
<p>Prior Knowledge Students should know Newton's laws of motion (from y10 Module 3). Students should be able to (from y7) identify different components, recall the definitions of current and potential difference. Be able to draw how to set up series and parallel circuits.</p>	<p>Prior Knowledge Student should know apply the knowledge from module 1 of current electricity together with magnets and their properties from y7 and energy transfers from year 9.</p>	<p>Prior Knowledge Students will have prior knowledge of all topics revised this module.</p>
<p>Key tasks for this module: Mock 1 Forces</p>	<p>Key tasks for this module: Mock 2 Electricity</p>	<p>Key tasks for this module: Past Papers GCSE Exams</p>