



### Overview of Bridging Course

<b>Department:</b> Physics	
<b>What is the focus of this bridging course?</b>	
<ul style="list-style-type: none"> <li>• Students will be introduced to some of the key concepts studied in Year 12 Physics, including particles and radiation, waves, electricity, and mechanics and materials.</li> <li>• Students will be introduced to some of the key skills needed at A-level Physics.</li> <li>• Students will begin to form links between different areas of the course.</li> <li>• Students will begin to apply their knowledge to tasks/questions related to the A – level examination style to assess students' knowledge and understanding of Physics, in both theoretical and practical aspects.</li> </ul>	
<b>w/b 27 April</b>	<b>Particles and Radiation</b> <ul style="list-style-type: none"> <li>• Students will learn about what the course entails, and the different aspects of A-level Physics.</li> <li>• Students will be given access/log ins to the digital platform Kerboodle which will be used to deliver and help assess the learning in the bridging course</li> <li>• Students will recap and build upon their knowledge of particles and radiation which was covered at GCSE, such as the structure of the atom and nuclear decay.</li> <li>• Students will then look at the stability of different nuclei analysing the effect of different forces at the sub-atomic level. Students will also learn about the fundamental particle interactions at the sub-atomic level and the concept of exchange particles which lead to a force being produced.</li> <li>• Students will then apply their knowledge to specific tasks designed to strengthen their depth of knowledge and ultimately answer A–level style questions – questions will look at both the theoretical and practical aspect of the topic.</li> </ul>
<b>w/b 4 May</b>	<b>Waves</b> <ul style="list-style-type: none"> <li>• Students will recap and build upon their knowledge of waves which was covered at GCSE, such as the properties of waves and concept of transverse and longitudinal waves</li> <li>• Students will then look at the effect of superposition between two progressive waves. Students will investigate how different patterns of superposition and stationary waves can be formed in nature.</li> <li>• Students will then apply their knowledge to specific tasks designed to strengthen their depth of knowledge and ultimately answer A–level style questions – questions will look at both the theoretical and practical aspect of the topic.</li> </ul>
<b>w/b 11 May</b>	<b>Electricity</b> <ul style="list-style-type: none"> <li>• Students will recap and build upon their knowledge of electricity which was covered at GCSE, such as the properties of current, potential difference and resistance.</li> <li>• Students will then look at the concept of resistivity in materials. Students will investigate how the resistivity of materials can be derived from experimental observations.</li> <li>• Students will then apply their knowledge to specific tasks designed to strengthen their depth of knowledge and ultimately answer A–level style questions – questions will look at both the theoretical and practical aspect of the topic.</li> </ul>
<b>w/b 18 May</b>	<b>Mechanics and Materials</b> <ul style="list-style-type: none"> <li>• Students will recap and build upon their knowledge of mechanics (forces and motion) which was covered at GCSE, such as speed, velocity, acceleration, and motion graphs.</li> <li>• Students will then look at the different equations of uniform acceleration and how they were developed. Students will investigate how the acceleration due to the gravitational field of the Earth can be derived from experimental observations.</li> <li>• Students will then apply their knowledge to specific tasks designed to strengthen their depth of knowledge and ultimately answer A–level style questions – questions will look at both the theoretical and practical aspect of the topic.</li> </ul>
<i>Work that will students will receive feedback on:</i>	
Students will submit their completed A- level questions from all weeks of the bridging course, and these will be marked in detail.	