

## Sixth Form Subject Information

# Physics



<b>Qualification</b>	A-Level	
<b>Exam Board</b>	Edexcel	
<b>Course Leader</b>	Mr N Lad	
<b>Course summary</b>	<p>This course takes two approaches to the teaching of Physics. It covers the basic principles, the content, and then applies it to real uses of Physics. For example, the electricity content may be applied to satellite technology and material science is applied to the sweet industry. This course employs the use of practical investigations and the analysis of data.</p> <p>Students should have a 7 or above in GCSE Physics and a 6 or above in Maths.</p>	
<b>What will students learn?</b>	<b>Year 12 content</b>	<p>Pupils will learn about:</p> <ul style="list-style-type: none"> <li>• Mechanics (motion, forces and energy)</li> <li>• Material Science (the properties of materials, fluids and liquids)</li> <li>• Electricity (series and parallel circuits, resistance and components)</li> <li>• Waves (musical waves, transverse and longitudinal waves, how DVD's and Bluray's work)</li> <li>• Light (The photoelectric effect and energy levels within the atom)</li> </ul>
	<b>Year 13 content</b>	<ul style="list-style-type: none"> <li>• Electricity and magnetism (Electromagnetic fields, capacitors, inducing electricity)</li> <li>• Further mechanics (circular motion, momentum and collisions)</li> <li>• Particle physics (fundamental particles, particle accelerators and detectors)</li> <li>• Oscillations (simple harmonic motion and resonance)</li> <li>• Radioactivity (radioactive materials, half-life and background radiation)</li> <li>• Astrophysics (the life cycle of a star and the history of the universe)</li> </ul>
<b>How will students be assessed?</b>	<p>Pupils will be assessed through three exams at the end of Year 13. Two of these exams will count for 30% of the course, each 1 hour 45 long, and one will count for 40% which is 2 hours 30 mins in length.</p> <p>There is no longer a coursework element; however, pupils will need to complete at least 6 core practicals in each of the two years to count towards a practical skills qualification.</p>	
<b>Differentiation</b>	<p>Pupils are supplied with an ISP (individual study plan) which guides them through the course. Tasks are differentiated with YouTube videos containing solutions to the tasks to allow independent learning.</p>	
<b>Resources</b>	<p>A-Level Physics: Edexcel Year 1 &amp; 2 Complete Revision &amp; Practice ISBN: 9781782943051</p> <p>Revise Edexcel AS/A Level Physics Revision Guide ISBN: 9781447989981</p>	