

# GCSE Physics – Y9 Transition

**“Science is more than a body of knowledge; it is a way of thinking”**

**– Carl Sagan**

- Science is a wide-ranging subject, and we aim to support students to become inquisitive learners. At Key Stage Four we offer Combined Science and separate Biology, Chemistry and Physics GCSEs. Courses are offered to best meet the needs and ability of students.
- Students studying either pathway have six hours of Science each week (two of these for Physics).
- The word “Physics” comes from ancient Greek, literally meaning ‘knowledge of nature’. It is the branch of science that studies matter, forces and energy to understand how everything in the universe behaves, from the smallest subatomic particles to the entire universe.
- In Combined science (Physics), there are thirteen topics to study, in Separate Physics there are an additional two topics to study across the two years. In both courses, Topic 1: ‘Key concepts of physics’ is embedded into the teaching of all other topics

<p><b>Preparation</b></p>	<ul style="list-style-type: none"> <li>✓ Keep interested in your studies – Where is the Physics you are currently learning about based? What else can you find out about it?</li> <li>✓ Research – What Physics is happening in the news? How is Physics being used in political choices and local decisions?</li> <li>✓ Revision – keep on top of key words and ideas. Skills learnt in Year 9 are used in GCSE, such as selecting and rearranging formulae in calculations, interpreting data from tables and graphs, and evaluating methods in practical work.</li> </ul>	
<p><b>Overview of course</b></p>	<p><b><u>Combined Science (Physics)</u></b></p>	<p><b><u>Separate Physics</u></b></p>
	<ul style="list-style-type: none"> <li>✓ <b>Exam Board: Edexcel</b></li> <li>✓ <b>External exams – Combined Science (Physics):</b> Two exams, each 1 hour 10 minutes long.</li> <li>✓ <b>Paper 5</b> (1SC0/1PF or 1SC0/1PH) <b>Paper 6</b> (1SC0/2PF or 1SC0/2PH)</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Exam Board: Edexcel</b></li> <li>✓ <b>External Exams – Separate Physics:</b> Two exams, each 1 hour 45 minutes long</li> <li>✓ <b>Paper 1 (1PH0/1F or 1PH0/1H)</b></li> <li>✓ <b>Paper 2</b> (1PH0/2F or 1PH0/2H)</li> </ul>
<p><b>Short term focus: Term 1</b></p>	<p>In the September of Y10 we start with <b>Topic 2: Motion and forces</b> – scalars and vectors, graphs of motion, acceleration, and Newton's laws of motion. This builds on the work from Year 9 on distance – time graphs, speed, and balanced and unbalanced forces,</p>	
<p><b>Careers &amp; Suitability</b></p>	<p><b>Skills you will develop in this course:</b></p> <ul style="list-style-type: none"> <li>• Development of scientific thinking</li> <li>• Understanding of everyday and technological applications of science</li> <li>• Experimental skills and strategies</li> <li>• Communication of information</li> <li>• Analysis of information</li> <li>• Presenting explanations</li> </ul>	<p><b>Careers:</b></p> <ul style="list-style-type: none"> <li>• Engineering</li> <li>• Renewable energy</li> <li>• Astronomy, space exploration</li> <li>• Meteorology and climate change</li> <li>• Aeronautics</li> <li>• Automotive industry</li> <li>• Electronics</li> <li>• Laboratory work</li> <li>• Healthcare - radiography, medicine</li> <li>• Telecommunication</li> <li>• Forensic science</li> <li>• Nanotechnology</li> </ul>