

Course:	<b>Physics</b>
Specification and code:	OCR - Physics A - H556 or H156 (AS Only)
Exam Board website:	<a href="http://www.ocr.org.uk/qualifications/as-a-level-gce-physics-a-h156-h556-from-2015/">http://www.ocr.org.uk/qualifications/as-a-level-gce-physics-a-h156-h556-from-2015/</a>
Course outline:	<p>The Physics A level course will take you from the basics you learned at GCSE right into the heart of some of the most up to date cutting edge Physics.</p> <p>During each year you will study two main modules.</p> <p>Year 1</p> <ol style="list-style-type: none"> <li>1. Forces and Motion.</li> <li>2. Electrons, Waves and Photons.</li> </ol> <p>Year 2</p> <ol style="list-style-type: none"> <li>3. Newtonian world and Astrophysics</li> <li>4. Particles and Medical Physics</li> </ol> <p>Alongside the theory done in class over the two years you will complete and appropriately document a series of required practical activities which build on scientific skills learned at GCSE. These count towards a practical skills endorsement which is recorded alongside your final course grade.</p>
Essential reading	<p><a href="https://www.ocr.org.uk/Images/295471-mathematical-skills-handbook.pdf">https://www.ocr.org.uk/Images/295471-mathematical-skills-handbook.pdf</a></p> <p>Download the maths skills guide and then read through M0 unit on arithmetic and numerical computation. Write notes on each section making sure you can use standard form, convert units and use prefixes correctly.</p> <p><a href="https://www.ocr.org.uk/Images/295483-practical-skills-handbook.pdf">https://www.ocr.org.uk/Images/295483-practical-skills-handbook.pdf</a></p> <p>Download the practical skills guide and then read through chapter 2 and 3 on practical skills requirements and practical skills within the examinations.</p>
Further Background reading	We would highly recommend you purchase the CGP "Head Start to A Level Physics" book. This is a great way to refresh the most important concepts from GCSE and practice some introductory A level standard problems.
Summer Task:	<ol style="list-style-type: none"> <li>1. <b><u>Prepare two A4 clip folders</u></b>. One Folder for Module 3 – Forces and Motion. The second folder for Module 4 – Electrons, Waves and Photons. Ensure each folder has a set of dividers. You will need the first folder for your work at both Beaminster and Colfox to start.</li> <li>2. Ensure your maths is kept up-to scratch. <b><u>Find out and answer</u></b>. 1. What are the 6 SI Base units? 2. What is meant by a unit prefix? 3. What are the multiplication factors for the following prefixes, "peta, tera, giga, mega, kilo, milli, micro, nano, pico, femto." 4. What is meant by a derived unit?, 5. What is the difference between a scalar and a vector? 6. How do you add vectors at right angles to each other? How do you resolve a vector into two perpendicular components?</li> <li>3. <b><u>Research the life, work and achievements of any notable physicist of your choice</u></b>  From your research, produce a short essay (about two sides of a4, font size 12) on any famous physicist.  You should aim to include: <ul style="list-style-type: none"> <li>• An introduction about the person's background and life.</li> <li>• Any information on how they may have become interested in a career in Physics.</li> <li>• Where they were trained, taught or learned about Physics as a student.</li> <li>• Any key notable discoveries or principles they have been involved in discovering or defining.</li> </ul> <p><b><u>Important:</u></b> For your chosen Physicist, keep a record of any websites, textbooks or journals you use as a reference of where you got your information from. Be prepared to turn your essay into a short presentation.</p> </li> </ol>