**PCHS Curriculum Information - Year 13**

| Course title: A-Level Physics | Exam board: AQA | Specification code: 7408 |
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**How will students be assessed?**

Students will sit three two hour external exams at the end of Year 13. During the course, along with other practical work, students will carry out 12 assessed practicals which will lead to the students being awarded their practical skills endorsement.

**Physics Paper 1**: (85 marks)
Students will complete short and long answer questions (60 marks) on the topic from sections 1-5 and 6.1. The paper includes multiple choice questions (25 marks).

**Physics Paper 2**: (85 marks)
Students will complete short and long answer questions (60 marks) on the topic from sections 6.2 and 7 - 8 (the questions may assume knowledge from sections 1 - 6.1). The paper includes 25 multiple choice questions.

**Physics Paper 3**: (80 marks)
Students will complete 45 marks of long and short answer questions on practical experiments and data analysis, as well as 35 marks of short and long questions from the optional unit, astrophysics

| Half term | Key content | |
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| | **SBA** | **TAL** |
| **1** | **3.7 Fields and their consequences**<br>Fields<br>Gravitational fields<br>Orbits and satellites<br>Electric Fields | **3.6.2 Thermal physics**<br>Ideal gases<br>**Required practical 8 Gas Laws**<br><br>**3.8 Nuclear physics**<br>Radioactivity<br>Nuclear Instability |
| **2** | **3.7 Magnetic Fields**<br>Magnetic flux density<br>Moving charges in a magnetic field<br>Magnetic flux and flux linkage<br>Electromagnetic Induction<br>**Required practical 10 Magnetic Flux Linkage** | **3.8 Nuclear physics**<br>Nuclear Radius<br>Mass and energy<br>Induced Fission<br>Safety aspects<br>**Required Practical 12 Inverse-square law for gamma radiation** |
| **3** | **3.7 Magnetic Fields**<br><br>Alternating currents<br>The operation of a transformer | **3.7 Capacitance**<br>Parallel Plate Capacitor<br>Energy stored by a capacitor<br>Capacitor charge and discharge |

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| | **Required practical 11 Magnetic Flux Linkage** | **Required Practical 9 Capacitors** |
| **4** | **3.8 Astrophysics**<br><br>Telescopes<br>Classification of Stars | **3.8 Astrophysics**<br><br>The Hertzsprung-Russell (HR) diagram<br>Supernovae and neutron stars<br>Cosmology and the Dopller effect |
| **5** | **Revision** | **Revision** |