PCHS Curriculum Information: Year 12 Physics

Course Title: A-Level Physics	Exam Board: AQA	Specification Code:7408

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	
	Teacher 1 SBA (5 LESSONS)	**Teacher 2 TAL (4 lessons)**
1	**3.1 Measurement and Errors** Use of SI units and prefixes Errors and accuracy Handling experimental data **3.4 Mechanics** Scalars and vectors Moments Motion along a straight line Projectile motion	**3.2 Particles** Constituents of the atom Stable and unstable nuclei Particles, antiparticles and photons Particle interactions Classification of particles Quarks and antiquarks
2	**3.4 Mechanics** **Required practical 3** **Determination of g** Newton's laws of motion Momentum Work, Energy and Power **3.4 Materials** Bulk properties of solids	**3.2 Particles** Applications of conservation laws The photoelectric effect Collisions of electrons with atoms Energy level and photon emission Wave-particle duality

Half term	Key content	
	Teacher 1 SBA (5 LESSONS)	**Teacher 2 TAL (4 lessons)**
	The Young modulus **Required practical 4 Young Modulus**	
3	**3.5 Electricity** Current electricity Current-voltage characteristics Resistivity **Required practical 5** **Resistivity**	**3.3 Waves** Progressive waves Longitudinal and transverse Principle of superposition **Required practical 1** **Stationary Waves**
4	**3.5 Electricity** Circuits Potential divider EMF and internal resistance **Required practical 6 EMF**	**3.3 Waves** Diffraction Reflection Refraction Interference
5	**3.6.1 Further Mechanics - Circular Motion** Circular motion Simple Harmonic Motion Resonance and Damping **Required practical 7 Simple harmonic motion systems**	**3.3 Waves** Interference **Required practical 2** **Interference Effects**
6	**Revision** **3.6.1 Further Mechanics** **Revision**	**Revision** **3.6.2 Thermal physics** Ideal gases **Required practical 8 Gas Laws**