Year 13: Physics	**Curriculum Intent:** Students follow the two-year OCR A-Level (A) Physics specification. Students build on their knowledge from Year 12 and develop their mathematical skills throughout the course. Pupils study Module 5 and 6 of the OCR specification before taking their external examinations. Learning is supported by practical work and students will complete approximately 8 practical assessments (PAGs) during the year which count towards their final qualification. Students are taught by 2 teachers			
	Module 5	**Module 6**	**Revision**	**A – level examinations**
Key ideas	• How can gases be modelled at a macroscopic level? • How can rotating and oscillating systems be analysed? • How do the laws of gravity predict the motion of celestial bodies? • How do stars evolve and how can they be studied from earth? • How did our Universe begin and what evidence supports the Big Bang?	• How do capacitors work and how they can analysed in circuits? • How do we use electric and magnetic fields to analyse and simplify systems? • How do charged particles interact with electric and magnetic fields? • What mathematical models does radioactive decay follow? • What are the implications of $E=mc^2$ for energy released in nuclear reactions? • How is Physics used in medical imaging?	• Pupils will undertake a period of revision in lessons for their external examinations	
Sequence of Learning -	• Circular motion • Simple harmonic motion • Gravitational fields • Stars • Cosmology	• Capacitors • Electric fields • Magnetism • Radioactivity • Nuclear energy • Medical imaging		
Vocabulary	The list of key words is too numerous for inclusion here. The recommended course textbook provides a complete Glossary of key words			
Practical Skills (relevant PAGs)	• PAG 5.1 – diffraction grating • PAG 8.2 – Boyles Law • PAG 10.1- simple harmonic motion	• PAG 7.1 – random nature of radioactive decay • PAG 9.1 charging and discharging capacitors		

	• PAG 10.3 -static and dynamics to find a spring constant	• PAG 9.2 capacitors in series and parallel • PAG 11.3 – strength of a magnet		
Assessment (Related to mastery grids)	Pupils will be assessed through completion of tests, practical work and other assignments.	Pupils will be assessed through completion of tests, practical work and other assignments.	.	