

KS5 – Year 13 – Physics

Term	Topic Titles	Brief Overview
1	Periodic Motion	Students continue to review their understanding of oscillating systems.
	Nuclear Physics	Students learn about the structure of the nucleus, and nuclear decay processes.
	Gravitational Fields	Students learn about the properties of gravitational fields, the laws of gravitation, and their effects on masses.
	Electric Fields	Students learn about the properties of electric fields, Coulomb's law, and the behaviour of charges in electric fields.
2	Nuclear Physics	Students learn about how nuclear fission converts mass into energy, and link it back to the GCSE topic: Radioactivity
	Capacitance	Students learn the principles of capacitors, including how they store and release electrical energy, and their behaviour in different circuits.
	Magnetic Fields and Induction	Students learn about the properties of magnetic fields, the laws of magnetism, and the interaction of magnetic fields with electric currents and moving charges.
	Option Topic	<p>Students choose from one of the 5 Option Topics:</p> <p>Astrophysics: Students learn about the life cycle of stars, cosmology, and the principles governing the behaviour of celestial objects.</p> <p>Medical physics: Students learn the application of physics principles in medicine, including imaging techniques and radiation therapy.</p> <p>Engineering physics: Students learn the principles of physics as applied to engineering, including fluid dynamics, material strength, and thermodynamics.</p> <p>Turning points in physics: Students learn about significant historical advancements in physics that have led to paradigm shifts in scientific understanding.</p> <p>Electronics: Students learn the principles of electronic systems, including semiconductors, logic gates, and the design and analysis of electronic circuits.</p>

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Revision and
consolidation

In the final few weeks before external exams start, students focus on structured revision activities.