



Year 13 Curriculum Grid

Physics

Year/Term	Unit	Intent
Curriculum purpose		To inspire students, nurture a passion for Physics, lay the groundwork for further study in Physics related courses whilst providing numerous opportunities to use practical experiences to link theory to reality and equip students with the essential practical skills they need for future scientific study
Autumn	Motion in a circle	<ul style="list-style-type: none"> Recognise uniform motion in a circle and the forces involved with circular motion
	Simple harmonic motion	<ul style="list-style-type: none"> Explaining oscillations and recognise applications of simple harmonic motion
	Thermal physics	<ul style="list-style-type: none"> Studying thermodynamics, temperature scales and how materials behave with changes in temperature
	Gases	<ul style="list-style-type: none"> Use the Gas laws qualitatively and quantitatively Describe the behaviour of gases using kinetic theory
	Gravitational Fields	<ul style="list-style-type: none"> Introduce Newton's Law of Gravity and the maths associated with field strength and potential
	Radioactivity	<ul style="list-style-type: none"> Considering how ideas about the atomic nucleus have developed over time Understand the behaviour of stable and unstable nuclei
	Nuclear physics	<ul style="list-style-type: none"> Develop ideas about atomic nuclei, Einstein's iconic energy equation Discover more about fission and fusion and their applications
Spring	Gravitational fields	<ul style="list-style-type: none"> Introduce Newton's Law of Gravity and the maths associated with field strength and potential
	Electric fields	<ul style="list-style-type: none"> Compare electric fields with gravitational fields and build on this knowledge
	Magnetic fields and electromagnetic induction	<ul style="list-style-type: none"> Develop knowledge of the motor effect and dynamo rule in everyday applications Understand Lenz's Law and Faraday's Law Describe how electricity is generated
	Astrophysics	<ul style="list-style-type: none"> Develop an understanding of cosmology Develop knowledge of telescopes Compare the life cycles of high mass stars with those of stars with similar masses to our Sun
Summer	Capacitance	<ul style="list-style-type: none"> Understand how capacitors work Use logarithmic functions to analyse discharging curves
	Preparation for Final Exams	<ul style="list-style-type: none"> To revise Year 12 and Year 13 content To prepare students with good examination technique