



PHYSICS CURRICULUM LEARNING JOURNEY

Knowledge & Concepts increase students depth/ challenge and build on previous learning where topics are revisited throughout their learning journey

Due to facility and resource considerations, not all classes study the same topics at the same time. The table below depicts the content covered within each year group and also how the curriculum progresses where topics are revisited.

		Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Half Term 1	Topics	Forces	Electricity	Energy	Radioactivity	Electromagnetic Waves	Particles and Radiation	Further Mechanics
	Knowledge	Interaction between forces	Circuits (voltage, current, resistance),	Conservation of Energy, work done, GPE, KE, Efficiency, power	Atoms and Radiation, Discovery of Nucleus, half-life (fusion/fission)	Spectrum – each part of the spectrum, waves in medicine	Matter and radiation, quarks and leptons, phenomena	Motion in a circle, Simple harmonic motion
Half Term 2	Topics	Waves – Sound	Magnetism	Energy	Forces	Electromagnetism	Waves	Thermal Physics
	Knowledge	labelling a wave Amplitude, Wavelength, Frequency	Magnets, electromagnets	Specific heat capacities, conserving energy	Vectors and Scalars, resultant forces, moments, centre of mass	Magnetic fields, solenoid, motor effect, electromagnet	Reflection, Refraction, Diffraction, superimposition, harmonics	Specific Heat, energy and temperature, ideal gas law
Half Term 3	Topics	Waves – Light	Energy	Energy Resources	Motion	Light (T)	Mechanics	Fields
	Knowledge	Reflection and refraction	Temperature, energy stores and energy transfers	Renewable resources, non-renewable, issues	Motion graphs, analysing graphs, drawing graphs	Lenses, reflection/refraction (more detail)	Vectors, Scalars, Moments, Momentum, Resolving, SUVAT, $F=ma$, materials	Gravitational Fields, Electric Fields, Capacitance



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		Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Half Term 4	Topics	Waves – Light	Energy transfers	Electricity	Forces and Motion	Space (T)	Electricity	Nuclear Physics
	Knowledge	The eye and colour	Energy transfers, Convection, conduction and radiation	Current, charge, potential difference	$F=ma$, weight and terminal velocity, momentum	Solar system, history of star, planet/satellites, universe	Current, charge, components, resistance, circuit rules, EMF, internal	Fission, fusion, discovery, half-life, types of radiation, inverse law of gamma, size of nucleus
Half Term 5	Topics	Space	Motion	Electricity	Wave Properties	Exam revision	Work energy and power	Magnetic fields and electromagnetic induction
	Knowledge	Solar System and Earth	Speed equation, motion graphs,	Components, resistance, circuit rules	Labelling a wave, reflection and refraction, seismic waves, sound and ultrasound	Exam practice and technique	Work done, KE, GPE, Power and efficiency	Laws of electromagnetism, AC and power, transformers, charges in fields
Half Term 6	Topics	Space	Pressure	Molecules and Matter	Mock revision	Exam revision	Mock revision	Option topic
	Knowledge	The night sky and the moon	Pressure in gasses, liquids and solids	Density, specific latent heat, internal energies, changes of state, gas pressure	Exam practice and technique	Exam practice and technique	Exam practice and technique	To be chosen