

PHYSICS

YEAR 9	Term 1	SP3: Conservation of energy, energy stores and transfers, renewable energy resources, non-renewable energy resources and energy efficiency. SP4: Waves. Describing waves, waves calculations, refraction, waves crossing boundaries, the ear, ultrasound and infrasound.
	Term 2	SP5: Light and the Electromagnetic Spectrum. Ray diagrams, colour, lenses, electromagnetic waves, the electromagnetic spectrum, using the longer wavelengths, using the shorter wavelengths, radiation and temperature and the dangers of electromagnetic radiation.
	Term 3	SP1: Motion and SP2: Forces and Motion. Vectors, scalars, distance-time graphs, acceleration, velocity-time graphs, resultant forces, Newton's laws of motion, momentum, mass and weight, stopping distances and crash hazards.
	Term 4	SP10 and 11: Electricity, Circuits, Magnetism and the Motor Effect. Circuit components, current, charge, energy, resistance, electrical power, electrical safety, static electricity, dangers and uses of static electricity and electric fields. SP8 and SP9: Energy and Forces doing work. Work, power, objects affecting each other, vector diagrams and rotational forces.
	Term 5	SP7: Astronomy. The solar system, gravity and orbits, the life cycle of stars, red-shift and the origin of the universe. SP6: Radioactivity. Atomic models, electrons and orbits, background radiation, types of radiation and radioactive decay.
YEAR 10	Term 1	SP7: Astronomy. The solar system, gravity and orbits, the life cycle of stars, red-shift and the origin of the universe. SP8 and SP9: Energy and Forces doing work. Work, power, objects affecting each other, vector diagrams and rotational forces.
	Term 2	SP12 and SP13 Magnets, magnetic fields, electromagnetism, magnetic forces, transformers and electromagnetic induction.
	Term 3	SP10 and 11: Electricity, Circuits, Magnetism and the Motor Effect. Circuit components, current, charge, energy, resistance, electrical power, electrical safety, static electricity, dangers and uses of static electricity and electric fields. SP8 and SP9: Energy and Forces doing work. Work, power, objects affecting each other, vector diagrams and rotational forces.
	Term 4	Paper 1 Revision: Revisiting the content from year 9 in preparation for a paper 1 mock exam at the end of term.
	Term 5	SP14 and SP15: Particle Model, Forces and Matter. Particles, density, energy, changes of state, energy calculations, gas pressure and temperature, bending and stretching materials, energy transfers linked to extension, gas pressure and volume and pressure in fluids.
YEAR 11	Term 1	Revisiting Modules SP1-4 covered in year 9 and 10. Building understanding and confidence as well as challenging students with exam techniques and linking concepts from different modules.
	Term 2	Revisiting Modules SP5-15 covered in year 9 and 10. Building understanding and confidence as well as challenging students with exam techniques and linking concepts from different modules.
	Term 3	Race to the Line Revision: A series of lessons on each module where structured options are provided allow choice of level of work and content to focus on allowing flexibility in learning depending on the learners needs at this time. While still providing scaffolding and structure to help develop knowledge, understanding and exam technique.
	Term 4	F.A.C.E Revision: A series of high impact lessons that give the final push toward exam preparation focusing on Facts, Application, Consolidation and Exam Techniques.
	Term 5	Final revision push providing more independence to student to allow focus on area of most need and External End of Year Exams.

YEAR 12	Term 1	Module 1: Development of practical skills in physics. This module covers planning and evaluating experiments, significant figures, plotting and interpreting graphs. Module 2: Foundations in physics. Covering physical quantities and units, nature of quantities and making measurements.
	Term 2	Module 3: Forces and motion: Covering motion graphs, constant acceleration, free fall and acceleration, determining acceleration due to gravity, stopping distances, Newton's laws of motion, turning forces, centre of mass, density, pressure, work, energy, power, materials, deformation and Newton's laws of motion.
	Term 3	Module 4: Electrons, waves and Photons. Covering current, charge, energy, power and resistance.
	Term 4	Module 4: Electrons, waves and Photons. Covering electrical circuits, circuit analysis, potential dividers, series and parallel circuits, wave motion, electromagnetic waves, superposition and stationary waves.
	Term 5	Module 4: Electrons, waves and Photons. Covering photons, the photoelectric effect and wave-particle duality. The remaining time will be used to review the content of the year 12 course.
YEAR 13	Term 1	Module 5: Newtonian World and Astrophysics. Covering thermal physics, circular motion and oscillations.
	Term 2	Module 5: Newtonian World and Astrophysics. Covering gravitational fields, astrophysics and cosmology. Module 6: Particles and Medical Physics. Covering capacitors and electric fields.
	Term 3	Module 6: Particles and Medical Physics. Covering Electromagnetism, Nuclear and particle physics and medical imaging.
	Term 4	Thorough revision and consolidation of all A level content and exam preparation through past papers.
	Term 5	Final revision push and external exams.