

Key Stage 5 Curriculum Map - Physics

Physicists explore the fundamental nature of almost everything we know of. They probe the furthest reaches of the earth to study the smallest pieces of matter yet, try to determine the origins of our existence through the study of the vastness of our universe. In section 1 (Particles and Radiation), we start by studying the nature and building blocks of particles and how they interact, their wave equivalence and how changes in them affect the surroundings and what can be observed. In Year 12, we also study: Waves and Optics, Mechanics and Materials, Electricity and AS Practical skills. In Year 13, we study: Further mechanics and thermal physics, Fields (Gravitational, Electric and Magnetic as well as Capacitors), Nuclear physics and one of 5 option topics, Astrophysics, Medical physics, Engineering Physics, Turning points in physics or Electronics.

A-level Physics will give you incredibly strong analytical and research skills. You will be able to come at problems and solve them in a methodical and logical way. You will be able to investigate theories, devise tests and explore new ideas. Such strong problem-solving skills are highly sought after. In fact, qualifications in physics and maths are two of the most desirable qualifications for employers. Considering the heavily mathematical element in physics, it's a qualification that carries weight. It can also lead to an incredibly broad range of interesting and rewarding careers.

		AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Year 12	Topic/themes/ skills covered	*Skills in AS Physics Matter and Radiation Quarks and leptons Quantum Phenomena	Waves (inc' R.P.) Optics (inc' R.P.)	Forces and Equilibrium On the move (inc' R.P.)	Newton's Laws Force and Momentum Work and Energy Materials (inc' R.P.)	Electric Current (inc' R.P.) D.C. Circuits (inc' R.P.)	*Skills in AS Physics REVISION
	Assessment	Settling in Assessment	Monitoring Assessment 1 Req' Prac's (R.P.)	Informal Req' Prac's (R.P.)	Monitoring Assessment 2 Req' Prac's (R.P.)	Informal Req' Prac's (R.P.)	AS Trial Exam
		AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Year 13	Topic/themes/ skills covered	*Skills in A2 physics Motion in a circle Simple Harmonic Motion (inc' R.P.) Thermal physics Gases (inc' R.P.)	Gravitational fields Electric fields Capacitors (inc' R.P.) Magnetic fields (inc' R.P.)	Electric current and DC Circuits (recap) Electromagnetic induction (inc' R.P.) Radioactivity	Nuclear Energy Option topics	Option topics *Skills in A2 physics REVISION	REVISION EXAMS
	Assessment	Monitoring Assessment 3 Req' Prac's (R.P.)	Informal Req' Prac's (R.P.)	A2 Trial Exam Req' Prac's (R.P.)	Option topic trial		

Its envisaged that much of the 'AS Skills in Physics' and 'Skills in A-level Year 2 Physics' will be taught in context as practical work is completed