

Physics Curriculum

	Autumn	Spring	Summer
Year 9	Units & formulae Density Pressure Hydraulics Moments	Levers & gears Stability & centre of mass Structure of the universe Forces & acceleration Graphs of motion Stopping distances	EXAM WEEK Energy transfer and insulation
Year 10	Energy stores & systems Changes in energy Hooke's Law: forces and elasticity Power Efficiency National and global energy resources Changes of state and the particle model Internal energy Temperature changes in a system and specific heat capacity Particle motion in gases Pressure in gases	Structure of the atom Static electricity Circuit diagrams & symbols Electric current & charge Current, resistance and potential difference Series and parallel circuits Domestic uses of electricity and safety features Direct and alternating potential difference Mains electricity Power Energy transfers in everyday appliances The National Grid Electric fields Mass number, atomic number & isotopes Development of the model of the atom	EXAM WEEK Atoms and nuclear radiation Radioactive decay and nuclear radiation Nuclear equations Half-lives and the random nature of radioactive decay Radioactive contamination Background radiation Uses of nuclear radiation Nuclear fission & fusion

	Autumn	Spring	Summer
Year 11	Scalar & vector quantities Contact and non-contact forces Resultant forces Work done and energy transfer Distance & displacement Speed and velocity Acceleration Newton's laws of motion Forces & braking Momentum	Properties of waves Electromagnetic waves Uses and applications of E-M waves Lenses Blackbody radiation Permanent magnetism Electromagnetism The motor effect The generator effect Transformers Space physics	Final exam preparations GCSE EXAMINATIONS
Year 12	Quantum phenomena Particle physics Mechanics: statics Mechanics: dynamics Newton's laws of motion 'suvat' equations	Further particle physics Current electricity Moments Momentum Work and power Waves: Reflection Refraction Diffraction	SCHOOL EXAMINATIONS Materials science Thermal physics Circular motion
Year 13	Gas laws Simple harmonic motion Further mechanics Gravitational fields Medical physics: eye, ear, heart	Electromagnetism Electric fields Capacitance Radioactive decay Nuclear energy Medical Physics: Non-ionising imaging ultrasound, endoscopy, MR scans Ionising imaging – X rays, CAT scan, PET scans, nuclear medicine	Mock examinations Final practical work A LEVEL EXAMINATIONS