

Science Department Curriculum Map September 2024-2025

Year Group	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
7 Smart activate	Intro to Sci skills. Cells The particle model Forces	Body systems Elements, atoms, compounds The particle model(cont) Forces(cont)	Body systems(cont) Elements,atoms,compounds(cont) Sound Reproduction	Sound (cont) Reproduction(cont) Science/careers week	Reactions Light	Acids and alkalis Space
8 Smart activate	Health Biological processes Periodic table Electricity Motion	Health Biological processes Periodic table Electricity Motion	Revision/Winter test Metals Energy Separation techniques Ecosystems Inheritance	Metals Energy Separation techniques Ecosystems Inheritance Science week	Revision Summer test Earth	Earth WS
9	Cell structure and transport.B1 Atomic structure.C1 Conservation and dissipation of energy.P1 Energy transfer by heating.P2	Cell structure and transport.B2 Atomic structure.C1 Conservation and dissipation of energy.P1 Energy transfer by heating.P2	The periodic table.C2 Cell Division.B2 Energy resources.P3	Structure and bonding.C3 Organisation and the digestive system. B3 Electric circuits.P4	Structure and bonding.C3 Organisation and the digestive system.B3 Electric circuits.P4	Organising animals and plants.B4
10	Communicable diseases.B5 Preventing and treating B6 disease. Chemical calculations.C4 Chemical changes.C5 Electricity in the home P5. Radioactivity.P7 Molecules and mater.P6	Communicable diseases.B5 Preventing and treating disease.B6 Non-communicable diseases.B7 Chemical calculations.C4 Chemical changes.C5 Electrolysis.C6 Electricity in the home.P5 Radioactivity.P5 Molecules and mater.P6	Electrolysis.C6 Non-communicable diseases.B7 Photosynthesis.B8 Respiration.B9 Energy changes.C7	Energy changes.C7 Rates and equilibrium.C8 Motion.P9 Force and motion.P10 Adaptations, interdependence and competition B16,17,18 Forces in balance.P8	Force and pressure P11 (Separate Sci only). Adaptations, interdependence and competition B16,17,18 Rates and equilibrium C8 Forces in balance.P8 Motion.P9 Force and motionP10	Crude Oil and fuels (Separate Sci only).C9 Adaptations, interdependence and competition B16,17,18 Organising an ecosystem. Biodiversity and ecosystems. B18
11	Rates of reactions C8 Crude oil and fuels.C9 Chemical analysisC12 The Earth's atmosphere.C13 The Earth's resources.C14 Electromagnetism. P15 The human nervous system.B10 Hormonal coordination B11 Organic reactions and Polymers (Both are separate sci only) C10,C11 Wave properties.P12 EM waves P13	EM waves P13 Crude oil and fuels.C9 Chemical analysis C12 The Earth's atmosphere.C13 The Earth's resources.C14 Using earth's resources C15 (Separate Sci only) Electromagnetism.P15 Light (Separate Sci only).P14 Genetics and evolution. B15 Variation and evolution.B14 ReproductionB13 Homeostasis B12 Revision/mocks paper 1 content	Electromagnetism.P15 Space (separate Sci only)P16 Wave properties.P12 EM waves P13 The human nervous system.B10 Hormonal coordination.B11 (Separate Sci only).	Revision Mocks paper 2 content	Revision/Exams	Exams

KS5 Curriculum Map

Year Group	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Y12 Biology	Cell structure. Carbohydrates. Lipids. Proteins	Transport across cell membranes. Nucleic acids. ATP. Water and inorganic ions. Transport Cell recognition and the immune system.	Cell recognition and the immune system. Gas exchange. DNA, genes and chromosomes. Protein synthesis Genetic diversity.	Digestion and absorption. Mass Transport Biodiversity	Immunology Practical catch up	Consolidation Ecology
Y12 Chemistry	Atoms, ions and compounds Electrons and bonding Shapes of molecules Amount of substance	Shapes of molecules Periodicity Basics of organic chemistry Alkanes Acids and redox Reactivity trends	Alkanes. Alkenes. Alcohols. Organic synthesis. Reactivity trends. Enthalpy. Reaction rates and eqm.	Alkenes. Alcohols. Haloalkanes. Organic synthesis. Enthalpy. Reaction rates and eqm.	Enthalpy. Reaction rates and eqm Aromatics. Rates of reaction. Analytical techniques.	Aromatics. Rates of reaction. Asprin practical
Y12 Physics	Measurements and their errors. Mechanics. Matter and radiation. Quarks and leptons. Materials. Maths skills	Measurements and their errors. Mechanics. Matter and radiation. Quarks and leptons. Materials.	Quantum phenomena. Electric current. Newton's law of motion	Quantum phenomena. Force and momentum Direct current circuits. Waves. Work energy and power.	Optics.	Consolidation Exam paper practice Practical catch up
Y13 Biology	Populations Energy and ecosystems Nutrient cycles Photosynthesis Respiration Inheritance	Survival and response Receptors Controlling heart rate. Respiration Inheritance. Homeostasis.	Nerve impulses. Muscles as effectors. Mutations. DNA	DNA Control of blood, glucose and water. Revision.	Revision	
Y13 Chemistry	Equilibrium. Acids and bases. Buffers. Amines and aromatics. Carbonyls and carboxylic acids.	Organic synthesis Enthalpy and Entropy. Chromatography and spectroscopy.	Redox and electrode potential. Chromatography and spectroscopy.	Transition elements. Chromatography and spectroscopy. Revision	Revision	
Y13 Physics	Motion in a circle Simple harmonic motion Gravitational fields Radioactivity.	Electric fields. Nuclear energy. Simple harmonic motion. Capacitors	Astrophysics Magnetic fields Thermal Physics Gases	Astrophysics Electromagnetic effects.	Revision.	