

Science Department Curriculum Map

Year Group	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
7	Intro to Sci skills. Cells, tissues and organs Sexual reproduction in animals. Energy. Mixtures and separation. Acids and Alkalis.	Cells, tissues and organs. Sexual reproduction in animals. Energy. Mixtures and separation. Acids and Alkalis.	Electricity. Muscles and bones. The particle model. Forces.	Electricity. Muscles and bones. The particle model. Forces. Science week.	Sound. Atoms, elements and molecules.	Sound. Atoms, elements and molecules. Revision
8	Food and digestion. Fluids. Combustion. The periodic table. Plants and their reproduction.	Food and digestion. Fluids. Combustion. The periodic table. Plants and their reproduction.	Breathing and respiration. Metals and their uses. Light. Energy transfers.	Breathing and respiration. Metals and their uses. Light. Energy transfers. Science week.	Unicellular organisms. The Earth and space. Rocks.	Revision
9	Cell structure and transport. Atomic structure. Conservation and dissipation of energy. Energy transfer by heating.	Cell structure and transport. Atomic structure. Conservation and dissipation of energy. Energy transfer by heating.	The periodic table. Cell Division. Energy resources.	Structure and bonding. Organisation and the digestive system. Electric circuits.	Structure and bonding. Organisation and the digestive system. Electric circuits.	Organising animals and plants. Revision.
10	Communicable diseases. Preventing and treating disease. Non-communicable diseases. Chemical calculations. Chemical changes. Electrolysis. Electricity in the home. Radioactivity. Molecules and mater.	Communicable diseases. Preventing and treating disease. Non-communicable diseases. Chemical calculations. Chemical changes. Electrolysis. Electricity in the home. Radioactivity.	Photosynthesis. Respiration. The human nervous system. Energy changes. Rates and equilibrium. Forces in balance. Motion. Force and motion.	Photosynthesis. Respiration. The human nervous system. Energy changes. Rates and equilibrium. Forces in balance. Motion. Force and motion. Rates and equilibrium.	Hormonal coordination. Reproduction. Wave properties. EM waves. Force and pressure (Separate Sci only).	Hormonal coordination. Reproduction. Wave properties. EM waves. Homeostasis in action and Crude Oil and fuels (both Separate Sci only). Revision.
11	Crude oil and fuels. Chemical analysis The Earth's atmosphere. The Earth's resources. Electromagnetism. Variation and evolution. Genetics and evolution. Organic reactions and Polymers (Both are separate sci only)	Crude oil and fuels. Chemical analysis The Earth's atmosphere. The Earth's resources. Electromagnetism. Light (Separate Sci only). Adaptations, interdependence and competition.	Organising an ecosystem. Biodiversity and ecosystems. Using our resources and Space (both are separate Sci only)	Revision		

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. Transport across cell membranes. Cell recognition and the immune system. Carbohydrates. Lipids.	Proteins. Nucleic acids. ATP. Water and inorganic ions. Surface area to volume ratio.	Gas exchange. Digestion and absorption. Mass transport. DNA, genes and chromosomes.	Protein synthesis Genetic diversity. Species and taxonomy.	Biodiversity	Revision
Y12 Chemistry	Atoms, ions and compounds Electrons and bonding Shapes of molecules Amount of substance	Periodicity Basics of organic chemistry Alkanes Acids and redox Reactivity trends	Alkenes. Alcohols. Haloalkanes. Organic synthesis. Enthalpy. Reaction rates and eqm.	Alkenes. Alcohols. Haloalkanes. Organic synthesis. Enthalpy. Reaction rates and eqm.	Aromatics. Rates of reaction. Analytical techniques.	Aromatics. Rates of reaction. Analytical techniques.
Y12 Physics	Measurements and their errors. Mechanics. Matter and radiation. Quarks and leptons. Materials.	Measurements and their errors. Mechanics. Matter and radiation. Quarks and leptons. Materials.	Quantum phenomena. Electric current. Direct current circuits. Waves.	Quantum phenomena. Electric current. Direct current circuits. Waves.	Revision Practical catch up	Further mechanics.
Y13 Biology	Energy and ecosystems Nutrient cycles Photosynthesis Respiration	Survival and response Receptors Controlling heart rate. Populations. Inheritance. Homeostasis.	Nerve impulses. Muscles as effectors. Mutations.	DNA technology. Revision.	Revision	
Y13 Chemistry	Equilibrium. Acids and bases. Buffers. Enthalpy and Entropy. Amines and aromatics. Carbonyls and carboxylic acids. Redox and electrode potentials.	Equilibrium. Acids and bases. Buffers. Enthalpy and Entropy. Amines and aromatics. Carbonyls and carboxylic acids. Redox and electrode potentials.	Redox and electrode potential. Transition elements. Organic synthesis 2 Chromatography and spectroscopy.	Redox and electrode potential. Transition elements. Organic synthesis 2 Chromatography and spectroscopy. Revision	Revision	
Y13 Physics	Recap of lockdown work from Y12. Oscillations. Thermodynamics Matter. Radioactivity.	Oscillations. Thermodynamics Matter. Radioactivity.	Particle accelerators and detectors. The particle zoo. Electric fields. Capacitance. Electromagnetic effects.	Particle accelerators and detectors. The particle zoo. Electric fields. Capacitance. Electromagnetic effects.	Astrophysics. Revision.	