



Science Curriculum 2026-2027

In Science our aim is that all children will experience a well-balanced and comprehensive curriculum that enhances informed, intellectual, developmental and moral character. We strive to create a curriculum that can be accessed by all students. We regularly check our pupils are making progress by employing strategies such as Cold calling and "no opt out". We aim to show our students the wider world, by using real world examples in lessons and discussing some of the careers our students could have. We also take our students on visits that will allow them to see science in action. Our aim is that as a result, this will improve life chances of our young people, improve inter-personal relationships, social mobility and preparedness for employment. Our curriculum will encourage everyone to have a positive impact on society and have a better understanding of the world around them.

Listed subtopics are some of the key items in that module, these are not comprehensive lists.

Key Stage 3

Term	1a	1b:	2a	2b	3a	3b
Year 7 Teacher A (Twice per week) B = Biology C = Chemistry P = Physics	B1 Cells - Microscopes - Cell Structure - Animal and Plant Cells - Magnification - Diffusion - Specialised Cells	P1 Energy - Fuels and energy stores - Transfers - Power - Energy Resources	P2 Speed - Speed - Distance/Time graphs - Relative Motion Physics: P3 Forces - Force Diagrams - Categorising forces - Stretching and Squashing	P3 Forces - Force Diagrams - Categorising forces - Stretching and Squashing - Hooke's Law	P3 Forces - Work Done - Moments - Motion	Skills - Variables - Planning Experiments - Drawing Graphs - Finding relationships - Health and Safety - Using equipment - Etymology
	C1 Particles - Particle Model - States of Matter - Changes of State - Gas Pressure	B2 Skeletal and muscular systems - The Skeleton - Biomechanics - Principles of Organisation	C2 Atoms - Atomic Model - Symbols and formulae - Elements and compounds	C3 Pure and Impure - Diffusion - Pure and Impure - Separation	C3 Pure and Impure - Diffusion - Pure and Impure - Separation	
Teacher B (Once per week)					B3 Nutrition and Digestion - Health Diets - Digestive Organs - Gut Bacteria	
Year 8 (Three lessons per week) B = Biology C = Chemistry P = Physics	C4 Reactions - Oxidation - Displacement reactions - Conservation of mass - Acids and Alkalis - Displacement - Conservation of mass - Acids and Alkalis	B4 Gas exchange - Ventilation - Exercise - Asthma - Smoking	P6 Light - Light and Ray models - Ray Diagrams - Interactions of light waves with materials - Mirrors, pinhole cameras and the eye - Detecting light and colour	B5 Reproduction - Sexual Reproduction - Reproductive organs - Fertilisation - Fetal Development - Plant reproduction - The Menstrual cycle	P7 Electricity in circuits - Conductors and insulators - Current - Potential difference - Resistance	P9 Magnets - Magnetic Fields - Earths Magnetism - Electromagnets - Motors
	P4 Pressure in Fluids - Pressure in liquids - Atmospheric Pressure - Pressure calculations	P5 Sound - Types of Waves - Sound Waves - Microphones - Ultrasound	C5 Energy Changes - Changes of State - Chemical energy - Endothermic Reactions - Exothermic Reactions		P8 Static Electricity - Static Charges - Electric Fields	B6 Photosynthesis - Organelles - Photosynthesis - Leaf structure B7 Respiration - Aerobic respiration - Anaerobic respiration



Year 9 (Three lessons per week)	Topic 1 – Chemistry Atomic Structure and the Periodic Table - History of the Atom - Isotopes and calculations - Electronic Configuration - Balancing Equations	Topic 1 – Biology Cells, Microscopy and methods of transport. - Eukaryotic and Prokaryotic - Microscopes - Calculating Magnification - Diffusion, osmosis and active transport.	Topic 3 + 8 – Physics Energy - Energy stores and transfers - GPE and KE - Renewable and Non-Renewable - Heat Transfer	Topic 2 Chemistry - States of Matter and Mixtures - State Changes - Potable water - Distillation - Chromatography	Topic 2 – Biology Cells and Control - Nervous System - Synapses - Cell Cycle - Stem Cells	Topics 4 +5 – Physics Waves and the EM Spectrum. - Wave properties - Wave Speed - Reflection and Refraction - Uses of the EM spectrum
	Rotation 1 – Students will do the three topics. One each half term, the order of these will vary.			Rotation 2 – Students will do the three topics. One each half term, the order of these will vary.		

Key Stage 4

Term	1a	1b:	2a	2b	3a	3b
Year 10 Biology	Topic 3 – Genetics - Variation - Meiosis - Punnett Squares - Inheritance	Topic 3 + 4 – Genetics and natural selection - Natural Selection - Antibiotic Resistance - Human Evolution - Classification	Topic 4 – Natural selection - Selective Breeding - Genetic Engineering - Ethics surrounding genetic engineering	Topic 5 – Health and disease - Nutrition - Communicable Disease - BMI - Viruses	Topic 5 +6 – Health and Disease and Plant Structures - Immune Response - Plant Disease - Vaccines - Photosynthesis	Topic 6 – Plant Structures - Structure of a leaf - Limiting Factors of Photosynthesis - Water Absorption - Plant Hormones
Year 10 Chemistry	T1B – Structure, bonding and the periodic table - Covalent Bonding - Ionic Formulae - Properties of Ionic and covalent Compounds	Topic 1C – Calculations in Chemistry - Relative formula mass - Moles - Empirical Formula - Conservation of Mass	Topic 3 – Acids and Alkalis - What are acids - pH Scale - Neutralisation - Making salts	Topic 3 – Acids and Alkalis - Naming products - Soluble substances - Electrolysis - Gas Tests	Topic 4A – Extracting Metals - Reactivity Series - Extraction from Ores - Biological extraction - Environmental impact	Review of Content with feedback based on Year 10 Assessments
Year 10 Physics	Topic 2A – Fundamentals of Motion - SI Units - Vectors and Scalars - Distance/Time graphs - Acceleration	Topic 2B – Newtons Laws and Forces - Newtons Laws - Balanced and Unbalanced Forces - Braking Distance - Crash Hazards	Topic 6 – Radioactivity - Atomic Models - Background Radiation - Types of Radiation - Decay Equations	Topic 6 – Radioactivity - Comparing Radiation - Half Life - Dangers of Radiation - Keeping Safe	Topic 14 Particle Theory - Density - Specific Heat Capacity - Specific Latent Heat - Absolute Zero	Topic 10A – Electricity - Circuit Symbols - Current - Potential Difference - Ohms Law



Term	1a	1b:	2a	2b	3a	3b
Year 11 Biology	Topic 7 – Homeostasis - Hormones - Diabetes - Menstrual Cycle - Renal System	Topic 8 – Circulatory system and respiration - Respiration - Gas Exchange - Ficks Law - Circulatory System	Topic 9 – Ecosystems - Interdependence - Abiotic factors - Water Cycle - Carbon Cycle	Review of Content with feedback based on HCSE 2.	Exam Period / Revision	Exam Period / Revision - Revision Mornings - Power Hours - Understanding Command Words - Period 6
Year 11 Chemistry	Topic 6 – Groups of the Periodic Table - Alkali Metals - Reactions of Alkali Metals - Noble Gases - Halogens	Topic 7 – Rates of Reaction - Factors affecting rate of reaction - Catalysts - Interpreting graphs - Exothermic and Endothermic - Collision theory	Topic 8 – Hydrocarbons - Properties of Hydrocarbons - Homologous Series - Crude Oil - Combustion	Topic 8 - Hydrocarbons and Rates of Reaction - Acid Rain - Alternatives to fossil fuels - Cracking	Exam Period / Revision	Exam Period / Revision - Revision Mornings - Power Hours - Understanding Command Words - Period 6
Year 11 Physics	Topic 10B – Electricity - Revision of 10A - Charge - Power - Electrical Safety	Topic 9 - Forces and their effects - Force Diagrams - Types of Force - Vectors and Scalars - Vector Diagrams	Topic 12 – Magnetism - Magnetic Fields - Magnetic Materials - Electromagnets - Earth's Magnetic Field	Topic 13 – Electromagnetic Induction - Electromagnetic Induction - Transformers - National Grid - Magnetic fields of Conductors	Topic 15 – Hooke's Law and the properties of materials - Describing Materials - Hooke's Law - Describing Graphs - Elastic Potential Energy	Exam Period / Revision - Revision Mornings - Power Hours - Understanding Command Words - Period 6