

Curriculum map: Science



Key Stage 3

Year
7

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cells Particles Safety in Science Asking Scientific Questions	Motion Skeletal System Planning Investigations	Mixtures Forces Collecting, recording and presenting data	Atoms., Elements and Compounds The Digestive System Analysing patterns in data	Energy Atomic Structure and the Periodic Table Evaluating Data and Methods	Human Reproduction Chemical Reactions

Year
8

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Acids and Alkalis Sound More on Planning How to answer a question	The Respiratory System Light More on Analysing and Evaluating	Our Atmosphere Inheritance Electricity Communication	Groups in the Periodic Table Metals Evidence and Sources	Botany The Earth Critique Claims and Justify Opinions	Ecosystems Cycles and Fieldwork Pressure

Year
9

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Space Magnetism States of Matter Separating Mixtures	Conservation of Energy Key Concepts in Biology Part 1	Waves Key Concepts in Biology Part 2	Cells and Control Atomic Structure	The Periodic Table Light and The Electromagnetic Spectrum	Chemical Bonding and Properties

Key Stage 4

Exam Board: Edexcel

Year
10

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Genetics Natural Selection and Genetic Modification	Key Concepts of Motion Forces and Motion Acids and Alkalis	Chemical Bonding Review Calculations in Chemistry Health and Disease	Radioactivity Electrolysis Reactivity and Extracting Metals	Plant Structures and Functions Groups and the Periodic Table	Ecosystems Particle Model

Year
11

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Rates of Reaction and Energy Changes Forces Doing Work and Their Effects Electricity and Circuits Exchange and Transport in Animals	Fuels Coordination, Control and Homeostasis Magnets and Electromagnetic Induction	Earth and Atmospheric Science Forces and Matter Material Cycles	Review and Preparation for GCSE exams	Review and Preparation for GCSE exams	

Key Stage 5 Biology

Exam Board: OCR A

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 12	Biological molecules Cell structure Nucleic acids	Enzymes Biological membranes Cell division, cell diversity and cell differentiation Exchange surfaces and breathing	Transport in plants Transport in animals Classification & evolution	Communicable diseases Biodiversity	Practical skills Maths skills Review of Y12 Communication and homeostasis (Y13) Cellular control (Y13)	Practical skills Review of Y12
Year 13	Communication and homeostasis Cellular control Excretion as an example of homeostatic control Neuronal communications Patterns of inheritance	Manipulating the genome Hormonal communication Plant and animal responses Photosynthesis	Respiration Cloning and biotechnology Ecosystems	Populations and sustainability Review of course	Review of course	

Key Stage 5 Chemistry

Exam Board: OCR A

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 12	Foundation chemistry/Basic practical skills • Atoms, compounds, molecules and equations • Amount of substance • Practical skills assessed in the practical endorsement	• Acid-base and redox reactions • Electrons, bonding and structure • The periodic table and periodicity • Group 2 and the halogens • Practical skills assessed in the practical endorsement	• Enthalpy changes • Reaction rates and equilibrium (qualitative) • Organic Chemistry: Basic concepts • Hydrocarbons • Practical skills assessed in the practical endorsement	• Alcohols and haloalkanes • Organic synthesis • Analytical techniques (IR and MS) • Practical skills assessed in the practical endorsement	Chemistry Calculations consolidation and review Organic Chemistry review. Electrons, Bonding and structure review Practical skills review Exams	Aromatic compounds Reaction rates and equilibrium (quantitative)
Year 13	• pH and buffers Carbonyl compounds • Carboxylic acids and esters • Nitrogen compounds Practical skills assessed in the practical endorsement	• Enthalpy, entropy and free energy • Polymers • Organic synthesis • Chromatography and spectroscopy (NMR) Practical skills assessed in the practical endorsement	• Redox and electrode potentials NMR spectroscopy continued Practice of identification of organic compounds using spectroscopic techniques Practical skills assessed in the practical endorsement	• Transition elements Synoptic Chemistry practice Revision	Revision/Exams	Exams

Key Stage 5 Physics

Exam Board: OCR A

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 12	Foundations in Physics Practical Skills Motion Forces in Action	Waves Work, Energy Power Motion continued	Material Physics Electricity	Electricity continued Quantum Physics	Core practical review Mechanics review Electricity review	Quantum review Waves review Assessments Year 13 course begins
Year 13	Thermal Physics Gases Circular Motion SHM	Gravitational Fields Stars Cosmology Nuclear Physics	Capacitors Electric Fields	Magnetic Fields Medical Imaging	Exams	Exams