

The Science Department sets out to do 3 things:

Help students understand how things work

1. To enable students to enter the wider world with a firm understanding of the Science they will encounter in day to day life.

Help students know what information to believe

2. To give students the ability to apply the Scientific method to solve problems and analyse the credibility of information presented to them.

Help students make informed decisions

3. To help students to make informed decisions on a range of subjects that will be critical for their generation; from climate change to vaccination, to energy and resource demands.

	Autumn	Spring	Summer
Year 7	B-Cells C-Particles P-Forces B-Organisation C-Atoms P-Waves	B-Health C-Acids and Alkalis P-Waves B-Reproduction C-Fundamentals P-Light	C-Reactions P-Light
Year 8	B-Ecosystems C-Separation techniques P-Electricity B-Health 2 C-Atoms P-Electricity	B-Ecosystems C-Periodic table P-Energy B-Adaptations C Periodic table	B-Genetics C-Periodic table P-Motion B-Genetics C-Metals and Acids P-Energy
Year 9	B-Cells 1 C-Atomic structure P-Energy B-Cells 2 C-Periodic table P-Bonding	B-Organisation P1/2 P-Energy/transfer B-Organisation P3 C-Chemical changes P-Electricity	B-Organisation 3 C-Chemical changes P-Electricity in the home

Biology	Autumn	Spring	Summer
Year 10	Electricity Electricity in the home Bioenergetics Energy Changes Homeostasis P1	Homeostasis P2	Homeostasis P3
Year 11	Ecology P1/2/3	Inheritance Revision	Revision
Year 12	Biological molecules & nucleic acids Cell structure Transport across cell membranes Cell recognition and the immune system	Exchange Mass transport DNA, genes and protein synthesis	Genetic diversity and biodiversity Photosynthesis and respiration
Year 13	Photosynthesis Respiration Responses to stimuli Energy and ecosystems Nervous/coordination and muscles	Inherited change Populations and evolution Population in ecosystems Homeostasis Gene expression Recombinant DNA technology	

Chemistry	Autumn	Spring	Summer
Year 10	Energy Changes Rates and extent of chemical change	Rates and extents Organic Chemistry	Quantitative
Year 11	Using Resources	Chemical Analysis Chemistry of the atmosphere	Revision
Year 12	Atomic structure, amount of a substance and bonding Group 2, group 7, energetics, periodicity, redox and equilibria	Introduction to organic chemistry, alkanes, alkenes and kinetics Haloalkanes and organic analysis	Revision of year 12 content
Year 13	Compounds containing carbonyl compounds, thermodynamics, aromatics, electrode potentials and K_p Amines, polymerisation, properties of period 3 elements and their oxides and transition metals	Amino acids, proteins, DNA, reactions of ions in aqueous ions, structure determination and acids and bases Organic analysis, chromatography, acids and bases and rate	Revision

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Physics	Autumn	Spring	Summer
Year 10	P4 Electrical circuits P5 Electricity in the home	Radioactivity Forces Motion Forces and Motion	P10 Forces and motion
Year 11	Waves EM waves Electromagnetism	Revision	Revision
Year 12	1 - Particles and Radiation 2 - Quarks and Leptons 3 - Quantum Phenomena 4 - Waves 5 - Optics	5 - Optics 6 - Forces in Equilibrium 7 - On the Move 8 - Newton's Laws of Motion 9 - Force and Momentum	10 - Work, Energy and Power 11 - Materials 12 - Electric Current 13 - Direct Current Circuits Review of year 12 content
Year 13	17 - Circular Motion 18 - Simple Harmonic Motion 19 - Thermal Physics 20 - Gases 21 - Gravitational Fields 22 - Electric Fields	22 - Electric Fields 23 - Capacitors 24 - Magnetic Fields 25 - Electromagnetic Induction 26 - Radioactivity	27 - Nuclear Energy Option D - Turning Points in Physics Review of Year 13 content