

Key Stage 3 and 4 Units

KS3 Science

Throughout KS3 students cover the key concepts within Biology, Chemistry and Physics to form a solid foundation for their GCSE studies. In addition, we have a particular emphasis on developing student's practical investigative and analytical thinking skills.

Topics at KS3 are taught on a rota basis.

Year 7 content	Year 8 content	Year 9 content
Introduction to Science	Nutrition and digestion	The skeletal and muscular systems
Cells	Gas exchange systems and cellular respiration	Health
Reproduction	Photosynthesis	Inheritance, chromosomes, DNA and genes
Relationships in an ecosystem	Earth and Atmosphere	Chemical reactions part 2
Particles and solutions	Atoms, elements and compounds	Energy transfer
Chemical reactions part 1	The Periodic Table	Energy and fuels
Forces	Light waves and sound waves	Forces and motion
	Observed waves	Electricity and electrostatics
	Magnetism	
	Space	
	Microbiology	

BROUGHTON
HIGH SCHOOL

GCSE Combined Science

Students who take Combined Science are taught by three specialist subject teachers.

Biology content	Chemistry content	Physics content
B1 Key biological concepts	C1 States of matter	P1 Motion
B2 Cells and control	C2 Methods of separating and purifying substances	P2 Forces and motion
B3 Genetics	C3 & C4 Atomic structure and The Periodic Table	P3 Conservation of energy
B4 Natural selection and genetic modification	C5, C6 & C7 Ionic and covalent bonding, and types of substances	P4 Waves
B5 Health, disease and the development of medicines	C8 Acids	P5 Light and the electromagnetic spectrum
B6 Plant structures and their functions	C9 Calculations involving masses	P6 Radioactivity
B7 Animal coordination, control and homeostasis	C10 & C11 Electrolytic process and obtaining and using metals	P7 Energy forces doing work
B8 Exchange and transport in animals	C12 Reversible reactions and equilibria	P9 Electricity and circuits
B9 Ecosystems and material cycles	C13 Groups in the periodic table	P10 Magnetism and the motor effect
	C14 Rates of reaction	P11 Electromagnetic induction
	C15 Heat energy changes in chemical reactions	P12 Particle model
	C16 Fuels	P13 Forces and matter
	C17 Earth and atmospheric science	

Year 11

Students who take Triple Science are taught by three specialist subject teachers.

Biology content	Chemistry content	Physics content
B1 Key biological concepts	C1 States of matter	P1 Motion
B2 Cells and control	C2 Methods of separating and purifying substances	P2 Forces and motion
B3 Genetics	C3 & C4 Atomic structure and The Periodic Table	P3 Conservation of energy
B4 Natural selection and genetic modification	C5, C6 & C7 Ionic and covalent bonding, and types of substances	P4 Waves
B5 Health, disease and the development of medicines	C8 Acids	P5 Light and the electromagnetic spectrum
B6 Plant structures and their functions	C9 Calculations involving masses	P6 Radioactivity
B7 Animal coordination, control and homeostasis	C10 & C11 Electrolytic process and obtaining and using metals	P7 Astronomy
B8 Exchange and transport in animals	C12 Reversible reactions and equilibria	P8 Energy forces doing work
B9 Ecosystems and material cycles	C13 Transition metals, alloys and corrosion	P9 Forces and their effects
	C14 Quantitative analysis	P10 Electricity and circuits
	C15 Dynamic equilibria and calculations involving gases	P11 Static electricity
	C16 Chemical cells and fuel cells	P12 Magnetism and the motor effect
	C17 Groups in the periodic table	P13 Electromagnetic induction
	C18 Rates of reaction	P14 Particle model
	C19 Heat energy changes in chemical reactions	P15 Forces and matters
	C20 Fuels	
	C21 Earth and atmospheric science	
	C22 Qualitative analysis	
	C23 Hydrocarbons	
	C24 Polymers	
	C25 Alcohols and carboxylic acids	
	C26 Bulk and surface properties of matter including nanoparticles	

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