

KS5 Science

We are fortunate to be able to offer a wide range of science course at KS5, including, Chemistry, Physics, Biology and Applied Science. These are suitable for candidates taking Double or Triple Sciences and lead to a wide range of courses at University.

Edexcel Biology A SNAB			
Curriculum Year	Unit Name	Content	Key Assessment
AS	Topic 1: Lifestyle, Health and Risk	Biological Molecules, Heart structure and function, Diseases of the cardiovascular system	Summative assessments and the end of each topic Internal Mock exam CPAC assessments
	Topic 2: Genes and Health	Structure of cell membranes, genes and inheritance, proteins	
	Topic 3: Voice of the Genome	Types of cell, Cell division and Cell differentiation and gene expression	
	Topic 4: Biodiversity and Natural Resources	Measuring Biodiversity, the importance of plants and how we use them	
A2	Topic 5: On the Wild Side	Ecosystems, the importance of photosynthesis and Climate Change	Summative assessments and the end of each topic Internal Mock exam A-level Exams 3 x 2 Hour papers in Jun CPAC assessments
	Topic 6: Immunity, Infection and Forensics.	Applications of DNA, the immune response and how we treat disease	
	Topic 7: Run for your Life	Muscle structure and action, respiration and effects of exercise on the heart and lungs	
	Topic 8: Grey Matter	Nervous system structure and function, brain development and ethical consideration of drug treatments	

OCR Cambridge Technical Applied Science			
Curriculum Year	Unit Name	Content	Key Assessment
Certificate	Unit 1 Fundamentals of Science (External Assessment)	Basic concepts from Physics Biology and chemistry, including cell structure, electricity and atomic structure	Summative End of topic assessments External Assessment in Jan and May
	Unit 2 Laboratory Techniques (External Assessment)	A practical based module including Health and Safety procedures, Aseptic techniques, Chemical analysis	
Extended Certificate	Unit 6 Control of Hazards of Laboratory Techniques (Internal Assessment)	Health and Safety regulations, risk assessment, lab design	Coursework based assessment, marked internally and verified by an OCR moderator
	Unit 18 Microbiology (Internal Assessment)	Techniques in microbiology including gram staining, the use of microbiology in food and GM crops	
	Unit 21 Product Testing Techniques (Internal Assessment)	Practical techniques used in industry such as titration	

OCR Physics A			
Curriculum Year	Unit Name	Content	Key Assessment
AS	Module 1 – Development of practical skills in physics	Practical skills assessed in a written examination Practical skills assessed in the practical endorsement	Summative assessments and the end of each topic Internal Mock exam
	Module 2 – Foundations of physics	Physical quantities and units, Making measurements and analysing data, Nature of quantities	CPAC assessments
	Module 3–Forces and motion	Motion, Forces in action, Work, energy and power, Materials, Newton’s laws of motion and momentum	
	Module 4 –Electrons, waves and photons	Charge and current, Energy, power and resistance, Electrical circuits, Waves, Quantum physics	
A2	Module 5– Newtonian world and astrophysics	Thermal physics, Circular motion, Astrophysics and cosmology	
	Module 6 –Particles and medical physics	Electric fields, Electromagnetism, Medical imaging, Nuclear and particle physics	A-level Exams 2 x 2 r 15 mins papers 1 x 1hr 30 min paper in Jun CPAC assessments

AQA Chemistry			
Curriculum Year	Unit Name	Content	Key Assessment
AS	Physical Chemistry	Atomic Structure and bonding, Chemical reactions including; Energetics, Kinetics, Chemical Equilibria, Oxidation and Reduction reactions	Summative assessments and the end of each topic Internal Mock exam CPAC assessments
	Inorganic Chemistry	The periodic table including; Periodicity, Group 2 elements, and Group 7 elements	
	Organic Chemistry	Organic Compounds including; Alkanes, Alkenes, Halogenoalkanes, Alcohols and Organic analysis	
A2	Physical Chemistry	Topics include; Thermodynamics, Rate equations, Electrode potentials and Acids & Bases	Summative assessments and the end of each topic Internal Mock exam A-level Exams 2 x 2 r 15 mins papers 1 x 1hr 30 min paper in Jun CPAC assessments
	Inorganic Chemistry	Properties of materials including period 3 elements and their Oxides, and Reactions of Ions in solution	
	Organic Chemistry	Organic compounds including aldehydes and ketones, carboxylic acids, Amines and Polymers, Analysis techniques including NMR and Chromatography	