KS4 Curriculum Overview - Combined Science

Your child will learn about a range of scientific ideas and concepts while developing their knowledge, skills and understanding of key scientific principles during each half term.

Term	Year 10	Year 11
Autumn 1	**Biology** • Cell structure and transport • Communicable disease **Chemistry** • The periodic table • Structure, bonding & properties **Physics** • Particle model • Atomic structure	**Biology** • Biodiversity • Classification **Chemistry** • Electrolysis of aqueous solutions **Physics** • Forces
Autumn 2	**Biology** • Organisation of organisms • Digestion and enzymes **Chemistry** • Energy changes **Physics** • Energy	**Biology** • Adapt and compete • Variation **Chemistry** • Atmospheric chemistry • Rates of reaction **Physics** • Magnetism
Spring 1	**Biology** • Respiration • Plant organs and photosynthesis **Chemistry** • Introduction to quantitative chemistry **Physics** • Electricity	**Biology** • Reproduction **Chemistry** • Reversible reactions **Physics** • Electromagnetism
Spring 2	**Biology** • The heart and health • Adapt and compete **Chemistry** • Reactions of metal and redox **Physics** • Electricity	**Biology** • Reproduction (cont) • Exam skills **Chemistry** • Chemical analysis **Physics** • Exam skills • Revision

KS4 Curriculum Overview – Science Continued.

Through the study of subject your child will be expected to develop the following knowledge, skills and understanding:

Term	Year 10	Year 11
Summer 1	**Biology** • Ecosystems **Chemistry** • Reactions of acids • Concentration and reacting masses **Physics** • Waves	**Biology** • Exam skills • Revision **Chemistry** • Exam skills • Revision T **Physics** • Exam skills • Revision
Summer 2	**Biology** • Materials cycling • Classification **Chemistry** • Electrolysis of aqueous solutions **Physics** • Forces	GCSE Public Examinations

Development of scientific thinking	Experimental skills and strategies
• Pupils will become confident in their scientific understanding and will become confident to use methods that scientists use to answer questions	• Pupils will develop their knowledge of scientific equipment and techniques

Analysis and evaluation	Scientific vocabulary, quantities, units, symbols and nomenclature
• Pupils will use data analysis skills to display information from a variety of scientific topics	• Pupils will use substantive and disciplinary knowledge and be able to problem solve both at school and in their everyday lives

Parents can support their child by asking questions about what your child is studying in science in lessons, watching video tutorials on complex scientific ideas and encourage your child to be aware of science in the news.