



Key Stage 4 Programme of Study

Year Group	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
10	<p>Topic/Enquiry:</p> <ul style="list-style-type: none"> B3 Infection and Response B4 Bioenergetics <p>Key knowledge:</p> <ul style="list-style-type: none"> Communicable and non communicable disease Bodies defence against disease Drug development Photosynthesis Respiration – aerobic and anaerobic Metabolism and Exercise <p>Assessment: Tailor made Higher and Foundation assessment Values:</p>	<p>Topic/Enquiry:</p> <ul style="list-style-type: none"> C3 Quantitative Chem C4 Chemical Changes <p>Key knowledge:</p> <ul style="list-style-type: none"> Relative formula mass Conservation of Mass Balanced Equations Moles and Concentration Limiting Reactants Acids and Alkali pH scale Reactions of acids Reactivity series Reactions of metals Redox reactions Electrolysis <p>Assessment: Tailor made Higher and Foundation assessment Values:</p>	<p>Topic/Enquiry:</p> <ul style="list-style-type: none"> P3 Particle Model of Matter P5 Atomic Structure C4 Energy changes <p>Key Knowledge</p> <ul style="list-style-type: none"> The particle model and motion in gas Density, Internal Energy and states Changes in state Heating and Cooling Specific Heat Capacity Developing the atomic model History of the atom Isotopes and radiation 	<p>Topic/Enquiry:</p> <p>B5 Homeostasis and Response</p> <p>C6 The rate and extent of chemical change</p> <p>Key knowledge:</p> <ul style="list-style-type: none"> The nervous System Reflexes and synapses Hormones Blood Glucose control Puberty and Menstrual Cycle Controlling fertility Rates of reaction Using graphs Factors affecting rate of reaction Reversible reactions 	<p>Topic/Enquiry:</p> <p>P5 Forces</p> <p>Key knowledge:</p> <ul style="list-style-type: none"> Scalars and vectors Forces and Weight Force Diagrams Work Done Elasticity Practical Motion Velocity and Acceleration Distance Time and Velocity Time Graphs Newtons Laws Terminal Velocity Stopping Distance Momentum <p>Assessment: Tailor made Higher and Foundation assessment</p>	<p>Topic/Enquiry:</p> <ul style="list-style-type: none"> B6 Inheritance, Variation and Evolution C8 Chemical Analysis <p>Key knowledge:</p> <ul style="list-style-type: none"> DNA, Genes and Chromosomes Reproduction – Meiosis Genetic Diagrams Inherited Disorders Variation and Natural Selection Fossils Antibiotic Resistance Classification and extinction Purity and Formulation Gas Tests Paper Chromatography

			<ul style="list-style-type: none"> • Nuclear Equations • Radioactivity and half lifes • Endothermic and exothermic reactions • Reaction Profiles • Bond Energies <p>Assessment: Tailor made Higher and Foundation assessment Values:</p>	Assessment: Tailor made Higher and Foundation assessment Values:	Values:	Assessment: Tailor made Higher and Foundation assessment Values:
11	<p>Topic/Enquiry:</p> <p>B7 Ecology</p> <p>C8 Chemical Analysis</p> <p>C9 Chemistry of the Atmosphere</p> <p>Key Knowledge:</p> <ul style="list-style-type: none"> • Factors affecting a community • Adaptations • Food chains • Biodiversity • Water cycle • Carbon cycle • Human impact on ecosystem • Pollution 	<p>Topic/Enquiry:</p> <p>P6 Waves</p> <p>P7 Magnetism and Electromagnetism</p> <p>Key Knowledge:</p> <ul style="list-style-type: none"> • Transverse and longitudinal waves • Refractions • Electromagnetic Spectrum and uses • Infrared radiation • Magnets – Repulsion and attraction 	<p>Topic/Enquiry:</p> <p>C10 Using Resources</p> <p>Key Knowledge:</p> <ul style="list-style-type: none"> • Human resources • Life cycle assessment • Sustainability – reduce, reuse, recycle • Water treatment • Sewage treatment <p>Assessment:</p>	<p>Topic/Enquiry:</p> <p>Analysis of strengths and weaknesses Mocks</p> <p>Key Knowledge: Using short assessments, mock results and PLC's. Topics with weaknesses will be identified and targeted</p> <p>Assessment:</p> <p>Values:</p>	EXAMS	EXAMS

	<ul style="list-style-type: none"> • Purity and Formulation • Gas Tests • Paper Chromatography • Earths Early Atmosphere • Greenhouse effect • Climate change • Carbon footprint • Air Pollution <p>Assessment: Tailored end of topic assessments made by dept.</p>	<ul style="list-style-type: none"> • Magnetic materials and induced magnets • Compasses and electromagnets • The motor effect <p>Assessment: End of HT2 Mocks are completed at least 2 on topics covered to date</p>	Tailored end of topic assessments made by dept.			
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