

CURRICULUM PATHWAY SCIENCE 2022-23	<p>Quality of Education: Curriculum is planned and sequenced so that new knowledge and skills build on what has been taught before and leads towards a clearly defined end points.</p> <p>Vision: The Science department has a vision to provide a broad curriculum that covers the knowledge, specialist practical skills and scientific literacy that will empower and impassion pupils to engage responsibly with the community and the world around them with in an informed and evaluative way. We provide a challenging curriculum that ensures that students have ambitious goals that they persevere towards.</p> <p>NB: There has been a change to order of the KS4 curriculum pathway which is the reason for the apparent replication of content this year</p>					
	Year 7	Year 8	Year 9	Year 10	Year 11	Skills 10/11
Autumn term	<p>Knowledge Lab safety Cells and tissues 1 Atoms and bonding 1 Organ systems Electricity 1 Periodic table 1</p> <p>Skills Selecting equipment Assessing risk Making observations Patterns and conclusions Method writing</p>	<p>Knowledge Atoms and bonding 2 Cells and tissues 2 Waves 2 Periodic table 2 Electricity 2 Bioenergetics 2</p> <p>Skills Making observations Applying equations and units Method writing Patterns and conclusions Method writing Constructing graphs</p>	<p>Knowledge Microbes Radioactivity Reactivity series and electrolysis Cellular transport Rates of reaction</p> <p>Skills Assessing risk Method writing Patterns and conclusions Making observations Constructing graphs Identifying variables</p>	<p>Biology paper 1 Heart, blood, vessels and gas exchange, Non-Communicable Diseases, Plant structure, Photosynthesis and respiration Infection, Response, Communicable diseases</p> <p>Physics paper 1: Energy Stores, Conservation of energy, Energy resources, Current Electricity, Mains Electricity</p>	<p>Biology paper 2: Feeding relationships, Biodiversity and ecosystems.</p> <p>Chemistry paper 2: Rates and Equilibrium, Crude oil and Fuels, Organic Reactions, Chemical Analysis, The Earth's Atmosphere, The Earth's Resources</p>	<p>Identifying variables, writing and improving methods, identifying and minimising risks, conducting practical experiments, using scientific terminology to describe concepts, drawing detailed conclusions, designing graphs, identifying and describing trends in data, comparing and evaluating, rearranging formula, working with means, significant figures and standard form.</p>
Spring term	<p>Knowledge Health and disease Reactions 1 Energy and states of matter 1 Bioenergetics 1 Salts 1</p> <p>Skills Identifying variables Making predictions Units Patterns and conclusions Designing tables</p>	<p>Knowledge Reactions 2 Forces and motion 2 Reproduction 2 Energy and states of matter 2 Organs and disease</p> <p>Skills Sources of error Making predictions and Designing tables Selecting equipment Method writing Applying equations and calculations Assessing risk and sources of error</p>	<p>Knowledge Forces Electricity and power Materials 2</p> <p>Skills Designing tables Making prediction Calculations and units Sources of error Evaluation</p> <p>Biology paper 1 Cell Biology, Genes, Chromosomes, Mitosis, Transport in cells, Enzymes and digestion</p>	<p>Physics paper 1: Particle Model of Matter, Radiation.</p> <p>Biology paper 2: The human nervous system, Hormonal co-ordination, Reproduction, Genetics and evolution, Adaptations, interdependence and competition.</p>	<p>Physics paper 2: Forces, motion and elasticity, Properties of Waves, Magnetism & Electromagnetism, Space and Pressure (Triple only).</p>	
Summer term	<p>Knowledge Forces and motion 1 Reproduction 1 Waves 1 Metals 1 Space and radiation 1 Ecosystems 1</p> <p>Skills Calculations and evaluation Constructing graphs Identifying variables Method writing Making observations Patterns and conclusions Sampling techniques</p>	<p>Knowledge Materials 1 Metals 2 Ecosystems 2 Calculations 1 Space and radiation 2 Salts 2</p> <p>Skills Identifying variables Sources of error Assessing risk Constructing graphs Sampling techniques Patterns and conclusion Selecting equipment</p>	<p>Biology paper 1 Heart, blood, vessels and gas exchange, Non-Communicable Diseases, Plant structure, Photosynthesis and respiration Infection, Response, Communicable diseases</p> <p>Skills See skills Year 10 and 11</p>	<p>Biology paper 2: Feeding relationships, Biodiversity and ecosystems.</p> <p>Chemistry paper 2: Rates and Equilibrium, Crude oil and Fuels, Organic Reactions, Chemical Analysis</p>	<p>Revision of all content</p>	

