

KS4 Curriculum Plan

		LP1	LP2	LP3	LP4	LP5	
Year 10	TOPIC	States of Matter, Atomic Structure and Cells in Animals and Plants	Waves, Systems in the Body, Plants and Photosynthesis	Lifestyle and Health, Radiation and Risk, Preventing and treating disease	The Earth's atmosphere, Ecosystems and Biodiversity	Inheritance, variation and evolution, The Periodic Table and Chemical Quantities	
	Knowledge	Pupils will learn about the states of matter, atomic structure of atoms and finally, about cells in animals and plants including their structures and functions.	Pupils will learn about the properties of waves, systems in the human body including digestive, circulatory, endocrine and nervous system. Finally, pupils will learn about plant systems and photosynthesis.	Pupils will learn about health and disease, including the risks of smoking, alcohol and other carcinogens. Pupils will also learn about blood glucose regulation and hormones within the endocrine system. Finally, pupils will learn about the risks of radiation and how to prevent, treat and curing a variety of diseases including the use of stem cells in medicine.	Pupils will learn about the history of the Earth's atmosphere and the impacts of climate change. Pupils will also learn about ecosystems, the relationships and factors affecting biodiversity.	Pupils will learn about genetics in terms of inheritance, variation and evolution, they will also learn about the development of the Periodic Table and explain the trends in the Period Table. Finally, pupils will learn about chemical quantities and equations including, atoms, elements and compounds.	
	Skills	Scientific enquiry: Students will further develop enquiry skills from Ks3, they will develop a greater confidence in using more complex scientific equipment in order to explain scientific phenomena in greater depth. Evaluating skills, Students will develop greater evaluating skills in order to competently evaluate results from					
	Key Vocab	osmosis, diffusion, particles, latent heat	reflection, refraction, respiration, nervous system, transpiration	homeostasis, radiation, hazards, disease, stem cells	climate change, potable, biodiversity, evolution, natural selection	Halogens, alkali, periodic table, electronic structure	
Year 11	TOPIC						
	Knowledge	Pupils will learn about the variety of forces and energy changes. Pupils will also learn about the structure of atoms and ions and the different types of atomic bonding. Finally, pupils will learn about electromagnetism and magnetic fields.	Pupils will learn about forces and motion, including speed, distance, velocity and acceleration. Pupils will also learn about electricity including the circuits, current and electrical appliances.	Pupils will continue their learning of electricity and then progress on to acids and alkalis. This will include learning about how to make salts, types of reactions and neutralisation. Pupils will finally learn about rates of reaction, how reactions can be affected and reversible reactions.	Pupils will learn about carbon chemistry, this includes hydrocarbon structure, distillation and cracking. Pupils will then learn about the resources of materials and energy, including extracting metals, energy demands and the environment and finally the changes and efficiency of energy transfers.		
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	Key Vocab	Scalars, vectors, bonding, ionic, work, covalent	velocity, acceleration, momentum, motion, electricity	salts, soluble, bases, energy, reactions, catalyst, equilibrium	hydrocarbons, fractional distillation, energy, efficiency, dissipation, ores		