

Science Curriculum Overview 2018-19

Stretch Year 7 (3 hours a week)		
Term 1	Term 2	Term 3
Speed Gravity Electrical circuits – including current and potential difference - Not electromagnets Waves – Light and Sound Energy types Energy transfers Energy costs	Particle Model – States of matter and changing state. Energy when changing state. Metals and non-metals Acids and alkalis Earth Structure Universe (Easter Project and space odyssey visit)	Movement – skeleton and muscles Cells – types and specialisation Variation – genetic and environmental Plant reproduction Human reproduction Interdependence within the environment.

Stretch Year 8 (3 hours a week)		
Term 1	Term 2	Term 3
Contact forces Pressure Magnetism Electromagnetism Heating and cooling Wave properties Wave effects	Periodic table Atoms and the atomic structure Types of reaction Chemical energy Climate Earth's resources	Digestion Breathing Respiration Photosynthesis Inheritance.

Stretch Year 9 (3 hours a week)		
Term 1	Term 2	Term 3
Conservation and dissipation of energy Energy transfers by heating Energy resources – renewable and non-renewable Electricity circuits – resistance, variable resistors Electricity in the home – National grid and transfer to the home. Power of electrical items	Atomic structure in relation to ionic and covalent bonding. The periodic table – groups and trends Giant covalent bonding Isotope Chemical changes and calculations Energy changes.	Cell structure and transport – osmosis, active transport and diffusion. Cell division Puberty – focus on menstrual cycle and hormones Reproduction Variation and evolution

Challenge Year 10 (5 hours a week)

Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
Forces in balance and motion Energy conservation Molecules and matter - Density	Electricity – circuits, mains and national grid Radioactivity	Crude oil and polymers Organic reactions Rate and equilibrium	Electrolysis Chemical analysis - Titrations	Organising animals and plants – taxonomy Digestive system – enzymes Nervous system	Communicable and non – communicable diseases Preventing disease Homeostasis in action

Challenge Year 11 (5 hours a week)

Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
Electromagnetic waves Properties of waves Light Forces Work done	The Earth’s Atmosphere The Earth’s Resources Using our Resources	Photosynthesis and respiration Adaptations, interdependence and competition Organising ecosystems	Electromagnetism Titration – acids and alkalis Neutralisation Electrolysis	Revise	