

Science – Year 8



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	<p>Topic: Periodic table and materials</p> <p>Knowledge: Atomic Structure Electronic Configuration Ar and Mr (EXT) Alkali metals (group 1) Halogens (Group 7) Noble Gases (Group 0) Reactivity of Group 1 and 7 (EXT) Naming compounds (EXT) Writing formulae (EXT) Exothermic and endothermic reactions Testing for gases</p> <p>Metals and oxygen Metals and acid reactions Acids and hydroxides Acids and carbonates Combustion Word and symbol equations Balancing equations Conservation of mass</p>	<p>Topic: Chemical Reactions and the environment</p> <p>Knowledge: The Reactivity series Displacement reactions Extracting metals Rates of reaction (EXT) Thermal decomposition and catalysts</p> <p>Composition of the Earth Structure of the Earth The Rock Cycle Igneous rocks Sedimentary rocks Metamorphic rocks Fossil fuel formation</p> <p>The Earth's Atmosphere The carbon cycle Climate change and the greenhouse effect Finite resources and recycling</p>	<p>Topic: Waves and Pressure</p> <p>Knowledge: Producing sounds How sound travels Hearing sounds – The ear (EXT) Properties of sound waves Wave calculations Using sound: ultrasound and echowaves (EXT)</p> <p>Waves – EM waves Transverse and longitudinal (EXT) The eye and light Reflection Refraction Seeing colour (EXT) Pressure (over area) Pressure (in liquids) Pressure (in gases)</p> <p>Assessment: Pre and post assessment at the start and end of term based on Waves and Pressure (50marks & 50 minutes)</p>	<p>Topic: Electricity and Magnetism</p> <p>Knowledge: Static electricity (EXT) Conductors and Insulators Electrical circuits Current Potential difference Measuring potential difference Series and Parallel circuits Resistance in a circuit (EXT) Power in a circuit (EXT)</p> <p>Magnets Making Magnets Drawing magnetic fields Earth's magnetic field Electromagnets (EXT) Using Electromagnets (EXT)</p> <p>Assessment: Pre and post assessment at the start and end of term based on Electricity and Magnetism (50marks & 50 minutes)</p>	<p>Topic: Energy from food</p> <p>Knowledge: Food groups Balanced and unbalanced diets Energy in food Tissues and organs of the digestive system Digestion Absorption – diffusion, active transport, osmosis (EXT) Enzymes in the digestive system</p> <p>Photosynthesis Leaf adaptations – Gas exchange Root adaptation - Absorption of water Transpiration/translocation (EXT) Testing for starch</p> <p>Assessment: Pre and post assessment at the start and end of term based on Energy from food (50marks & 50 minutes)</p>	<p>Topic: Keeping Healthy</p> <p>Knowledge: Sub cellular structures (recap) Cells, tissues, organs and systems The lungs Breathing Gas exchange The heart and blood The circulatory system The skeletal & muscular system Aerobic respiration Anaerobic respiration Exercise and respiration</p> <p>Communicable vs non communicable diseases Microorganisms Pathogens Antibiotics Human defences Vaccination (EXT) Drugs & lifestyle choices</p>

	<p>Assessment: Pre and post assessment at the start and end of term based on the Periodic table and materials (50 marks & 50 minutes)</p>	<p>Assessment: Pre and post assessment at the start and end of term based on the Chemical reactions and the environment (50 marks & 50 minutes)</p>				<p>Assessment: Pre and post assessment at the start and end of term based on Keeping Healthy (50marks & 50 minutes)</p> <p>Oasis Science Assessments (June/July) Year 7 AND 8 topics 3 x 30-minute papers (bio, chem, physics) Each paper is 30 marks Extension paper available (high demand questions only) – 30 minutes and 30 marks</p>
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