

## Year 7 Curriculum Overview [2022-2023]

### Subject – Science

Autumn Term	Knowledge & Understanding			Literacy Skills  Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components [includes understanding of KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
<b>HT1</b>	Cells, tissues, and organ systems.	<ul style="list-style-type: none"> <li>• Life Processes</li> <li>• Cells</li> <li>• Tissues</li> <li>• Organs</li> <li>• Microscopes</li> <li>• <a href="#">WS Microscope skills</a></li> <li>• Organ systems</li> <li>• <a href="#">Transplants</a></li> </ul>	<ul style="list-style-type: none"> <li>• Organs and MRS GREN</li> </ul>	<ul style="list-style-type: none"> <li>• History of the Microscope</li> </ul>	<ul style="list-style-type: none"> <li>• Donors</li> </ul>	<b>Assessment Point 1</b> Class assessment on Cells and Separating techniques and skills
<b>HT1</b>	Mixtures and separation	<ul style="list-style-type: none"> <li>• <a href="#">WS Identifying and drawing equipment in science</a></li> <li>• Working safely</li> <li>• <a href="#">WS writing a method</a></li> <li>• Filtration practical</li> <li>• Solutions</li> <li>• Evaporation and safety when heating</li> <li>• Chromatography</li> <li>• Distillation</li> <li>• Safe drinking water</li> </ul>	<ul style="list-style-type: none"> <li>• Separating Substances</li> </ul>	<ul style="list-style-type: none"> <li>• Solubility key words, hazards, solubility. Method writing</li> </ul>	<ul style="list-style-type: none"> <li>• Working as a scientist in a lab</li> <li>• Sewage works</li> </ul>	
<b>HT2</b>	<a href="#">Forces</a>	<ul style="list-style-type: none"> <li>• Different Forces</li> <li>• Mass and Weight</li> <li>• Springs</li> <li>• Making notes (literacy)</li> <li>• Friction</li> <li>• Pressure</li> <li>• Si Units</li> <li>• Balanced and Unbalanced</li> </ul>	<ul style="list-style-type: none"> <li>• Forces pushes and pulls KS2</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding abbreviations for common units</li> </ul>	<ul style="list-style-type: none"> <li>• Mechanical Engineer</li> </ul>	<b>Assessment point 2:</b> Summative assessment on Separating techniques, cells and Forces

		<ul style="list-style-type: none"> <li>• Designing sports equipment</li> </ul>				
<b>HT2</b>	Sexual reproduction in animals	<ul style="list-style-type: none"> <li>• Reproductive organs</li> <li>• Gametes</li> <li>• Becoming pregnant</li> <li>• Gestation and birth</li> <li>• IVF</li> <li>• Puberty and menstrual cycle</li> <li>• <a href="#">WS The scientific method</a></li> <li>• <a href="#">Conservation project</a></li> </ul>	<ul style="list-style-type: none"> <li>• Organelles</li> </ul>	<ul style="list-style-type: none"> <li>• IVF – making notes</li> </ul>	<ul style="list-style-type: none"> <li>• Working as a vet</li> <li>• Working as a midwife</li> <li>• Conservation Worker</li> <li>• Zoologist</li> </ul>	

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Spring Term	• Knowledge & Understanding		Literacy Skills  Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities	
	Composites	<ul style="list-style-type: none"> <li>• Components</li> <li>• [includes understanding of KEY concepts &amp; subject specific vocab]</li> </ul>				Formal Retrieval [if any]
<b>HT3</b>	Sexual reproduction in animals	<ul style="list-style-type: none"> <li>• Reproductive organs</li> <li>• Gametes</li> <li>• Becoming pregnant</li> <li>• Gestation and birth</li> <li>• IVF</li> <li>• Puberty and menstrual cycle</li> <li>• <a href="#">WS The scientific method</a> <ul style="list-style-type: none"> <li>• <a href="#">Conservation project</a></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Organelles</li> </ul>	<ul style="list-style-type: none"> <li>• IVF – making notes</li> </ul>	<ul style="list-style-type: none"> <li>• Working as a vet</li> <li>• Working as a midwife</li> <li>• Conservation Worker</li> <li>• Zoologist</li> </ul>	
<b>HT4</b>	The particle model	<ul style="list-style-type: none"> <li>• Describing materials</li> <li>• The Particle Model - SLG</li> <li>• Changes of state</li> <li>• Brownian motion</li> <li>• Diffusion</li> <li>• Air pressure</li> <li>• <a href="#">Rubbish! (Waste disposal)</a></li> </ul>	<ul style="list-style-type: none"> <li>• Using the particle model to explain the separating techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Devising Hypotheses</li> </ul>	<ul style="list-style-type: none"> <li>• Training and working as a Nano scientist</li> <li>• Meteorology</li> </ul>	<b>Assessment Point 3 Class Assessment:</b> Separating techniques, cells, forces, The particle Model and Animal Reproduction
<b>HT4-5</b>	Energy	<ul style="list-style-type: none"> <li>• Energy from food</li> <li>• Energy transfers and stores</li> <li>• WS Fair comparisons and ratios</li> <li>• Fuels</li> <li>• Other energy resources</li> <li>• Using resources</li> </ul>	Forms of Energy (KS2)	Energy released by different fuels - Summarising	The race for renewable energy – job roles in the Energy industry	

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Summer Term	• Knowledge & Understanding			Literacy Skills  Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities
	Composites	• Components  • [includes understanding of KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
HT5	Muscles and bones	<ul style="list-style-type: none"> <li>• Fitness</li> <li>• Muscles and breathing</li> <li>• Muscles and blood (The heart)</li> <li>• WS Scientific questions</li> <li>• The skeleton</li> <li>• Muscles and moving</li> <li>• Drugs</li> <li>• Drugs in sport</li> </ul>	Organ systems	Forming sentences	<ul style="list-style-type: none"> <li>• Working as a physiotherapist</li> <li>• Personal Trainer</li> <li>• Sports Scientist</li> <li>• Prosthetist</li> </ul>	
HT5	Atoms, elements, and molecules	<ul style="list-style-type: none"> <li>• The air we breathe (introduction to elements, compounds and mixtures)</li> <li>• The earth's elements</li> <li>• Metals and non-metals</li> <li>• Chemical reactions (metals and acids – squeaky pop test)</li> <li>• Problems with elements</li> </ul>	States of matter How particles behave	Facts and opinion	<ul style="list-style-type: none"> <li>• Car Engineers</li> <li>• Analytical Chemist</li> <li>• Geologists</li> <li>• Financial Analysts</li> <li>• Mining Engineers</li> <li>• Chemical Engineers</li> </ul>	
HT5-6	Electricity	<ul style="list-style-type: none"> <li>• Switches and currents</li> <li>• Models in science</li> <li>• Models for circuits</li> <li>• Series and parallel circuits</li> <li>• Changing the current WS</li> <li>• Using electricity</li> </ul>	• States of matter How particles behave	Facts and opinion	<ul style="list-style-type: none"> <li>• Car Engineers</li> <li>• Analytical Chemist</li> <li>• Geologists</li> <li>• Financial Analysts</li> <li>• Mining Engineers</li> <li>• Chemical Engineers</li> </ul>	

<b>HT6</b>	Ecosystems	<ul style="list-style-type: none"> <li>• Variation</li> <li>• <a href="#">WS Charts and Graphs</a></li> <li>• Adaptations</li> <li>• Organisms and their habitats</li> <li>• Transfers in food chains</li> </ul>	Adaptations of plants and animals - KS2	Paragraphs	<ul style="list-style-type: none"> <li>• Environmental Planners</li> <li>• Environmental Geneticist</li> <li>• Zoologist</li> <li>• Veterinary Nurse</li> <li>• Wildlife Biologist</li> </ul>	<b>Assessment Point 4: CSA</b>
<b>HT6</b>	Sound	<ul style="list-style-type: none"> <li>• Making sounds</li> <li>• Moving sounds</li> <li>• <a href="#">WS Line and scatter graphs</a></li> <li>• Detecting sounds</li> <li>• Using sounds</li> <li>• Literacy – remembering</li> <li>• Comparing waves</li> </ul>	Practical skills	Remembering	<ul style="list-style-type: none"> <li>• Sound engineer and audiologists</li> </ul>	
<b>HT6</b>	Earth Materials	<ul style="list-style-type: none"> <li>• Introduction to rocks and their uses</li> <li>• Structure of the earth (include how rocks are formed)</li> <li>• Sedimentary rocks</li> <li>• Weathering</li> </ul>	Observe weather associated with changes of season. - KS2	Scientific keywords	<ul style="list-style-type: none"> <li>• Geoscientist</li> </ul>	