



Year 9 Science Curriculum Map						
Half Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Big Themes	Biology - Cell Biology Chemistry - Atoms and the Periodic Table	Chemistry - Atoms and the Periodic Table Physics - Energy	Chemistry - Bonding, structure, and the properties of matter	Biology - Organisation	Physics - Particle model of matter Chemistry - Chemical changes	Chemistry - Chemistry of the atmosphere Revision and Exam
Knowledge and skills covered	<p>Eukaryotic and prokaryotic cells, animal and plant cells, and microscopy.</p> <p>Structure of chromosomes, mitosis, stem cells and cell differentiation.</p> <p>Diffusion, osmosis and active transport.</p> <hr/> <p>The periodic table and the development of it</p> <p>Mixtures and separation techniques.</p> <p>Writing formulae and equations</p> <p>Balancing equations</p> <p>Skills: Revision Technique Algebraic equations Microscopy</p>	<p>Metals and Non-metals properties and ion formation</p> <p>Structures of atoms, reactions of elements (Group 1, Group 7, Group 0).</p> <hr/> <p>Energy changes in a system, and the ways energy is stored before and after such changes.</p> <p>Conservation and dissipation of energy.</p> <p>National and global energy resources.</p> <p>Skills: Safety requirements working harmful substances Working scientifically in practicals: <i>Writing hypothesis</i></p>	<p>States of matter recap</p> <p>How do atoms become ions?</p> <p>Ionic bonding and lattice structures</p> <p>Covalent bonding (simple and giant covalent structures)</p> <p>Metallic bonding</p> <p>Fullerenes and Graphene</p> <p>Nanoparticles</p> <p>Working scientifically in practicals: <i>Writing hypothesis</i> <i>Evaluating practical equipment suitability</i> <i>Method writing</i> <i>Result logging</i> <i>Graph drawing</i> <i>Interpreting data</i> <i>conclusion writing</i></p>	<p>Principles of organisation, the human digestive system and its enzymes, the heart and vessels, blood, related health issues, the effects of lifestyle, and cancer.</p> <p>Structure and organisation of plant tissues, and transportation in plants.</p> <p>Working scientifically in practicals: <i>Writing hypothesis</i> <i>Evaluating practical equipment suitability</i> <i>Method writing</i> <i>Result logging</i> <i>Graph drawing</i> <i>Interpreting data</i> <i>conclusion writing</i></p>	<p>Changes of state and the particle model.</p> <p>Internal energy and energy transfers.</p> <p>Particle model and pressure.</p> <hr/> <p>Reactivity of metals</p> <p>Displacement of metals</p> <p>Extraction of metals</p> <p>Reactions of acids</p> <p>Neutralisation Reactions</p> <p>Strong vs Weak acids</p> <p>Titration</p> <p>Working scientifically in practicals: <i>Writing hypothesis</i> <i>Evaluating practical equipment suitability</i></p>	<p>Composition and evolution of the Earth's atmosphere</p> <p>Common greenhouse gases</p> <p>Common atmosphere pollutants and their sources</p> <hr/> <p>Big Themes Revision from Year</p> <hr/> <p>EOY Assessment</p>



Knowledge organisers and more detailed topic resources can be found on all student Google Classrooms