

Learning cycle / term	YEAR EIGHT COVERAGE & OUTCOMES <b>Class of 2021 CHEMISTRY</b>	KEY SKILLS	YEAR EIGHT COVERAGE & OUTCOMES <b>Class of 2021 BIOLOGY</b>	KEY SKILLS	YEAR EIGHT COVERAGE & OUTCOMES <b>Class of 2021 PHYSICS</b>	KEY SKILLS	GCSE DESTINATION / LINK <small>(please include all the Assessment Objectives for your new GCSE specification (s) so that clear links can be made with the content and skill sets being covered in Years 7 &amp; 8 and how they relate directly to final GCSE outcomes)</small>
<b>AUTUMN 1</b> September – October	<b>Atoms, elements &amp; compounds</b> <ul style="list-style-type: none"> <li>Types of atoms &amp; elements</li> <li>How elements are arranged in the periodic table &amp; the representation of elements using symbols.</li> <li>Compounds</li> <li>How physical &amp; chemical changes can be classified as reversible or irreversible.</li> <li>Gases and the Earth's atmosphere.</li> </ul>	State Recall Describe Explain Consider Give reasons... Evaluate Count Construct Represent Interpret Classify Distinguish Calculate	<b>Food and Digestion</b> <ul style="list-style-type: none"> <li>Food groups and benefits of a balanced diet</li> <li>How to test for the different food groups.</li> <li>Understanding how the digestive system carries out its function</li> <li>Evaluation of absorption of nutrients through the small intestine</li> <li>How enzymes work and break down nutrients</li> </ul>	State Recall Describe Explain Consider Give reasons... Evaluate Construct Interpret Classify Distinguish Calculate	No Physics topic this half term		<b>AO1</b> – to demonstrate knowledge and understanding of scientific ideas, techniques and procedures. <b>AO2</b> - to apply knowledge and understanding of scientific ideas, techniques and procedures. <b>AO3</b> – to analyse information and ideas, to interpret and evaluate; to make judgements and draw conclusions; to develop and improve experimental procedures.
	<b>Assessment and skills tested at the end of each topic</b> <b>This piece of work is a portfolio piece for EBacc subjects.</b>						
<b>AUTUMN 2</b> October – December	<b>Combustion</b> <ul style="list-style-type: none"> <li>Fuels used to transfer energy using combustion.</li> <li>Combustion of hydrocarbons &amp; producing oxides.</li> <li>Chemical reactions represented through word equations.</li> <li>Chemical reactions represented by symbols or formula equations.</li> <li>Conservation of mass.</li> <li>Exchange of energy with surroundings; classification as exothermic and endothermic.</li> <li>Vehicles &amp; air pollutants.</li> <li>Variation of Earth's temperature and climate change.</li> <li>Gases in the atmosphere &amp; warmth</li> </ul>	Recall Name Describe Classify Explain Identify Model Compare Investigate Interpret Plan Evaluate	No Biology Topic this half term		<b>Light</b> <ul style="list-style-type: none"> <li>Sources of light.</li> <li>Properties of light.</li> <li>Reflection.</li> <li>Refraction.</li> <li>Lenses-convex and concave lenses.</li> <li>Nature of images form lenses.</li> <li>Nature of image form a mirror.</li> <li>Reflection in a mirror.</li> <li>Colours of light.</li> <li>Colours of objects in different light.</li> </ul>	Recall Name Describe Classify Explain Identify Model Compare Investigate Interpret Plan Evaluate	<b>AO1</b> – to demonstrate knowledge and understanding of scientific ideas, techniques and procedures. <b>AO2</b> - to apply knowledge and understanding of scientific ideas, techniques and procedures. <b>AO3</b> – to analyse information and ideas, to interpret and evaluate; to make judgements and draw conclusions; to develop and improve experimental procedures.

<p><b>SPRING 1</b> January –February</p>	<p>No Chemistry topic this half term</p>		<p><b>Respiration</b></p> <ul style="list-style-type: none"> <li>Link food we eat with energy requirements</li> <li>Understanding of the process of respiration and its importance to all living things.</li> <li>Know and construct the word equation for respiration</li> <li>Explain how organisms respire</li> <li>Understand the structure of the lungs and how gas exchange links to respiration</li> </ul>	<p>State Recall Describe Explain Consider Give reasons... Evaluate Count Construct Represent Interpret Classify Distinguish calculate</p>	<p>Earth and Space</p> <ul style="list-style-type: none"> <li>Planets in the solar system.</li> <li>Models of the solar system.</li> <li>How humans have explored the solar system.</li> <li>Different objects in the solar system.</li> <li>Moons and eclipses.</li> <li>Days and seasons of the Earth.</li> <li>Satellites and their uses.</li> <li>How weight is influenced by mass and gravity.</li> <li>Solar systems and galaxies.</li> </ul>	<p><b>AO1</b> – to demonstrate knowledge and understanding of scientific ideas, techniques and procedures. <b>AO2</b> - to apply knowledge and understanding of scientific ideas, techniques and procedures. <b>AO3</b> – to analyse information and ideas, to interpret and evaluate; to make judgements and draw conclusions; to develop and improve experimental procedures.</p>	
<p style="text-align: center;"><b>FORMATIVE ASSESSMENT</b> <b>Assessment and skills tested at the end of each topic</b> <b>This piece of work is a portfolio piece for EBacc subjects.</b></p>							

<p><b>SPRING 2</b> February –March</p>	<p><b>Periodic Table</b></p> <ul style="list-style-type: none"> <li>The properties of different elements and their uses.</li> <li>Classification of materials as metal or non-metal.</li> <li>Arrangement of elements into the periodic table.</li> <li>Reversible &amp; irreversible physical &amp; chemical changes – classification of these.</li> <li>The atoms of one element – all same type. Atoms of different elements: different types.</li> <li>Ascending atomic number and arrangement of elements.</li> <li>Different types of atoms and different masses.</li> <li>Chemical reactions represented by word equations.</li> <li>Chemical reactions &amp; bonds between atoms are broken and reformed.</li> <li>Conservation of mass when chemical reactions occur.</li> <li>Group 1: Alkali metals and their properties</li> <li>Groups in periodic tables and similar properties.</li> <li>Bonds &amp; atoms of substances.</li> </ul>	<p>Recall List Identify Describe Explain Link Discuss Construct Justify Compare Suggest Model State Explain Evaluate Create</p>	<p><b>Microbes and Disease</b></p> <ul style="list-style-type: none"> <li>Classification of micro-organisms as prokaryotes and eukaryotes.</li> <li>Classification of micro-organisms based on cell structure</li> <li>Understanding of different types of diseases and how they are spread.</li> <li>How the immune system and vaccination prevent diseases.</li> <li>How drugs development has prevented diseases</li> <li>Culturing of bacteria to evaluate effectiveness of antibiotics and disinfectants.</li> </ul>	<p>Recall List Identify Describe Explain Link Justify Compare Suggest Model State Explain Evaluate</p>	<p>No Physics topic this half term</p>	<p><b>AO1</b> – to demonstrate knowledge and understanding of scientific ideas, techniques and procedures. <b>AO2</b> - to apply knowledge and understanding of scientific ideas, techniques and procedures. <b>AO3</b> – to analyse information and ideas, to interpret and evaluate; to make judgements and draw conclusions; to develop and improve experimental procedures.</p>
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<p><b>SUMMER 1</b> April – May</p>	<p><b>Periodic Table (Contd)</b></p> <ul style="list-style-type: none"> <li>The properties of different elements and their uses.</li> <li>Classification of materials as metal or non-metal.</li> <li>Arrangement of elements into the periodic table.</li> <li>Reversible &amp; irreversible physical &amp; chemical changes – classification of these.</li> <li>The atoms of one element – all same type. Atoms of different elements: different types.</li> <li>Ascending atomic number and arrangement of elements.</li> <li>Different types of atoms and different masses.</li> <li>Chemical reactions represented by word equations.</li> <li>Chemical reactions &amp; bonds between atoms are broken and reformed.</li> <li>Conservation of mass when chemical reactions occur.</li> <li>Group 1: Alkali metals and their properties</li> <li>Groups in periodic tables and similar properties.</li> <li>Bonds &amp; atoms of substances.</li> </ul>	<p>Recall List Identify Describe Explain Link Discuss Construct Justify Compare Suggest Model State Explain Evaluate Create</p>	<p>No Biology topic this half term</p>		<p><b>Heating and Cooling</b> Thermal Energy.</p> <ul style="list-style-type: none"> <li>Factors that affect the temperature of an object.</li> <li>Effects of evaporation.</li> <li>Direction of energy transfer.</li> <li>Methods of energy transfer, conduction, convection, evaporation and radiation.</li> <li>Efficiency and conservation of energy.</li> <li>Energy change diagrams.</li> <li>Power and home energy use.</li> </ul>	<p>Identify Describe Explain Link Discuss Construct Justify Compare Suggest Model State Explain Evaluate</p>	<p>Biology spec: AQA 8461    Chemistry spec: AQA 8462    Physics: AQA 8463</p>
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<p><b>SUMMER 2</b> June –July</p>	<p><b>metals &amp; non-metals</b></p> <ul style="list-style-type: none"> <li>Classification of metals &amp; non-metals.</li> <li>Word equations to represent chemical reactions.</li> <li>Speed variation &amp; chemical reactions.</li> <li>Metals and their reaction with oxygen.</li> <li>Metals and their reaction with water.</li> <li>Representation of chemical reactions by symbols or formula equations</li> <li>Acids &amp; their reactions with metals, bases &amp; carbonates.</li> <li>Pure elements, alloys and properties.</li> </ul>	<p>Identify Describe Recall Construct Design Link Explain Estimate Suggest Model Justify Evaluate</p>	<p>No Biology topic this half term</p>		<p>Fluids</p> <ul style="list-style-type: none"> <li>States of matter- solids, liquids and gases.</li> <li>Kinetic Theory of particles.</li> <li>Expansion and contraction.</li> <li>Density of matter.</li> <li>Change of state- reversible and irreversible changes</li> <li>Pressure in liquids and gases.</li> </ul>	<p>Identify Describe Explain Link Discuss Construct Justify Compare Suggest Model State Explain Evaluate Create</p>		
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END OF YEAR EXAMINATION / ASSESSMENT (SUMMATIVE ASSESSMENT) – PORTFOLIO piece for ALL subjects