

## Programme of Study/Scheme of Work 2023-2024

Subject – Science

Year group: 11

Unit Outline. (Overview of what is being delivered in each half-term)	Key Skills to be developed	Methods used to develop skills. What tasks/activities will you use to maximise outcomes? (Based on deconstructing the tasks proven to be effective at KS 3/4)	Success criteria. (How will you know and record if pupils have learnt what is required?)	Cross curricular links. (What are the key skills which could be used in other subjects?)	Assessment /Criteria / Methods
<p><b><u>Autumn 1</u></b></p> <p>The skeletal and muscular systems</p>	<p>The structure and functions of the human skeleton, to include support, protection, movement and making blood cells biomechanics – the interaction between skeleton and muscles, including the measurement of force exerted by different muscles the function of muscles and examples of antagonistic muscles</p>	<p><b>Generic:</b> PowerPoint presentations Group discussion Video clips Peer support/ Matching activities Worksheets</p>	<p>Completion of mini tasks in lessons and formative assessment</p> <p>Home work</p> <p>Summative assessment</p>		<ul style="list-style-type: none"> <li>- Individual feedback (WWW-EBI)</li> <li>- Peer marking</li> <li>- Self marking</li> <li>- Verbal feedback</li> <li>- Grading (Emerging, Developing, Secure)</li> </ul> <p>Summative assessment</p>
<p><b><u>Autumn 2</u></b></p> <p>Structure, bonding and the properties of matter</p>	<p>Changes of state of matter in terms of particle kinetics, energy transfers and the relative strength of chemical bonds and intermolecular forces types of chemical bonding: ionic, covalent, and metallic</p>	<p><b>Generic:</b> PowerPoint presentations Group discussion Video clips Peer support/ Matching activities Worksheets</p>	<p>Completion of mini tasks in lessons and formative assessment</p> <p>Home work</p> <p>Summative assessment</p>		<ul style="list-style-type: none"> <li>- Individual feedback (WWW-EBI)</li> <li>- Peer marking</li> <li>- Self marking</li> <li>- Verbal feedback</li> </ul>

Building up resilience, managing myself and communication.

	<p>bulk properties of materials related to bonding and intermolecular forces  bonding of carbon leading to the vast array of natural and synthetic organic compounds that occur due to the ability of carbon to form families of similar compounds, chains and rings structures, bonding and properties of diamond, graphite, fullerenes and graphene.</p>				<p>- Grading (Emerging, Developing, Secure)   Summative assessment</p>
<p><b><u>Spring 1</u></b>   Energy</p>	<p>Energy changes in a system involving heating, doing work using forces, or doing work using an electric current: calculating the stored energies and energy changes involved power as the rate of transfer of energy  conservation of energy in a closed system, dissipation  calculating energy efficiency for any energy transfers  renewable and non-renewable energy sources used on Earth, changes in how these are used</p>	<p><b>Generic:</b>  PowerPoint presentations  Group discussion  Video clips  Peer support/  Matching activities  Worksheets</p>	<p>Completion of mini tasks in lessons and formative assessment   Work created for display   Home work   Summative assessment</p>		<p>- Individual feedback (WWW-EBI)  - Peer marking  - Self marking  - Verbal feedback  - Grading (Emerging, Developing, Secure, Mastering)   Half term summative assessment</p>

<p><b><u>Spring 2</u></b></p>	<p>Cells as the basic structural unit of all organisms; adaptations of cells related to their functions; the main sub-cellular structures of eukaryotic and prokaryotic cells stem cells in animals and meristems in plants enzymes factors affecting the rate of enzymatic reactions the importance of cellular respiration; the processes of aerobic and anaerobic respiration carbohydrates, proteins, nucleic acids and lipids as key biological molecules</p>	<p><b>Generic:</b> PowerPoint presentations Group discussion Video clips Peer support/ Matching activities Worksheets</p>	<p>Completion of mini tasks in lessons and formative assessment</p> <p>Work created for display</p> <p>Home work</p> <p>Summative assessment</p>		<ul style="list-style-type: none"> <li>- Individual feedback (WWW-EBI)</li> <li>- Peer marking</li> <li>- Self marking</li> <li>- Verbal feedback</li> <li>- Grading (Emerging, Developing, Secure, Mastering)</li> <li>Half term summative assessment</li> </ul>
<p><b><u>Summer 1</u></b></p> <p>Energy changes in Chemistry</p> <p>Rate and extent of chemical change</p>	<p>Measurement of energy changes in chemical reactions (qualitative) Bond breaking, bond making, activation energy and reaction profiles (qualitative)</p> <p>Factors that influence the rate of reaction: varying temperature or</p>	<p><b>Generic:</b> PowerPoint presentations Group discussion Video clips Peer support/ Matching activities Worksheets</p>	<p>Completion of mini tasks in lessons and formative assessment</p> <p>Work created for display</p> <p>Home work</p> <p>Summative assessment</p>		<ul style="list-style-type: none"> <li>- Individual feedback (WWW-EBI)</li> <li>- Peer marking</li> <li>- Self marking</li> <li>- Verbal feedback</li> <li>- Grading (Emerging, Developing, Secure, Mastering)</li> </ul>

Building up resilience, managing myself and communication.

	concentration, changing the surface area of a solid reactant or by adding a catalyst factors affecting reversible reactions				Half term summative assessment
--	--	--	--	--	--------------------------------

Building up resilience, managing myself and communication.

<p><b>Summer 2</b></p> <p>Electricity and electromagnetism Current electricity</p>	<p>Electric current, measured in amperes, in circuits, series and parallel circuits, currents add where branches meet and current as flow of charge potential difference, measured in volts, battery and bulb ratings; resistance, measured in ohms, as the ratio of potential difference (p.d.) to current differences in resistance between conducting and insulating components (quantitative)</p>	<p><b>Generic:</b> PowerPoint presentations Group discussion Video clips Peer support/ Matching activities Worksheets</p>	<p>Completion of mini tasks in lessons and formative assessment</p> <p>Work created for display Home work</p> <p>Summative assessment</p> <p>Completion of mini tasks in lessons and formative assessment</p> <p>Work created for display</p> <p>Home work</p> <p>Summative assessment</p>		<ul style="list-style-type: none"> <li>- Individual feedback (WWW-EBI)</li> <li>- Peer marking</li> <li>- Self marking</li> <li>- Verbal feedback</li> <li>- Grading (Emerging, Developing, Secure, Mastering)</li> </ul> <p>Half term summative assessment</p>
--	---	---	--	--	---