

Programme of Study/Scheme of Work 2023-2024

Subject – Science

Year group: 9D

| 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 |
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| <p><u>Autumn 1</u></p> <p>Material cycles and energy</p> <p>Photosynthesis</p> <p>Cellular respiration</p> | <p>The reactants in, and products of, photosynthesis, and a word summary for photosynthesis</p> <p>the dependence of almost all life on Earth on the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of oxygen and carbon dioxide in the atmosphere</p> <p>the adaptations of leaves for photosynthesis</p> <p>Aerobic and anaerobic respiration in living organisms, including the breakdown of organic molecules to enable all the</p> | <p>Generic:</p> <p>PowerPoint presentations</p> <p>Group discussion</p> <p>Video clips</p> <p>Peer support/</p> <p>Matching activities</p> <p>Worksheets</p> | <p>Completion of mini tasks in lessons and formative assessment</p> <p>Home work</p> <p>Summative assessment</p> | | <p>- Individual feedback (WWW-EBI)</p> <p>- Peer marking</p> <p>- Self marking</p> <p>- Verbal feedback</p> <p>- Grading (Emerging, Developing, Secure)</p> <p>Summative assessment</p> |

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| | <p>other chemical processes necessary for life a word summary for aerobic respiration the process of anaerobic respiration in humans and micro-organisms, including fermentation, and a word summary for anaerobic respiration.</p> <p>The differences between aerobic and anaerobic respiration in terms of the reactants, the products formed and the implications for the organism Interactions and interdependencies.</p> | | | | |
| <p><u>Autumn 2</u></p> <p>Chemical reactions</p> | <p>Chemical reactions as the rearrangement of atoms representing chemical reactions using formulae and using equations combustion, thermal decomposition, oxidation and displacement reactions defining acids and alkalis in terms of neutralisation reactions.</p> <p>The pH scale for measuring acidity/alkalinity; and indicators</p> | <p>Generic: 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"> - Individual feedback (WWW-EBI) - Peer marking - Self marking - Verbal feedback - Grading (Emerging, Developing, Secure) <p>Summative assessment</p> |

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| | <p>reactions of acids with metals to produce a salt plus hydrogen</p> <p>reactions of acids with alkalis to produce a salt plus water</p> <p>what catalysts do</p> | | | | |
| <p><u>Spring 1</u></p> <p>Electricity and electromagnetism</p> <p>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</p> <p>potential difference, measured in volts, battery and bulb ratings;</p> <p>resistance, measured in ohms, as the ratio of potential difference (P.d.) to current.</p> <p>Differences in resistance between conducting and insulating components (quantitative)</p> | <p>Generic:</p> <p>PowerPoint presentations</p> <p>Group discussion</p> <p>Video clips</p> <p>Peer support/</p> <p>Matching activities</p> <p>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"> - Individual feedback (WWW-EBI) - Peer marking - Self marking - Verbal feedback - Grading (Emerging, Developing, Secure, Mastering) <p>Half term summative assessment</p> |
| <p><u>Spring 2</u></p> <p>Health</p> | <p>The effects of recreational drugs (including substance misuse) on behaviour, health and life processes</p> | <p>Generic:</p> <p>PowerPoint presentations</p> <p>Group discussion</p> <p>Video clips</p> <p>Peer support/</p> <p>Matching activities</p> <p>Worksheets</p> | <p>Completion of mini tasks in lessons and formative assessment</p> <p>Work created for display</p> <p>Home work</p> | | <ul style="list-style-type: none"> - Individual feedback (WWW-EBI) - Peer marking - Self marking - Verbal feedback |

Building up resilience, managing myself and communication.

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| | | | Summative assessment | | - Grading (Emerging, Developing, Secure, Mastering) Half term summative assessment |
| <u>Summer 1</u> Earth and atmosphere | <p>The composition of the Earth the structure of the Earth the rock cycle and the formation of igneous, sedimentary and metamorphic rocks.</p> <p>Earth as a source of limited resources and the efficacy of recycling the composition of the atmosphere the production of carbon dioxide by human activity and the impact on climate Physics</p> | <p>Generic: 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> | | <p>- Individual feedback (WWW-EBI)</p> <p>- Peer marking</p> <p>- Self marking</p> <p>- Verbal feedback</p> <p>- Grading (Emerging, Developing, Secure, Mastering)</p> <p>Half term summative assessment</p> |

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| <p><u>Summer 2</u></p> <p>Magnetism</p> | <p>Magnetic poles, attraction and repulsion magnetic fields by plotting with compass, representation by field lines.</p> <p>Earth's magnetism, compass and navigation the magnetic effect of a current, electromagnets, DC motors (principles only)</p> | <p>Generic: 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"> - Individual feedback (WWW-EBI) - Peer marking - Self marking - Verbal feedback - Grading (Emerging, Developing, Secure, Mastering) <p>Half term summative assessment</p> |
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