



Curriculum Map

Subject: Science

Year group: 8

	Biology	Chemistry	Physics
<p>Content</p> <p><i>Declarative Knowledge – ‘Know What’</i></p>	<p>B1 - Health and Lifestyle Comparing the effects of healthy and unhealthy lifestyle choices on the body</p> <p>B2 - Ecosystem Processes Explaining how energy is utilised by producers and consumers, and how it supports life at all stages</p> <p>B3 - Adaptations and Inheritance How organisms are adapted to their environment and how characteristics are passed on from parents to offspring</p>	<p>C1 - The Periodic Table Identify patterns in the properties of elements and learn how to use the periodic table to predict properties</p> <p>C2 - Separation techniques Study how we separate mixtures</p> <p>C3 - Metals and acids To understand reactions of metals and predict the products of the reactions</p> <p>C4 - The Earth Learn about the structure of the earth and the rocks of its crust</p>	<p>P1 - Electricity and magnetism Constructing simple circuits and explaining the links between current, potential difference and resistance</p> <p>P2 - Energy Describe different energy stores and how energy can be converted from one form to another</p> <p>P3 - Motion and pressure Explain how speed can be measured and calculated Explain the effects of pressure and factors that can affect it</p>
<p>Skills</p> <p><i>Procedural Knowledge – ‘Know How’</i></p>	<ul style="list-style-type: none"> Record, present and interpret observations and data, including identifying patterns and using observations, measurement and data to draw conclusions. Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety. Select, plan, and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent, and control variables, where appropriate. Make predictions using scientific knowledge and understanding. Present reasoned explanations, including explaining data in relation to predictions and hypotheses. 	<ul style="list-style-type: none"> Interpretation of patterns Comparing predictions with evidence Making links between properties of elements Use and evaluate models to represent particles Practical skills Analysis of experimental outcomes and draw conclusions Writing balanced equations Predicting and testing predictions Evaluating materials Describe the structure of the earth Observe and make predictions about different types of rock formation Evaluate human impact on climate change 	<ul style="list-style-type: none"> Record, present and interpret observations and data, including identifying patterns and using observations, measurement and data to draw conclusions. Use appropriate techniques, apparatus, and materials during laboratory work, paying attention to health and safety. Select, plan, and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent, and control variables, where appropriate. Make predictions using scientific knowledge and understanding. Present reasoned explanations, including explaining data in relation to predictions and hypotheses.



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<p>Key Questions</p>	<p>B1 How can one live a long and healthy life? B2 How do energetic processes support life on Earth? B3 Why do organisms evolve and what causes variation?</p>	<p>C1 Why is the Periodic Table important? C2 What are the properties of each mixture that enable it to be separated? C3 What are the patterns in the properties of metals? C4 What are the valuable resources that we obtain from the earth</p>	<p>P1 How does electricity travel? How do our appliances work? P2 What are the different stores of energy and how is it transferred? P3 How can measure speed? What is different about pressure in solids, liquid and gases?</p>
<p>Assessment</p>	<p>End of topic assessments Extended writing tasks</p>	<p>End of topic assessments Extended writing tasks</p>	<p>End of topic assessments Extended writing tasks</p>
<p>Literacy/Numeracy/ SMSC/Character</p>	<p>Literacy Extended writing tasks Drawing conclusions from data identifying causal links Extracting information from research sources Numeracy Presenting data in tables and graphs Handling data: calculating means, medians, modes and ranges Simple data analysis SMSC Understanding a range of different views, cultures and lifestyle choices Working collaboratively to complete complex investigations Character Integrity: during practical work Resilience: using equations and data handling Confidence: participation in classroom discussions</p>	<p>Literacy Extended writing tasks Drawing conclusions from data identifying causal links Extracting information Numeracy Presenting data in tables and graphs Simple data analysis Identifying patterns Balancing equations SMSC Human impact on the earth Character Integrity: during practical work Resilience: using equations and data handling Confidence: participation in classroom discussions</p>	<p>Literacy Extended writing tasks Drawing conclusions from data identifying causal links Extracting information from research sources Numeracy Presenting data in tables and graphs Handling data: calculating means, medians, modes and ranges Simple data analysis SMSC Generating electricity and the impacts on the Earth. Consequences of wasting energy. Character Integrity: during practical work Resilience: using equations and data handling Confidence: participation in classroom discussions</p>