



Unit: <b>Investigation Skills</b>	1. Planning a scientific investigation 2. Data collection, processing and analysis 3. Drawing conclusion and evaluation	4. Enzymes in action 5. Diffusion of molecules 6. Plants and their environment	7. Energy Content of fuels 8. Electrical circuits
LESSONS			
<b>Knowledge &amp; Skills Development</b>	<ul style="list-style-type: none"> <li>Developing a hypothesis for an investigation</li> <li>Selection of appropriate equipment, techniques and standard procedures</li> <li>Writing a risk assessment</li> <li>Identifying variables</li> <li>Writing a clear logical method</li> <li>Collection of quantitative and qualitative data</li> <li>Processing data</li> </ul>	<ul style="list-style-type: none"> <li>Interpretation and analysis of data</li> <li>Writing an evaluations</li> <li>Incorporating these skills into practical work based on:  <i>Enzymes in action</i>  <i>Diffusion of molecules</i>  <i>Plants and their environment</i>  <i>Energy content of fuels</i>  <i>Electrical circuits</i> </li> </ul>	
<b>Assessment / Feedback Opportunities</b>	<b>Formative Assessment</b> Teacher questioning Quizzes Exam style questions	<b>Summative assessment</b> End of topic assessment Exam questions in future end of topic assessments to assess recall	
<b>Key Vocabulary</b>	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest, Absolute, Uncertainty, Error		
<b>Literacy/Reading Opportunities</b>	Subject specific vocabulary introduced before reading of related texts Word etymology from Latin and Greek roots Reading of simple and complex sentences, paragraphs, articles Scientific writing including structuring methods, comparisons and evaluations		
<b>Cross Curricular Themes</b>	Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators		
<b>Personal Development (Including British Values, RSE, Citizenship)</b>	None		

<b>Career Opportunities</b>	Chemist, Pharmacist, Chemical Engineer, Materials Scientist, Lab Technician, Biochemical scientist
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