

# Year 9 Core Science

Timing	Unit	Core Context	Core Objectives	Key Skills
1	Sept – Oct	Autumn	<p>Photosynthesis</p> <p>Metals and non-metals</p> <p>Voltage, current and resistance</p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• Describe ways in which plants obtain resources for photosynthesis</li> <li>• Explain why other organisms are dependent on photosynthesis</li> <li>• Sketch a line graph to show how the rate of photosynthesis is affected by changing conditions</li> <li>• Describe an oxidation, displacement, or metal-acid reaction with a word equation</li> <li>• Use particle diagrams to represent oxidation, displacement, and metal-acid reactions</li> <li>• Identify an unknown element from its physical and chemical properties</li> <li>• Draw a circuit diagram to show how voltage can be measured in a simple circuit</li> <li>• Use the idea of energy to explain how voltage and resistance affect the way components work</li> </ul>	<p>Use lab tests on variegated leaves to show that chlorophyll is essential for photosynthesis</p> <p>Use experimental results to suggest an order of reactivity of various metals</p> <p>Compare the voltage drop across resistors connected in series in a circuit</p>

2	Oct - Dec	Winter	Evolution  Chemical energy  Pressure and Work	Pupils will: <ul style="list-style-type: none"> <li>• Use evidence to explain why a species has become extinct or adapted to changing conditions</li> <li>• Evaluate whether evidence for a species changing over time supports natural selection</li> <li>• Use experimental observations to distinguish exothermic and endothermic reactions</li> <li>• Use a diagram of relative energy levels of particles to explain energy changes observed during a change of state</li> <li>• Use diagrams to explain observations of fluids in terms of unequal pressure</li> <li>• Explain why objects either sink or float depending upon their weight and the upthrust acting upon them</li> </ul>	Review the evidence for theories about how a particular species went extinct  Investigate a phenomenon that relies on an exothermic or endothermic reaction  Investigate how pressure from your foot onto the ground varies with different footwear
3	Jan- Apr il	Spring	GCSE begins	Pupils will: <ul style="list-style-type: none"> <li>• Students begin GCSE skills work and content in preparation for their GCSE course at Brockington College</li> </ul>	Practical skills  Mathematical skills  Tackling longer-answer questions
4	Apr - July	Summer	GCSE begins	Pupils will: <ul style="list-style-type: none"> <li>• Students begin GCSE skills work and content in preparation for their GCSE course at Brockington College</li> </ul>	Practical skills  Mathematical skills  Tackling longer-answer questions

We will continually evaluate this to ensure students are building these skills throughout the year.

# Year 9 Triple Science

Timing	Unit	Core Context	Core Objectives	Key Skills
1	Sept – Oct	Autumn	<p>Evolution</p> <p>Metals and non-metals</p> <p>Voltage, current and resistance</p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• Use evidence to explain why a species has become extinct or adapted to changing conditions</li> <li>• Evaluate whether evidence for a species changing over time supports natural selection</li> <li>• Describe an oxidation, displacement, or metal-acid reaction with a word equation</li> <li>• Use particle diagrams to represent oxidation, displacement, and metal-acid reactions</li> <li>• Identify an unknown element from its physical and chemical properties</li> <li>• Draw a circuit diagram to show how voltage can be measured in a simple circuit</li> <li>• Use the idea of energy to explain how voltage and resistance affect the way components work</li> </ul>	<p>Review the evidence for theories about how a particular species went extinct</p> <p>Use experimental results to suggest an order of reactivity of various metals</p> <p>Compare the voltage drop across resistors connected in series in a circuit</p>

2	Oct - Nov	Winter	Photosynthesis  Chemical energy  Pressure and Work	Pupils will: <ul style="list-style-type: none"> <li>• Describe ways in which plants obtain resources for photosynthesis</li> <li>• Explain why other organisms are dependent on photosynthesis</li> <li>• Sketch a line graph to show how the rate of photosynthesis is affected by changing conditions</li> <li>• Use experimental observations to distinguish exothermic and endothermic reactions</li> <li>• Use a diagram of relative energy levels of particles to explain energy changes observed during a change of state</li> <li>• Use diagrams to explain observations of fluids in terms of unequal pressure</li> <li>• Explain why objects either sink or float depending upon their weight and the upthrust acting upon them</li> </ul>	Use lab tests on variegated leaves to show that chlorophyll is essential for photosynthesis  Investigate a phenomenon that relies on an exothermic or endothermic reaction  Investigate how pressure from your foot onto the ground varies with different footwear
3	Nov - April	Winter/Spring	GCSE begins	Pupils will: <ul style="list-style-type: none"> <li>• Students begin GCSE skills work and content in preparation for their GCSE course at Brockington College</li> </ul>	Practical skills  Mathematical skills  Tackling longer-answer questions
4	Apr - July	Summer	GCSE begins	Pupils will: <ul style="list-style-type: none"> <li>• Students begin GCSE skills work and content in preparation for their GCSE course at Brockington College</li> </ul>	Practical skills  Mathematical skills  Tackling longer-answer questions

We will continually evaluate this to ensure students are building these skills throughout the year.