

# Year 10 Long Term Scheme of Learning 2023-24

## Separate Science - Chemistry

Date	Unit(s)
<b>Chemistry Separates</b>	
<b>4/9/23</b>	<b>C2 Structure, Bonding, &amp; the Properties of Matter</b>
11/9/23	<b>Key ideas:</b>
18/9/23	<ul style="list-style-type: none"> <li>• States of matter</li> </ul>
25/9/23	<ul style="list-style-type: none"> <li>• Chemical bond – Ionic, covalent and metallic</li> </ul>
2/10/23	<ul style="list-style-type: none"> <li>• Properties of ionic compounds</li> </ul>
09/10/23	<ul style="list-style-type: none"> <li>• Properties of small molecules</li> </ul>
16/10/23	<ul style="list-style-type: none"> <li>• Properties of giant covalent compounds eg diamond &amp; graphite</li> </ul>
	<ul style="list-style-type: none"> <li>• Properties of metals and alloys</li> </ul>
	<ul style="list-style-type: none"> <li>• <a href="#">Nanoparticles – inc graphene &amp; fullerenes</a></li> </ul>
<b>30/10/23</b>	<b>C4 Chemical Reactions – reactions of acids</b>
6/11/23	<ul style="list-style-type: none"> <li>• pH and neutralisation reactions.</li> </ul>
13/11/23	<ul style="list-style-type: none"> <li>• <a href="#">Required Practical – Making Soluble Salts</a></li> </ul>
20/11/23	<b>C4'Chemical Reactions' – electrolysis</b>
27/11/23	<b>Key ideas:</b>
4/12/23	<ul style="list-style-type: none"> <li>• Ionic compounds can be split into elements when molten or in solution using electricity</li> </ul>
	<ul style="list-style-type: none"> <li>• Aluminium extraction using electrolysis</li> </ul>
	<ul style="list-style-type: none"> <li>• <a href="#">Required Practical –'Electrolysis of aqueous solutions'</a></li> </ul>
11/12/23	<b>C5 'Energy Changes'</b>
	<b>Key ideas:</b>
	<ul style="list-style-type: none"> <li>• Endothermic &amp; exothermic reactions</li> </ul>
	<ul style="list-style-type: none"> <li>• <a href="#">Required Practical – 'Temperature changes'</a></li> </ul>
	<ul style="list-style-type: none"> <li>• <a href="#">Reaction profiles &amp; bond energy</a></li> </ul>
	<ul style="list-style-type: none"> <li>• <a href="#">Batteries &amp; fuel cells</a></li> </ul>
<b>1/1/24</b>	<b><u>Chemistry Assessment</u></b>
8/1/24	
15/1/24	<b>C3 'Quantitative Chemistry'</b>
22/1/24	<b>Key ideas:</b>

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29/1/24	<ul style="list-style-type: none"> <li>Balancing equations</li> <li>Relative formula mass</li> <li>Amount of substance – moles</li> <li>Concentration of solutions</li> <li>Percentage yield</li> <li>Atom economy</li> </ul>
5/2/24	
12/2/24	
<b>26/2/24</b>	<b>C3 'Quantitative Chemistry'</b>
4/3/24	<b>Key ideas:</b>
11/3/24	<ul style="list-style-type: none"> <li>Gas Volumes</li> <li>Required Practical – 'Titrations'</li> </ul>
18/3/24	
	<b>C6 'Rate &amp; Extent of Chemical Reactions' – rate of reaction</b>
25/3/24	<b>Key ideas:</b> <ul style="list-style-type: none"> <li>Measuring rate of reaction methods</li> <li>Limiting reactants</li> <li>Factors affecting rates</li> </ul>
<b>15/4/24</b>	<b>C6 'Rate &amp; Extent of Chemical Reactions' – rate of reaction</b>
22/4/24	<b>Key ideas:</b>
29/4/24	<ul style="list-style-type: none"> <li>Required Practical – Disappearing Cross</li> <li>Required Practical – Measuring a gas volume</li> <li>Graphs &amp; tangents</li> </ul>
6/5/24	
13/5/24	
	Collision theory & catalysts
	<b>C1 'The Periodic Table'</b>
20/5/24	<b>Key ideas:</b> <ul style="list-style-type: none"> <li>Transition metals – catalysts</li> </ul>
	<b>C6 'Rate &amp; Extent of Chemical Reactions' - equilibria</b>
	<b>Key ideas:</b> <ul style="list-style-type: none"> <li>Reversible reactions &amp; equilibrium</li> <li>Effect of changing reaction conditions eg temperature, pressure and concentration</li> </ul>
<b>3/6/24</b>	<b><u>End of Year Exams</u></b>
10/6/24	
17/6/24	<b>C7 'Organic Chemistry'</b>

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24/6/24	<b>Key ideas:</b> <ul style="list-style-type: none"><li>• Fractional distillation of crude oil</li><li>• Alkanes and Alkenes (Cracking)</li><li>• Combustion of fuels</li><li>• Reactions of Alkenes</li></ul>
1/7/24	
8/7/24	
15/7/24	