



# Year 11 Biology Curriculum Summary



**YEAR GROUP: 11 FMS**

**SUBJECT: Chemistry**

When?	Knowledge	Understanding	Assessment
<p><b>Chemical analysis and Topic 6b Equilibrium</b></p>	<p><b>Be able to:</b></p> <ul style="list-style-type: none"> <li>describe and explain the differences between pure substances and impure mixtures</li> <li>carry out experiments involving chromatography and explain the results</li> <li>describe the tests for different gases.</li> </ul> <p><b>Be able to:</b></p> <ul style="list-style-type: none"> <li>define reversible reactions and dynamic equilibrium and what happens to the energy transferred in reversible reactions.</li> <li>Describe the effects of temperature, concentration, pressure and a catalyst on dynamic equilibrium.</li> </ul>	<p>Students will carry out a range of practical experiments during these topics.</p> <p><b>Chemical analysis key vocabulary:</b> Retention factor Chromatography Pure substance mixture</p> <p><b>Equilibrium key vocabulary:</b> anhydrous closed system collision theory equilibrium hydrated Le Châtelier's Principle reversible reaction</p>	<p>Chemical Analysis and Topic 6b: Equilibrium Test</p>
<p><b>Further</b></p>	<p><b>Be able to:</b></p>	<p>Students will carry out a range of</p>	



<b>Chemical Analysis</b>	<ul style="list-style-type: none"> <li>Describe the tests and positive results for positive and negative ion tests.</li> <li>Describe the advantages of instrumental methods including flame emission spectroscopy.</li> </ul>	<p>practical experiments during these topics.</p> <p><b>Further Chemical Analysis</b>          Flame emission spectroscopy          Nichrome loop</p>	<p>Further Chemical Analysis Test</p>
<b>Further Quantitative Chemistry</b>	<p>Be able to:</p> <ul style="list-style-type: none"> <li>Calculate percentage yield and atom economy and explain why percentage yield is not always 100%.</li> <li>Describe how to carry out a titration experiment including calculations.</li> <li>Calculate the volume of gases at room temperature and pressure.</li> </ul>	<p>Students will carry out a range of practical experiments during these topics.</p> <p><b>Further Quantitative Chemistry key vocabulary:</b>          burette          concentration          concordant          end point          mole          percentage yield          pipette          titration          yield</p>	<p>Further Quantitative Chemistry Test</p>
<b>The Earth's Resources</b>	<p>Be able to:</p> <ul style="list-style-type: none"> <li>Describe the differences between renewable and non-renewable resources.</li> <li>Describe alternative methods of extracting metals from their ores.</li> <li>Describe different methods of treatment of water sources.</li> <li>Evaluate the life cycle</li> </ul>	<p>Students will carry out a range of practical experiments during these topics.</p> <p><b>: The Earth's Resources key vocabulary:</b>          Bioleaching          blast furnace          life cycle assessment (LCA)          non-renewable          thermal decomposition</p>	<p>The Earth's Resources Test</p>



	<b>assessment of different products.</b>		
<b>Using Our resources</b>	<b>Be able to:</b> <ul style="list-style-type: none"><li>• Describe corrosion and explain different preventative methods.</li><li>• Describe the properties of glass, ceramics, composites and alloys</li><li>• Describe and explain the conditions and processes involved in the Haber process.</li></ul>	Students will carry out a range of practical experiments during these topics.  <b>Using Our resources key vocabulary:</b> alloy carbon steel galvanised neutralisation polymer rusting sacrificial protection stainless steel steel thermosetting polymer thermosoftening polymer	Using Our resources Test