

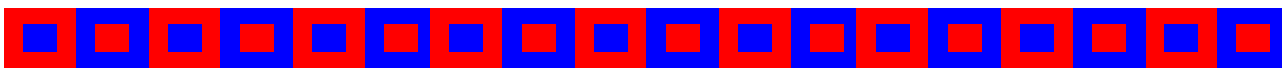
## Chemistry

It is recommended that candidates embarking on the course should have at least obtained GCSE Double Award Science (Grade C). Also, at least a grade C in GCSE Mathematics is essential.  
The specification is comprised of 5 units – 2 AS and 3 A2 level units.

**Contact: Mr A. Pickett**

### Course Content and Structure

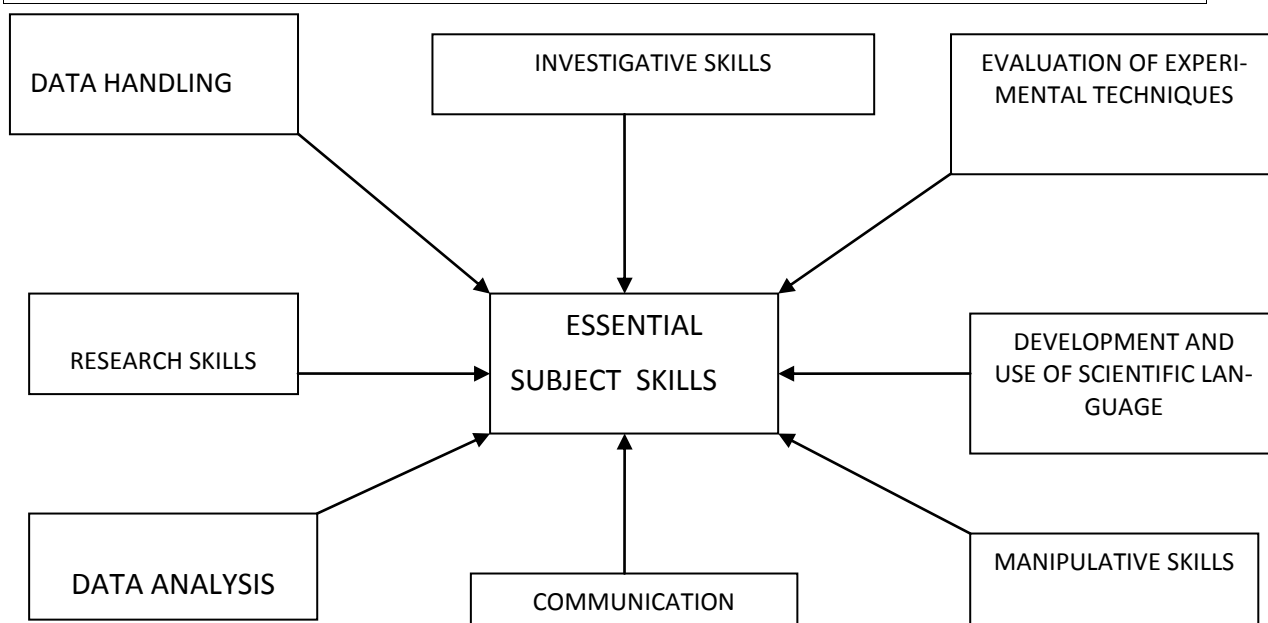
Advanced Subsidiary (AS)	Advanced Level (A2)
<p><b>A2 UNIT 1: The Language of Chemistry, Structure of Matter and Simple Reactions</b></p> <ul style="list-style-type: none"> <li>Formulae and equations</li> <li>Basic ideas about atoms</li> <li>Chemical calculations</li> <li>Bonding</li> <li>Solid structures</li> <li>The Periodic Table</li> <li>Simple equilibria and acid base reactions</li> </ul>	<p><b>A2 UNIT 3: Physical and Inorganic Chemistry</b></p> <ul style="list-style-type: none"> <li>Redox and standard electrode potential</li> <li>Redox reactions</li> <li>Chemistry of the p block and d block elements</li> <li>Chemical kinetics</li> <li>Enthalpy changes</li> <li>Entropy and feasibility of reactions</li> <li>Equilibrium constants</li> <li>Acid Base Equilibria</li> </ul>
<p><b>AS Unit 2 Energy, Rate and Chemistry of Carbon Compounds</b></p> <ul style="list-style-type: none"> <li>Thermochemistry</li> <li>Rates of reaction</li> <li>The wider impact of chemistry</li> <li>Organic compounds</li> <li>Hydrocarbons</li> <li>Halogenalkanes</li> <li>Alcohols and carboxylic acids</li> <li>Instrumental analysis</li> </ul>	<p><b>A2 UNIT 4: Organic Chemistry and analysis</b></p> <ul style="list-style-type: none"> <li>Stereoisomerism</li> <li>Aromaticity</li> <li>Alcohols and phenols</li> <li>Aldehydes and ketones</li> <li>Carboxylic acids and derivatives</li> <li>Amines</li> <li>Amino acids, peptides and proteins</li> <li>Organic synthesis and analysis</li> </ul>
<p style="text-align: center;"><b>Practical Work:</b></p> <p>In Unit 1 and 2 above, practical work will be carried out with all work recorded in practical books. Practical work will be assessed through examination questions in Units 1 and 2.</p>	<p style="text-align: center;"><b>A2 Unit 5: Practical Examination</b></p> <p>This unit gives learners the opportunity to demonstrate their skills, knowledge and understanding in relation to practical techniques and their ability to analyse and evaluate experimental data. The practical examination comprises two tasks to be carried out individually under controlled conditions.</p>
AS = 2 units (studied in Year 12) plus A2 = 3 units (studied in Year 13) equals full A-level	



**Assessment:**

Year 12 AS (2 Units)	Year 13 A2 (3 Units)
<b>AS Unit 1:</b> Written examination: 1 hour 30 minutes 20% of qualification	<b>A2 Unit 3:</b> Written examination: 1 hour 45 minutes 25% of qualification
<b>AS Unit 2:</b> Written examination: 1 hour 30 minutes 20% of qualification	<b>A2 Unit 4:</b> Written examination: 1 hour 45 minutes 25% of qualification
	<b>A2 Unit 5:</b> Practical Examination 10% of qualification

\* There will be Synoptic Assessment within the A2 unit papers. Candidates are required to make and use



**Progression at 18+**

Fully acceptable qualification for entry to university & higher education in general.  
Wide range of career possibilities including:  
Industry, Biochemistry, Dentist, Doctor, Pharmacy, Teaching, Law,  
Physiotherapy, Research, Veterinary Practice, Chemical and Mechanical Engineering  
and Forensic Science and much more.

