A Level Chemistry (AQA)

Head of Department: Mr T Parker

48% A*-A
72% A*-B
in 2025

Chemistry is an essential science in modern society, alongside Biology and Physics. As well as being the foundation for further study in Chemistry, Chemical Engineering, Biochemistry, Pharmacology, Environmental Science, Polymer and Colour Chemistry and much more, it is also an essential A Level for Veterinary Science, Medicine and Dentistry. The skills needed to succeed in Chemistry are wide-ranging; from the analysis of data through to the synthesis of ideas. Chemists, therefore, have many transferrable skills which may lead to careers in Law, Personnel, Management and Finance.

We have chosen to follow the AQA A Level specification because it complements our Science course at GCSE and builds on the concepts of 'How Science Works' that ensure relevance to contemporary issues.

AQA A Level is a natural progression from the GCSE course and so there are many recognisable topics that are taken a stage further. Some, such as atomic structure, are studied in greater detail while others, such as equilibria, broaden the GCSE experience and use mathematics so that qualitative understanding becomes more quantitative. One of the biggest content differences at A Level is the increase in the amount of organic chemistry. This includes many more functional groups, an understanding of the mechanisms of reactions, and synthetic routes that create much more complex molecules with medicinal uses.

To take Chemistry A Level, you must achieve at least one grade 7 or above in GCSE Combined Sciences or GCSE Chemistry, and a minimum grade 6 in GCSE Maths, although grade 7 is strongly recommended.

Content Overview
The course is split into 3 areas:

Physical Chemistry - including topics such as Bonding, Redox, Kinetics, Equilibria, Acids and Bases, Thermodynamics and Electrode Potentials

Inorganic Chemistry - comprising of topics such as Periodicity, Group II, Group VII, Period 3, Transition Metals and Aqueous Ions.

Organic Chemistry - consisting of topics such as Nomenclature, Isomerism, Alkanes, Alkenes, Alcohols, Aldehydes & Ketones, Aromatic Chemistry, Amines, Amino Acids, Proteins & DNA. There is also a focus on spectroscopic techniques such as NMR and Infra Red Spectrometry.

The course is assessed in three 2-hour examinations at the end of Year 13. Additionally, students must demonstrate practical competency in twelve assessed experiments across the course.