



A Level Chemistry

Key contacts: Mrs E Parsons (Head of Chemistry)
Exam Board: OCR A

Overview of the course:

Have you ever wondered...

- What is in a medicine?
- What new fuels do we need to develop?
- Why do onions make you cry?
- How is chemistry linked to art?
- Can you turn lead into gold?

Well study A Level Chemistry A to find out the answers.

A Level Chemistry A will give you an exciting insight into the contemporary world of chemistry. It covers a range of different contexts, conveying the excitement of contemporary chemistry. This combination of academic challenge, relevant context and practical focus makes the prospect of studying A Level Chemistry A highly appealing. You will learn about Chemistry in a range of different contexts and the impact it has on industry and many aspects of everyday life. You will learn to investigate and solve problems in a range of contexts.

Key features

- Simple straightforward assessment through examinations.
- Based on key contexts relevant to Chemistry.
- Opportunities to build practical skills through a range of experiments and investigations.

What will you study?

- Atoms, compounds, molecules and equations
- Amount of substance
- Acid-base and redox reactions
- Electrons, bonding and structure
- The periodic table and periodicity
- Group 2 and the halogens
- Organic Chemistry
- Organic synthesis
- Polymers
- Reaction rates and equilibrium
- Analytical techniques (IR and MS)
- Chromatography and spectroscopy (NMR)
- pH and buffers
- Enthalpy, entropy and free energy
- Redox and electrode potentials
- Transition elements

Emphasis throughout the course is on developing knowledge, competence and confidence in practical skills and problem solving.

What are the benefits?

- An interesting and challenging experience to link chemical ideas and understand how they relate to each other.
- The development of transferable skills including investigating, problem solving, research, decision making, mathematical skills and analytical skills.
- Opens up a range of possibilities for further study and careers associated with chemistry.

Assessment

- Total of six hours of examinations (two x 2hrs 15mins and one x 1hr 30mins) taken at the end of the course.
- A wide range of question types including multiple choice, short answer and extended response questions.
- Opportunity to demonstrate your knowledge of both theory and practical skills through the examinations.

To achieve a Practical Endorsement you will be expected, through a range of experiments, to display your competency in:

- Following procedures
- Applying an investigative approach when using instruments and equipment
- Working safely
- Making and recording observations
- Researching, references and reporting.

Possible career paths

A Level Chemistry A is an excellent base for a university degree in healthcare such as medicine, pharmacy and dentistry as well as chemistry, the biological sciences, physics, mathematics, pharmacology and analytical chemistry. Chemistry is also taken by many law applicants as it shows you can cope with difficult concepts. Chemistry can also complement a number of arts subjects. A range of career opportunities including chemical, manufacturing and pharmaceutical industries, and in areas such as forensics, environmental protection and healthcare. The problem solving skills are useful for many other areas, too, such as law and finance.

Entry requirements

GCSE Chemistry/Science and Mathematics at Grade 6 or above **and** five GCSEs Grade 6 or above.