



# Have you ever wondered...

- Why does ice float?
- Why do people put salt on icy roads?
- Why do onions make you cry?
- How does aspirin stop pain in your body?
- Can you turn lead into gold?

**Study A Level Chemistry A to find out the answers.**

## A Level Chemistry A

A Level Chemistry will give you an exciting insight into the contemporary world of chemistry. It covers the key concepts of chemistry and practical skills are integrated throughout the course. This combination of academic challenge and practical focus makes the prospect of studying A Level Chemistry 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 concepts in chemistry
- Opportunities to build practical skills through a range of experiments and investigations.

**A LEVEL  
CHEMISTRY A**

**OCR**  
Oxford Cambridge and RSA

## What's included

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

Reaction rates and equilibrium

pH and buffers

Enthalpy, entropy and free energy

Redox and electrode potentials

Transition elements

Organic chemistry

Polymers

Organic synthesis

Analytical techniques (IR and MS)

Chromatography and spectroscopy (NMR)

Emphasis throughout the course is on developing knowledge, competence and confidence in practical skills and problem solving. You will learn how society makes decisions about scientific issues and how sciences contribute to the success of the economy and society.

## How will you be assessed?

- Total of 6 hours of examinations (2 x 2 hours 15 minutes and 1 x 1 hour 30 minutes) 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, referencing and reporting.

## Where can A Level Chemistry A take me?

- A Level Chemistry A is an excellent base for a university degree in healthcare such as medicine, pharmacy and dentistry as well as 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.

## What are the benefits?

- An interesting and challenging experience to link key 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 the subject.

## Are you...

- Wanting to be a doctor?
- Wanting to work in the chemical industry?
- Wanting to understand how chemistry can impact the environment?
- Interested in the world around you?
- A problem solver?
- Keenly interested in science?
- Keen on practical work?
- Studying other science A Levels or Maths?

## Thought provoking questions

- What is the importance of  $6.02 \times 10^{23}$ ?
- How is nitrogen similar to arsenic?
- How can spectroscopy be used to solve a crime?
- How does our blood act as a buffer?
- How do the shape and bonding in a molecule affect its smell?