

A Level Chemistry



Why this subject?

Chemistry is sometimes referred to as the 'central science', as it combines and connects the physical sciences, such as Maths and Physics; with applied sciences, such as Biology and Medicine. Studying Chemistry helps students to explain physical and biological phenomena that cannot be understood through one science alone.

Students studying Chemistry at Churchdown School, develop valuable problem solving, analytical, research skills, whilst also helping them to understand the world. The course is highly challenging, whilst also being practical, interesting and fun. There is more practical work than GCSE and the theory lessons visit many new topics.

A Levels in Chemistry are highly regarded internationally and are required for more courses at University than any other subject due to the wide variety of skills required to study it. Students that choose A Level Chemistry gain a valuable understanding of the theories and principles of chemistry, whilst also gaining many transferable skills that will be useful in universities and industry.

Course Outline

Year 12

Module 1: Practical Skills: You will develop a range of practical skills throughout the course.

Module 2: Chemistry Foundations: This develops your knowledge about atomic structure, bonding, reacting amounts, acids and bases.

Module 3: Periodic Table and Energy: This covers trends in reactivity of elements, energy changes and reaction rates.

Module 4: Core Organic Chemistry : This covers a whole range of chemicals from simple hydrocarbons to alcohols and haloalkanes, their reactions, synthesis and application to modern day analytical techniques.

Year 13

Module 5: Practical Chemistry and Transition Elements: Rates of reaction and equilibrium, acids, bases and buffers, enthalpy, entropy and free energy Redox and electrode potentials, transition elements and qualitative Chemistry.

Module 6: Organic Chemistry and analysis: Benzene and aromatic compounds, carbonyl compounds, carboxylic acids and derivatives, nitrogen compounds, polymers and organic synthesis.



Key Information

Exam Board	OCR A / H432
Qualification Type	A Level
Entry Requirements	Grade 7 in GCSE Chemistry or Grade 7/7 in GCSE Combined Science
Subject Lead	Miss Cruickshank

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Assessment Outline

Assessment is comprised of three written papers sat in June of Year 13.

Practical Endorsement – This is a teacher assessed component where students complete a minimum of 12 practical activities that cover a range of skills and are applicable in different modules. These are recorded in the practical booklet. This is Module 1 and the content is assessed in all three papers.

Paper 1: Duration 2h 15min, 100 marks, (37% weighting)

A mixture of short and long answer questions covering:

Foundations in Chemistry, Physical Chemistry, Inorganic Chemistry and Practical Skills.

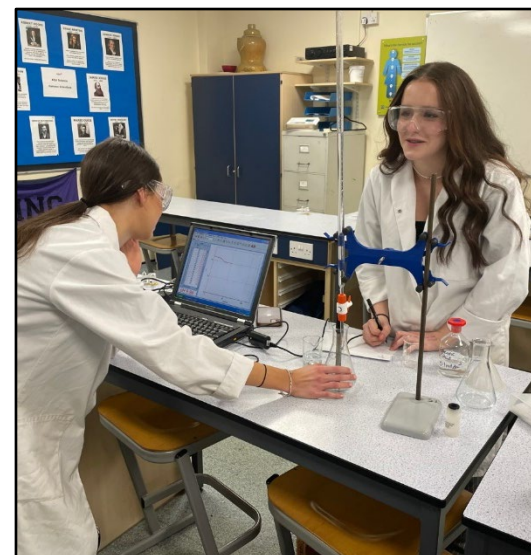
Paper 2: Duration 2h 15min, 100 marks, (37% weighting)

A mixture of short and long answer questions, covering:

Foundations in Chemistry, Organic Chemistry and Practical Skills.

Paper 3: Duration 1h 30min, 70 marks, (26% weighting)

Structured, synoptic questions. During all aspects of the course, practical work will be completed, and a portfolio of work collated.



Careers and next steps

Studying Chemistry provides you with a vast range of useful skills and knowledge that are highly valued by employers in many job areas, including careers in Medicine and Pharmaceutical research, as well as Materials Engineering, Sports Science and the Environment.

Chemistry students leaving Churchdown School in recent years, have gone on to study a wide range of subjects at university, including Biomedical Science, Biochemistry, Midwifery, Medicine, Pharmacology and Engineering. In addition, students that studied Chemistry have also used the analytical and processing skills developed, to obtain positions in Accountancy and Apprenticeships.

