

A LEVEL CHEMISTRY

The principles of chemistry underpin our understanding of the world around us and are relevant to all areas of science, from the chemical processes in living organisms to the formation of stars millions of miles away - chemistry is literally everywhere and has occupied human thought since the first alchemists started mixing and melting and transmuting substances thousands of years ago!

We study chemistry at King's in order to understand the nature of substances: their composition, behaviour, and physical and chemical properties. Chemistry allows us to identify unknown substances, monitor concentrations and synthesise new chemicals. Above all, chemistry is about finding solutions to the problems that concern our surroundings and us.

Chemistry is the study of the material world. It underpins every aspect of our lives, from the pharmaceuticals we use to heal, to the plastics that surround us. Chemistry is invaluable in conjunction with other sciences and/or mathematics in order to study science or medicine at university. The core concepts introduced in chemistry A Level form an important part of any professional scientist's toolkit.

COURSE OUTLINE

In year one you will study physical chemistry as well as inorganic chemistry. Topics include kinetics, bonding, thermodynamics and periodicity.

In year two you will study further physical chemistry as well as organic chemistry. Topics include amines, polymers, chromatography & DNA.

To achieve a Practical Endorsement you will be expected through a range of experiments to display your competency in the following procedures; applying an investigative approach when using instruments and equipment, working safely, making and recording observations, researching, referencing and reporting.



ASSESSMENT STRUCTURE

You will sit all of your A Level examinations at the end of the course. Examinations are 100% written and contain a mixture of multiple choice, long and short answers.

YEAR	TITLE	CONTENT	WEIGHTING
End of Year 13	Paper 1	Physical & inorganic chemistry	35%
End of Year 13	Paper 2	Physical & organic chemistry	35%
End of Year 13	Paper 3	All content & practical skills	30%

ENTRY REQUIREMENTS

Competition for places will be high as the sciences are a popular choice at A Level as well as university. As a result to ensure we strive for the highest success students will ideally have Grade Point 7-9 (Grade A*/A) at science or chemistry GCSE. The minimum GCSE grade required is Grade point 6 (Grade B). Some of the content overlaps with the physics, biology and mathematics curricula. Studying some or all of these subjects alongside chemistry would be advantageous.



But still try, for who knows what is possible - Faraday



PROGRESSION ROUTES

Chemistry graduates possess adaptability and an analytical cast of mind which makes them attractive to a very broad spectrum of employers. Students wishing to read Medical, Veterinary or Pharmacological sciences, or Chemical Engineering at university must take A Level Chemistry. Many other courses in engineering and materials science also welcome the subject. For the study of chemistry at university, it should be combined at A Level with Mathematics and Physics and expanding field of Biochemistry makes the combination with Biology an attractive one.

A chemistry qualification could open doors to all sorts of jobs that you may have never even imagined! The food we eat, the clothes we wear and the technology we use all depend on chemistry. Chemists develop new medicines, safeguard our food supply and monitor and protect our environment.

RECOMMENDED EXTRA CURRICULAR ACTIVITIES

In order to secure a place on a science based university course, or in the world of work, it is highly recommended that you participate in extra-curricular subject related activities and clubs. In addition to numerous clubs and societies taking place every week in Science, we also offer:

Nuffield Research Placements

You will have the chance to work alongside professional scientists on a research project for four weeks during the summer holiday.

Crest Award Gold

Organised by the British Science Association, the Award gives students the chance to choose, plan and carry out a project of their choice.

Primary Science Assistance

Sixth Form students are encouraged to volunteer their enrichment time in local primary schools to help with the teaching of science but also to help complete Duke of Edinburgh Gold.

RECOMMENDED READING LIST

The Laws of Thermodynamics by Peter Atkins

Molecules by Philip Ball

On Giants' Shoulders by Melvyn Bragg

Mystery of the Periodic Table by Ben Wiker

TOP 5 UNIVERSITIES CURRENTLY FOR THIS SUBJECT

1. Cambridge
2. Durham
3. Oxford
4. Imperial College London
5. Warwick

COURSE/QUALIFICATION DETAILS

Qualification: A Level Chemistry

Specification: AQA

Code: 7405

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