



Head of subject:

Mrs N Ayles

Minimum entry requirements:

**Grade 7 or higher in
GCSE Triple Science (Chemistry)
or a grade 7-7 in Double Science**

Chemistry

What will you study in Year 12?

You will learn about atomic structure, bonding, shapes of molecules, trends in the periodic table, energetics, rates of reaction, equilibria, alkanes, alkenes, alcohols, halogenoalkanes, organic reaction mechanisms and analytical techniques such as mass spectrometry. Some of these are areas that you have studied in GCSE chemistry, however, you now have the opportunity to develop your understanding further and begin to make sense of the world around you. Set practicals will be carried out throughout the year that will need to be undertaken as they will form part of your final examination in year 13.

What will you study in Year 13?

In your second year you will extend your knowledge further by studying topics including thermodynamics, organic chemistry of carbonyl compounds, benzene and phenol as well as organic reaction mechanisms, Brønsted-Lowry theory of acids, kinetics, transition metals and their complexes and electrochemical cells. Further analytical techniques such as NMR and chromatography that are carried out by Chemists will also be studied. Many of the topics studied in year 13 build on the material that you studied in year 12. Again set practical tasks will be carried out throughout the year and these will be the focus of questions in the final examinations.

How will you be assessed during the course?

In school assessments – You will carry out regular in school assessments covering the most recent units that you have studied as well a previous material. Homework is often examination questions that will help develop your understanding. Termly cumulative assessments will also be carried out.

External assessments – At the end of year 13 you will sit three external assessments

Paper 1 – Periodic table, elements and physical chemistry. Modules 1, 2, 3 and 5. 37% of the total A level grade, 2 hours 15 minutes long, 100 marks available

Paper 2 – Synthesis and analytical techniques. Modules 1, 2, 4 and 6. 37% of the total A level grade, 2 hours 15 minutes long, 100 marks available.

Paper 3 – Unified chemistry. Modules 1, 2, 3, 4, 5 and 6. 26% of the total A level grade, 1 hour 30 minutes long, 70 marks available.

A mark for practical skills will be awarded separately at the end of the course for those that have shown a high degree of competence in the experiments carried out over the duration of the course.

Where could this course lead?

At current time, there are over 200 university courses which accept A level Chemistry. There are many Chemistry based courses to study at university including Applied Chemistry, Chemical Engineering, Medicinal Chemistry, Organic and Inorganic Chemistry, Biochemistry and Pharmacology. Grade A in A level Chemistry is mandatory for the study of medicine, veterinary science and dentistry. Many Biological courses require A level Chemistry and it can also support those that are interested in Physics and Mathematics. Law is another course that can accept A level Chemistry as it shows that you are able to apply yourself to difficult concepts.

Further information

Students will follow the OCR A, A level Chemistry specification <https://www.ocr.org.uk/qualifications/as-a-level-gce/chemistry-a-h032-h432-from-2015/>

The Chemistry department also offers support and extension via courses such as 'Chemistry Olympiad'.

Further help can also be found by the Chemistry Padlet: <https://padlet.com/naylen/nhr6i0fk4tjyh75h>