

Chemistry

AS/A Level

OCR

Structure & Specification

Yr 1: AS H034

Yr 2: A2 H434

What does the course include?

Year One- AS

Unit One: *Atoms, Bonds and Groups.*

In this unit you will learn about the structure of the atom, the importance of atomic masses, formulae and equations, chemical bonding and structure, and trends and patterns in the Periodic Table.

Unit Two: *Chains, Energy and Resources.*

Here you will study the chemical ideas that underpin organic chemistry, some of the important chemicals produced from oil and the role of chemists in developing fuels and controlling pollution. This unit also includes energy changes in chemical reactions, the rate of reactions, the use of catalysts and the control of reversible reactions to produce useful chemicals.

Unit Three: *Practical Skills in Chemistry 1.*

You will be assessed on your practical and investigative skills which you will have developed during AS Chemistry. The three tasks (qualitative, quantitative and evaluative) will be completed in lesson time under controlled conditions.

Year Two- A2

Unit Four: *Rings, Polymers and Analysis.*

Here you will learn about how chemists use organic compounds to manufacture useful materials such as pharmaceuticals, dyes and polymers. You will also study spectroscopy, which is used to find the structure of carbon compounds.

Unit Five: *Equilibria, Energetics and Elements.*

In this unit you will explore the physical chemistry that explains much of the chemistry encountered in all other modules. You will learn how to monitor reaction rates accurately, how to investigate reversible reactions and how acids, bases and buffers work. In addition you will study the colourful transition elements in more detail.

Unit Six: *Practical Skills in Chemistry 2.*

This unit is similar to *Practical Skills in Chemistry 1* unit in its format of three classroom based practical activities. However the tasks will require a higher level of understanding and explanation.

How will I learn?

The course will be divided between two teachers and you will learn by a wide variety of activities: individual work using textbooks, group discussions, experiments, making models, watching videos, using CD roms, giving presentations. You will be expected to do a considerable amount of independent study and you may be required to attend extra support sessions in addition to the

How will my work be assessed?

AS:

Unit One by written examination in January; Unit Two by written examination in June and Unit Three will be assessed internally during the first two terms.

A2:

Unit Four by written examination in January; Unit Five by written examination in June and Unit Six will be assessed internally during the first two terms of the second year.

What skills will I need to be successful in this subject?

You must have a genuine interest in Chemistry, and enjoy practical work. You must be willing to participate in all kinds of learning activities, and you need to be prepared to work hard and put a great deal of effort into developing your understanding of this key science.

What are the entry requirements?

You need a good GCSE profile, normally including grade C or above in English Language and Maths, and B for Double Science (or Chemistry).

What are the opportunities after this course for further/higher education and employment?

A Level Chemistry is a requirement for some higher education courses such as medicine, dentistry and pharmacy. It will help you in further study of most science or engineering subjects. The skills learnt in all science A Levels are highly regarded by universities and employers, for example in the financial world.