

CHEMISTRY

SPECIFICATION

A Level AQA Chemistry 7405

OBJECTIVES OF THE COURSE

To equip students for further study of science based disciplines at a higher level and to meet the demands of an increasingly scientific and technological society.

Chemistry is a unique subject that teaches an analytical approach which can be applied in many other problem-solving situations.

CONTENT AND ASSESSMENT

Students will study three core areas covering Physical Chemistry, Inorganic Chemistry and Organic Chemistry.

Physical Chemistry

- Energetics
- Kinetics
- Acid base equilibria
- Redox Potentials

Inorganic Chemistry

- Structure of the atom
- Trends in the Periodic Table
- Transition Metal Chemistry
- Aqueous Chemistry

Organic Chemistry

- Processing of crude oil
- Alkanes
- Alkenes
- Haloalkanes
- Alcohols
- Benzene
- Carbonyl Compounds

Examination

Students sit three 2-hour examination papers. Paper 1 is worth 35% of the final grade and examines Inorganic Chemistry, relevant Physical Chemistry topics and relevant practical skills. Paper 2 is also worth 35% and examines Organic Chemistry, relevant Physical Chemistry topics and relevant practical skills. Paper 3 is worth 30% of the final A level grade and is a synoptic paper examining all the course content and skills.

Practical Endorsement

There will be a requirement for each student to keep a laboratory notebook which will provide evidence that key practical experiments have been completed satisfactorily. An external assessor will come into school to check students' laboratory books to see if they provide evidence of the five key competencies over a sufficient range of practical activities. They will be awarded a pass or fail in this element which will appear on their final certificate.

METHODS OF STUDY

Great emphasis is placed on practical work and on learning through discovery. Various learning styles are employed, including group work, class discussions, individual assignments and presentations.

SPECIAL FEATURES OF THE COURSE

Extra support is offered to students through the weekly Chemistry Clinic. There are opportunities for students to compete in the Chemistry Olympiad, support Year 7 Science Club and present a research project in the Science Fair.