

A Level Chemistry

at The Warriner School



Chemistry

Exam Board: OCR Chemistry A

Entry Requirements:

Grade 6—6 in GCSE Combined Science / 6 in GCSE Chemistry and a 6 in GCSE Maths

Subject Overview

Specification A – a content-led approach. A flexible approach where the specification is divided into topics, each covering different key concepts of Chemistry. Teaching of practical skills will be integrated with the theoretical topics and assessed both through written papers and the Practical Endorsement.

Units

Module 1: Development of practical skills – this module underpins the whole of the specification, and covers the practical skills that students should develop throughout the course. The practical skills in this module can be assessed within written examinations and within the Practical Endorsement.

Module 2: Foundations in chemistry covering concepts required throughout the remaining modules, including: atoms, compounds molecules and equations, amount of substances (moles), acid-base and redox reactions, and electrons, bonding and structure

Module 3: The Periodic Table and energy, including: The Periodic table and periodicity, Group 2 and the halogens, Qualitative analysis, Enthalpy changes, Reaction rates and equilibrium (qualitative).

Module 4: Core Organic Chemistry, including: Basic concepts, Hydrocarbons, Alcohols and haloalkanes, Organic synthesis, Analytical techniques (IR, MS).

Module 5: Physical Chemistry and Transition elements: Reaction rates and equilibrium (quantitative), pH and buffers, Enthalpy, entropy and free energy, Redox and electrode potentials, Transition elements.

Module 6: Organic Chemistry and Analysis, including: Aromatic compounds, Carbonyl compounds, Carboxylic acids and esters, Nitrogen compounds, Polymers, Organic synthesis, Chromatography and spectroscopy (NMR).

Assessment

Paper 1 assesses the content from Modules 1, 2, 3 and 5, a combination of multiple choice and short answer questions. Duration – 135 mins. Contributes 100 marks and is 37 % of the A Level.

Paper 2 assesses the content from Modules 1, 2, 4 and 6, a combination of multiple choice and short answer questions. Duration – 135 mins. Contributes 100 marks and is 37 % of the A Level.

Paper 3 assesses the content from Modules 1 to 6, a combination of short answer and extended answer questions. Duration – 90 mins. Contributes 70 marks and is 26 % of the A Level.

Practical Endorsement: a practical component where 12 teacher-assessed practicals are completed throughout the A Level course. Candidates are graded Pass/Fail only. The aim is to develop students' practical and research skills for practical work beyond A-Level.

Careers

A-level Chemistry is a must for degrees in Medicine, Veterinary Science and Dentistry and can open up a range of careers and higher education courses in Optometry, Physiotherapy, Pharmaceutical Sciences, Forensic Science, Biomedical and Biological Sciences, and Environmental Health and Food Sciences. A-level Chemistry can also help gain direct entry into employment, especially into the scientific and related sectors.

Students who go on to study Chemistry at university will find a very wide range of careers available, some common examples include: both private and public research scientists, work in banking and finance, graduate medicine, work in the engineering sector and even in chemical patent law.