

# A Level Chemistry

## at The Warriner School



### Chemistry A Level

**Exam Board: AQA Chemistry**

**Entry Requirements: GCSE Combined Science Grade 6/6, GCSE Chemistry Grade 6 and GCSE Maths Grade 6**

#### Subject Overview

A-level Chemistry attempts to answer the big question 'what is the world made of' and it's the search for this answer that makes this subject so fascinating. From investigating how one substance can be changed drastically into another, to researching a new wonder drug to save millions of lives, the opportunities that chemistry provides are endless.

#### Topics Covered Assessment

First year of A-level	Second year of A-level
<b>Physical chemistry</b> Including atomic structure, amount of substance, bonding, energetics, kinetics, chemical equilibria and Le Chatelier's principle	<b>Physical chemistry</b> Including thermodynamics, rate equations, the equilibrium constant $K_p$ , electrode potentials and electrochemical cells
<b>Inorganic chemistry</b> Including periodicity, Group 2 the alkaline earth metals, Group 7 (17) the halogens	<b>Inorganic chemistry</b> Including properties of Period 3 elements and their oxides, transition metals, reactions of ions in aqueous solution
<b>Organic chemistry</b> Including introduction to organic chemistry, alkanes, halogenoalkanes, alkenes, alcohols, organic analysis	<b>Organic chemistry</b> Including optical isomerism, aldehydes and ketones, carboxylic acids and derivatives, aromatic chemistry, amines, polymers, amino acids, proteins and DNA, organic synthesis, NMR spectroscopy, chromatography

Paper 1 assesses the content from Inorganic Chemistry, Atomic Structure, moles, energetics, equilibria, antibiotics in a combination of short, answer questions. Duration – 120 mins. Contributes 105 marks and is 35 % of the A Level.

Paper 2 assesses the content from organic chemistry, atomic structures, moles, rate of reaction in a combination of short and long answer questions. Duration – 120 mins. Contributes 105 marks and is 35% of the A Level.

Paper 3 assesses the content from the whole course, plus practical skills and data analysis, a combination of multiple choice, short answer and extended answer questions. Duration – 120 mins. Contributes 90 marks and is 30 % 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.