



HARLINGTON
UPPER SCHOOL

Creating ambitious, altruistic and accountable leaders

A LEVEL CHEMISTRY

EXAM BOARD: OCR

Subject Leader: Mrs L Hymus

Course Entry Requirements:

Grade 6 in Mathematics and GCSE grade 66 in double science or GCSE grade 5 in Chemistry. Recommended for students who have taken the higher tier paper.

Course Outline and Assessments

Chemistry is a subject that has global impact. As a fundamental science it has a profound effect on our planet and is involved in nearly every facet of everyday life. Almost every new technological change and important discovery has its foundation in chemistry. A qualification in Chemistry allows access into many career pathways, including research, medicine, dentistry, forensic science, food technology, polymer science and public health analysis. Chemical research is breaking new ground at an ever increasing pace, particularly in the fields of environmental science and nanotechnology, making Chemistry more exciting than ever and opening new opportunities for careers in these and other related areas.

Many university science based courses include A level Chemistry as a required subject.

ASSESSMENT

Paper 1 135 minutes 37% of the A Level Period Table, Elements & Physical Chemistry	
Paper 2 135 minutes 37% of the A Level Synthesis & Analytical Techniques	
Paper 3 90 minutes 26% of the A Level Unified Chemistry	
Practical skills will be examined within the written papers and by the successful completion of practical's that cover a range of skills. This practical endorsement is recorded separately, as a pass or fail.	

LEARNING STRATEGIES

- ✓ Laboratory work during lessons and whole day practical workshops
- ✓ Actively engaged enquiry into problems, issues and questions
- ✓ Group discussions and Presentation assignments
- ✓ Educational Visits
- ✓ Opportunities for high achieving students to take part in the Chemistry Olympiad



HARLINGTON
UPPER SCHOOL

Creating ambitious, altruistic and accountable leaders

COURSE DETAILS



Modules

Development of Practical Skills

Throughout the course students will use a range of lab equipment. These skills will be demonstrated in a minimum of 12 assessed practical activities over two years.

Foundations in Chemistry

Content starting with chemical calculations using moles and further development of bonding structure. Later topics are shapes of molecules, ionisation energies and redox reactions.

Modules

Periodic table and energy

Study of the periodic table includes periodicity and qualitative tests for group 7 Elements.

Core Organic Chemistry

Introduction to the different functional groups of organic chemistry alkanes to carboxylic acids including methods of synthesis and analysis (MS and IR).

Modules

Physical Chemistry and Transition elements

Indepth study of reaction rates and equilibrium leads to pH and buffers. This is followed by an introduction to entropy, free energy and electropotentials.

Organic Chemistry and analysis

Continuation of core organic chemistry in greater depth.

Subject Leader: Mrs L Hymus

Contact: lhymus@harlington.org

CREATING AMBITIOUS, ALTRUISTIC AND ACCOUNTABLE LEADERS