IB CHEMISTRY

Contact Person - Mrs L. Kings

GROUP 4: CHEMISTRY

ENTRANCE REQUIREMENTS

For higher level students should achieve an A grade in GCSE additional science or an A in GCSE Chemistry.
For standard level students should achieve an A grade in GCSE additional science or an A in GCSE Chemistry.

COURSE AIMS & OBJECTIVES:

Chemistry is a highly analytical subject that combines academic challenge with the additional focus on experimental and investigative skills. The IB programme is different from the current A level syllabus in that the topics are not studied in a modular manner. Relationships between the topics in Chemistry are encouraged and links are made between this subject and the other five subjects that students will study.

The syllabus encourages students to inquire, discuss and think critically about issues in the broadest sense so that they become more aware of their responsibilities in society. The international nature of Chemistry is stressed – the vocabulary shared among scientists is universal and the collaboration between scientists working in different parts of the world is essential if we are to continue to further our understanding of matter and the influence, adverse or otherwise, that we have on our planet.

COURSE CONTENT

The core for both Higher and Standard levels is delivered under the following topic areas over 80 hours:

- Quantitative chemistry
- Atomic structure*
- Periodicity*
- Bonding and structure*
- Energetics*
- Kinetics*
- Equilibrium*
- Acids and bases*
- Oxidation and reduction*
- Organic chemistry*
- Measurement and data processing

Those topics marked with a * are studied in greater depth at Higher level with an additional 55 hours allocated to the teaching of these.

All candidates will also study a further two options, selected from six areas of the subject that again offer core and extension material which may build on existing principles as well as offering a look at more diverse applications of chemistry. In addition all students studying the Experimental Sciences are expected to work together on a Group 4 project where a scientific or technological topic is studied that allows concepts and perceptions from across the disciplines to be shared.

SCHEME OF ASSESSMENT:

Assessment is criterion-related and reflects the international-mindedness of the programme. Just over three quarters of the marks awarded are assessed externally by terminal examinations and the internal element is practically-based (24%).

The external element is terminal and comprises three written papers.

- **Paper 1** will be multiple choice questions which will examine the core in scientific understanding and its application and use (weighting 20% for both SL and HL)
- **Paper 2** further examines core material using data-based and extended-response questions (weighting HL 36% and SL 32%)
- **Paper 3** concentrates on the options selected and will include short answer and extended response questions (weighting HL 20% and SL 24%)

The internal assessment is practically-based and consists of a series of investigations, a mixture of short- and long-term, and an inter-disciplinary project.