

CHEMISTRY DEPARTMENT

AIMS Further to the general Science Department Aims, the Chemistry Department aims to give a basic knowledge for those who only study the subject for one year, or a knowledge that will support other science studies and be a good foundation for further study of chemistry for those who study it for 3 or 5 years.

SYLLABUS

a) 6th. Form: ILPAC, an independent learning scheme well suited to small groups of mixed first and second year sixth. The school chemistry department was one of those which helped pioneer the materials used in this ILEA project.

b) 3rd. Year: a "topic" approach.

- (i) SEPARATION OF MIXTURES (handling apparatus, choice of method)
- (ii) COMBUSTION, FUELS, ENERGY.
- (iii) WATER - formation; solvent; distilled, tap, sea water; melting and boiling points; purity; hard/soft; pollution.
- (iv) AIR - composition; separation and use of components; pollution.
- (v) ACIDS/ALKALIS - uses; hazards; pH.

4th. Year: Chemical techniques (revision of 3rd. year); nature of matter (kinetic theory); elements/compounds; atomic structure; Bonding; Acids, bases, salts; energy changes in chemical reactions; speed of reaction, metals (properties, reactivity, extraction); non-metals (hydrogen, oxygen).

5th. Year: Non-metals continued (nitrogen, sulphur, chlorine, carbon); Organic chemistry; Radox reactions; the Periodic Table; the Mole Concept (reacting quantities); revision of all previous work; simple analysis and other experimental methods.

The chemistry department also arranges and teaches the 4th. and 5th. year Science course (see separate report).

EXAMINATION BOARDS

5th. Year - Midland Examining Group, Joint GCE "O" / CSE Chemistry.
6th. Form - Cambridge "A" Level.

FINANCE

(a) The departmental allowance is adequate for the numbers now studying the subject, and may be able to be further reduced.

(b) If the Old Chemistry Lab. is to be retained for that use, major refurbishment is necessary. The 3 fume cupboards are all unusable as

decreed by ILEA inspection; the plumbing and gas piping are both corroded and defective, and in need of major overhaul.

FUTURE TRENDS

These are dependent on School/ILEA/National decisions, but may include the following:-

- (a) Integrated science in the 3rd. year instead of separate sciences.
- (b) Integrated Science (modular scheme) in 4th. and 5th. years. At present student can only study all three sciences by making them three of their six options. An integrated modular scheme would make it possible for them to study all 3 sciences, either as a single or double option with advantages all round. This is in line with the presently emerging ILEA and national policy.
- (c) At 6th. form level - ceasing to offer A-level courses.
- (d) Transfer of chemistry teaching from the Old Chemistry Lab. to the New Science Block, as originally intended when the latter was built in 1977.

P.R.Skailes
Head of Chemistry

WOOLVERSTONE HALL SCHOOL

Report to Governors

Science

Aims and Outline Syllabus

The aim of the course is to show the application of science to everyday life. It is based on a Mode 1 CSE Modular examination. 50% of the examination is course assessed.

The course consists of seven modules:-

1. Pollution
2. Fuel and Energy
3. Health and Hygiene
4. Flight
5. Building Science
6. Cosmetic Science
7. Motor Vehicle Science

Each module occupies just over half a term of time during the two year course.

As well as practical and theoretical work at the school many factory visits and the like are organised. Examples of these are sewage works, museums, chemical and motor factories such as Lotus.

Examination Results

Because of the nature of the course it tends to attract the less able boys. The crude examination results are:-

CSE Grade 1 - 1	Grade 5 - 3
Grade 3 - 1	Grade U - 3
Grade 4 - 2	

Of the boys in the group, two of the boys came into the course at a late stage, thus losing valuable course assessment work.

Future

The course I feel could form a basis of a modular science course combined with technology as part of a possible curriculum development within the 4th and 5th Year.

