



CHEMISTRY

Advanced General Certificate of Education (AS and A2)

WHY CHEMISTRY?

The opportunities for students of Science, on completion of full-time education, are enormous. There are many possible careers within the scientific world and qualifications in Science subjects are acceptable as an entry into many other careers.

Science students at Thomas Telford School are currently preparing to move into Higher Education Courses and careers in the following fields.

Electrical Engineering

Mechanical Engineering

Nursing

Biological Sciences

Forensic Science

Medicine

Aeronautics

Pharmacy

Research Chemistry

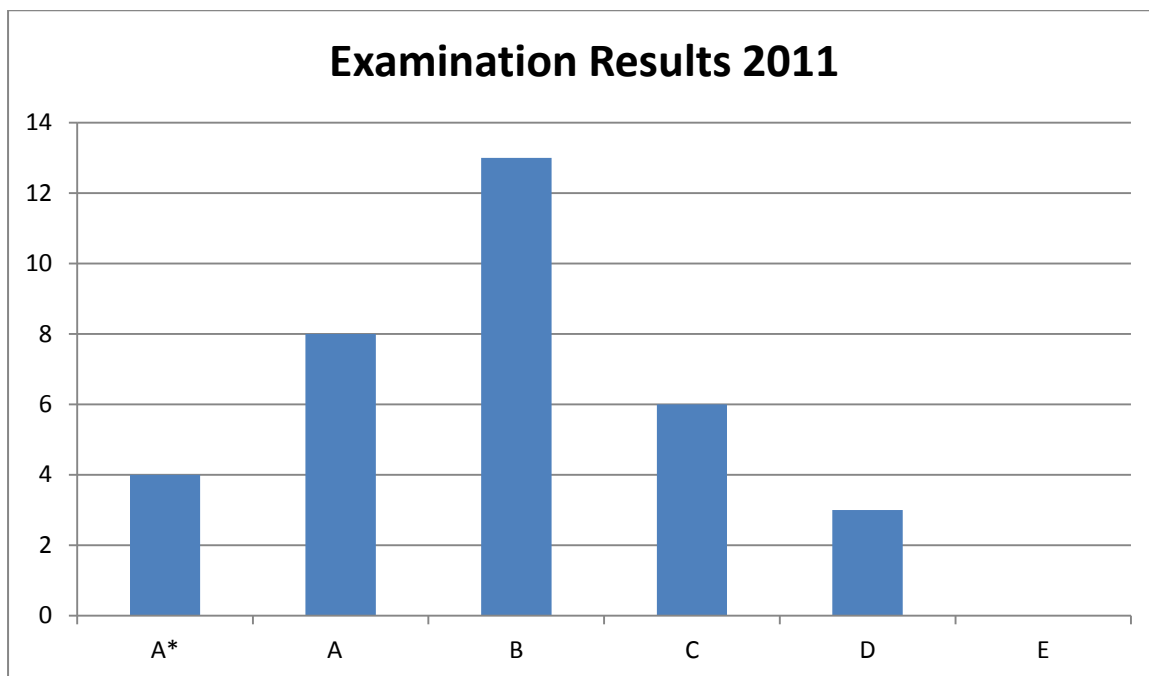
Computing

Chemical Engineering

The Science courses offered at Thomas Telford School are designed to provide academic and vocational experiences. They will prepare students for their choice of career in both the world of work and Higher Education

SPECIFIC ENTRY REQUIREMENTS

- 6 GCSEs (Grades A* - C)
- Grade B (Higher Tier) in GCSE Chemistry or Grade B (Higher Tier) in Additional Science
- Satisfactory level of competence in English
- Grade B in Mathematics



COURSE DETAILS

OCR Specification: H434

You will study six modules as follows:

F321 Atoms, Bonds and Groups (*Written Examination*)

This unit is intended to build upon the concepts learned during Key Stage 4. It provides a knowledge and understanding of quantitative chemistry, atomic structure, chemical bonding and the Periodic table. These basic chemical concepts are a prerequisite for all further chemistry modules studied in this course. It is worth 15% of the total marks.

F322 Chains, Energy and Resources (*Written Examination*)

This module is intended to provide a foundation for the study of organic chemistry. You will find out about the chemical reactions of hydrocarbons, alcohols and halogenoalkanes. The module also raises issues about the application of organic chemistry in everyday life such as the use of CFCs and polymers. It also contains a short section on energy changes and controlling rates of chemical reactions. It is worth 25% of the total marks.

F323 Practical Skills in Chemistry 1 (*Coursework*)

The coursework is made up three tasks; Quantitative, Qualitative and Evaluative. Some of the work will be carried out under controlled conditions. This is internally assessed and externally moderated. It is worth 10% of the total marks.



F324 Rings, Polymers and Analysis (*Written Examination*)

This builds on the chemistry studied in unit F322. The module extends the study of functional groups to include arenes, esters, carbonyls, carboxylic acids and nitrogen compounds. You will also look at instrumental techniques used in organic and forensic analysis. It is worth 15% of the total marks.

F325 Equilibria, Energetics and Elements (*Written Examination*)

The study of lattice enthalpy, periodic trends and the transition elements allows a deeper understanding of inorganic chemistry. This unit also extends knowledge of physical chemistry by studying aspects of rates, equilibria and acids. It is worth 25% of the total marks.

F326 Practical Skills in Chemistry 2 (*Coursework*)

The coursework is made up three tasks; Quantitative, Qualitative and Evaluative. Some of the work will be carried out under controlled conditions. This is internally assessed and externally moderated. It is worth 10% of the total marks.