

Applied Science

The Applied Science course is a two year full time course leading to the award of an AS qualification at the end of Year 12 and a full A level at the end of Year 13.

The specification will allow you to develop general skills, knowledge and understanding of how science is used in the workplace. This is achieved through a variety of approaches including work experience, links with employers, case studies, visits and research. This is a very practical course, with students constantly learning new scientific techniques.

Contact: Mr A. Pickett



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It is recommended that candidates embarking on this course have an interest in all three sciences, enjoy challenging practical work and have achieved a Grade C or above in GCSE Core science, Additional Science and Maths.

Course Content and Structure

AS UNIT 1: HEALTH SCIENCE

In this unit you will learn about how science is used to monitor health especially in relation to the circulatory and respiratory systems. You will learn about the different methods used to monitor and diagnose health and related health and safety regulations, as well as ethical issues in diagnosis.

This unit is assessed through external examination.

AS UNIT 2: ANALYSIS

This is a very practical unit, focusing on a range of analytical techniques such as Chromatography, Colorimetry, Volumetric analysis and inorganic analysis of ionic compounds. Also studied are organisations that use analytical techniques.

This unit involves group work as well as individual tasks, which are submitted as portfolio work.

AS UNIT 3: ENERGY AND THE ENVIRONMENT

In this unit you will learn about how energy is stored in fossil fuels, energy changes, energy production and environmental issues associated with the energy business. Domestic heating systems will be studied looking at conservation of energy as well as energy suppliers. Practical work will involve investigating energy efficiency from certain fuels.

Assessment by portfolio work.

A2 COMPULSORY APPLIED SCIENCE INVESTIGATION

This involves producing a report on an extended practical investigation. The work will be carried out and written up under teacher supervision and marked externally. The topics can be chosen from Biology, Chemistry and Physics investigation.

Pupils can choose another two units from the following list and these are assessed by portfolio work.

A2 APPLIED FORENSICS: (Recommended)

Practical techniques used: Organic analysis, redox titrations, and advanced inorganic analysis as well as a report on police forensic analysis.

A2 APPLIED BIOLOGY: Report on Animal care/ welfare and plant propagation or composting.

A2 APPLIED ENERGY: Portfolio on renewable energies, global warming and conserving energy.

A2 APPLIED SCIENTIFIC COMMUNICATION: Report/diary, presentation on science in the media focusing on application of science and the environment.

A2 WORKING IN APPLIED SCIENCE: Based on a work placement, which is assessed by keeping a scientific diary of experience.

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