

GCSE : Science

Course Aims:

The programme of study is aimed at encouraging students to:

- Develop an interest in, and an enthusiasm for science;
- Develop a critical approach to the examination of scientific evidence and methodology;
- Acquire and apply scientific skills and knowledge;
- Develop an understanding of how science works;
- Develop an appreciation of the essential role of science in society.

Course Outlines:

There are two options for the study of GCSE science:-

GCSE Core and Additional Science - The three sciences are taught as separate disciplines. Core Science is taught in year 10 and Additional Science in year 11 and is studied by the vast majority of Key Stage 4 students.

Together, the courses cover the content of the first 2 modules of each of the separate science GCSE's.

GCSE Biology, Chemistry and Physics - Science can be studied as three separate subjects. This option enables students to study each science in greater depth and is offered to a proportion of students based on their attainment at the end of Key Stage 3.

Examination Information.

Both the separate and core/additional science students sit external examination papers at various points during years 10 and 11. These are each worth 25% in Biology, Chemistry and Physics.

In addition, for each GCSE there is an Centre Assessed Unit (CAU) which takes place in school and contributes 25% of the total marks for the particular subject.

Exam: 75% / Controlled Assessment 25%

These courses lead to either an:

AQA : GCSE's in 'Science' and 'Additional Science'

or

AQA : GCSE's in 'Biology', 'Chemistry' and 'Physics'



Skills

Planning practical ways to test scientific ideas;
Assessing and managing any risks involved in practical activities;
Developing ideas and hypotheses;
Carrying out practical investigations to test hypotheses;
Collecting data from experiments or other activities;
Selecting, presenting and analysing data collected from a variety of activities;
Using scientific models and evidence to develop hypotheses, arguments and explanations.

Teaching & Learning

All of the GCSE science courses have a central theme of studying the way in which science progresses known as How Science Works. This is studied as the practical component of all GCSE science courses.

The Core and Additional science courses contain two-thirds of the content of each separate science GCSE course. The difference is made up by the inclusion of an extra module of study in each separate science course.

The **Core and Additional Science** courses include work in the following topic areas:

Biology: Human Biology; Organisms; Evolution; The Environment.

Chemistry: The nature of substances and how they react together;
How our knowledge of chemistry is used in business and industry;
How our use of raw materials as fuels and in manufacturing can affect the local and global environment.

Physics: The use and transfer of energy; waves, radiation and space; the application of physics.

The **Biology, Chemistry** and **Physics** courses extend the topic areas described above, providing greater breadth and depth in their particular subject area.

Progression to Further Education

Biology, Chemistry and Physics GCE AS and A-level courses in the Sixth Form.

Students may go on to Science based degree and medical courses at University.

There are many areas of employment where possession of GCSE Science qualifications is essential.

Careers

Medicine
Dentistry
Nursing
Engineering and Technology
Forensic Science
Education
Architecture
Civil and Mechanical Engineering

For further information please see

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