Mount St Mary's Catholic High School

Educating The Individual For The Benefit Of All

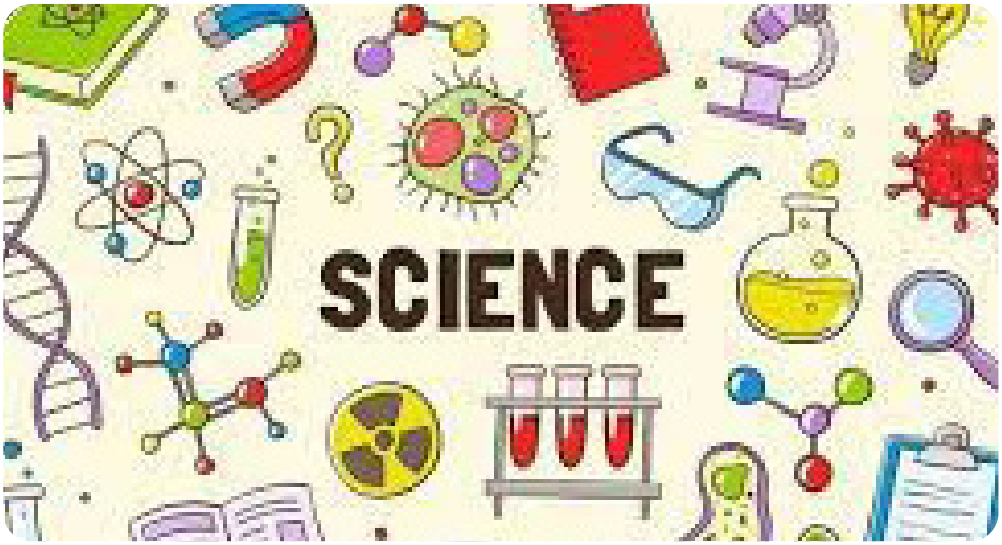
GCSE Combined Science

The importance of GCSE Combined Science

GCSE Combined Science allows students to access and experience science from across all three disciplines :

Biology
Chemistry
Physics

It provides foundation skills in the scientific method and the key knowledge needed for students to understand the ever changing and more complex world around them, as well as providing a route into further study in Applied Science BTEC or Science A-Level.



Careers Options

Science is essential for many careers such as research, engineering and medicine. Science is also vital in a number of allied careers in healthcare such as nursing, pharmacy and pathology, primary education, mechanical and electrical work, archaeology, architecture, the legal profession, and many more. For further information about career routes and job profiles using science, visit:

www.nationalcareersservice.direct.gov.uk/job-profiles/science-and-research

What you will study

Biology

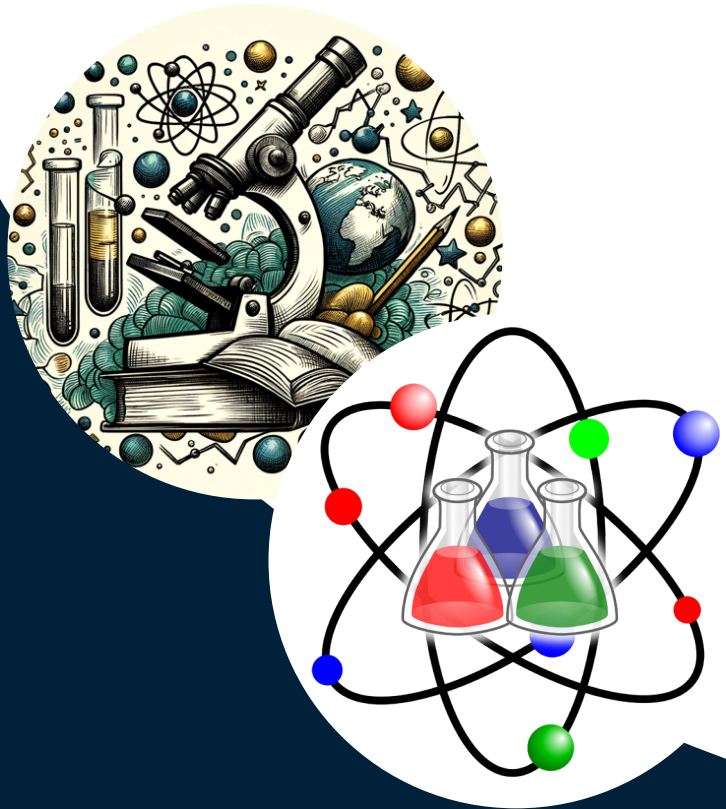
Biology is the study of living things - their structure, function, and behaviour. Beginning with cells as the basis of all living things, the Biology component will provide an understanding of how organisms work in terms of physiology, how disease is transmitted, prevented and treated and how key biological processes happen in order to explain how organisms, including humans, affect, and are affected by, the environment around them. Students will gain practical skills in microscopy, measuring the effect of different factors in cells and have the opportunity to complete ecology fieldwork techniques.

Chemistry

Chemistry is the study of how matter reacts and interacts. Through understanding atomic and molecular structure and bonding, students are able to explain how and why substances react and behave the way that they do, and how and why materials are used for different purposes, along with the economic and environmental consequences of their use. Students will have the opportunity to develop their practical skills in using different separation techniques, producing different chemical compounds and measuring different types of chemical reaction, alongside a number of different mathematical and problem solving skills to better understand their observations.

Physics

Physics is the study of forces, energy, and their effects. Students will learn how energy transfers affect a system and how to measure, calculate and predict their effects, how electricity behaves in circuits and components, how forces can affect an object and the application of this, and the uses and properties of ionising and electromagnetic radiation. Students will develop practical skills in measuring energy transfer in a variety of situations including electrical circuits, how forces can affect motion, and measuring and determining wave speed. Physics in particular will develop students' mathematical and problem solving skills to calculate and determine different properties.



How is the subject assessed?

We follow the AQA Combined Science Trilogy Specification. It is a double award worth two GCSE's with each grade counting separately (i.e. a 5,4 is one grade 5 and one grade 4).

GCSE Combined Science has two tiers of entry :

- Foundation grades are (1-1 – 5-5)
- Higher grades are (4-4 – 9-9)

It is assessed by six, 1 hour and 15 minute exams, each worth 70 marks and contributing 1/6th toward the final grades. There are two papers for each discipline

Biology
Chemistry
Physics

Each of the papers will assess knowledge and understanding from across each discipline in distinct topic areas through the form of multiple choice, structured, closed short answer, and open response questions. The weighting of these depends on the tier of entry.

For further information contact:

D. Deacon (Joint Curriculum Lead - Science) - d.deacon@mountstmarys.org
R. Wellington (Joint Curriculum Lead - Science) - r.wellington@mountstmarys.org
S. Stockton (Faculty Director - Maths, Science & Business) - s.stockton@mountstmarys.org