



GCSE Combined Science (2 GCSEs)

Heads of Faculty: Mrs K Cornwell and Mrs B Casserley

Email: K.cornwell@barnwell.herts.sch.uk , B.casserley@barnwell.herts.sch.uk

Why study GCSE Combined Science?

The Combined Science GCSE offers students a comprehensive and balanced exploration of Biology, Chemistry, and Physics. It develops both subject knowledge and a deep understanding of key scientific principles. Through this course, students gain essential skills for navigating an increasingly science-driven world, while also exploring the ethical and societal implications of scientific advancements. The curriculum encourages critical thinking, curiosity, and informed decision-making—preparing learners for further study and responsible citizenship.

What does the course involve?

GCSE Combined Science gives a broad introduction to key scientific concepts that are both relevant to everyday life and foundational for further study. In Biology topics, students explore how the human body functions and how medicines are developed. In Physics topics, they learn how electricity is generated and investigate the uses and effects of the electromagnetic spectrum, including infrared and microwaves. In Chemistry, topics include the Earth's atmosphere, pollution, and the processes involved in producing safe drinking water.

Beyond subject knowledge, the course helps students develop valuable analytical and evaluative skills, while also strengthening their numeracy and literacy. Lessons combine clear theoretical teaching with engaging practical work and hands-on activities, making science both accessible and stimulating.

How will I be assessed?

This GCSE is examined at the end of Year 11. Assessment will consist of four equally weighted papers (each one 25% of overall grade). The papers will be a mix of multiple choice, structured closed questions as well as open ended extended responses. Each paper will last 1 hour 45 minutes.

Life and Environmental Sciences Papers 1 and 2

States of matter
Atomic structure
Cells in animals and plants
Waves
Systems in the human body
Plants and photosynthesis
Lifestyle and health
Radiation and risk
Preventing, treating and curing diseases
The Earth's atmosphere
Ecosystems and biodiversity
Inheritance, variation, and evolution

Physical sciences Papers 3 and 4

The periodic table
Chemical equations and calculations
Forces and energy changes
Structure and bonding
Magnetism and electromagnetism
Forces and motion
Electricity
Acids and alkalis
The rate and extent of chemical change
Atoms and ions
Carbon chemistry
Resources of materials and energy

In addition, students complete a set of required practical's that they will be assessed upon as part of their final examinations.

What are my progression routes?

In the sixth form, students who achieve a GCSE grade 7-7 or above will be able to study A-level Sciences; students who achieve a GCSE grade 5-5 or above will be able to study BTEC Human Biology.

Additional Information

Combined Science is suitable for all candidates; the course is broken down into manageable sections so that all students can access the learning.