

Combined Science

GCSE – Code: **8464** – Exam Board: **AQA**



Saint Joseph's
CATHOLIC SCHOOL

Assessment:

Pupils will receive 2 GCSE combined science grades calculated from the total mark achieved from 6 combined science papers: 2 for Biology, 2 for Chemistry, and 2 for Physics. Each paper is 1 hour 15 mins, and worth 16.7% of the final mark.

40% of the marks are on the scientific method focused on the 21 required practicals, an average of 20% of the marks are for applied maths and 40% of the marks are for the application of scientific knowledge.

Key Information:

Entries at GCSE are at two levels Higher Tier (Grades 4 to 9) or Foundation Tier (Grades 1 to 5) and are assessed externally at the end of Year 11.

Pupils will also complete 21 required practicals during the course. An understanding of the principles of these required practicals will be assessed in the written papers B1, B2, C1, C2, P1 & P2.

Biology: 2 Papers comprising of the following units:

- B1: Cell Biology; Organisation; Infection and response; and Bioenergetics
- B2: Homeostasis and response; Inheritance, variation and evolution; and Ecology.

Chemistry: 2 Papers comprising of the following units:

- C1: Atomic structure and the periodic table; Bonding, structure, and the properties of matter; Quantitative chemistry; Chemical changes; and Energy changes
- C2: The rate and extent of chemical change; Organic chemistry; Chemical analysis; Chemistry of the atmosphere; and Using resources

Physics: 2 Papers comprising of the following units:

- P1: Energy; Electricity; Particle model of matter and Atomic structure
- P2: Forces; Waves; and Magnetism and electromagnetism

Who is this course for?

At SJCS pupils are taught by specialist teachers. Science forms part of the compulsory 'core' curriculum. There is significant factual content in all the courses but in addition to teaching the basics of the syllabus we endeavour to make our pupils think like scientists. The Sciences at GCSE encourage pupils to question, debate and evaluate decision making. Pupils will be expected to design experiments, to observe, record and present data. They will also be expected to understand the importance of using data to draw valid conclusions and to understand societal aspects of scientific data and the limitations of scientific data.

Trips:

There are a range of trips in the Science curriculum, most notably the recent Scholar's trip to CERN in Geneva, Switzerland. Pupils also have the opportunity to visit the Winchester Science Museum to interact with the exhibition and experience the Planetarium there. There are also opportunities to visit Bournemouth Oceanarium, conduct field work at one of our local coastal sites or visit the Big Bang Exhibition at the NEC.

Skills Gained:

- Understanding of the effects of Science on society.
- Knowledge of the material, physical and living worlds.
- How to use hypothesis and evidence to understand Science.
- Observational, enquiry and problem-solving skills.
- Skills in communication, mathematics and technology
- Develop judgement by learning how to critically evaluate the trustworthiness of information sources.

For more information, see the full course specification:

[aqa.org.uk/subjects/science/gcse/science-8464/specification](https://www.aqa.org.uk/subjects/science/gcse/science-8464/specification)

Or scan here:



Separate Sciences



Saint Joseph's
CATHOLIC SCHOOL

GCSE – Code: 8461/8462/8463 – Exam Board: AQA

Assessment:

- **Paper 1:** Written Exam (1 hour 45 mins) – 50% of final mark
- **Paper 2:** Written Exam (1 hour 45 mins) – 50% of final mark

Key Information:

Biology

Paper 1: Cell Biology; Organisation; Infection and response; Bioenergetics

Paper 2: Homeostasis and response; Inheritance; Variation and evolution; Ecology

Chemistry

Paper 1: Atomic structure and the periodic table; Bonding, structure, and the properties of matter; Quantitative chemistry; Chemical changes; Energy changes

Paper 2: Chemical change; Organic chemistry; Chemical analysis; The atmosphere; Using resources

Physics

Paper 1: Energy; Electricity; Particle model of matter; Atomic structure

Paper 2: Forces; Waves; Magnetism and electromagnetism; Space physics

Who is this course for?

Pupils with strong Maths and English skills may consider studying towards three separate GCSEs in Biology, Chemistry and Physics. Studying separate sciences at GCSE provides a comprehensive understanding of Biology, Chemistry, and Physics individually, offering in-depth knowledge and practical skills. This specialised approach not only lays a solid foundation for future STEM studies and careers but also fosters a nuanced appreciation of each scientific discipline, enhancing the breadth and depth of each Science discipline ahead of A- Level Science study.

Skills Gained:

- Investigative skills
- Critical thinking
- Research / quantitative skills
- Problem solving
- Analytical skills
- Increase decision making
- Analytical skills

Linked Careers:

(for both Combined and Separate Sciences)

- Medicine
- Biomedical sciences
- Physiotherapy
- Sports science
- Ecologist/Botanist
- Pharmacist
- Engineering (Mechanical, Genetics, Chemical)
- Pathologist
- Veterinary care

For more information, see the full course specifications:

Biology: [aqa.org.uk/subjects/biology/gcse/biology-8461/specification](https://www.aqa.org.uk/subjects/biology/gcse/biology-8461/specification)

Chemistry: [aqa.org.uk/subjects/chemistry/gcse/chemistry-8462/specification](https://www.aqa.org.uk/subjects/chemistry/gcse/chemistry-8462/specification)

Physics: [aqa.org.uk/subjects/physics/gcse/physics-8463/specification](https://www.aqa.org.uk/subjects/physics/gcse/physics-8463/specification)

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