

Separate Science

Frequently Asked Questions

Q: What will I learn on this course?

A: Taking separate science means you will learn about the three sciences in real depth. You will be taken on a journey from studying some of the smallest things in existence to the largest, learning how to interpret the world around you and how to solve complex problems along the way. You will also significantly build on your practical and mathematical skills.

Topics you will study are shown below – for a full description of what is in each of the topics, click on the specifications at the end of this document.

Biology	Chemistry	Physics
<ol style="list-style-type: none">1. Cell biology2. Organisation3. Infection and response4. Bioenergetics5. Homeostasis and response6. Inheritance, variation and evolution7. Ecology	<ol style="list-style-type: none">1. Atomic structure and the periodic table2. Bonding, structure, and the properties of matter3. Quantitative chemistry4. Chemical changes5. Energy changes6. The rate and extent of chemical change7. Organic chemistry8. Chemical analysis9. Chemistry of the atmosphere10. Using resources	<ol style="list-style-type: none">1. Energy2. Electricity3. Particle model of matter4. Atomic structure5. Forces6. Waves7. Magnetism and electromagnetism8. Space physics

Q: How is the course assessed?

A: The three sciences are each assessed through two 100-mark exam papers, each worth 50% of the total available marks. The examinations can be taken at one of two tiers of entry: Foundation or Higher. The foundation tier covers grades 1 to 5, while the higher tier covers grades 4 to 9. There are no practical assessments in the new science qualification; however, questions assessing students' investigative skills will make up 15% of the examinations. The exams are all 1 hour 45 minutes in length and are taken at the end of Year 11.

Q: What is the difference between separate science and combined science?

A: The short answer to this is that you will study the same topics in separate science as you will in combined science, but that you go into considerably more depth in each of the topics. The exception to this is physics, where you will only study the space unit if you do separate science.

The table below shows all of the key differences between separate science and combined science.

Separate Science	Combined Science
This is an option choice	This is the non-option route
You will study all three sciences	You will study all three sciences
You have 9 double lessons a fortnight	You have 6 double lessons a fortnight
You will gain separate GCSEs for each of biology, chemistry and physics	You will gain 2 GCSEs in Science. These are combined grades across all three sciences
You sit 6 exams They are each 1 hr 45mins	You sit 6 exams They are each 1 hr 15mins

Q: Who should study separate science?

A: Separate science is suited to those with a passion for science, those who really enjoy problem solving, and those with a taste for science experiments. We generally recommend that students who take separate science are in the 'Advanced' or 'Exceptional' band, but if you really enjoy science and are willing to take on the extra work, then the course can be completed at Foundation level. If you are thinking about studying science after Cambourne, then separate science is a good choice for you as it gives you a really strong foundation in the sciences. However, please rest assured that separate science is not required to carry on studying science post 16!

Q: If my grade is currently a Secure (but I really hope it'll improve) in Science, is it still possible for me to take the Separate Science GCSE?

A: If you are on secure and are demonstrating that you have a passion for science by working really well in class, then please do apply to take separate science!

Q: Where can I find full details of the courses?

A: Students studying separate science follow the AQA Biology, Chemistry and Physics specifications. The specifications, which include full details of the courses, can be found at the following links.

- Biology: <https://www.aqa.org.uk/subjects/science/gcse/biology-8461>
- Chemistry: <https://www.aqa.org.uk/subjects/science/gcse/chemistry-8462>
- Physics: <https://www.aqa.org.uk/subjects/science/gcse/physics-8463>

Students who take combined science follow the AQA Combined Science: Trilogy specification, which can be found here: <https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464>

Q: Where can I find examples of exam papers I would take?

A: A specimen exam paper for each of the sciences can be found at the links below:

- Biology: <https://filestore.aqa.org.uk/resources/biology/AQA-84611H-SQP.PDF>
- Chemistry: <https://filestore.aqa.org.uk/resources/chemistry/AQA-84621H-SQP.PDF>
- Physics: <https://filestore.aqa.org.uk/resources/physics/AQA-84631H-SQP.PDF>

Q: What kind of workbook would be suitable for GCSE triple science study?

A; During the course, you will be given the opportunity to buy a Collins revision guides at a reduced price. These can be viewed at the links below.

- Biology: <https://collins.co.uk/collections/revision-gcse-science-ages-14-16/products/9780008326746>
- Chemistry: <https://collins.co.uk/collections/revision-gcse-science-ages-14-16/products/9780008326739>
- Physics: <https://collins.co.uk/collections/revision-gcse-science-ages-14-16/products/9780008326722>

Alternatively, CGP do high quality revision workbooks:

- Biology: <https://www.cgpbooks.co.uk/secondary-books/gcse/science/biology/bahw41-grade-9-1-gcse-biology-aqa-workbook-higher>
- Chemistry: <https://www.cgpbooks.co.uk/secondary-books/gcse/science/chemistry/cahw41-grade-9-1-gcse-chemistry-aqa-workbook-higher>
- Physics: <https://www.cgpbooks.co.uk/secondary-books/gcse/science/physics/pahw41-grade-9-1-gcse-physics-aqa-workbook-higher>