

Year 9 – Science Options

**Specification Choices for
Moving Into Key Stage 4
Years 10 & 11 Science**

Specifications

We follow AQA Exam Board

Routes available

Trilogy Combined science (2 Science GCSEs)

OR

Separate Science route (3 Science GCSEs)

Course overview

At Alperton, we start with the GCSE curriculum in year 10.

At the end of year 9 students are guided along the Combined Science: Trilogy route (2 GCSEs), OR Biology, Chemistry, Physics GCSE (3 GCSEs) route depending on their performance so far in Science.

All Science routes are matched carefully to the ability of each individual student.

Practical Skills

The practical skills students gain by doing required practicals will be assessed as a part of the written exams.

At least 15% of the marks will be related to practical work.



Differences between Triple science and Combined science

Separate science

15 lessons per fortnight

Three subject specialist science teachers (Biology, Chemistry and physics)

A greater number of sub-topics within units to be covered.

28 required practicals.

Six exams, all 1hr 45min , 100 marks each

It can be beneficial if aiming to study science at 'A' level

Combined science

10 lessons per fortnight

Highly specialist Science teachers. Learn Biology ,Physics and Chemistry

21 required practicals

Six exams, all 1hr15min ,70 marks each

Students are still eligible to study science at A levels.

Entry requirements for triple science

Current performance in Science (at least 55% in the end of year exam)

Engaged or highly motivated Attitude for learning and a recommendation by Current Science Teacher.

Current performance in Maths and English to be considered.

Note: Separate (triple) science route takes up one of the 4 options and so would replace the 4th choice subject.

Examinations

All external examinations count for 100% of the final mark for GCSE. There is no coursework or controlled assessment.

The Science GCSE is graded from 9-1 (9 being the highest grade).



Find more information about Science Careers

<https://edu.rsc.org/future-in-chemistry/career-options>

<https://www.rsb.org.uk/careers-and-cpd/careers>

<https://www.iop.org/careers-physics#gref>

<https://www.unifrog.org/>



Contacts for further questions

Mr. Ibrahim – Head of Biology (a.ibrahim@alperton.brent.sch.uk)

Ms. Saini – Head of Chemistry (s.saini@alperton.brent.sch.uk)

Mr. Younis – Head of Physics (f.younis@alperton.brent.sch.uk)

**Mr. Oliveira - Head of year 9 Science
(f.de-oliveira@alperton.brent.sch.uk)**

Mr Rayleigh- For careers advice a.rayleigh@alperton.brent.sch.uk

GCSE Science



What's the difference between 'Combined' (2 GCSEs) and 'Separate' science (3 GCSEs award)?

Separate science

15 lessons per fortnight

- Three subject specialist science teachers (Biology, Chemistry and physics)
- A greater number of sub-topics within units to be covered.
- 28 required practicals.
- Six exams, all 1hr 45min , 100 marks each
- It can be beneficial if aiming to study science at 'A' level

Combined science

10 lessons per fortnight

- Highly specialist Science teachers.
- Learn Biology ,Physics and Chemistry
- 21 required practicals
- Six exams, all 1hr15min ,70 marks each
- **Students are still eligible to study science at A levels.**

Aspire Commit Succeed

Entry Requirements for Separate Science

- Current performance in Science (at least 55% in the end of year exam)
- Engaged or highly motivated Attitude for learning and a recommendation by Current Science Teacher.
- Current performance in Maths and English will be considered.

Note: Separate (triple) science route takes up one of the 4 options and so would replace the 4th choice subject.

Examinations and resources:

- **No course work 100% examination based grade**
- **Foundation Tier: Grade 5-1**
- **Higher Tier: Grade 9-4**
- **At least 15% of each exam will be based on practical skills**
- **Lab book, revision guide and My GCSE science login provide to each student**

GCSE Topic LIST

Note: For Separate Sciences a greater number of sub-topics within each unit are covered.

Separate Sciences:	Combined Science:
<p>Biology:</p> <ol style="list-style-type: none"> 1. Cell biology 2. Organisation 3. Infection and response 4. Bioenergetics 5. Homeostasis and response 6. Inheritance, variation and evolution 7. Ecology 8. Key ideas 	<p>Biology:</p> <ol style="list-style-type: none"> 1. Cell biology 2. Organisation 3. Infection and response 4. Bioenergetics 5. Homeostasis and response 6. Inheritance, variation and evolution 7. Ecology
<p>Chemistry:</p> <ol style="list-style-type: none"> 1. Atomic structure and the periodic table 2. Bonding, structure, and the properties of matter 3. Quantitative chemistry 4. Chemical changes 5. Energy changes 6. The rate and extent of chemical change 7. Organic chemistry 8. Chemical analysis 9. Chemistry of the atmosphere 10. Using resources 	<p>Chemistry:</p> <ol style="list-style-type: none"> 1. Atomic structure and the periodic table 2. Bonding, structure, and the properties of matter 3. Quantitative chemistry 4. Chemical changes 5. Energy changes 6. The rate and extent of chemical change 7. Organic chemistry 8. Chemical analysis 9. Chemistry of the atmosphere 10. Using resources
<p>Physics:</p> <ol style="list-style-type: none"> 1. Energy 2. Electricity 3. Particle model of matter 4. Atomic structure 5. Forces 6. Waves 7. Magnetism and electromagnetism 8. Space physics 	<p>Physics:</p> <ol style="list-style-type: none"> 1. Energy 2. Electricity 3. Particle model of matter 4. Atomic structure 5. Forces 6. Waves 7. Magnetism and electromagnetism

