



Harmonize Academy Subject Overview



Science

In science at KS3 (year 9), we deliver all three sciences: **Biology, Chemistry and Physics**, including a chance to improve your practical skills in each with many different experiments throughout the year. The aim of this is to help you to develop a love of science with lots of variety, and to prepare you for your GCSE course starting in year 10, already having the basic knowledge and skills needed.

At KS4 (years 10 and 11), we deliver a two-year AQA **GCSE Biology** course which includes ten required practicals, any of which you can be assessed on in two written exams at the end of year 11.

If you have an interest in science you can also choose a 2- year **GCSE Physics** course alongside Biology as one of your options. This will be beneficial if your future career is science based.

How do we deliver the Science courses?

Key Stage 3 In KS3 (year 9) the topics taught in Science 9 are:

<ul style="list-style-type: none">• Introduction to science• Waves• Earth and atmosphere• Humans as organisms	<ul style="list-style-type: none">• Energy• Classifying materials• Plants and ecosystems• Electricity	<ul style="list-style-type: none">• Chemical changes• Inheritance• Forces• Space
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There are no formal assessments but a short test to assess your knowledge and understanding at the end of each topic.

Key Stage 4 At KS4 (year 10 and 11), we deliver a 2-year AQA **GCSE Biology** course which includes ten required practicals, any of which you can be assessed on in two written exams at the end of year 11.

<p>Paper 1 What's assessed Topics 1–4: Cell biology; Organisation; Infection and response; and Bioenergetics.</p> <p>How it's assessed</p> <ul style="list-style-type: none">• Written exam: 1 hour 45 minutes• Foundation and Higher Tier• 100 marks• 50% of GCSE <p>Questions Multiple choice, structured, closed short answer and open response.</p>	<p>Paper 2 What's assessed Topics 5–7: Homeostasis and response; Inheritance, variation and evolution; and Ecology.</p> <p>How it's assessed</p> <ul style="list-style-type: none">• Written exam: 1 hour 45 minutes• Foundation and Higher Tier• 100 marks• 50% of GCSE <p>Questions Multiple choice, structured, closed short answer and open response.</p>
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Key Stage 4 Option GCSE Physics

If you have an interest in science you can also choose a 2- year AQA GCSE Physics course alongside the biology as one of your options. This will be beneficial if your future career is science based.

The assessment method is the same as Biology including ten required practicals and two written exams at the end of year 11.

<p>Paper 1: What's assessed Topics 1-4: Energy; Electricity; Particle model of matter; and Atomic structure.</p> <p>How it's assessed</p> <ul style="list-style-type: none">• Written exam: 1 hour 45 minutes• Foundation and Higher Tier• 100 marks• 50% of GCSE <p>Questions</p> <ul style="list-style-type: none">• Multiple choice, structured, closed short answer and open response.	<p>Paper 2: What's assessed Topics 5-8: Forces; Waves; Magnetism and electromagnetism; and Space physics.</p> <p>How it's assessed</p> <ul style="list-style-type: none">• Written exam: 1 hour 45 minutes• Foundation and Higher Tier• 100 marks• 50% of GCSE <p>Questions</p> <ul style="list-style-type: none">• Multiple choice, structured, closed short answer and open response.
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Future pathways

There are many different career choices with a science element in them including:

- Medical professions
- Engineering
- Sports science
- Environmental science
- Pharmaceuticals
- Architecture
- Astrophysics
- Teaching

And many more.

Further education centres offer a wide range of science qualifications including A levels, vocational qualifications and apprenticeships.