

## Science

### Brief overview and aims of teaching Science

Science is a pivotal subject that allows students to explore and understand the wider world around us. As well as gaining vast subject knowledge in biology, chemistry and physics, students will develop their investigative skills that will allow them to analyse data and form evidence based conclusions, skills that are applicable to a wide range of careers. The study of science also draws on students' skills they develop in maths and English. By studying science students will be able to make informed choices as they become an adult and understand the global issues that are happening and will affect their choices they make.

### KS3

#### Topics taught

	Y7	Y8
Autumn ½ term 1	Cells & movement Particle model Separating mixtures	Electricity Metals, non-metals, Acids and Alkalis
Autumn ½ term 2	Metals, non-metals Acids & Alkalis	Periodic table & Elements Sound & light
Spring ½ term 1	Speed & Gravity	Interdependence & Plant reproduction Earth structure & Universe
Spring ½ term 2	Interdependence Plant reproduction Sound & light	Energy Variation & human reproduction
Summer ½ term 1	Variation Human reproduction	Speed & gravity
Summer ½ term 2	Earth structure & universe Electricity	Revision

#### How will students be assessed in science?

Students will sit an end of unit test at the end of each unit. Formative assessment of key pieces of work is marked and written feedback is given throughout the units.

#### What homework is to be expected in this subject?

Project based homework which finish with a celebration of work in the form of displays and presentations.

#### What extracurricular activities /enrichment will be offered to students in Science?

Homework club is on every week to support all students who want extra support/resources. STEM activities aimed at specific cohorts in year 7 and 8, including trips to the Big Bang Exhibition. Students involved in science related careers events when appropriate.

Any useful websites that students could use for support or extra information?

<https://www.bbc.com/bitesize/subjects/zrkw2hv>

[GCEPod](#)

## KS4

Exam boards and specifications:

AQA GCSE Combined Science: Trilogy 8464

AQA GCSE Biology 8461

AQA GCSE Chemistry 8462

AQA GCSE Physics 8463

Exam information:

There are 6 papers for all courses (two each for biology, chemistry, and physics). There are foundation and higher tiers available for each paper. There isn't any controlled assessment and the course is assessed 100% exam. Each paper has equal weighting. The papers vary in length depending on the course:

Combined science – each paper is 1 hour and 15 minutes

Separate sciences – each paper is 1 hour and 45 minutes

Topics taught:

	Y9	Y10	Y11
Autumn ½ term 1	Particle model of matter Energy	Quantitative chemistry Energy changes	Magnetism & electromagnetism Forces
Autumn ½ term 2	Atomic structure Electricity	Organic chemistry Rates of reaction	Using resources Chemical analysis
Spring ½ term 1	Cell biology	Using resources	Organic chemistry Homeostasis
Spring ½ term 2	Organisation	Electricity Particle Model of matter	Inheritance & variation Ecology
Summer ½ term 1	Infection & response	Atomic Structure	Revision Exam Season
Summer ½ term 2	Bioenergetics	Bioenergetics Ecology	

How will students' progress be assessed throughout the course?

For each unit, there will be an end of unit assessment. At the end of each block of teaching (approximately 4 units) there are mock exam papers which fall in line with the whole school assessment calendar.

There will be formative assessments of key pieces of literacy and numeracy skills throughout each unit.

What homework will students expect?

Once per fortnight, covering key knowledge from the unit, this will support revision for the end of unit assessment and will enable students to retain and recall knowledge and skills.

Any useful websites or information that students can use to support their learning?

[www.gcsepod.com](http://www.gcsepod.com)

<https://www.bbc.com/bitesize/subjects/zrkw2hv>