

Science Y9

Aims:

- To begin their GCSE Science course.
- To develop students mathematical skills
- To continue motivating students and stimulating their interest in Science.
- To continue developing students' practical and investigative skills.
- To consider careers in STEM (Science, Technology, Engineering & Mathematics) subjects.

Topics Covered:

In Year 9 all students begin their GCSE course in Science (following the AQA GCSE course).

For information on the course go to: <http://www.aqa.org.uk/subjects/science/gcse>

Students are taught Biology, Chemistry and Physics separately and will cover the following topics:

Biology:

- Cells & microscopes (Sept – March)
- Body systems & respiration (March – July)

Chemistry:

- Atomic Structure & the periodic table (Sept – March)
- Bonding and properties of matter (March – July)

Physics:

- Energy (Sept – February)
- Particles (February – May)
- Waves (May – July)

There will also be a week devoted to considering careers relating to Science & Engineering.

Courses:

In Year 9 all students will be taught the same content, although as part of the options process they will need to decide if they want to use one of their options in Y10 for the Triple Science GCSE or whether to choose a two GCSE route (they will do all three subjects but only get 2 GCSEs at the end).

Teaching Groups:

Students are placed into sets at the start of Year 9 and are therefore taught in classes of similar ability in order that they may receive teaching that most closely matches their ability and needs. The top groups are taught by specialist Science teachers who will separately deliver the Biology, Chemistry and Physics content. Lower groups will be taught by 1 or 2 teachers. Occasionally changes to these sets will occur during the year.

Assessment:

There will be formal tests taken at by all students at two times in the year, this allows the teachers to assess the GCSE level each student is working at and also alter the sets if necessary.

They will also be expected to complete Assessed Homeworks (just as our Y10-11 students are completing at Upper School), these give students practise of exam

questions and exam technique which is crucial as they prepare for their GCSE exams.

How Parents and Carers can help:

- * Buy your child a **revision guide** when these are being sold by the school – this will be in January/February time (once students have chosen which type of GCSE course to complete).
- * Support students in completing homework on time, helping them as they start their GCSE course and talking to them about what they have been learning in Science.
- * Encourage students to watch documentaries and read articles in newspapers or magazines about space, nature and the world around them.

Science Y8



Aims:

- * To motivate students and stimulate their interest in Science.
- * To continue developing students' practical and investigative skills.
- * To develop students computing and mathematical skills.

Topics Covered:

Students are taught twelve topics which are split into four blocks:

Block One (Sept – Nov):

Healthy Lifestyle
Periodic Table
Separation Methods
Electricity

Block Two (Nov – Feb):

Ecosystems
Metals & materials
Energy

Block Three (Feb – June):

Adaptations
The Earth & the atmosphere
Pressure & moments

Block Four (June – July):

Detection (forensic science)
The Solar System

Teaching Groups:

Students are placed into sets at the start of Year 8 and are therefore taught in classes of similar ability students in order that they may receive teaching that most closely matches their ability and needs. Occasionally changes to these sets will occur during the year.

Assessment:

Formal tests are taken by all students at the end of blocks 1 - 3, allowing teachers to assess student progress. The test at the end of Block 3 will be a more formal test carried out in the exam hall under test conditions to give students experience of formal exams. The results of these test will be used to determine students' current attainment as well as in setting students for the following year.

How Parents and Carers can help:

- Support students in completing their homework on time, helping them to prepare for their end of block tests and discussing the cross-curricular projects with them.
- Encourage students to watch documentaries and read articles in newspapers or magazines about space, nature and the world around us.



Science Y7



Aims:

- * To introduce students to the Laboratory.
- * To familiarise students with Laboratory apparatus.
- * To develop students' investigative skills.
- * To motivate students and stimulate their interest in Science.
- * To increase knowledge and understanding of the human body and the world around us.

Topics Covered:

Year 7 Science begins an introduction to safety in the Laboratory and general practical skills. Students are then taught twelve topics which are split into four blocks:

Block One (Sept – Dec):

Cells
Particles
Forces

Block Two (Dec – Feb):

Body Systems
Elements
Waves & Sound

Block Three (Feb – May):

Reproduction
Chemical Reactions
Light

Block Four (May – July):

Acids & alkalis
Space

Within these topics students get many opportunities to develop their practical and investigative skills and to find out about the work of other Scientists.

Teaching Groups:

All students are taught in mixed ability form groups up until Christmas after which point some setting will happen with students who need more stretching being placed in an "A" group and students who need more time to consolidate their learning being placed in a "B" group. We will also have a very small class for students who need support in accessing the curriculum.

Assessment:

Formal tests are taken by all students at the start of the year (to assess KS2 understanding) and at the end of blocks 1 - 3, allowing teachers to assess student progress. The test at the end of Block 3 will be a more formal test carried out in the exam hall under test conditions to give students experience of formal exams. The results of these test will be used to determine students' current attainment as well as in setting students for the following year.

How Parents and Carers can help:

- Support students in completing homework on time and talking to them about what they have been doing in Science.
- Encourage students to watch documentaries about space, nature etc. (e.g. Planet Earth, Blue Planet series)
- If possible, visits places like Magna, Heeley City Farm and Eureka.