Science - Year 11

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Subject Content

Students will study either the AQA Trilogy combined science course which will award 2 GCSE grades, or the AQA separate sciences for Biology Chemistry and Physics which awards 3 GCSE grades. This year we aim to finish the syllabus before Easter in year 11 to allow time for revision technique (slightly later for those studying separate science due to the extra content). Students will sit a full paper 1 mock in the autumn term and a paper 2 mock in the spring term. There are checklists of content available. Revision session after school will happen on Tuesdays. Some tutor time sessions may also be available for some small group revision.

Autumn	Spring	Summer
Inheritance	ecology	revision
Organic chemistry and chemical analysis	Atmosphere and resources	revision
forces	Electromagnetism (space)	revision

Assessment

Homework Once a week from an exam question booklet
Assessment: Students will complete topic exam questions in class but priority will be given to the mock papers
Mocks will be given in November (paper 1) and March (paper 2) content

Provisional exam dates summer 2024
10 May am Biology paper 1
17 May am Chemistry paper 1
22 May am Physics paper 1
7 June pm Biology paper 2
11 June am Chemistry paper 2
14 June pm Physics paper 2

Useful Study Support Resources

• BBC KS4 AQA Trilogy or Science Bitesize has many useful activities
• Hub – there are the homework booklets/links to revision sites and revision resources

Anything else relevant / subject specific

Science is an exciting practical subject that students enjoy studying. Students are encouraged to take an interest in Science outside of school and appreciate that Science is all around us at all time. Many students visit zoos, wildlife sanctuaries and museums in their spare time, others choose to watch programmes such as 'Bang Goes the Theory' and Science documentaries that interest them or take an interest in new scientific discoveries that are reported in the media. Science club and ecoschools are available to students – more information to be given in tutor times.

Year 11 expectations:

Application

• 1 hour of homework a week which are in the form of exam questions which are checked weekly in lesson
• Respond to all feedback given by teacher

Organisation

• Bring all equipment to Science lessons, including your pen pencil ruler and **calculator**
• Ask your teacher if you need additional help or have missed a lesson and need to catch up

Independence

• Students should complete homework independently where possible, but feel free to support when help is required
• Students are encouraged to develop the skills required to work independently and to seek help in working out answers using the '4B's: '*brain* (can they work out an answer on their own?) *book* (could they look up the answer in their exercise/ textbook/ internet?), *buddy* (could they work out the answer by talking to a friend?), *boss* (ask a teacher).

Improving grades

Students will be able to regularly access feedback to work that will tell them how to improve their grade. As a general overview, to achieve each grade, students are required to be able to do the following:

	Grade 2/3	Grade 4/5	Grade 6/7	Grade 8/9
AO1 **Demonstrating knowledge**	Remember **some basic facts**. Use a **few** key words. Realise simple or obvious effects of science on society.	Remember a **wide range** of **basic** facts. Use a **few** key words for **any topic** studied. Understand scientific discoveries have risks and benefits.	Remember key facts about **most areas of Science.** They **usually** use appropriate terminology in answers (key words and phrases) They can see the relationships between scientific advances, their ethical implications and the benefits and risks associated with them.	Remember key and detailed facts of **any area within Science**. They **always** use appropriate terminology in answers (key words and phrases) They can explain the relationships between scientific advances, their ethical implications and the benefits and risks associated with them.
AO2 **Applying knowledge**	They **can occasionally** apply knowledge effectively in a **range** of contexts. They can **occasionally** use theories to make **simple** explanations of events. They can **occasionally** use data to support evidence. They can **usually use** equations in calculations.	They **usually** apply knowledge effectively in a **range** of contexts. They can **usually** use theories to make **simple** explanations of events. They can **sometimes** use data to support evidence. They can **consistently use** and **sometimes rearrange** equations in calculations.	They **usually** apply knowledge effectively in a **wide range** of contexts. They can **usually** use theories to make **detailed** explanations of events. They can **usually** use data to support evidence. They can **usually rearrange** equations in calculations.	They **always** apply knowledge effectively in a **wide range** of contexts. They can **always** use theories to make **detailed** explanations of events. They **always** make effective use of data to support evidence. They can **consistently rearrange** equations in calculations.
AO3 **Analyse & Evaluate**	They evaluate **basic** information to develop **simple** arguments and explanations. They **usually** draw conclusions consistent with the available evidence**.**	They evaluate information to develop arguments and explanations. They **consistently** draw conclusions consistent with the available evidence**.**	They evaluate information **systematically** to develop arguments and explanations. They **usually** draw **detailed, evidence-based** conclusions**.**	They evaluate information **from a wide range of sources systematically** to develop arguments and explanations. They **consistently** draw **detailed, evidence-based** conclusions**.**

	They can **recognise** anomalous results and spot some causes of error in experimental procedures.	They can spot **some** causes of error and uncertainty in data or experimental procedures.	They can **usually** spot causes of error and uncertainty in data or experimental procedures.	They can **consistently** spot causes of error and uncertainty in data or experimental procedures.

Extended resource List

Autumn	Spring	Summer
Inheritance	ecology	revision
Organic chemistry and chemical analysis	Atmosphere and resources	revision
forces	Electromagnetism (space)	revision

Biology Inheritance
B13 Reproduction
B14 Variation and evolution
B15 Genetics and evolution
Inheritance, variation and evolution - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize
Inheritance, variation and evolution - GCSE Biology (Single Science) Revision - AQA - BBC Bitesize
The whole of AQA INHERITANCE, VARIATION and EVOLUTION. 9-1 GCSE Biology combined science for paper 2 - YouTube

Biology ecology
B16 Adaption interdependence and ecology
B17 organising an ecosystem
B18 biodiversity and ecosystems
Ecology - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize
Ecology - GCSE Biology (Single Science) Revision - AQA - BBC Bitesize
AQA GCSE Biology / Combined Science Unit 7 - Ecology - Recall Questions - YouTube
AQA GCSE Biology Unit 7 - Ecology (TRIPLE) - Recall Questions - YouTube

Chemistry Organic chemistry and chemical analysis
C9 Crude oil and fuels
C10 Organic reactions (separate only)

C11 polmers (separate only)
C12 chemical analysis
Organic chemistry - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize
Chemical analysis - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize
Organic chemistry - GCSE Chemistry (Single Science) Revision - AQA - BBC Bitesize
Chemical analysis - GCSE Chemistry (Single Science) Revision - AQA - BBC Bitesize

Chemistry Atmosphere and resources

C13 Earths atmoshpere
C14 Eraths resources
C15 Using our resources (separate only)
Chemistry of the atmosphere - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize
Using resources - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize
Chemistry of the atmosphere - GCSE Chemistry (Single Science) Revision - AQA - BBC Bitesize
Using resources - GCSE Chemistry (Single Science) Revision - AQA - BBC Bitesize
The Whole of AQA - ORGANIC CHEMISTRY. GCSE Chemistry or Combined Science Revision Topic 7 for C2 - YouTube
C12 - WHOLE TOPIC GCSE CHEMICAL ANALYSIS - YouTube

Physics forces
P8 Forces in balance
P9 Motion
P10 Forces in motion
P11 Forces and pressure (separate only)
Forces - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize
Forces - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize
All of AQA Forces and Motion Explained - GCSE 9-1 Physics REVISION - YouTube

Physics Electromagnetism (space)

P15 magnetism and electromagnetism
P16 Space (separate only)
Magnetism and electromagnetism - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize
Magnetism and electromagnetism - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize
GCSE Physics - Electromagnetism #78 - YouTube
The Whole of AQA - SPACE. GCSE 9-1 Physics or Combined Science Revision. Topic 8 for P2 - YouTube