



GCSE Science at Kingsdale School

- Students begin *GCSE Science* in Year 9 with 4 hours a week of Science. In Year 10 and Year 11 they have 5 hours a week, and may also be able to have extra one-hour sessions a week in Year 11 if their timetable allows.
- Initially all students in Year 9 and 10 follow the *AQA Combined Science: Trilogy* course, which will enable them to achieve two *GCSE* grades in Science.
- Separate Science is also available to students. They will achieve three separate *GCSE* grades for this.
- All *GCSEs* are now linear rather than modular. This means all exams will take place at the end of the course. There will be no controlled assessment, although required practical lessons will help you answer questions in the exams. Students will be provided with a lab book containing the required practicals and exam questions based on the practicals will be set as homework.

Combined Science: Trilogy (Two GCSEs)

Summary of content

Biology

- Cell biology
- Organisation
- Bioenergetics
- Infection and response
- Homeostasis and response
- Inheritance, variation and evolution
- Ecology

Chemistry

- Atomic structure and the periodic table
- Bonding, structure, and the properties of matter
- Quantitative chemistry
- Chemical changes
- Energy changes
- The rate and extent of chemical change
- Organic chemistry
- Chemical analysis
- Chemistry of the atmosphere
- Using resources

Physics

- Energy
- Electricity
- Particle model of matter
- Atomic structure
- Forces
- Waves
- Magnetism and electromagnetism

Programme of Study:

Topics 1-4 in Biology, 1-4 in Chemistry and 1-4 in Physics will be taught in Year 9.

Topics 5-7 in Biology and Physics and topics 5-10 in Chemistry are covered in Year 10.

Time in Year 11 is dedicated to revision and exam practice.

Exams:

- There will be six exams: two biology, two chemistry and two physics papers.
- Each exam is 1 hour and 15 minutes, 70 marks.
- All six exams are combined to give an overall grade.

Separate Science - Biology, Chemistry and Physics (3 GCSEs)

Programme of Study:

Topics 1-4 in Biology, 1-4 in Chemistry and 1-4 in Physics will be taught in Year 9. Topics 5-7 in Biology, 5-7 in Physics and 5-10 in Chemistry are covered in Year 10. The Separate Science content in each topic is then taught in Year 11.

There will be six exams: two biology, two chemistry and two physics papers.

Exams

The questions will be more straightforward and the higher tier papers will stretch the most able.

Paper 1

- Questions on topics 1–4
- 1 hour 45 minutes, 100 marks
- Questions: multiple choice, structured, closed short answer, and open-response. Similar to our current GCSE.

Paper 2

- Questions on topics 5–7
- 1 hour 45 minutes, 100 marks
- Questions: multiple choice, structured, closed short answer, and open-response. Similar to our current GCSE.

Summary of content

- 1 Cell biology
- 2 Organisation
- 3 Infection and response
- 4 Bioenergetics
- 5 Homeostasis and response
- 6 Inheritance, variation and evolution
- 7 Ecology

GCSE Biology

The exam questions will be more straightforward and the higher tier papers will stretch the most able.

Paper 1

- Questions on topics 1–5
- Likely to be 1 hour 45 minutes, 100 marks
- Questions: multiple choice, structured, closed short answer, and open-response. Similar to our current GCSE

Paper 2

- Questions on topics 6–10
- Likely to be 1 hour 45 minutes, 100 marks
- Questions: multiple choice, structured, closed short answer, and open-response. Similar to our current GCSE

Summary of content

- 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

GCSE Chemistry

See our specimen question papers from 17 July at aqa.org.uk/(url for this spec page)

Exams

The exam questions will be more straightforward and the higher tier papers will stretch the most able.

Paper 1

- Questions on topics 2, 4, 6, 7
- 1 hour 45 minutes, 100 marks
- Questions: multiple choice, structured, closed short answer, and open-response. Similar to our current GCSE.

Paper 2

- Questions on topics 1, 3, 5, 8
- 1 hour 45 minutes, 100 marks
- Questions: multiple choice, structured, closed short answer, and open-response. Similar to our current GCSE.

Summary of content

- 1 Forces
- 2 Energy
- 3 Waves
- 4 Electricity
- 5 Magnetism and electromagnetism
- 6 Particle model of matter
- 7 Atomic structure
- 8 Space physics

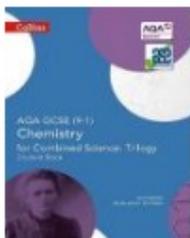
GCSE Physics

AQA GCSE (9-1) Biology for Combined Science: Trilogy



Authors: John Beeby, Anne Pilling, Series editor: Ed Walsh
Publisher: Collins
ISBN-13: 9780008175047
Price: £12.99
Publication date: June 2016 - out now
Digital version available: TBC

AQA GCSE (9-1) Chemistry for Combined Science: Trilogy



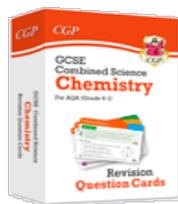
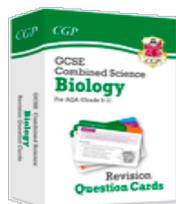
Authors: Ann Daniels, Series editor: Ed Walsh
Publisher: Collins
ISBN-13: 9780008175054
Price: £12.99
Publication date: June 2016 - out now
Digital version available: TBC

AQA GCSE (9-1) Physics for Combined Science: Trilogy



Authors: Sandra Mitchell, Series editor: Ed Walsh
Publisher: Collins
ISBN-13: 9780008175061
Price: £12.99
Publication date: 24 June 2016
Important information about AQA GCSE (9-1) Physics; Digital version available: TBC

Separate Science versions of the books are also available to purchase online. In school, we sell the CGP revision cards and guides in the revision room.



Students can also access online versions of the textbooks using their School Collins Connect details that are unique to each user:

<https://connect.collins.co.uk/school/defaultlogin.aspx>

Simply click on the link and follow the instruction

Further reading and recommended websites:

<http://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464>

<http://www.s-cool.co.uk/>

<http://www.bbc.co.uk/education/levels/z98jmp3>

https://www.youtube.com/channel/UCqbOeHaAUXw9II7sBVG3_bw

Extra-Curricular Opportunities

In previous years we have supplemented our Science teaching with additional extracurricular opportunities, including:

- KS3 Science club every Monday after school
- Year 11 revision- Every Tuesday after school
- STEM club
- STEM HS2 Engineering Day
- Science Week activities
- Trips to:
 - Farnborough Air Show
 - Chemistry in Action at the Institute of Education
 - Science Museum
 - Natural History Museum
 - King's College London Summer School
 - Imperial College London spectroscopy workshops

