

Science Revision Information

Trilogy Science offers students the chance to study all three Science disciplines and gain two GCSE qualifications in Science. Students will have 6 exams, 2 in Biology, 2 in Chemistry and 2 in Physics. As there is no coursework in Science, students will be tested on their practical understanding in the exam.

Biology Component:

Exams:

8464 Paper 1: Biology - 1h 15m **14 May 2019 pm**

8464 Paper 2: Biology - 1h 15m **07 June 2019 pm**

Units Covered:

- 4.1 Cell Biology
- 4.2 Organisation
- 4.3 Infection and Response
- 4.4 Bioenergetics
- 4.5 Homeostasis and Response
- 4.6 Inheritance, Variation and Evolution
- 4.7 Ecology

Chemistry Component:

Exams:

8464 Paper 1: Chemistry - 1h 15m **16 May 2019 am**

8464 Paper 2: Chemistry - 1h 15m **12 June 2019 am**

Units Covered:

- 4.1 Atomic Structure and Periodic Table
- 4.2 Bonding, Structure and the properties of matter
- 4.3 Quantitative Chemistry
- 4.4 Chemical Change
- 4.5 Energy Changes
- 4.6 Rate and extent of chemical change
- 4.7 Organic Chemistry
- 4.8 Chemical Analysis
- 4.9 Chemistry of the Atmosphere
- 4.10 Using Resources

Physics Component:

Exams:

8464 Paper 1: Physics 1h 15m **22 May 2019 pm**

8464 Paper 2: Physics 1h 15m **14 June 2019 am**

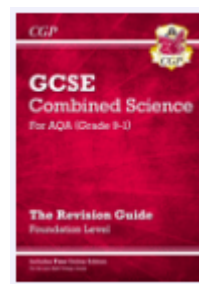
Units Covered:

- 4.1 Energy Changes in a System
- 4.2 Electricity
- 4.3 Particle model of Matter
- 4.4 Atomic Structure
- 4.5 Forces
- 4.6 Waves
- 4.7 Magnetism and Electromagnetism

Revision Guides

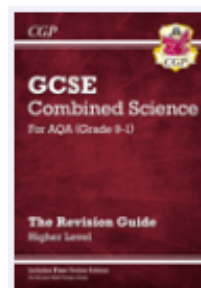
We recommend the CGP revision guide below

Foundation:



ISBN: 978 1 78294 560 4

Higher:



ISBN: 978 1 78294 559 8

Separate Sciences (Triple Award)

Biology:

Course: AQA 8461

Key Dates:

8461/1H Paper 1

1h 45m 14 May 2019 pm

8461/2H Paper 2

1h 45m 07 June 2019 pm

Units Covered:

4.1 Cell Biology

4.2 Organisation

4.3 Infection and Response

4.4 Bioenergetics

4.5 Homeostasis and Response

4.6 Inheritance, Variation and Evolution

4.7 Ecology

Chemistry:

Course: AQA 8462

Key Dates:

8462/1H Paper 1

1h 45m 16 May 2019 am

8462/2H Paper 2

1h 45m 12 June 2019 am

Units Covered:

4.1 Atomic Structure and Periodic Table

4.2 Bonding, Structure and the properties of matter

4.3 Quantitative Chemistry

4.4 Chemical Change

4.5 Energy Changes

4.6 Rate and extent of chemical change

4.7 Organic Chemistry

4.8 Chemical Analysis

4.9 Chemistry of the Atmosphere

4.10 Using Resources

Physics:

Course: AQA 8463

Key Dates:

8463/1H Paper 1

1h 45m 22 May 2019 pm

8463/2H Paper 2

1h 45m 14 June 2019 am

Units Covered:

4.1 Energy Changes in a System

4.2 Electricity

4.3 Particle Model of Matter

4.4 Atomic Structure

4.5 Forces

4.6 Waves

4.7 Magnetism and Electromagnetism

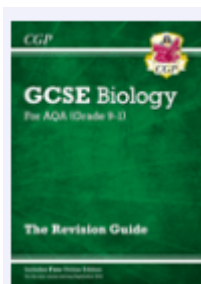
4.8 Space Physics

Recommended Revision Guides:

Biology

ISBN:

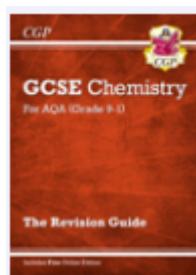
978 1 78294 556 7



Chemistry

ISBN:

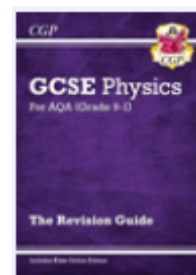
978 1 78294 557 4



Physics

ISBN:

978 1 78294 558 1



Science Exam Question Command Words

Command Words	Meanings – (what you are expected to do when these words appear in questions in exam)
1. Calculate	Use numbers given in the question to work out the answer.
2. Choose*	Select from a range of alternatives.
3. Compare	Describe the similarities and/or differences between things, not just write about one.
4. Complete	Answers should be written in the space provided, for example, on a diagram, in spaces in a sentence or in a table
5. Define*	Specify the meaning of something.
6. Describe	Recall some facts, events or process in an accurate way.
7. Design*	Set out how something will be done.
8. Determine*	Use given data or information to obtain and answer
9. Draw	To produce, or add to, a diagram. Estimate Assign an approximate value.
10. Estimate	Assign an approximate value.
11. Evaluate	Use the information supplied as well as their knowledge and understanding to consider evidence for and against.
12. Explain	Make something clear, or state the reasons for something happening.
13. Justify	Use evidence from the information supplied to support an answer.
14. Give	Only a short answer is required, not an explanation or a description.
15. Identify*	Name or otherwise characterise. Justify Use evidence from the information supplied to support an answer.

Physics Equations

These are no longer provided in the exam paper and must therefore be learnt.

Or in a song: <https://youtu.be/G3K6ZdtFZlg>

Equations not given	
Kinetic Energy	$E_k = \frac{1}{2} \times m \times v^2$ ($\frac{1}{2} \times \text{mass} \times \text{speed}^2$)
Gravitational potential	$E_p = m \times g \times h$ (mass x gravity x height)
Power 1	$P = E \div t$ (energy \div time)
Power 2	$P = W \div t$ (work done \div time)
Efficiency 1	Efficiency = useful power output \div total power in
Efficiency 2	Efficiency = useful energy output \div total energy in
Charge	$Q = I \times t$ (current x time)
Voltage	$V = I \times R$ (current x resistance)
Power 3	$P = V \times I$ (potential difference x current)
Power 4	$P = I^2 \times R$ (current ² x resistance)
Energy	$E = Q \times V$ (charge x potential difference)
Density	$p = m \div \text{vol}$ (mass \div volume)
Weight	$W = m \times g$ (mass x gravity)
Work done	$W = F \times s$ (Force x distance moved)
Force	$F = k \times e$ (spring constant x extension)
Force 2	$F = m \times a$ (mass x acceleration)
Momentum	$P = m \times v$ (mass x velocity)
Speed 1	$v = s \div t$ (distance \div time)
Speed 2	$v = f \times \lambda$ (frequency x wavelength)
Acceleration	$a = \Delta v \div t$ (change in velocity \div time)

Useful Websites for revision:

<http://www.bbc.co.uk/schools/gcsebitesize/science/>

Provides written information and tests to help students who like to read to revise for GCSE science courses. Remember to select AQA Bio, Chem or Phys. If you are a trilogy student select AQA Trilogy.

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

'free science lessons' channel on youtube. This is a fantastic resource, often used in class. A series of short videos that cover the AQA9-1 trilogy (double award). Really useful to watch to revise/go over areas you are not sure of. Covers the required practicals well.

<https://www.youtube.com/channel/UCBgvmal8AR4QIK2e0EfJwaA>

Primrose kitten – youtube videos to watch, including booster grade 7-9 questions AND a workbook that can be downloaded filled with many quick fire questions you should know the answers to.

<http://www.docbrown.info/index.htm>

Provides revision notes and questions for GCSE sciences. Has been updated for 9-1.

<http://gradegorilla.com/UKschools.php>

Provides a series of tests for all physics units in the AQA 9-1 physics curriculum. Shows trilogy content and separates out the physics GCSE content.

<http://www.westsomersetcollege.org/science-knowledge-organiser/>

A range of revision materials that could be downloaded and printed off with summaries of key facts.

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

Specimen papers for AQA trilogy science qualification. You can also find the specification on this website. Easily navigate to the separate sciences from here.

<https://www.educake.co.uk/>

Educake – Used for Science homework. All students have their login information. Students can complete the set revision work from here or set themselves tests on their areas of weakness.