

Science – Miss L O'Neill





Science GCSEs 2027



- The majority of students are studying AQA GCSE Combined Science
- This qualification results in two equal or adjacent grades e.g 5-5, 5-4, 4-4, 4-3.
- Higher tier students can achieve up to a grade 9-9 but not below a grade 4-3.
- Foundation tier students can achieve from a grade 1-1 up to a grade 5-5.
- A small number of students are studying the Separate Science pathway where they can achieve up to a grade 9 in each of the three Sciences.



<p>May 2027 Biology Paper 1 <i>(Cell bio, Organisation, Infection, Bioenergetics)</i></p>	<p>June 2027 Biology Paper 2 <i>(Homeostasis, Inheritance, Ecology)</i></p>
<p>May 2027 Chemistry Paper 1 <i>(Atomic structure, Periodic table, Quantitative, Chemical changes, energy changes)</i></p>	<p>June 2027 Chemistry Paper 2 <i>(Rates, organic, chemical analysis, atmosphere, using resources)</i></p>
<p>May 2027 Physics Paper 1 <i>(Energy, Electricity, Particle model, Atomic structure)</i></p>	<p>June 2027 Physics Paper 2 <i>(Forces, Waves, Magnetism) + Space physics triple only</i></p>



Students will have access to all the Physics equations



Physics Equations Sheet
GCSE Physics (8463)
FOR USE IN JUNE 2023 ONLY

HT = Higher Tier only equations

kinetic energy = $0.5 \times \text{mass} \times (\text{speed})^2$	$E_k = \frac{1}{2} m v^2$
elastic potential energy = $0.5 \times \text{spring constant} \times (\text{extension})^2$	$E_e = \frac{1}{2} k e^2$
gravitational potential energy = mass \times gravitational field strength \times height	$E_p = m g h$
change in thermal energy = mass \times specific heat capacity \times temperature change	$\Delta E = m c \Delta\theta$
power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$
power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{W}{t}$
efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$	
efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
charge flow = current \times time	$Q = I t$
potential difference = current \times resistance	$V = I R$
power = potential difference \times current	$P = V I$
power = (current) $^2 \times$ resistance	$P = I^2 R$
energy transferred = power \times time	$E = P t$
energy transferred = charge flow \times potential difference	$E = Q V$
density = $\frac{\text{mass}}{\text{volume}}$	$\rho = \frac{m}{V}$



Mocks Summer 2026

- **All students will be sitting:**

Biology Paper 1

Chemistry Paper 1

Physics Paper 1

- **Check class charts for revision lists and guidance from your class teacher!**



What can you do to support your child with preparing for their Science mock papers?



- Ensure that for every Science exam your child is equipped with a calculator, pen, pencil, ruler and protractor.
- Check that your child knows their units of measurements. Test them!
- Ensure your child has watched the required practical videos on YouTube for each paper (see the information on class charts).
- Support your child with accessing the revision resources....



Combined Science Biology Paper 1 Mock revision



SUBMISSION

COPY TO LESSON



Issued: 2/6/2025 | Due: 11/7/2025

Prepare for your Biology paper 1 mock. This needs to involve watching all the required practical videos (in the links section below), making notes/cards/mindmaps. Use the cognito videos, free science lessons videos, primrose kitten youtube videos, BBC bitesize links or revision guides for the content.

Topics covered in this paper:

4.1 Cell Biology (eukaryotic cells, prokaryotic, microscopes, Stem cells, Mitosis, specialised cells, diffusion, osmosis, active transport)

4.2 Organisation (digestive system, enzymes, food tests, circulatory system, non communicable disease, the respiratory system, plant organisation)

4.3 Infection and response (pathogens and disease, body defences, antibiotics, vaccination, drug trials)

4.4 Bioenergetics (photosynthesis, rate of photosynthesis and limiting factors, uses of glucose in plants, aerobic respiration, anaerobic respiration, effects of exercise, metabolism)

<https://www.bbc.co.uk/bitesize/examspecs/z8r997h>

<https://cognitoedu.org/home.html>

<https://www.youtube.com/watch?v=5X6mow1AExI>

<https://www.youtube.com/watch?v=akMLGbNA0gE>

<https://www.youtube.com/watch?v=8Yqbu56ImXk>

https://www.youtube.com/watch?v=oiexYuQm_xE

https://www.youtube.com/watch?v=id0aO_OdFwA

<https://www.youtube.com/watch?v=mKYQ-K23Mr4>

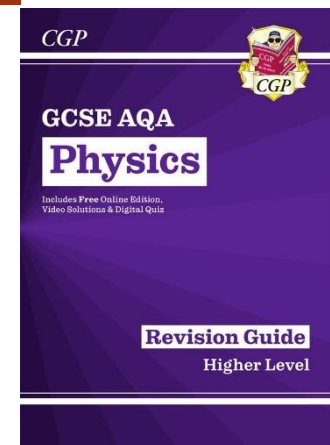
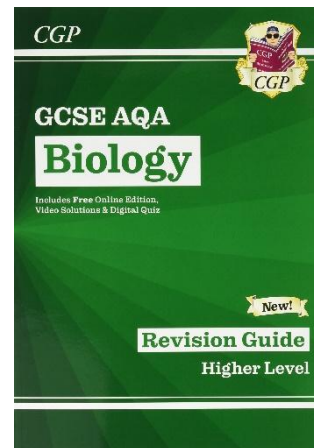
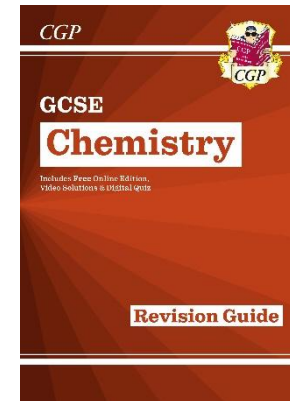
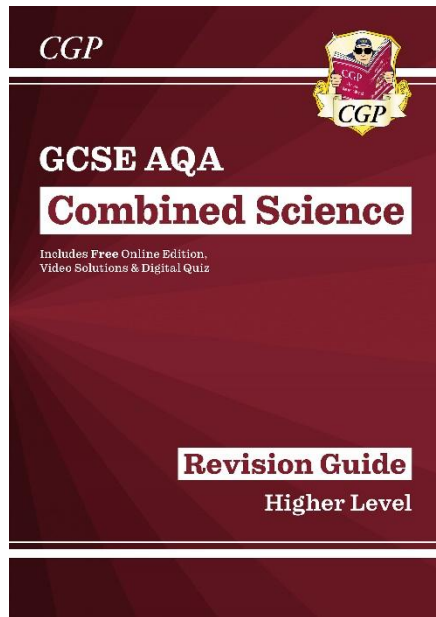




What should students be doing to prepare themselves for the Autumn Mocks and GCSEs?



- Purchase revision guides!





You can also sign up to
Cognito for free where all
the videos can be found
but also a bank of
practice exam questions



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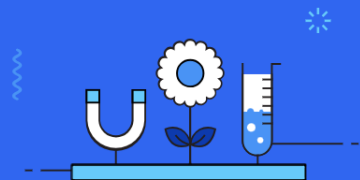
GCSE

Combined Science - AQA Trilogy

Easy-to-understand homework and revision materials for your GCSE Combined Science AQA Trilogy '9-1' studies and exams

Part of [Combined Science](#)

[+ Add subject to My Bitesize](#)



BBC Bitesize

- AQA Trilogy.
 - Combined Science.
- OR...
- Triple (Separate Sciences).

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View your favourite subjects and get revising quicker.

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Exam practice



GCSE Combined Science: exam-style quiz by topic

Try this quiz based on GCSE Combined Science past papers. Choose the topic you would like to revise and answer the



GCSE Combined Science: exam-style questions

Free online science tests based on past papers to increase your understanding in biology, chemistry and physics GCSE

GCSE

Chemistry (Single Science) - AQA

Easy-to-understand homework and revision materials for your GCSE Chemistry (Single Science) AQA '9-1' studies and exams

Part of [Chemistry \(Single Science\)](#)

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Exam practice



GCSE Chemistry: exam-style quiz by topic

Try this quiz based on GCSE Chemistry past papers. Choose the topic you would like to revise and answer the



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Free online chemistry tests based on past papers to increase your understanding in chemistry GCSE



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Discover how to use past papers effectively



Science shorts on Youtube



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ORGANISATION



INFECTION & RESPONSE

BIOENERGETICS



AQA
GCSE
BIOLOGY
PAPER 1
in 25 minutes 24:39

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Lessons and revision tips to help you in your GCSE & A-level studies. Have a look around and see if there's something just for you ...

Subscribe

All of AQA BIOLOGY Paper 1 in 25 minutes - GCSE Science Revision

461K • 4mo ago



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Revision app! iOS: <https://bit.ly/studysshortsios> Android: <https://bit.ly/studysshortsand>



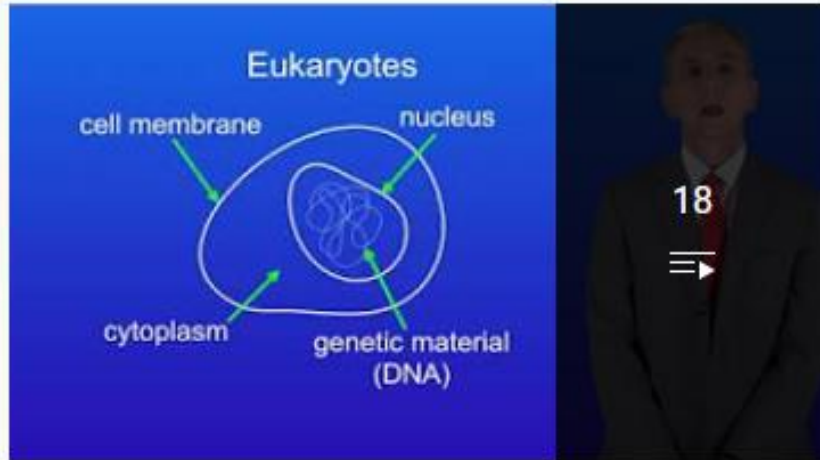
23 chapters Intro | Microscopy | Cells | Microbiology (TRIPLE) | Mitosis | Specialisation &...



free science lessons cell biology gcse



 FILTERS



9-1 GCSE Biology Paper 1 Cell Biology

Freesciencelessons ✓

GCSE Science Revision Biology "Eukaryotes and Prokaryotes" • 2:41

GCSE Science Revision Biology "Sizes of Cells" • 4:05

[VIEW FULL PLAYLIST](#)

**Free Science lessons on
YouTube- great for
foundation tier**



Primrose kitten on YouTube- great for run throughs of whole topics



primrose kitten biology paper 1



FILTERS

AQA Biology
Paper 1
Whole Topic



The whole of AQA Biology Paper 1 in only 63 minutes! 17th May 2022 | Science exam revision

1.6M views • 4 years ago



Science and Maths by Primrose Kitten

I want to help you achieve the grades you (and I) know you are capable of, these grades are the stepping stone to your future.

CC



start | Plant Cell Structure | Animal Cell Structure | Comparison of Animal and Plant Cells |...

56 chapters



- There is also a wealth of resources including required practical videos, checklists, specification overviews and quizzes on the revision area of the school website....



Parent Zone

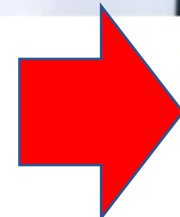


PARENT ZONE

Pupil Zone



PUPIL ZONE



Staff Zone



PUPIL ZONE



REVISION

HOMEWORK



SUBJECT REVISION RESOURCES



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CURRICULUM



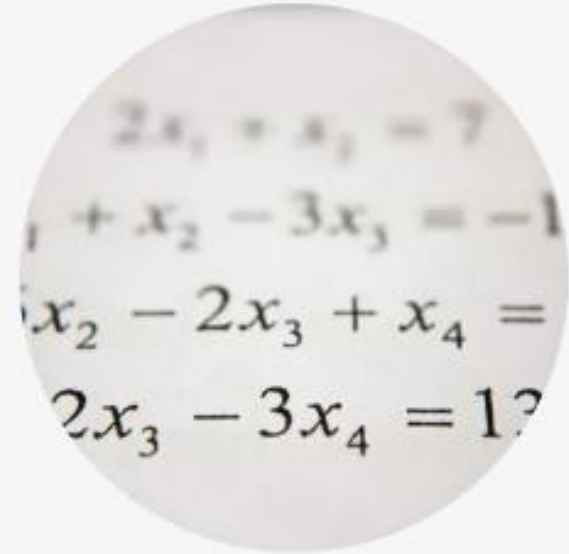
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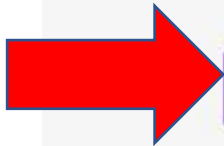
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SCIENCE REVISION RESOURCES



Biology Padlet Resources

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Chemistry Padlet Resources

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Physics Padlet Resources

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GCSE Chemistry AQA 9-1

Everything you need to pass Chemistry Paper 1 and Paper 2.

Chemistry Paper 1 Topics Include:

- Atomic Structure.
- Periodic Table.
- Bonding.
- Properties of Matter and Structures.
- Quantitative - Yields, Moles, Relative Formula Mass, Balancing Equations.
- Chemical Changes - Reactivity, Neutralisation, pH, Electrolysis.
- Energy Changes - Endothermic Vs Exothermic, Reaction Profiles.

Chemistry 1 Required Practicals:

- Making Salts.
- Electrolysis.
- Temperature Changes.

GCSE COMBINED SCIENCE (9-1)

Required practical handbook

Combined science AQA-8464-...
PDF document
padlet drive

Making Salts RP

Watch the video to see the RP in action.



Making Salts - GCSE Science ...
by Malmesbury Science
youtube

Electrolysis RP

Watch the video to see the RP in action.

The Whole of Chemistry Paper 1 in one Video!



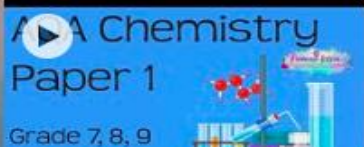
The whole of AQA Chemistry P...
This is for C1 or paper 1 of your...
youtube

Chemistry 1 Test Yourself - Quick Fire Questions & Answers



AQA Chemistry Paper 1 - 214 ...
by Science and Maths by Primr...
youtube

Chemistry 1 Grades 7, 8 and 9 Booster Questions



Grade 7, 8, 9

Chemistry 1 Flash Cards

Great way to revise key terms.



AQA Chemistry Paper 1 Flashc...
Start studying AQA Chemistry ...
quizlet

Chemistry 1 Match Up Game

Drag the definition into the term to make it go green, try to beat the clock!



AQA Chemistry Paper 1 Flashc...
Start studying AQA Chemistry ...
quizlet

Chemistry 1 Keyword Quiz

Test yourself on the definitions of key words.

Chemistry Paper 2 Topics Include:

- Rate of Chemical Change.
- Organic Chemistry - Crude Oil, Fractional Distillation, Hydrocarbons.
- Chemical Analysis - Purity, Chromatography, Testing for Gases.
- Chemistry of the Atmosphere.
- Using Resources.

Chemistry 2 Required Practicals:

- Rates of Reaction.
- Chromatography.
- Water Purification.

GCSE COMBINED SCIENCE (9-1)

Required practical handbook

Combined science AQA-8464-...
PDF document
padlet drive

Rates of Reaction RP

Watch the video to see the RP in action.



Rates Of Reaction - GCSE Scie...
Mrs Peers-Dent shows you ho...
youtube

Rates of Reaction 2 (Collecting Gas) RP





SCIENCE



AQA GCSE Chemistry Paper 1

Triple/Separate
Double/Combined Trilogy
HT/FT

All of AQA CHEMISTRY Paper 1 in 30 minutes - GCSE Science Revision
Science Shorts @ 100 views

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AQA GCSE Biology Paper 1

Triple/Separate
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HT/FT

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Combined Science - AQA Trilogy

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Combined Science AQA Trilogy 9-11 studies and more

AQA GCSE Physics Paper 1

Triple/Separate
Double/Combined Trilogy

All of AQA BIOLOGY Paper 1 in 25 minutes - GCSE Science Revision
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GCSE Biology Paper 1 Quiz (AQA)
Science Shorts • 104k views • 3 months ago

All BIOLOGY Required Practicals - GCSE Science (AQA)
Science Shorts • 57k views • 2 months ago

All of AQA CHEMISTRY Paper 1 in 30 minutes - GCSE Science Revision
Science Shorts • 454k views • 11 months ago



Any further questions/queries...

l.o'neill@portchester.hants.sch.uk

Or contact your Science teacher directly.

