

Achieving your personal best

Biology

GCSE exams

AQA Combined Science – Paper 2- REVISIT

Papers 1 & 2 - mock exams

AQA Combined Science – Paper 1 - REVISIT

Paper 2 - mock exams

AQA Combined Science Paper 2: B7 – Ecology

Paper 1 - mock exams

AQA Combined Science Paper 2: B6 – Inheritance, Variation and evolution

AQA Combined Science Paper 2: B5 – Homeostasis and response

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B1 – cells – Prokaryotic & eukaryotic cells & specialised cells

Required practical – osmosis

B2 – Organisation – transport in plants – transpiration & translocation

B2 – Organisation – digestion & enzymes

B3 – inheritance & response – immune response & vaccination

Required Practical – Light intensity & photosynthesis

B4 – Bioenergetics – Photosynthesis & limiting factors?

Required Practical – Microscopy – onion cells

B1 – cells – Diffusion, osmosis & active transport

B2 – Organisation – Transport system – Blood circulatory system

Required practical – enzymes & food tests

B4 – Bioenergetics – respiration & exercise

Selective breeding & reduction in the gene pool

Genetic engineering & GM crops

Classification – binomial system & evolutionary trees

Competition – biotic and abiotic factors & adaptations

Required Practical – quadrat sampling

The water cycle

Biodiversity and waste management

Maintaining ecosystems & biodiversity

Variation and evolution – theories of evolution: natural selection & antibiotic resistance

Fossils – what are fossils and 3 ways in which fossils form.

Food chains & predator-prey relationships

Transects – distribution of organisms

The Carbon cycle

Global warming & Deforestation & Landuse

Inheritance – genetic cross diagrams – genetic disorders & genetic family trees

What is DNA?

Controlling fertility – contraception and Fertility treatment - IVF

The endocrine system – controlling blood sugar levels – Insulin & glucagon, diabetes

The nervous system, synapses and Reflexes

Inheritance – Genetic cross diagrams – inheritance of characteristics

Inheritance – genetic cross diagrams – inheritance of gender

Meiosis – Type of cell division (compare with Mitosis – paper 1)

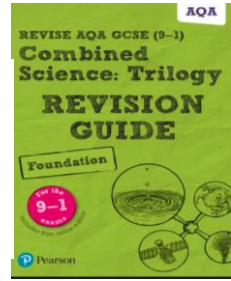
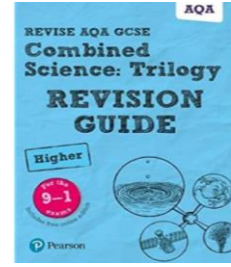
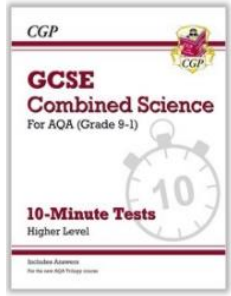
Reproduction – sexual and asexual reproduction

The endocrine system - adrenalinae and thyroxine ?

The endocrine system – puberty & menstrual cycle ?

Required Practical – Investigating Reaction times

What is homeostasis?



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GCSE exams

Chemistry

AQA Combined Science – Paper 2 – REVISIT

Papers 1 & 2 – Mock exams

AQA Combined Science – Paper 1 – REVISIT

Paper 2 – mock exams

Paper 1 – mock exams

AQA Combined Science Paper 2: C8 – Chemical analysis

AQA Combined Science Paper 2: C9 – Evolution of the atmosphere

AQA Combined Science Paper 2: C10 – Using resources

AQA Combined Science Paper 2: C7 – Organic chemistry – Crude oil

AQA Combined Science Paper 2: C6 – Rate & extent of chemical change

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Required Practical – electrolysis

Required practical – making a soluble salt

C4 – displacement reactions & reactivity series & ionic equations

C5 – Energy changes – endo & exothermic & bond energy calculations (higher only)

C2 – Structure & bonding – Ionic bonding & metallic bonding

C3 – Calculations – RFM, Moles, & % mass

C1 – Periodic table & alkali metals, halogens and noble gases – reactivity trends & properties
C1 – Atomic structure & history of the atom

B4 – electrolysis – molten and solutions of ionic compounds

C4 – Acid reactions & neutralisation & balancing equations

Required practical – energy changes

C2 – Structure & bonding – Covalent bonding & Giant covalent structure

C3 – Calculations – Concentration & limiting reactants

Purity & formulations

Tests for gases

The evolution of the atmosphere

Carbon footprints

Finite & renewable resources

Potable water & required practical

Walking talking mocks

Paper 1 – chemistry preparation

Alkenes & bromine water test

Uses and cracking of crude oil – 2 methods

Fractional Distillation of crude oil & trends in Bpt, Viscosity, flammability and volatility

What are hydrocarbons ?

Paper Chromatography & calculating Rf values – Practical

Green house gases and global warming – climate change

Global warming & air pollution

Life cycle Assessments, reuse and recycling

Waster water treatment

What is crude oil ?

Equilibrium & Le Chatelier's principle

Calculating reaction Rates from graphs – Maths skills

Required Practical – releasing gas expt - marble chips & acid experiment

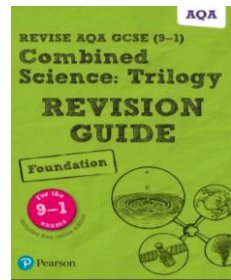
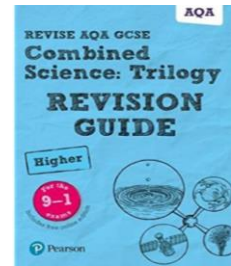
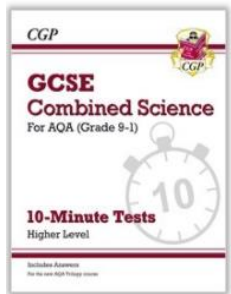
Factors affecting the rate of reaction

Reversible reactions

Required Practical – disappearing cross experiment

Measuring the rate of reaction – Mg & acid expt

Rate of reaction - basics



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P3 - Internal energy & change of state & Specific latent heat (cooling & heating curves)

P3 - states of matter & particle theory

P4 - Half life - & calculations

P4 - Atomic structure & isotopes & radioactivity

Required practical - investigating resistance

P2 - Resistance & $V=IR$ calculations

P1 - energy resources & their uses

P1 - Energy stores & energy calculations - maths skills

GCSE exams

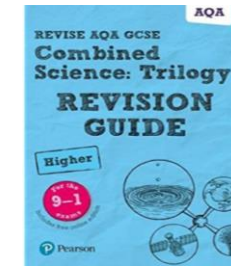
AQA Combined Science - Paper 2 - REVISIT

Papers 1 & 2 - mock exams



Physics

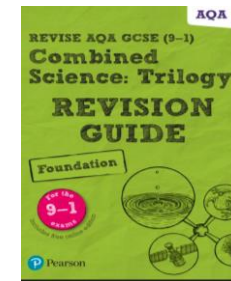
AQA Combined Science - Paper 1 - REVISIT



AQA Combined Science Paper 2: P6 - Waves

AQA Combined Science Paper 2: P7 - Magnetism & electromagnetism

Paper 2 - mock exams



Paper 1 - mock exams

Walking talking mocks

Types of waves & wave properties

Electromagnetic waves & properties

EM waves & their uses & dangers

P2 - Nuclear equations

P2 Electricity in the home & Power calculations - maths skills

P2 - series and parallel circuits & calculations - maths skills

Finite & permanent & induced magnets

The Motor effect - higher only

Required practical - ripple tank & wave equation

Refraction & radio waves

Required practical - investigating IR radiation

Electromagnetism - how to make an electromagnet

Electric motors

Paper 1 Revision

Newton's 1st, 2nd and 3rd laws

Velocity-time graphs - draw and interpret?

What is acceleration and how do you calculate acceleration - maths skills

Required practical - investigating springs - Hooke's law

Calculating forces - maths skills

What is the difference between weight, mass & gravity

Momentum & momentum before & after collisions

AQA Combined Science Paper 2: P5 - Forces

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Reaction times

Stopping distances and what factors affect stopping distances?

Required practical - investigating motion

What is Terminal velocity?

Distance-time graphs - draw and interpret

Scalar & vector quantities

Forces & elasticity & calculations

Resultant forces & work done calculations - maths skills

What are Contact & non-contact forces?