

Biology

Paper 1

Friday May 10th

Combined

B1. Cell Biology

B2. Organisation

B3. Infection and Response

B4. Bioenergetics

AQA GCSE COMBINED SCIENCE PAPER 1 REVISION CHECK-LIST

Cell Biology

- Cell Measurement (Microscopy)
- Cell Size
- Light Microscopes
- Microscopy (Required Practical)
- Limitations of Microscopes
- Animal Cells
- Plant Cells
- Measuring Cell Size
- Comparing Sizes
- Eukaryotes and Prokaryotes
- Specialised Cells
- Chromosomes and DNA
- Mitosis and The Cell Cycle
- Stem Cells
- Cell Differentiation
- Cloning in Plants
- Using Human Stem Cells
- Therapeutic Cloning
- Diffusion
- Mixing Particles
- Cell Models
- Osmosis
- Osmosis Required Practical
- Simple Measures
- Analysis Result
- Active Transport
- Comparing Transport Processes

Organisation

- Levels of Organisation
- Exchange Surfaces
- Adaptations of Exchange Surfaces
- Gaseous Exchange System
- Breathing
- Molecules of Life
- Structure of Molecules
- Food Tests (Required Practical)
- The Human Digestive System
- Enzymes
- Digestive Enzymes
- Enzymes (Required Practical)
- The Liver and Digestion
- Circulatory System
- The Heart
- Circulation
- Control of the Heart Rate
- Blood Vessels
- The Blood
- White Blood Cells
- Cardiovascular Disease
- Treating Cardiovascular Disease
- Heart Transplants
- Evaluating Treatments
- Pulses and Blood Flow
- Plant Organisation
- Plant Tissues
- Xylem and Phloem
- Transport in Plants
- Transpiration
- Factors Affecting Transpiration
- Investigating Transpiration
- Potometers
- Stomata and Guard Cells
- Types of Diseases
- Cancer and Carcinogens
- Risk Factors
- Smoking
- Alcohol
- Exercise, Nutrition and Obesity
- Principles of Sampling
- Analysing Patterns in Data
- Line Graphs
- Frequency of Disease
- Scatter Graphs

Infection and Response

- Pathogens
- Viral Diseases
- Bacterial Diseases
- Protoist Diseases
- Fungal Diseases
- Preventing Diseases
- Interpreting Information
- Non-Specific Human Defences
- The Immune System
- Non-communicable Diseases
- Vaccinations
- Herd Immunity
- Antibiotics and Painkillers
- Antibiotic Resistance
- Discovery of New Drugs
- Developing and Testing Drugs

Bioenergetics

- Photosynthesis
- Factors Affecting Photosynthesis
- Water, Light, Carbon Dioxide, Temperature and Chlorophyll
- Interacting Factors (Higher)
- Photosynthesis (required Practical)
- Interpreting Data
- Inverse Square Law (Higher)
- Importance of Limiting Factors
- Cellular Respiration
- Aerobic and Anaerobic Respiration
- Anaerobic Respiration (yeast)
- Response to Exercise
- Oxygen Debt and Liver (Higher)
- Metabolism



You will need to use the GCSE combined science (trilogy) website to revise

each section:

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



AQA Biology Required Practical Checklist

To show how confident you are with each required practical, either colour the square red, amber or green or add a tick in the correct box.

Practical Name	Completed	Rate Your Understanding of This Practical			Exam Questions Completed
		Red	Amber	Green	
Microscopy: Using a microscope to observe, draw and label animal and plant cells.					
Microbiology (Biology Only): Investigating the effect of antiseptics on the growth of bacteria.					
Osmosis: Investigating the effect of concentration of salt or sugar solutions on the mass of plant tissue.					
Food Tests: Using qualitative reagents to test for carbohydrates, lipids and proteins.					
Enzymes: Investigating the effect of pH on the rate of reaction of amylase.					
Photosynthesis: Investigating the effect of light intensity on the rate of photosynthesis.					
Reaction Time: Investigating the effect of a factor on human reaction time.					
Germination (Biology Only): Investigating the effect of gravity or light on the growth of newly germinated seedlings.					
Field Investigations: Using sampling techniques to investigate the effect of a factor on distribution of a species.					
Decay (Biology Only): Investigating the effect of temperature on the rate of decay of milk by measuring changes in pH.					

Chemistry

Paper 1

Friday May 17th

Combined

C1. Atomic structure & Periodic Table

C2. Bonding, Structure and Properties

C3. Quantitative Chemistry

C4. Chemical Changes

C5. Energy Changes

AQA GCSE COMBINED CHEMISTRY PAPER 1 REVISION CHECK-LIST

Atomic Structure and The Periodic Table

- Chemical Symbol
- Chemical Formulae of Elements
- Chemical Formulae of Compounds
- Chemical Formulae of Ions
- Word Equations
- Balanced Chemical Equations
- Pure Substances and Mixtures
- Filtration and Crystallisation
- Distillation
- Paper Chromatography
- Early Ideas about Atoms
- Developing Models of Atoms
- Structure of the Atom
- Atomic Number
- Isotopes
- Relative Atomic Mass
- Mendeleev's Periodic Table
- The Modern Periodic Table
- Electronic Structure
- Metals and Non-Metals
- Group 0 – Physical and Chemical
- Group 1 – Physical and Chemical
- Group 7 – Physical and Chemical
- Group 7 – Displacement Reactions

Bonding, Structure and Matter

- Solids, Liquids and Gases
- Change of State
- Forming Ions
- Forming Ionic Bonds
- Ionic Lattice
- Properties of Ionic Compounds
- Covalent Bonds
- Modelling Molecules
- Drawing Dot and Cross Diagrams
- Interpreting Dot and Cross Diagrams
- Properties of Substances with Small Molecules
- Substances with Many Covalent Bonds
- Diamond and Graphite
- Graphene and Fullerenes
- Polymers
- Structure and Bonding in Metals
- Alloys

Quantitative Chemistry

- Relative Formula Mass
- Law of Conservation of Mass
- Chemical Measurements
- Concentration of Solutions
- The Mole (H)
- Moles and Masses (H)
- Calculations (H)
- Reactions and Moles (H)
- Calculating Concentrations
- Volume of Solutions

Energy Changes

- Reactions and Temperature Changes
- Temperature Changes (Required Practical)
- Reaction Profiles
- Explaining Energy Changes (H)
- Calculating Energy Changes

Chemical Changes

- Reactivity Series of Metals
- Oxidation, Reduction and Displacement
- Extracting Iron and Copper
- Extracting Aluminium
- Acidic and Alkaline Solutions
- Neutralisation
- Reactions of Acids with Metals
- Naming Salts
- Making Soluble Salts
- Making Salts (Required Practical)
- Concentration and Strengths of Acids (H)
- Electrolysis of Molten Salts
- Electrolysis of Solutions
- Electrolysis (Required Practical)
- Oxidation and Reduction in Electrolysis (H)

You will need to use the GCSE science (trilogy) website to revise each section:
<https://www.bbc.co.uk/bitesize/exampsp>
 ecs/z8r997h



AQA Chemistry Required Practical Checklist

To show how confident you are with each required practical, either colour the square red, amber or green or add a tick in the correct box.

Practical Name	Completed	Rate Your Understanding of This Practical			Exam Questions Completed
		Red	Amber	Green	
Making Salts: Using an insoluble oxide or carbonate to prepare a pure, dry sample of a soluble salt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neutralisation (Chemistry Only Foundation Tier): Using titration to find the volume of a strong acid required to neutralise a known volume of a strong alkali.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neutralisation (Chemistry Only Higher Tier): Finding the concentration of a solution from the reacting volume and known concentration of another solution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrolysis: Investigating the elements formed at each electrode when aqueous salt solutions are electrolysed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature Changes: Investigating the variables that affect temperature changes in reacting solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rates of Reaction: Investigating how the concentration of a solution affects the rate of reaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromatography: Investigating how paper chromatography can be used to separate and identify mixtures of coloured substances.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identifying Ions (Chemistry Only): Using chemical tests to identify anions and cations in ionic compounds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Purification: Testing water samples to identify impurities and using distillation to produce potable water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Physics

Paper 1

Wednesday May 22nd

Combined

P1. Energy

P2. Electricity

P3. Particle Model of Matter

P4. Atomic Structure (Radioactivity)

AQA GCSE COMBINED PHYSICS PAPER 1

REVISION CHECK-LIST

You will need to use the GCSE science (trilogy) website to revise each section:

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

Energy

- Types of Energy Stores ----->
- Energy Transfers ----->
- Energy Dissipation ----->
- Conservation of Energy ----->
- Calculation of Energy ----->
- Changes ----->
- Work, Power and Efficiency -->
- Energy and Power ----->
- Efficiency ----->
- Electrical Appliances ----->
- Energy and Heating ----->
- Thermal Conductivity ----->
- Specific Heat Capacity ----->
- Specific Heat Capacity ----->
- (Required Practical) ----->
- National and Global Energy -->
- Demands and Resources ----->
- Energy ----->

Electricity

- Electrical Circuit ----->
- Symbols ----->
- Electrical Charge ----->
- and Current ----->
- Potential Difference ----->
- and Resistance ----->
- Voltage Graphs ----->
- (Required Practical) ----->
- Series Circuits ----->
- Parallel Circuits ----->
- Resistance ----->
- (Required Practical) ----->
- Energy and Power ----->
- Alternating and ----->
- Direct Current ----->
- Household ----->
- Electricity ----->
- Electrical ----->
- Appliances ----->
- The National Grid ----->

Particle Model of Matter

- Density ----->
- Volume ----->
- Density (Required ----->
- Practical) ----->
- States of Matter ----->
- Internal Energy ----->
- Energy and ----->
- Temperature ----->
- Specific Heat ----->
- Capacity (2) ----->
- Specific Latent Heat -->
- Multiple Changes ----->
- Particle Motion ----->
- Pressure and ----->
- Temperature ----->
- Pressure and Volume -->
- Work and Energy ----->
- (Higher) ----->

Atomic Structure

- Developing the Atom -->
- Rutherford and the ----->
- Nucleus ----->
- Further ----->
- Developments to ----->
- the Atomic Model ----->
- Structure of the ----->
- Atom ----->
- Atoms and Isotopes ----->
- Ions ----->
- Radioactive Decay ----->
- Nuclear Radiation ----->
- Half-Lives ----->
- Nuclear Equations ----->
- Irradiation ----->
- Contamination ----->
- Effect of Radiation ----->
- on the Human Body ----->



AQA Physics Required Practical Checklist

To show how confident you are with each required practical, either colour the square red, amber or green or add a tick in the correct box.

Practical Name	Completed	Rate Your Understanding of This Practical			Exam Questions Completed
		Red	Amber	Green	
Specific Heat Capacity: Investigating the specific heat capacity of copper.					
Thermal Insulation (Physics Only): Investigating the effectiveness of different materials as thermal insulators and factors that affect the thermal insulation properties of a material.					
Resistance: Using circuit diagrams to investigate the factors affecting the resistance of electrical circuits.					
I-V Characteristics: Investigating the effect of current through a component when the potential difference across it changes.					
Density: Finding the density of regular and irregular shaped objects and liquids.					
Force and Extension: Investigating the relationship between force and extension for a spring.					
Acceleration: Investigating the effects of mass and force on acceleration of an object.					
Waves: Observing waves in a ripple tank and observing waves on a stretched spring or cord.					
Reflection and Refraction (Physics Only): Investigating the reflection and refraction of light by different surfaces and substances.					
Radiation and Absorption: Investigating the amount of infrared radiation emitted from different surfaces.					

Biology

Paper 2

Friday June 7th

Combined

B5. Homeostasis and Response

B6. Inheritance, Variation & Evolution

B7. Ecology

AQA GCSE COMBINED SCIENCE PAPER 2 REVISION CHECK-LIST

Homeostasis and Response

- Homeostasis
- The Nervous System
- Reflexes
- Reaction Time (Required Practical)
- Hormones and Nerves
- Negative Feedback (Higher)
- Thyroxine and Adrenaline (Higher)
- Control of Blood Glucose
- Diabetes
- Role of Glucagon (Higher)
- Reproductive Hormones
- Hormones in the Menstrual Cycle
- Oestrogen and Progesterone
- Hormonal Methods of Contraception
- Non-hormonal Methods of Contraception
- IVF (Higher)
- Evaluating IVF (Higher)

- Asexual Reproduction
- Sexual Reproduction, Meiosis and Gametes
- DNA
- The Human Genome
- Evolution by Natural Selection Fossils
- Genetic Inheritance
- Genetic Crosses
- Punnett Squares
- Extinction
- Examples of Genetic Crosses
- Sex Determination
- Inherited Disorders
- Family Trees
- Classification of Living Organisms
- Development of Classifying Systems

- Causes of Variation
- Mutation and Variation
- Selective Breeding
- Genetic Engineering
- Uses of Genetic Engineering
- Process of Genetic Engineering (Higher)
- Benefits and Risks of Genetic Engineering

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Ecology

- Communities
- Abiotic Factors
- Biotic Factors
- Competition in Plants
- Competition in Animals
- Adaptation of Plants
- Adaptations of Animals
- Extremophiles
- Levels of Organisation
- Predators and Prey
- Quadrats and Transects
- Sampling (Required Practical)
- Mean, Median and Mode Averages
- Recycling Material
- The Carbon Cycle
- The Water Cycle
- Biodiversity
- Population Growth
- Waste Management
- Deforestation
- Peat Bog Destruction
- Greenhouse Effect
- Global Warming
- Maintaining Biodiversity

Chemistry

Paper 2

Tuesday June 11th

Combined

C6. Rate of Chemical Change

C7. Organic Chemistry

C8. Chemical Analysis

C9. Chemistry of the Atmosphere

C10. Using Resources

AQA GCSE COMBINED CHEMISTRY PAPER 2 REVISION CHECK-LIST

The Rate and Extent of Chemical Changes

- Rate of Reaction
- Rates, Concentration and Pressure
- Rates and Surface Area to Volume Ratio
- Rates and Temperature
- Catalysts
- Production of Gas (Required Practical)
- Rate of Reaction (Required Practical)
- Reversible Reactions
- Equilibrium (H)

Analysing and Identifying Substances

- Pure Substances
- Formulations
- Chromatography
- Chromatography (Required Practical)

Chemistry of the Atmosphere

- Earth's Early Atmosphere
- Increases in Oxygen
- Decreases in Carbon
- The Greenhouse Effect
- Human Activities
- Global Climate Change
- Carbon Footprint
- Combustion of Hydrocarbon Fuels
- Atmospheric Pollutants

Organic Chemistry

- Crude Oil and Hydrocarbons
- Alkanes
- Separating Crude Oil
- Properties of Fractions
- Cracking Alkenes

Using Resources

- The Earth's Resources
- Finite and Renewable Resources
- Potable Water
- Desalination
- Waste Water Treatment
- Purification of Water (Required Practical)
- Life-cycle Assessment
- Recycling
- Biological Metal Extraction (H)

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Physics

Paper 2

Friday June 14th

Combined

P5. Forces

P6. Waves

P7. Magnetism & Electromagnetism

P8. Space Physics

AQA GCSE COMBINED PHYSICS

PAPER 2 REVISION CHECK-LIST

Forces

- Scalar Quantities -----> Motion in a Straight Line ----->
- Vector Quantities -----> Velocity & Acceleration ----->
- Calculating Involving Distance-Time Graphs ----->
- Forces Velocity-Time Graphs ----->
- Velocity, Acceleration
- Contact Forces -----> and Distance
- Non-contact Forces ----->
- Terminal Velocity ----->
- Gravitational Fields -----> Newton's First Law ----->
- Weight, Mass and GFS -----> Newton's Second Law ----->
- Calculating Work Done -----> Forces and Acceleration
- Free Body
- Diagrams (H)
- Resolving Forces (H) -----> Mass and Acceleration
- (Required Practical)
- Newton's Third Law ----->
- Change of Shape -----> Forces and Braking ----->
- Hooke's Law ----->
- Energy in a Spring -----> Momentum (H)
- Extension of a Spring
- (Required Practical)
- Conservation of
- Momentum (H) ----->

Waves

- Types of Waves ----->
- Wave Period and Wave
- Speed
- Speed of Sound in
- Air and Water
- Waves in a Liquid
- (Required Practical)
- Wave in a Solid
- (Required Practical)
- Longitudinal Waves ----->
- Transverse Waves ----->
- Electromagnetic Waves ----->
- More about
- Electromagnetic Waves
- Medicine and
- Ionising Radiation
- Reflection of Waves ----->
- Refraction of Waves ----->
- Infrared Radiation
- (Required Practical)
- The Earth's Temperature (H) ----->

Magnetism and Electromagnets

- Poles of a
- Magnet ----->
- Induced and
- Permanents ----->
- Magnetism
- Drawing
- Magnetic Fields
- Electromagnets ----->
- Motor Effect (H) ----->
- Fleming's Left ----->
- Hand Rule (H) ----->
- Electric
- Motors (H) ----->
- Transformers (H) ----->

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