

Biology

Paper 1

Friday May 10th

Triple

B1. Cell Biology

B2. Organisation

B3. Infection and Response

B4. Bioenergetics

AQA GCSE TRIPLE BIOLOGY PAPER 1 REVISION CHECK-LIST

Cell Biology

- Cell Measurement (Microscopy)
- Cell Size
- Biological Sample (T)
- 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
- Bacterial Calculations (T)
- Aseptic Technique (Triple Required Practical)
- Effect of Antibiotics and Antiseptics (T)
- Discovery of New Drugs
- Developing and Testing Drugs
- Production of Monoclonal Antibodies (T)
- Uses of Monoclonal Antibodies (T)
- Issues with Monoclonal Antibodies (T)
- Vaccinations
- Herd Immunity
- Antibiotics and Painkillers
- Antibiotic Resistance
- Bacterial Growth in Cultures (T)
- Pathogens causing Plant Diseases (T)
- Mineral Ion Deficiencies (T)
- Nutrient Solutions (T)
- Symptoms of Plant Diseases (T)
- Plant Defences (T)
- Mechanical Plant Defences (T)

Bioenergetics

- Photosynthesis
- Factors Affecting Photosynthesis
- Water, Light, Carbon Dioxide, Temperature and Chlorophyll
- Interacting Factors
- Photosynthesis (required Practical)
- Interpreting Data
- Inverse Square Law
- Limiting Factors
- Cellular Respiration
- Aerobic and Anaerobic Respiration
- Anaerobic Respiration (yeast)
- Response to Exercise
- Oxygen Debt and Liver
- Metabolism
- You will need to use the GCSE combined science (trilogy) website to revise each section: <https://www.bbc.co.uk/bitesize/examspecs/zpgcbk7>



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

Triple

C1. Atomic structure & Periodic Table

C2. Bonding, Structure and Properties

C3. Quantitative Chemistry

C4. Chemical Changes

C5. Energy Changes

AQA GCSE TRIPLE CHEMISTRY PAPER 1 REVISION CHECK-LIST

Atomic Structure and the Periodic Table

Atomic Number and Mass Number

Isotopes

Relative Atomic Mass

Chemical Symbol

Chemical Formulae of Elements

Mendeleev's Periodic Table

The Modern Periodic Table

Chemical Compounds

Electronic Structure

Chemical Formulae of Metals and Non-Metals

Word Equations

Balanced Chemical Equations

Group 0 - Physical and Chemical

Group 1 - Physical and Chemical

Pure Substances and Mixtures

Filtration and Crystallisation

Group 7 - Physical and Chemical

Distillation

Paper Chromatography

Group 7 - Displacement Reactions

Early Ideas about Atoms

Developing Models of Atoms

Transition Metals

Structure of the Atom

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

Nanoscience

Nanoparticle Materials

Quantitative Chemistry

Relative Formula Mass

The Mole

Moles and Masses

Law of Conservation of Mass

Calculations

Reactions and Moles

Chemical Measurements

Concentration of Solutions

Volume of Solutions

Atom Economy

Percentage Yield

Reaction Pathways

Avogadro's Law

Molar Gas Volume

Calculations Involving Molar Volume

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

Electrolysis of Molten Salts

Electrolysis of Solutions

Electrolysis (Required Practical)

Oxidation and Reduction in Electrolysis

Making Salts from Acids and Alkalis

Titration (Triple Required Practical)

Titration Calculations

Energy Changes

Reactions and Temperature Changes

Temperature Changes (Required Practical)

Reaction Profiles

Explaining Energy Changes

Calculating Energy Changes

Chemical Cells

Fuel Cells

Evaluating Different Cells

You will need to use the GCSE science (trilogy) website to revise each section:
<https://www.bbc.co.uk/bitesize/subjects/zs6hvcw>

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

Triple

P1. Energy

P2. Electricity

P3. Particle Model of Matter

P4. Atomic Structure (Radioactivity)

AQA GCSE TRIPLE 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/zsc9rdm>

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
- Insulation (Triple Required Practical)
- 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
- Electrical Charges (T)
- Charging by Friction (T)
- Electric Fields (T)

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

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
- Nuclear Fission (T)
- Fission Reactors (T)
- Nuclear Fusion (T)



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

Triple

B5. Homeostasis and Response

B6. Inheritance, Variation & Evolution

B7. Ecology

AQA GCSE TRIPLE BIOLOGY PAPER 2 REVISION CHECK-LIST

- Homeostasis and Response**
- Hormonal Methods of Contraception
 - Non-hormonal Methods of Contraception
 - IVF
 - Evaluating IVF
 - Temperature Control
 - Water Balance
 - Nitrogen Balance
 - The Kidneys
 - Effects of ADH
 - Kidney Failure
 - Kidney Transplants
 - Negative Feedback
 - Thyroxine and Adrenaline
 - Auxins and Phototropism
 - Auxin and Geotropism
 - Plant Hormones
 - Role of Glucagon
 - Reproductive Hormones
 - Other Plant Hormones
 - Uses of Plant Hormones
 - Oestrogen and Progesterone

- Inheritance, Variation and Evolution**
- Selective Breeding
 - Genetic Engineering
 - Uses of Genetic Engineering
 - Process of Genetic Engineering
 - Benefits and Risks of Genetic Engineering
 - Cloning in Plants
 - Cloning in Animals
 - Evolution by Natural Selection
 - The Work of Lamarck
 - Darwin's Work on Evolution
 - Problems with Evolution
 - Darwin and Wallace
 - Speciation
 - Fossils
 - Ice and Peat Fossils
 - Inherited Disorders
 - Resistant Bacteria
 - Extinction
 - Classification of Living Organisms
 - Development of Classifying Systems

- Ecology**
- Biodiversity
 - Population Growth
 - Waste Management
 - Deforestation
 - Peat Bog Destruction
 - Greenhouse Effect
 - Global Warming
 - Maintaining Biodiversity
 - Impact of Environmental Changes
 - Levels of Organisation
 - Predators and Prey
 - Trophic Levels
 - Pyramids of Biomass
 - Transfer of Biomass
 - Calculating Efficiency
 - Recycling Material
 - The Carbon Cycle
 - Factors Affecting The Water Cycle
 - Food Security
 - Farming Techniques
 - Sustainable Fisheries
 - Role of Biotechnology
 - Novel Foods
 - Science Calculations

You will need to use the GCSE combined science (trilogy) website to revise each section:
<https://www.bbc.co.uk/bitesize/examspecs/zpgcbk7>

Chemistry

Paper 2

Tuesday June 11th

Triple

C6. Rate of Chemical Change

C7. Organic Chemistry

C8. Chemical Analysis

C9. Chemistry of the Atmosphere

C10. Using Resources

AQA GCSE TRIPLE CHEMISTRY PAPER 2 REVISION CHECK-LIST

The Rate and Extent of Chemical Changes

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

Analysing and Identifying Substances

- Pure Substances →
- Formulations →
- Chromatography →
- Chromatography (Required Practical) →
- Flame Tests for Metal Ions (T) →
- Metal Hydroxide Precipitate Test (T) →
- Negatively Charged Ions (T) →
- Testing for Ions (Required Practical) →
- Instrumental Methods of Analysis (T) →

Organic Chemistry

- Crude Oil and Hydrocarbons → Alcohols (T)
- Alkanes → Reactions of Alcohols (T)
- Separating Crude Oil → Carboxylic Acids (T)
- Properties of Fractions → Addition
- Cracking Alkenes → Polymerisation (T)
- Alkenes (T) → Biological Polymers (T)
- Reactions of Alkenes (T) → Amino Acids (T)
- Condensation
- Polymerisation (T)

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 →

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 →

- Corrosion (T) →
- Uses of Metals (T) →
- Glass and Clay Ceramics (T) →
- Polymers (T) →
- Composites (T) →
- The Haber Process (T) →
- Fertilisers (T) →
- Making Ammonium Sulfate (T) →

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

<https://www.bbc.co.uk/bitesize/examspecs/z8xtmnb>

Physics

Paper 2

Friday June 14th

Triple

P5. Forces

P6. Waves

P7. Magnetism & Electromagnetism

P8. Space Physics

AQA GCSE TRIPLE PHYSICS

PAPER 2

REVISION CHECK-LIST

Forces

- Scalar Quantities
- Calculating Pressure (T)
- Vector Quantities
- Pressure in a Liquid (T)
- Calculating Involving Forces
- Atmospheric Pressure (T)
- Motion in a Straight Line
- Contact Forces
- Velocity & Acceleration
- Non-contact Forces
- Distance-Time Graphs
- Velocity-Time Graphs
- Gravitational Fields
- Velocity, Acceleration and Distance
- Weight, Mass and GFS
- Calculating Work Done
- Free Body Diagrams
- Terminal Velocity
- Resolving Forces
- Newton's First Law
- Newton's Second Law
- Forces and Acceleration (Required Practical)
- Energy in a Spring
- Mass and Acceleration (Required Practical)
- Extension of a Spring (Required Practical)
- Newton's Third Law
- Forces and Braking
- Moments (T)
- Moment and Balanced Objects (T)
- Conservation of Momentum
- Levers (T)
- Momentum
- Gears (T)
- Forces and Momentum (T)

Magnetism and Electromagnets

- Poles of a Magnet
- Induced and Permanent Magnetism
- Drawing Magnetic Fields
- Electromagnets
- Motor Effect
- Fleming's Left Hand Rule
- Electric Motors
- Loudspeakers and Headphones (T)
- Generator Effect (T)
- The AC Generator (T)
- The DC Generator (T)
- Microphones (T)
- Transformers
- Calculating Potential Difference (T)
- Transformer Power Transfer (T)

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
- Refraction (Triple Required Practical)
- Sound Waves (T)
- Ultrasound (T)
- Seismic Waves (T)
- Convex and Concave Lenses (T)
- Real and Virtual Images (T)
- Magnification (T)
- Visible Light (T)
- Infrared Radiation (Required Practical)
- The Earth's Temperature

Space (T)

- Solar System
- The Sun
- Orbital Motion
- Orbits and Speed
- Life Cycle of Stars
- Main Sequence Stars
- Supernovae
- Red-Shift
- Big Band Theory
- Future of the Universe

You will need to use the GCSE science (triple) website to revise each section:
<https://www.bbc.co.uk/bitesize/examspece/zsc9rdm>