

Chemistry (Triple) Summative Assessment Overview

Topic Area/Test Name	Syllabus Reference, Book Section and Revision Guide Area	Topic Content – What they will be tested on, incl. the practicals (RPA)
C1 Atomic Structure	Syllabus: AQA 5.1.1.1 - 5.1.1.7 Book: P4-21 Section C1.1-C1.8 Revision Guide: C1	Atoms Chemical Equations Separating Mixtures Basic Distillation & Chromatography History of the Atom Ions, Atoms and Isotopes, and Electronic Structure.
C2 The Periodic Table	Syllabus: AQA 5.1.2.1 - 5.1.3.2 Book: P22-35 Section C2.1-C2.6 Revision Guide: C1	Development of the Periodic Table Electronic Structures and the Periodic Table Group 1: The Alkali Metals Group 7: The Halogens Explaining Trends in the Periodic Table The Transition Elements
C3 Structure & Bonding	Syllabus: AQA 5.2.1.1 - 5.2.4.2 Book: P36-61 Section C3.1-C3.12 Revision Guide: C2	States of Matter Atoms into Ions Ionic Bonding & Giant Ionic Structures Covalent Bonding Simple Molecular and Giant Covalent Structures Fullerenes and Graphene Metallic Bonding and Giant Metallic Structures Nanoparticles Applications of Nanoparticles
C4 Chemical Calculations	Syllabus: AQA 5.3.1.1 - 5.3.5 Book: P62-81 Section C4.1-C4.9 Revision Guide: C3	Relative Masses and Moles Equations and Calculations From Masses to Balanced Equations The Yield of a chemical reaction Atom Economy Concentrations Titrations Titration Calculations Volumes of Gases
C5 Chemical Changes	Syllabus: AQA 5.4.1.1 - 5.4.2.5 Book: P84-101 Section C5.1-C5.8 Revision Guide: C4	The Reactivity Series Displacement Reactions Extracting Metals Salts from metals and from insoluble bases Other ways Salt can be made Neutralisation and the pH Scale Strong and Weak Acids
C6 Electrolysis	Syllabus: AQA 5.4.3.1 - 5.4.3.5 Book: P102 - 111 Section C6.1-C6.4 Revision Guide: C4	Basic Electrolysis Reactions at the Electrodes Extraction of Aluminium Electrolysis of Aqueous Solutions
C7 Energy Changes	Syllabus: AQA 5.5.1.1 - 5.5.2.2 Book: P112-125 Section C7.1-C7.6 Revision Guide: C5	Endothermic and Exothermic Reactions Using Energy Transfers from Reactions Reaction Profiles Bond Energy Calculation Chemical Cells and Batteries Fuel Cells
C8 Rates and Equilibrium	Syllabus: AQA 5.6.1.1 - 5.6.2.7 Book: P128-147 Section C8.1-C8.9 Revision Guide: C6	Rate of Reaction Collision Theory and Surface Area The Effect of Temperature The Effect of Concentration and Pressure The Effect of Catalysts Reversible Reactions Energy and Reversible Reactions Dynamic Equilibrium Changing conditions and Reaction Rates
C9 Crude Oil and Fuels	Syllabus: AQA 5.7.1.1 - 5.7.1.4 Book: P148-157 Section C9.1-C9.4 Revision Guide: C7	Hydrocarbons Fractional Distillation of Oil Burning Hydrocarbon Fuels Cracking Hydrocarbons
C10 Organic Reactions	Syllabus: AQA 5.7.2.1 – 5.7.2.4 Book: P158-167 Section C10.1-C10.4 Revision Guide: C7	Reactions of Alkenes Structures of alcohols, carboxylic acids and esters Reactions and uses of alcohols Carboxylic acids and esters
C11 Polymers	Syllabus: AQA 5.7.3.1 – 5.7.3.4 Book: P168 - 177 Section C11.1 – C11.4 Revision Guide: C7	Addition polymerisation Condensation polymerisation Natural polymers DNA
C12 Chemical Analysis	Syllabus: AQA 5.8.1.1 - 5.8.3.7 Book: P180-193 Section C12.1-C12.6 Revision Guide: C8	Pure Substances and Mixtures Analysing Chromatograms Testing for Gases Tests for positive ions Tests for negative ions Instrumental analysis
C13 The Earth's Atmosphere	Syllabus: AQA 5.9.1.1 - 5.9.3.2 Book: P194-205 Section C13.1-C13.5 Revision Guide: C9	The History of our Atmosphere Our Evolving Atmosphere Greenhouse Gases Global Climate Change Atmospheric Pollutants
C14 The Earth's Resources	Syllabus: AQA 5.10.1.1 - 5.10.2.2 Book: P206 – 219 Section C14.1 – C14.6 Revision Guide: C10	Finite and Infinite Resources Water that is Safe to Drink Treating Waste Water Extracting Metals from Ores Life Cycle Assessments Reduce - Reuse - Recycle
C15 Using Our Resources	Syllabus: AQA 5.10.3.1 – 5.10.4.2 Book: P220 - 237 Section C15.1 – C15.2 Revision Guide: C10	Rusting Useful Alloys Properties of Polymers Glass ceramics and composites Making Ammonia The economics of the Haber process Making fertilisers in the lab Making fertilisers in industry

Physics (Triple) Summative Assessment Overview

Topic Area/Test Name	Syllabus Reference, Book Section and Revision Guide Area	Topic Content – What they will be tested on, incl. the practicals (RPA)
P1 Conservation and Dissipation of Energy	Syllabus: AQA 6.1.1.1 - 6.1.1.2, then - 6.1.2.2. Then AQA P6.5.2 Book: P4-23 Section P1.1-P1.9 Revision Guide: P1	Changes in Energy Stores Conservation of Energy Energy and Work Gravitational and Potential Energy Stores Kinetic and Elastic Energy Stores Energy Dissipation Energy and Efficiency Electrical Appliances Energy and Power
P2 Energy Transfer by Heating	Syllabus: AQA 6.1.1.3 AQA 6.1.2.1 AQA 6.6.3.1 – 6.6.3.2 Book: P24-35 Section P2.1-P2.5 Revision Guide: P1 and P6 P86-87	Energy Transfer by Conduction Infrared Radiation More about Infrared radiation Specific Heat Capacity Heating & Insulating Buildings RPA: 1 Specific Heat Capacity RPA: 2 Thermal insulation
P3 Energy Resources	Syllabus: AQA 6.1.3 Book: P36-47 Section P3.1-P3.5 Revision Guide: P1	Energy Demands Energy from Wind and Water Power from the Sun and Earth Energy & the Environment BIG Energy Issues
P4 Electrical Circuits	Syllabus: AQA 6.2.1.1 - 6.2.2 AQA 6.2.5.1 Book: P50-63 Section P4.1-P4.6 Revision Guide: P2	Electrical charges and static Current and Charge PD and Resistance Component Characteristics Series Circuits Parallel Circuits RPA: 3 Resistance of a Wire RPA: 4 Resistance in Components
P5 Electricity in the Home	Syllabus: AQA 6.2.3.1 - 6.2.4.3 Book: P64-75 Section P5.1-P5.5 Revision Guide: P2	Alternating Current Cables and Plugs Electrical Power and PD Electrical Current and Energy Transfer Appliances and Efficiency
P6 Molecules and Matter	Syllabus: AQA 6.3.1.1 - 6.3.3.3 Book: P76-91 Section P6.1-P6.7 Revision Guide: P3	Density States of Matter Changes of State Internal Energy Specific Latent Heat Gas Pressure and Temperature Gas pressure and volume RPA: 5 Density
P7 Radioactivity	Syllabus: AQA 6.4.1.1 - 6.4.4.2 Book: P92-111 Section P7.1-P7.9 Revision Guide: P4	Atoms and Radiation The Discovery of the Nucleus Changes in the Nucleus Alpha, Beta and Gamma Radiation Activity and Half Life Nuclear radiation in medicine Nuclear fission Nuclear fusion Nuclear issues
P8 Forces in Balance	Syllabus: AQA 6.5.1.1 - 6.5.1.4 then AQA 6.5.4 then AQA 6.5.6.1 – 6.5.6.1.5 Book: P111 - 133 Section P8.1-P8.9 Revision Guide: P5	Vectors and Scalars Forces Between Objects Resultant Force Moments at work More about levers and gears Centre of Mass Moments and equilibrium Parallelogram of Forces (H) Resolution of Forces
P9 Motion	Syllabus: AQA 6.5.6.1 - 6.5.6.1.5 Book: P134 - 143 Section P9.1-P9.4 Revision Guide: P5	Speed and Distance Time Graphs Velocity and Acceleration Velocity Time Graphs Analysing Motion Graphs
P10 Forces and motion	Syllabus: AQA 6.5.3 then AQA 6.5.6.2.1 - 6.5.6.3.4 then AQA 6.5.7.1 – 6.5.7.3 Book: P144-161 Section P10.1-P10.8 Revision Guide: P5	Forces and Acceleration Weight and Terminal Velocity Forces and Braking Momentum (H) Using conservation of momentum Impact forces Safety first Forces and elasticity RPA: 7 Hooke's Law RPA: 8 Force & Acceleration
P11 Force and Pressure	Syllabus: AQA 6.5.5.1 – 6.5.5.2 Book: P162-171 Section P11.1-P11.4 Revision Guide: P5	Pressure and surfaces Pressure in a liquid at rest Atmospheric pressure Upthrust and flotation
P12 Wave Properties	Syllabus: AQA 6.6.1.1 - 6.6.1.5 Book: P174-189 Section P12.1-P12.7 Revision Guide: P6	The Nature of Waves The properties of waves Reflection and refraction More about waves Sound waves The uses of ultrasound Seismic waves RPA: 9 Waves in liquids & Solids
P13 Electromagnetic Waves	Syllabus: AQA 6.6.2.1 - 6.6.2.4 Book: P190-201 Section P13.1-P13.5 Revision Guide: P6	The EM Spectrum Radio waves to Light Waves Communications using Waves UV to Gamma Rays RPA: 10 Radiation & Absorption
P14 Light	Syllabus: AQA 6.6.2.5 - 6.6.2.6 Book: P202-213 Section P14.1-P14.5 Revision Guide: P6	Reflection of light/Refraction of light Light and colour Lenses Using lenses RPA: 6 light
P15 Electromagnetism	Syllabus: AQA 6.7.1.1 - 6.7.3.4 Book: P214-231 Section P15.1-P15.8 Revision Guide: P7	Magnetic Fields Magnetic Fields of Electric Currents Electromagnets in devices The Motor Effect/ The generator effect The alternating current generator Transformers/Transformers in action
P16 Space	Syllabus: AQA 6.8.1.1 - 6.8.2 Book: P232-243 Section P16.1.1-P16.4 Revision Guide: P8	Formation of the solar system The life history of a star Planets, satellites and orbits The expanding universe The beginning and future of the universe

Biology (Triple) Summative Assessment Overview

Topic Area/Test Name	Syllabus Reference, Book Section and Revision Guide Area	Topic Content – What they will be tested on, incl. the practicals (RPA)
B1 Cell Structure and Transport	Syllabus: AQA 4.1.1.1 – 4.1.1.5 Book: P4-25 Section B1.1-B1.10 Revision Guide: B1	Microscopes Animal and Plant cells/ Eukaryotic and Prokaryotic cells Specialised Animal and Plant cells Diffusion and Osmosis Osmosis in Plants Active Transport and Exchanging Materials RPA 3: Osmosis RPA 1: Microscopy
B2 Cell Division	Syllabus: AQA 4.1.2.1 – 4.1.3.3 Book: P26-35 Section B2.1-B2.4 Revision Guide: B1	Cell Division Growth and Differentiation Stem Cells and The ethics surrounding them
B3 Organisation and the Digestive System	Syllabus: AQA 4.2.1.1 – 4.2.2.1 Book: P36-51 Section B3.1-B3.7 Revision Guide: B2	Tissues and Organs The Human Digestive System Chemistry of Food Catalysts and Enzymes Factors Affecting Enzyme Action How the Digestive System Works/ Making Digestion Efficient RPA 4: Food Tests RPA 5: Enzymes & pH
B4 Organising Animals and Plants	Syllabus: AQA 4.2.2.2 – 4.2.2.3, Then 4.2.3.1-4.2.3.2 Book: P52-71 Section B4.1-B4.9 Revision Guide: B2	Blood and Blood Vessels The Heart and Helping the Heart stay Healthy Breathing and Gas Exchange Tissues and Organs in Plants and transport systems in plants Evaporation and Transpiration/ Factors affecting Transpiration
B5 Communicable Diseases	Syllabus: AQA 4.2.2.5 then 4.3.1.3-4.3.1.6 then 4.1.1.6 Book: P72-97 Section B5.1-B5.11 Revision Guide: B3	Health and Disease/ Pathogens and Disease Growing bacteria in the lab Preventing Infections Viral and Bacterial Diseases and Diseases caused by Fungi and Protista Human Defence Responses More about plant diseases and plant defence responses RPA : 2 microbiology
B6 Preventing and Treating Disease	Syllabus: AQA 4.3.1.7 – 4.3.1.9 then 4.3.2.1 – 4.3.2.2 then 4.3.3.1 – 4.3.3.2 Book: P98-111 Section B6.1-B6.6 Revision Guide: B3	Vaccination Antibiotics and Painkillers Discovering and developing drugs Making monoclonal antibodies Uses of monoclonal antibodies
B7 Non-Communicable Diseases	Syllabus: AQA 4.2.2.4 – 4.2.2.7 Book: P112-123 Section B7.1-B7.5 Revision Guide: B2	Non-Communicable Diseases Cancer Smoking and the Risk of Disease Diet, Exercise and Disease Alcohol and Other Carcinogens
B8 Photosynthesis	Syllabus: AQA 4.4.1.1 – 4.4.1.3 Book: P124-133 Section B8.1-B8.4 Revision Guide: B4	Photosynthesis The rate of Photosynthesis How Plants use Glucose Making the Most of Photosynthesis RPA 6: Photosynthesis
B9 Respiration	Syllabus: AQA 4.4.2.1 – 4.4.2.3 Book: P134-143 Section B9.1-B9.4 Revision Guide: B4	Aerobic Respiration The Response the Exercise Anaerobic Exercise Metabolism and the Liver
B10 The Human Nervous System	Syllabus: AQA 4.5.2.1 – 4.5.2.3 Book: P144-159 Section B10.1-B10.6 Revision Guide: B5	Principals of Homeostasis The Structure and Function of the Nervous System Reflex Actions The brain and The eye Common problems of the eye RPA 7: Reaction Times
B11 Hormone Coordination	Syllabus: AQA 4.5.3.1 – 4.5.3.2 then 4.5.3.4 – 4.5.3.7 then 4.5.4.1 – 4.5.4.2 Book: P160-181 Section B11.1-B11.10 Revision Guide: B5	Principals of Hormonal Control The Control of Blood Glucose Levels and Treating Diabetes The role of Negative Feedback Human Reproduction/ Hormones and the Menstrual Cycle The Artificial Control of Fertility and Infertility Treatments Plant hormones and responses and their uses RPA 8: Plant responses
B12 Homeostasis in action	Syllabus: AQ A4.5.2.4 and 4.5.3.3 Book: P182-193 Section B12.1-B12.5 Revision Guide: B5	Controlling body temperature Removing waste products The human kidney Dialysis and transplants
B13 Reproduction	Syllabus: AQA 4.6.1.1 – 4.6.1.8 Book: P 194 - 217 Section B13.1-B13.10 Revision Guide: B5	Types of Reproduction and the best of both worlds Cell Division in Sexual Reproduction DNA and the Genome DNA and protein synthesis/ Gene expression and mutation Inheritance in Action and More about Genetics Inherited Disorders and Screening for Genetic Disorders
B14 Variation and Evolution	Syllabus: AQA 4.6.2.1 – 4.6.2.5 Book: P218 - 233 Section B14.1-B14.7 Revision Guide: B6	Variation Evolution by Natural Selection Selective Breeding/ Genetic Engineering Cloning and adult cell cloning Ethics of Genetic Technologies
B15 Genetics and Evolution	Syllabus: AQA 4.6.3.1 – 4.6.4 Book: P234 - 255 Section B15.1-B15.10 Revision Guide: B6	The history of genetics Theories of evolution and Accepting Darwin's ideas Evolution and speciation/ Evidence for Evolution Fossils and Extinction – Including Why Extinction can Occur Antibiotic Resistant Bacteria Classification and new systems of classification
B16 Adaptations, Interdependence and Competition	Syllabus: AQA 4.7.1.1 – 4.7.1.4 Book: P256 – 275 Section B16.1-B16.8 Revision Guide: B7	The importance of Communities Organisms in their Environment Distribution and Abundance Competition in Animals/ Competition in Plants Adaptations and Survival / Adaptations in Animals and Plants RPA 9: Field investigations
B17 Organising an Ecosystem	Syllabus: AQA 4.7.2.1 – 4.7.2.3 Book: P275-285 Section B17.1-B17.3 Revision Guide: B7	Feeding relationships Materials Recycling The Carbon Cycle Rates of decomposition RPA 10: decay
B18 Biodiversity and Ecosystems	Syllabus: AQA 4.7.2.4 then 4.7.3.1 – 4.7.3.6 then 4.7.4.1 – 4.7.4.3 then 4.7.5.1 – 4.7.5.4 Book: P286 - 311 Section B18.1-B18.12 Revision Guide: B7	The Human Population Explosion Land and Water Pollution / Air Pollution Deforestation and Peat Destruction Global Warming / The impact of change Maintaining Biodiversity Trophic levels and biomass and biomass transfers Factors affecting food security / Making food supply efficient Sustainable food production

