

GCSE Combined Science: AQA Trilogy (8464)

AQA released their advanced science exam information ([version 1.0](#)) on 7th February 2022 for the summer exam series, sharing details of what will and will not be included in the science exam papers.

The science team at CENTURY have reviewed this document and created clear explainers using our topic diagnostics, that can be used by both teachers and students. These show what has explicitly been included and the implicit material that may be included in exam questions. Accompanying these, specific courses have been created and are available on CENTURY to assign to your Year 11 students today.

The **major focus topics** for the exam papers have been moved to the front of courses for priority focus, together with the corresponding diagnostics in the first strand of the courses.

Topics not assessed directly or through 'linked' content in the paper, together with unspecified required practicals have been removed from the 2022 exam courses.

The **remaining topics within the specification** have been left in the course as they may appear in low tariff questions or via 'linked' questions. The diagnostics for these topics can be found in the second strand of the courses.

Major Focus Topics	Remaining Topics
• Diagnostic: Energy Stores & Transfers [PH0.00...]	• Diagnostic: Power [PH0.011]
• Diagnostic: Calculating Energy Transfers I [PH...]	• Diagnostic: Energy Transfers & Efficiency [PH...]
• Diagnostic: Calculating Energy Transfers II [P...]	• Diagnostic: Series & Parallel Circuits [PH0.031]
• Diagnostic: Calculating Energy Transfers III [P...]	• Diagnostic: Power & Electrical Circuits I [PH0...]
• Diagnostic: Specific Heat Capacity [PH0.013]	• Diagnostic: Power & Electrical Circuits II [PH0...]
• Diagnostic: Energy Resources [PH0.021]	• Diagnostic: Power & Electrical Circuits III [PH0...]
• Diagnostic: Introduction to Electricity [PH0.023]	• Diagnostic: Specific Latent Heat [PH0.051]
• Diagnostic: Electrical Charge [PH0.025]	• Diagnostic: Waves in Matter [2022-PF2]
• Diagnostic: Potential Difference [PH0.027]	
• Diagnostic: Ohmic & Non-ohmic Conductors [P...]	
• Diagnostic: Fundamental States of Matter [PH...]	
• Diagnostic: Calculating Density [PH0.049]	
• Diagnostic: Nuclear Decay [PH0.058]	
• Diagnostic: Half-life & Dangers of Radiation [P...]	
• Diagnostic: Forces [2022-PF1]	
• Diagnostic: Motion [2022-PF4]	
• Diagnostic: Light and Electromagnetic Waves ...	
• Diagnostic: Magnetism and Electromagnetism...	

Courses to assign **foundation tier** students:

- Y2022 Science Combined GCSE: AQA Trilogy (F) – Biology
- Y2022 Science Combined GCSE: AQA Trilogy (F) – Chemistry
- Y2022 Science Combined GCSE: AQA Trilogy (F) – Physics

Courses to assign **higher tier** students:

- Y2022 Science Combined GCSE: AQA Trilogy (H) – Biology
- Y2022 Science Combined GCSE: AQA Trilogy (H) – Chemistry
- Y2022 Science Combined GCSE: AQA Trilogy (H) – Physics

Biology Paper 1F	Chemistry Paper 1F	Physics Paper 1F
Diagnostic: Required Practical 1 Use of a Light Microscope [2022–BF1]	Diagnostic: Atoms, Elements & Compounds [CH0.01]	Diagnostic: Energy Stores & Transfers [PH0.001]
Diagnostic: Body Cell Division & Stem Cells [BI0.03]	Diagnostic: Atomic Structure [CH0.02]	Diagnostic: Calculating Energy Transfers I [PH0.003]
Diagnostic: The Digestive System [BI0.08]	Diagnostic: Chemical Equations [CH0.03]	Diagnostic: Calculating Energy Transfers II [PH0.005]
Diagnostic: The Chemistry of Food [BI0.09]	Diagnostic: Pure Substances, Mixtures & Separation Techniques [CH0.05]	Diagnostic: Calculating Energy Transfers III [PH0.007]
Diagnostic: Enzymes & Digestion [BI0.10]	Diagnostic: History of the Atom [CH0.06]	Diagnostic: Specific Heat Capacity [PH0.013]
Diagnostic: Breathing & Gas Exchange [BI0.12]	Diagnostic: The Periodic Table [CH0.07]	Diagnostic: Energy Resources [PH0.021]
Diagnostic: Circulatory System [BI0.13]	Diagnostic: Bonding in Metals [CH0.09]	Diagnostic: Introduction to Electricity [PH0.023]
Diagnostic: Health & Non-Communicable Disease [BI0.15]	Diagnostic: Fundamental States of Matter [PH0.045]	Diagnostic: Electrical Charge [PH0.025]
Diagnostic: The Spread of Communicable Disease [BI0.20]	Diagnostic: Ionic Substances [CH0.10]	Diagnostic: Potential Difference [PH0.027]
Diagnostic: Infectious Diseases [BI0.21]	Diagnostic: Covalent Bonding [CH0.12]	Diagnostic: Ohmic & Non-ohmic Conductors [PH0.029]
Diagnostic: Human Immunity & Defence [BI0.22]	Diagnostic: Small & Giant Covalent Substances [CH0.13]	Diagnostic: Fundamental States of Matter [PH0.045]
Diagnostic: Vaccinations [BI0.23]	Diagnostic: Silicon Dioxide & Polymers [CH0.14]	Diagnostic: Calculating Density [PH0.049]
Diagnostic: Medical Drugs [BI0.24]	Diagnostic: Carbon Allotropes [CH0.15]	Diagnostic: Nuclear Decay [PH0.058]
Diagnostic: Developing Drugs [BI0.25]	Diagnostic: Identifying Bonding, Deducing Properties & Writing Equations [CH0.16]	Diagnostic: Half-life & Dangers of Radiation [PH0.060]
Diagnostic: Introduction to Photosynthesis [2022–BF3] Removed uses of glucose	Diagnostic: Relative Formula Mass [CH0.19]	Diagnostic: Power [PH0.011]
	Diagnostic: Percentage Mass Calculations [CH0.21]	Diagnostic: Energy Transfers & Efficiency [PH0.017]
Diagnostic: Rate of Photosynthesis [BI0.30]	Diagnostic: Uncertainty of Repeated Measurements [CH0.23]	Diagnostic: Series & Parallel Circuits [PH0.031]
Diagnostic: Cells & Cell Structure [BI0.01]	Diagnostic: Concentration Calculations (g/dm ³) [CH0.26]	Diagnostic: Power & Electrical Circuits I [PH0.038]
Diagnostic: Exchanging Substances [2022–BF2] Removed osmosis and active transport	Diagnostic: Oxidation & Reduction [CH0.34]	Diagnostic: Power & Electrical Circuits II [PH0.040]
	Diagnostic: Reactivity Series [CH0.36]	Diagnostic: Power & Electrical Circuits III [PH0.042]
Diagnostic: Plant Anatomy [BI0.18]	Diagnostic: Acids, Bases & Alkalis [CH0.38]	Diagnostic: Specific Latent Heat [PH0.051]
Diagnostic: Transpiration & Translocation [BI0.19]	Diagnostic: Neutralisation [CH0.40]	Diagnostic: Mains Electricity [PH0.035]
Diagnostic: Cardiovascular Disease [BI0.16]	Diagnostic: Solubility [CH0.42]	Diagnostic: Pressure in Gases [PH0.053]
Diagnostic: Treating Cardiovascular Disease [BI0.17]	Diagnostic: Electrolysis [CH0.48]	Diagnostic: Structure of Atoms [PH0.056]
Diagnostic: Respiration [BI0.34]	Diagnostic: Exothermic Reactions [CH0.52]	Diagnostic: History of the Atom [CH0.06]
Diagnostic: Exercise, Cardiac Output & Metabolism [BI0.36]	Diagnostic: Endothermic Reactions [CH0.53]	
	Diagnostic: Temperature Changes [CH0.54]	

Foundation Tier – Paper 2s

Biology Paper 2F	Chemistry Paper 2F	Physics Paper 2F
Diagnostic: Hormone Control in Humans [2022–BF1]	Diagnostic: The Rates of Reactions [2022–CF1]	Diagnostic: Forces [2022–PF1]
Diagnostic: Reproduction, Inheritance and Genetics [2022–BF2]	Diagnostic: Organic Chemistry [2022–CF2]	Diagnostic: Motion [2022–PF4]
Diagnostic: Ecosystems [2022–BF3]	Diagnostic: Chemical Analysis [CHH0.07]	Diagnostic: Light and Electromagnetic Waves [2022–PF3]
Diagnostic: Gene Technology [2022–BF4]	Diagnostic: Earth and Atmosphere [2022–CF4]	Diagnostic: Magnetism and Electromagnetism [2022–PF5]
Diagnostic: Pollution [2022–BF5]	Removed: Carbon dioxide and methane as greenhouse gases	Diagnostic: Waves in Matter [2022–PF2]
Diagnostic: Human Nervous System [BH0.10]	Diagnostic: Chemical Industries [2022–CF5]	

Major focus topics

Remaining topics within the specification for low tariff questions or via 'linked' questions

Topics not assessed directly or through 'linked' content that have been removed from course

Biology Paper 1H	Chemistry Paper 1H	Physics Paper 1H
Diagnostic: Body Cell Division & Stem Cells [BI0.03]	Diagnostic: Atoms, Elements & Compounds [CH0.01]	Diagnostic: Energy Stores & Transfers [PH0.001]
Diagnostic: The Digestive System [BI0.08]	Diagnostic: Atomic Structure [CH0.02]	Diagnostic: Calculating Energy Transfers I [PH0.003]
Diagnostic: The Chemistry of Food [BI0.09]	Diagnostic: Chemical Equations [CH0.03]	Diagnostic: Calculating Energy Transfers II [PH0.005]
Diagnostic: Enzymes & Digestion [BI0.10]	Diagnostic: Pure Substances, Mixtures & Separation Techniques [CH0.05]	Diagnostic: Calculating Energy Transfers III [PH0.007]
Diagnostic: Breathing & Gas Exchange [BI0.12]	Diagnostic: History of the Atom [CH0.06]	Diagnostic: Power [PH0.011]
Diagnostic: Circulatory System [BI0.13]	Diagnostic: The Periodic Table [CH0.07]	Diagnostic: Specific Heat Capacity [PH0.013]
Diagnostic: Health & Non-Communicable Disease [BI0.15]	Diagnostic: Bonding in Metals [CH0.09]	Diagnostic: Introduction to Electricity [PH0.023]
Diagnostic: Cardiovascular Disease [BI0.16]	Diagnostic: Fundamental States of Matter [PH0.045]	Diagnostic: Electrical Charge [PH0.025]
Diagnostic: Treating Cardiovascular Disease [BI0.17]	Diagnostic: Ionic Substances [CH0.10]	Diagnostic: Potential Difference [PH0.027]
Diagnostic: Introduction to Photosynthesis [2022 – BH4] Removed uses of glucose	Diagnostic: Covalent Bonding [CH0.12]	Diagnostic: Ohmic & Non-ohmic Conductors [PH0.029]
	Diagnostic: Small & Giant Covalent Substances [CH0.13]	Diagnostic: Power & Electrical Circuits I [PH0.038]
Diagnostic: Rate of Photosynthesis [BI0.30]	Diagnostic: Silicon Dioxide & Polymers [CH0.14]	Diagnostic: Power & Electrical Circuits II [PH0.040]
Diagnostic: Cells & Cell Structure [2022–BH1]	Diagnostic: Carbon Allotropes [CH0.15]	Diagnostic: Power & Electrical Circuits III [PH0.042]
Diagnostic: The Spread of Communicable Disease [BI0.20]	Diagnostic: Identifying Bonding, Deducing Properties & Writing Equations [CH0.16]	Diagnostic: Fundamental States of Matter [PH0.045]
Diagnostic: Infectious Diseases Bacteria [2022 – BH3]	Diagnostic: Relative Formula Mass [CH0.19]	Diagnostic: Calculating Density [PH0.049]
Diagnostic: Vaccinations [BI0.23]	Diagnostic: Percentage Mass Calculations [CH0.21]	Diagnostic: Pressure in Gases [PH0.053]
Diagnostic: Medical Drugs [BI0.24]	Diagnostic: Uncertainty of Repeated Measurements [CH0.23]	Diagnostic: Structure of Atoms [PH0.056]
Diagnostic: Developing Drugs [BI0.25]	Diagnostic: Concentration Calculations (g/dm ³) [CH0.26]	Diagnostic: History of the Atom [CH0.06]
Diagnostic: Respiration [BI0.34]	Diagnostic: Quantitative Chemistry [CHH0.08]	Diagnostic: Nuclear Decay [PH0.058]
Diagnostic: Metabolism [2022 –BH2]	Diagnostic: Oxidation & Reduction [CH0.34]	Diagnostic: Half-life & Dangers of Radiation [PH0.060]
Diagnostic: Exchanging Substances [BI0.06]	Diagnostic: Redox Reactions [2022-CH1]	Diagnostic: Energy Transfers & Efficiency [PH0.017]
Diagnostic: Plant Anatomy [BI0.18]	Diagnostic: Reactivity Series [CH0.36]	Diagnostic: Energy Resources [PH0.021]
Diagnostic: Transpiration & Translocation [BI0.19]	Diagnostic: Acids, Bases & Alkalis [CH0.38]	Diagnostic: Series & Parallel Circuits [PH0.031]
Diagnostic: Infectious Diseases [BI0.21]	Diagnostic: Acid Strength & Concentration [2022-CH2]	Diagnostic: Mains Electricity [PH0.035]
Diagnostic: Human Immunity & Defence [BI0.22]	Diagnostic: Neutralisation [CH0.40]	Diagnostic: Specific Latent Heat [PH0.051]
Diagnostic: Exercise & Cardiac Output [BI0.36]	Diagnostic: Solubility [CH0.42]	
	Diagnostic: Testing Gases [2022-CF5]	
	Diagnostic: Electrolysis [CH0.48]	
	Diagnostic: Exothermic Reactions [CH0.52]	

Major focus topics

Remaining topics within the specification for low tariff questions or via 'linked' questions

Topics not assessed directly or through 'linked' content that have been removed from course

	Diagnostic: Endothermic Reactions [CH0.53]	
	Diagnostic: Temperature Changes [CH0.54]	
	Diagnostic: Bond Energy Calculations [2022-CH1]	

Higher Tier – Paper 2s

Biology Paper 2H	Chemistry Paper 2H	Physics Paper 2H
Diagnostic: Hormone Control in Humans [2022 – BH5]	Diagnostic: The Rates of Reactions [CHH0.05]	Diagnostic: Forces [2022–PH1]
Diagnostic: Ecosystems [BH0.09]	Diagnostic: Organic Chemistry [2022-CF2]	Diagnostic: Motion [2022–PH4]
Diagnostic: Human Effect on the Environment [2022 – BH7]	Diagnostic: Chemical Analysis [CHH0.07]	Diagnostic: Waves in Matter [2022–PH2]
Diagnostic: Meiosis [2022 – BH8]	Diagnostic: Earth and Atmosphere [CHH0.10]	Diagnostic: Light and Electromagnetic Waves [2022–PH3]
Diagnostic: Classification [2022 – BH6]	Diagnostic: Chemical Industries [2022-CH9]	Diagnostic: Magnetism and Electromagnetism [2022–PH5]
	Diagnostic: Testing Gases [2022-CF5]	