

**GCSE Biology (8461)****GCSE Chemistry (8462)****GCSE Physics (8463)**

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...	

**Foundation tier** courses available to assign:

- Y2022 Biology GCSE: AQA (F)
- Y2022 Chemistry GCSE: AQA (F)
- Y2022 Physics GCSE: AQA (F)

**Higher tier** courses available to assign:

- Y2022 Biology GCSE: AQA (H)
- Y2022 Chemistry GCSE: AQA (H)
- Y2022 Physics GCSE: AQA (H)



<b>Biology Paper 1F</b>	<b>Biology Paper 2F</b>
Diagnostic: Cells & Cell Structure [2022—TBF1] Removed: Cell Differentiation	Diagnostic: Human Nervous System [2022—TBH2] Removed: Brain & eye
Diagnostic: Exchanging Substances [BI0.06]	Diagnostic: Thermoregulation [2022—TBH3] Removed: Water Balance
Diagnostic: The Digestive System [2022—TBF2] Removed: Principles of Organisation Questions	Diagnostic: Hormone Control in Humans [2022—TBH4] Removed: Role of Glucagon Removed: Interactions of FSH and LH
Diagnostic: The Chemistry of Food [BI0.09]	Removed: interpreting Graphs/extraction of Data
Diagnostic: Enzymes & Digestion [BI0.10]	Removed: Infertility Treatment Removed: Negative Feedback
Diagnostic: Breathing & Gas Exchange [BI0.12]	Diagnostic: Plant Hormones [2022—TBH5] Removed: Photosynthesis, Limiting Factors and Controlling Photosynthesis Removed: Uses of Plant Hormones
Diagnostic: Circulatory System [2022—TBF3] Removed: Blood	Diagnostic: Reproduction, Inheritance and Genetics [2022—TBH6] Removed: DNA Structure Removed: Inherited disorders, Codominance & Sex Determination Removed: Mendel & Variation
Diagnostic: Health & Non-Communicable Disease [2022—TBF5] Removed: Cancer	Diagnostic: Meiosis [2022 — BH8]
Diagnostic: Cardiovascular Disease [BI0.16]	Diagnostic: Evolution [2022—TBH7] Removed: Natural Selection, Darwin & Wallace, Genetic Modification
Diagnostic: Treating Cardiovascular Disease [BI0.17]	Diagnostic: Ecosystems [2022—TBH8] Removed: Adaptations Removed: Water Cycle, Nitrogen Cycle, Carbon Cycle, Decay Cycle Removed: Feeding Relationships
Diagnostic: The Spread of Communicable Disease [BI0.20]	Diagnostic: Classification [2022 — BH6]
Diagnostic: Infectious Diseases [2022—TBF4] Removed: Protists	Diagnostic: Human Effect on the Environment [BH0.13]
Diagnostic: Human Immunity & Defence [BI0.22]	
Diagnostic: Vaccinations [BI0.23]	
Diagnostic: Medical Drugs [BI0.24]	
Diagnostic: Developing Drugs [BI0.25]	
Diagnostic: Introduction to Photosynthesis [BI0.29] Removed: Uses of glucose	
Diagnostic: Rate of Photosynthesis [BI0.30]	
Diagnostic: Body Cell Division & Stem Cells [BI0.03]	
Diagnostic: Plant Anatomy [BI0.18]	
Diagnostic: Transpiration & Translocation [BI0.19]	
Diagnostic: Respiration [BI0.34]	
Diagnostic: Exercise, Cardiac Output & Metabolism [BI0.36]	



<b>Biology Paper 1H</b>	<b>Biology Paper 2H</b>
Diagnostic: Cells & Cell Structure [2022—TBF1] Removed: Cell Differentiation	Diagnostic: Hormone Control in Humans [2022 — BH5] Removed: Negative Feedback, Puberty & Menstrual Cycle, Hormones & Menstrual Cycle, Contraception, Infertility Treatment.
Diagnostic: Exchanging Substances [BI0.06]	Diagnostic: Ecosystems [2022—TBH8] Removed: Levels of Organisation
Diagnostic: The Digestive System [BI0.08]	Removed: Competition in Animals and Plants
Diagnostic: The Chemistry of Food [BI0.09]	Removed: Feeding Relationships Removed: Pyramids of Biomass
Diagnostic: Enzymes & Digestion [BI0.10]	Diagnostic: Meiosis [2022 — BH8]
Diagnostic: Breathing & Gas Exchange [BI0.12]	Diagnostic: Homeostasis—Water Balance [2022—TBH10]
Diagnostic: Circulatory System [2022—TBF3] Removed: Blood	Diagnostic: Thermoregulation [2022—TBH3]
Diagnostic: Health & Non-Communicable Disease [2022—TBF5] Removed: Cancer	Diagnostic: Plant Hormones [2022—TBH5] Removed: Photosynthesis, Limiting Factors and Controlling Photosynthesis
Diagnostic: Cardiovascular Disease [BI0.16]	Removed: Uses of Plant Hormones
Diagnostic: Treating Cardiovascular Disease [BI0.17]	Diagnostic: Reproduction, Inheritance and Genetics [2022—TBH9] Removed: Inherited Disorders, Codominance & Sex Determination
Diagnostic: Plant Anatomy [BI0.18]	Removed: Mendel & Variation
Diagnostic: Transpiration & Translocation [BI0.19]	Diagnostic: Human Effect on the Environment [BH0.13]
Diagnostic: The Spread of Communicable Disease [BI0.20]	Diagnostic: Evolution and Gene Technology [BH0.08]
Diagnostic: Infectious Diseases [BI0.21]	
Diagnostic: Human Immunity & Defence [BI0.22]	
Diagnostic: Vaccinations [BI0.23]	
Diagnostic: Medical Drugs [2022—TBH1] Removed: Painkillers & Antibiotics	
Diagnostic: Body Cell Division & Stem Cells [BI0.03]	
Diagnostic: Introduction to Photosynthesis [BI0.29]	
Diagnostic: Rate of Photosynthesis [BI0.30]	
Diagnostic: Respiration [BI0.34]	
Diagnostic: Developing Drugs [BI0.25]	
Diagnostic: Exercise, Cardiac Output & Metabolism [BI0.36]	



Chemistry Paper 1F	Chemistry Paper 2F
Diagnostic: Atoms, Elements & Compounds [CH0.01]	Diagnostic: The Rates of Reactions [2022-CF1]
Diagnostic: Atomic Structure [CH0.02]	Diagnostic: Chemical Analysis [CHH0.07]
Diagnostic: Chemical Equations [CH0.03]	Diagnostic: Organic Chemistry [2022-CF2]
Diagnostic: Pure Substances, Mixtures & Separation Techniques [CH0.05]	Diagnostic: Chemical Industries [2022-CF4]
Diagnostic: History of the Atom [CH0.06]	Diagnostic: Earth and Atmosphere [CHH0.10]
Diagnostic: The Periodic Table [CH0.07]	Diagnostic: Testing Gases [2022-CF5]
Diagnostic: Bonding in Metals [CH0.09]	
Diagnostic: Fundamental States of Matter [PH0.045]	
Diagnostic: Nanoparticles [2022-CF1]	
Diagnostic: Ionic Substances [CH0.10]	
Diagnostic: Covalent Bonding [CH0.12]	
Diagnostic: Small & Giant Covalent Substances [CH0.13]	
Diagnostic: Silicon Dioxide & Polymers [CH0.14]	
Diagnostic: Carbon Allotropes [CH0.15]	
Diagnostic: Identifying Bonding, Deducing Properties & Writing Equations [CH0.16]	
Diagnostic: Relative Formula Mass [CH0.19]	
Diagnostic: Percentage Mass Calculations [CH0.21]	
Diagnostic: Uncertainty of Repeated Measurements [CH0.23]	
Diagnostic: Concentration Calculations ( $\text{g/dm}^3$ ) [CH0.26]	
Diagnostic: Percentage Yield and Atom Economy [2022-CF2]	
Diagnostic: Oxidation & Reduction [CH0.34]	
Diagnostic: Reactivity Series [CH0.36]	
Diagnostic: Acids, Bases & Alkalis [CH0.38]	
Diagnostic: Neutralisation [CH0.40]	
Diagnostic: Solubility [CH0.42]	
Diagnostic: Electrolysis [CH0.48]	
Diagnostic: Exothermic Reactions [CH0.52]	
Diagnostic: Endothermic Reactions [CH0.53]	
Diagnostic: Temperature Changes [CH0.54]	
Diagnostic: Chemical Cells and Fuel Cells [2022-CH1]	



<b>Chemistry Paper 1H</b>	<b>Chemistry Paper 2H</b>
Diagnostic: Atoms, Elements & Compounds [CH0.01]	Diagnostic: The Rates of Reactions [CHH0.05]
Diagnostic: Atomic Structure [CH0.02]	Diagnostic: Organic Chemistry [CHH0.06]
Diagnostic: Chemical Equations [CH0.03]	Diagnostic: Chemical Analysis [CHH0.07]
Diagnostic: Pure Substances, Mixtures & Separation Techniques [CH0.05]	Diagnostic: Chemical Industries [2022-CH9]
Diagnostic: History of the Atom [CH0.06]	Diagnostic: Earth and Atmosphere [CHH0.10] Removed: Carbon dioxide and methane as greenhouse gases
Diagnostic: The Periodic Table [CH0.07]	
Diagnostic: Bonding in Metals [CH0.09]	
Diagnostic: Fundamental States of Matter [PH0.045]	
Diagnostic: Ionic Substances [CH0.10]	
Diagnostic: Covalent Bonding [CH0.12]	
Diagnostic: Small & Giant Covalent Substances [CH0.13]	
Diagnostic: Silicon Dioxide & Polymers [CH0.14]	
Diagnostic: Carbon Allotropes [CH0.15]	
Diagnostic: Identifying Bonding, Deducing Properties & Writing Equations [CH0.16]	
Diagnostic: Relative Formula Mass [CH0.19]	
Diagnostic: Percentage Mass Calculations [CH0.21]	
Diagnostic: Uncertainty of Repeated Measurements [CH0.23]	
Diagnostic: Concentration Calculations ( $\text{g/dm}^3$ ) [CH0.26]	
Diagnostic: Quantitative Chemistry [CHH0.08]	
Diagnostic: Percentage Yield & Atom Economy [2022-CF2]	
Diagnostic: Oxidation & Reduction [CH0.34]	
Diagnostic: Redox Reactions [2022-CH1]	
Diagnostic: Reactivity Series [CH0.36]	
Diagnostic: Acids, Bases & Alkalis [CH0.38]	
Diagnostic: Acid Strength & Concentration [2022-CH2]	
Diagnostic: Testing Gases [2022-CF5]	
Diagnostic: Neutralisation [CH0.40]	
Diagnostic: Solubility [CH0.42]	
Diagnostic: Electrolysis [CH0.48]	
Diagnostic: Exothermic Reactions [CH0.52]	
Diagnostic: Endothermic Reactions [CH0.53]	
Diagnostic: Temperature Changes [CH0.54]	
Diagnostic: Bond Energy Calculations [2022-CH1]	
Diagnostic: Chemical Cells & Fuel Cells [2022-CH1]	
Diagnostic: Nanoparticles [2022-CF1]	



Physics Paper 1F	Physics Paper 2F
Diagnostic: Energy Stores & Transfers [PH0.001]	Diagnostic: Forces [2022–PHF1] Removed: Moments, Levers & Gears
Diagnostic: Calculating Energy Transfers I [PH0.003]	Diagnostic: Work Done and Energy Transfer [2022–PHF11]
Diagnostic: Calculating Energy Transfers II [PH0.005]	Diagnostic: Motion [2022–PHF2] Removed: Forces, accelerations and Newton's Laws of motion, Forces and braking
Diagnostic: Calculating Energy Transfers III [PH0.007]	Diagnostic: Waves in Matter [2022–PHF3]
Diagnostic: Specific Heat Capacity [PH0.013]	Diagnostic: Light and Electromagnetic Waves [2022–PHF5] Removed: Black Body Radiation
Diagnostic: Introduction to Electricity [PH0.023]	Diagnostic: Space Physics [2022–PHF7] Removed: Red-shift
Diagnostic: Electrical Charge [PH0.025]	Required Practical 9
Diagnostic: Potential Difference [PH0.027]	Diagnostic: Magnetism and Electromagnetism [2022–PH6]
Diagnostic: Ohmic & Non-ohmic Conductors [PH0.029]	
Diagnostic: Static Electricity [2022–PHF8]	
Diagnostic: Fundamental States of Matter [PH0.045]	
Diagnostic: Calculating Density [PH0.049]	
Diagnostic: Nuclear Decay [PH0.058]	
Diagnostic: Half-life & Dangers of Radiation [PH0.060]	
Diagnostic: Radioactivity [2022–PHF9] Removed: Fission and Fusion	
Diagnostic: Energy Transfers & Efficiency [PH0.017]	
Diagnostic: Specific Latent Heat [PH0.051]	
Diagnostic: Power [PH0.011]	
Required Practical 2	
Required Practical 5	
Diagnostic: Energy Resources [PH0.021]	
Diagnostic: Series & Parallel Circuits [PH0.031]	
Diagnostic: Power & Electrical Circuits I [PH0.038]	
Diagnostic: Power & Electrical Circuits II [PH0.040]	
Diagnostic: Power & Electrical Circuits III [PH0.042]	
Diagnostic: Mains Electricity [PH0.035]	
Diagnostic: Pressure in Gases [PH0.053]	
Diagnostic: Structure of Atoms [PH0.056]	
Diagnostic: History of the Atom [CH0.06]	

Physics Paper 1H	Physics Paper 2H
Diagnostic: Energy Stores & Transfers [PH0.001]	Diagnostic: Forces [2022–PHF1] Removed: Moments, Levers & Gears
Diagnostic: Calculating Energy Transfers II [PH0.005]	Diagnostic: Work Done and Energy Transfer [2022–PHF11]
Diagnostic: Calculating Energy Transfers III [PH0.007]	Diagnostic: Motion [PHH0.04]
Diagnostic: Power [PH0.011]	Diagnostic: Waves in Matter [2022–PHF3]
Diagnostic: Specific Heat Capacity [PH0.013]	Diagnostic: Space Physics [2PHH0.10]
Diagnostic: Introduction to Electricity [PH0.023]*	Diagnostic: Magnetism and Electromagnetism [2022–PH6]** Removed: Permanent and induced magnetism, magnetic forces and fields
Diagnostic: Electrical Charge [PH0.025]*	
Diagnostic: Potential Difference [PH0.027]*	Required Practical 9
Diagnostic: Power & Electrical Circuits I [PH0.038]	Diagnostic: Light and Electromagnetic Waves [2022–PHF5]
Diagnostic: Power & Electrical Circuits II [PH0.040]	
Diagnostic: Power & Electrical Circuits III [PH0.042]	
Diagnostic: Fundamental States of Matter [PH0.045]	
Diagnostic: Calculating Density [PH0.049]	
Diagnostic: Specific Latent Heat [PH0.051]	
Diagnostic: Energy Transfers & Efficiency [PH0.017]	
Required Practical 2	
Required Practical 5	
Diagnostic: Static Electricity [2022–PHF8]	
Diagnostic: Nuclear Decay [PH0.058]	
Diagnostic: Half-life & Dangers of Radiation [PH0.060]	
Diagnostic: Energy Resources [PH0.021]	
Diagnostic: Ohmic & Non-ohmic Conductors [PH0.029]	
Diagnostic: Series & Parallel Circuits [PH0.031]	
Diagnostic: Mains Electricity [PH0.035]	
Diagnostic: Pressure in Gases [PH0.053]	
Diagnostic: Structure of Atoms [PH0.056]	
Diagnostic: History of the Atom [CH0.06]	
Diagnostic: Radioactivity [2022–PHF9]	

\*Content required to access 4.2.4 energy transfer

\*\*Content required to access 4.7.2 The motor effect and 4.7.3 induced potential, transformers and the National Grid.