

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

May–June 2022 Assessment Window

Syllabus
reference

1SC0

Combined Science Advance Information

You are not permitted to take this notice into the examination.
This document is valid if downloaded from the [Pearson Qualifications website](https://www.pearsonqualifications.com).

Instructions

- Please ensure that you have read this notice before the examination.

Information

- This notice covers all examined components.
- The format/structure of the assessments remains unchanged.
- The advance information details the focus of the content of the exams in the May–June 2022 assessments.
- There are no restrictions on who can use this notice.
- This notice is meant to help students to focus their revision time.
- Students and teachers can discuss the advance information.
- This document has 9 pages.

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General advice

- In addition to covering the content outline in the advance information, students and teachers should consider how to:
 - manage their revision of content which may be assessed in areas not covered by the advance information
 - manage their revision of other parts of the specification which may provide knowledge that helps with understanding the areas being tested in 2022.
- For specifications with synoptic questions, topics not explicitly given in the advance information may appear, e.g. where students are asked to bring together knowledge, skills and understanding from across the specification.
- For specifications with optional papers/topics/content, students should only refer to the advance information for their intended option.
- For specifications with NEA, advance information does not cover any NEA components.

A link to the Joint Council for Qualifications guidance document on advance information can be found on the Joint Council for Qualifications website or [here](#).

Advance Information

Subject specific section

- For each paper the list shows the major focus of the content of the exam.
- Topics **not** assessed either directly or synoptically have also been listed.
- The information is presented in specification order and not in question order.
- Numbers in brackets refer to the points as listed in the specification.
- Assessment of practical skills, maths skills, and Working Scientifically skills will occur throughout all the papers.
- Core practicals that will be assessed have also been listed.
- Topics not explicitly given in either list may appear in low tariff questions or via synoptic or 'linked' questions. Synoptic or 'linked' questions are those that bring together knowledge, skills and understanding from across the specification.
- Students will still be expected to apply their knowledge to unfamiliar contexts.
- Each exam paper may include some, or all, of the content in the listed topic.

Paper 1SC0/1BF

Content **will be assessed** from the following topics:

- Topic 2 Cells and control – cell cycle (2.1–2.8)
- Topic 3 Genetics – reproduction and DNA (3.3–3.6)
- Topic 4 Natural selection and genetic modification – evolution and selective breeding (4.2–4.5)
- Topic 5 Health, disease, and the development of medicines – disease (5.1–5.8)
- Topic 5 Health, disease, and the development of medicines – immune system (5.13–5.16)

Core practical activities that **will be assessed**:

- Core Practical 1.10 Investigate the effect of pH on enzyme activity.

Topics **not assessed** in this paper:

- Topic 1 Key concepts in biology – microscopy (1.4–1.6)
- Topic 1 Key concepts in biology – osmosis (1.16–1.17)
- Topic 3 Genetics – inheritance (3.19–3.23)
- Topic 4 Natural selection and genetic modification – genetic engineering (4.10–4.14)
- Topic 5 Health, disease, and the development of medicines – new medicines (5.20)

Paper 1SC0/1BH

Content **will be assessed** from the following topics:

- Topic 1 Key concepts in biology – enzymes (1.7–1.12)
- Topic 2 Cells and control – cell cycle (2.1–2.6)
- Topic 3 Genetics – reproduction and DNA (3.3–3.6)
- Topic 4 Natural selection and genetic modification – inheritance (4.2–4.5)
- Topic 4 Natural selection and genetic modification – genetic modification (4.8–4.11)
- Topic 5 Health, disease, and the development of medicines – disease (5.2–5.8)

Core practical activities that **will be assessed**:

- Core Practical 1.6 Investigate biological specimens using microscopes, including magnification calculations and labelled scientific drawings from observations.
- Core Practical 1.10 Investigate the effect of pH on enzyme activity.

Topics **not assessed** in this paper:

- Topic 1 Key concepts in Biology – transport into and out of cells (1.15–1.17)
- Topic 3 Genetics – variation (3.19–3.23)
- Topic 5 Health, disease, and the development of medicines – defence against disease (5.12–5.14)

Paper 1SC0/1CF

Content **will be assessed** from the following topics:

- Topic 1 Key concepts in chemistry – Types of substance (1.32–1.42)
- Topic 1 Key concepts in chemistry – Calculations involving masses (1.43–1.49)
- Topic 2 States of matter and mixtures – States of matter (2.1–2.4)
- Topic 2 States of matter and mixtures – Methods of separating and purifying substances (2.5–2.12)
- Topic 3 Chemical changes – Acids and bases (3.1–3.14)
- Topic 3 Chemical changes – Acids and making salts (3.15–3.21)

Core practical activities that **will be assessed**:

- Core Practical 3.6 Investigate the change in pH on adding powdered calcium hydroxide or calcium oxide to a fixed volume of dilute hydrochloric acid

Topics **not assessed** in this paper:

- Topic 4 Extracting metals and equilibria – Obtaining and using metals (4.1–4.12)
- Topic 4 Extracting metals and equilibria – Reversible reactions and equilibria (4.13–4.16)

Paper 1SC0/1CH

Content **will be assessed** from the following topics:

- Topic 1 Key concepts in chemistry – Types of substance (1.32–1.42)
- Topic 1 Key concepts in chemistry – Calculations involving masses (1.43–1.53)
- Topic 3 Chemical changes – Acids and bases (3.1–3.14)
- Topic 3 Chemical changes – Electrolytic processes (3.22–3.31)
- Topic 4 Extracting metals and equilibria – Obtaining and using metals (4.1–4.12)

Core practical activities that **will be assessed**:

- Core Practical 3.6 Investigate the change in pH on adding powdered calcium hydroxide or calcium oxide to a fixed volume of dilute hydrochloric acid
- Core Practical 3.31 Investigate the electrolysis of copper sulfate solution with inert electrodes and copper electrodes

Topics **not assessed** in this paper:

- Topic 1 Key concepts in chemistry – Atomic structure (1.1–1.12)
- Topic 1 Key concepts in chemistry – The periodic table (1.13–1.20)
- Topic 2 States of matter and mixtures – States of matter (2.1–2.4)
- Topic 2 States of matter and mixtures – Methods of separating and purifying substances (2.5–2.12)
- Topic 4 Extracting metals and equilibria – Reversible reactions and equilibria (4.13–4.17)

Paper 1SC0/1PF

Content **will be assessed** from the following topics:

- Topic 2 Motion and forces – Velocity and acceleration (2.1–2.13)
- Topic 2 Motion and forces – Reaction times and stopping distances (2.27–2.31)
- Topic 3 Conservation of energy – Conservation of energy and energy transfers and efficiency (3.1–3.11)
- Topic 4 Waves – Waves and their effects (4.1–4.11)
- Topic 5 Light and the electromagnetic spectrum – Electromagnetic waves (5.7–5.11)
- Topic 5 Light and the electromagnetic spectrum – Harmful effects and uses of electromagnetic radiation (5.20–5.24)
- Topic 6 Radioactivity – Activity of radioactive sources, half-life, dangers and applications (6.23–6.32)

Core practical activities that **will be assessed**:

- Core Practical 4.17 Investigate the suitability of equipment to measure the speed, frequency and wavelength of a wave in a solid and a fluid

Topics **not assessed** in this paper:

- Topic 2 Motion and forces – Newton’s laws (2.14–2.23)
- Topic 3 Conservation of energy – Energy sources and patterns in usage of energy (3.13–3.14)
- Topic 5 Light and the electromagnetic spectrum – Emission and absorption of thermal radiation (5.12–5.14)

Paper 1SC0/1PH

Content **will be assessed** from the following topics:

- Topic 2 Motion and forces – Velocity and acceleration (2.1–2.13)
- Topic 2 Motion and forces – Newton’s 3rd law and momentum (2.20–2.26)
- Topic 3 Conservation of energy – energy transfers and efficiency (3.1–3.12)
- Topic 6 Radioactivity – Emission of ionising radiations (6.10–6.22)

Core practical activities that **will be assessed**:

- No core practicals are assessed in this paper

Topics **not assessed** in this paper:

- Topic 2 Motion and forces – Newton’s 1st law and 2nd law (2.14–2.19)
- Topic 3 Conservation of energy – Energy sources and patterns in usage of energy (3.13–3.14)
- Topic 5 Light and the electromagnetic spectrum – Emission and absorption of thermal radiation (5.12–5.14)



Paper 1SC0/2BF

Content **will be assessed** from the following topics:

- Topic 1 Key concepts in biology – cells and microscopes (1.1–1.6)
- Topic 6 Plant structures and their functions – photosynthesis (6.1–6.5)
- Topic 6 Plant structures and their functions – movement of substances through plants (6.7–6.12)
- Topic 8 Exchange and transport in animals – the heart and blood (8.6–8.9)

Core practical activities that **will be assessed**:

- Core Practical 1.6 Investigate biological specimens using microscopes, including magnification calculations and labelled scientific drawings from observations.
- Core Practical 6.5 Investigate the effect of light intensity on the rate of photosynthesis.

Topics **not assessed** in this paper:

- Topic 1 Key concepts in biology – enzymes (1.7–1.12)
- Topic 7 Animal coordination, control, and homeostasis – hormones (7.1–7.7)
- Topic 7 Animal coordination, control, and homeostasis – diabetes (7.13–7.17)
- Topic 8 Exchange and transport in animals – respiration (8.10–8.12)
- Topic 9 Ecosystems and material cycles – communities (9.1–9.6)

Paper 1SC0/2BH

Content **will be assessed** from the following topics:

- Topic 7 Animal co-ordination, control, and homeostasis – human hormones (7.1–7.8)
- Topic 8 Exchange and transport in animals – respiration (8.9–8.12)
- Topic 9 Ecosystems and material cycles – organisms and the environment (9.4–9.5)
- Topic 9 Ecosystems and material cycles – conservation and material cycles (9.10–9.15)

Core practical activities that **will be assessed**:

- Core Practical 8.11 Investigate the rate of respiration in living organisms.
- Core Practical 9.5 Investigate the relationship between organisms and their environment using field-work techniques, including quadrats and belt transects.

Topics **not assessed** in this paper:

- Topic 1 Key concepts in biology – enzymes (1.7–1.12)
- Topic 1 Key concepts in biology – transport into and out of cells (1.15–1.17)
- Topic 6 Plant structures and their functions – limiting factors on photosynthesis (6.3–6.6)
- Topic 9 Ecosystems and material cycles – communities (9.1–9.3)

Paper 1SC0/2CF

Content **will be assessed** from the following topics:

- Topic 1 Key concepts in chemistry – Calculations involving masses (1.43–1.49)
- Topic 6 Groups in the periodic table – Group 1 (6.1–6.5)
- Topic 6 Groups in the periodic table – Group 7 (6.6–6.13)
- Topic 6 Groups in the periodic table – Group 0 (6.14–6.16)
- Topic 7 Rates of reaction and energy changes – Rates of reaction (7.1–7.8)
- Topic 7 Rates of reaction and energy changes – Heat energy changes in chemical reactions (7.9–7.16)
- Topic 8 Fuels and Earth science – Fuels (8.1–8.17)

Core practical activities that **will be assessed**:

- Core Practical 7.1 Investigate the effects of changing the conditions of a reaction on the rates of chemical reaction

Topics **not assessed** in this paper:

- Topic 1 Key concepts in chemistry – Atomic structure (1.1–1.12)
- Topic 1 Key concepts in chemistry – Covalent bonding (1.28–1.31)
- Topic 1 Key concepts in chemistry – Types of substance (1.32–1.42)

Paper 1SC0/2CH

Content **will be assessed** from the following topics:

- Topic 1 Key concepts in chemistry – Calculations involving masses (1.43–1.53)
- Topic 6 Groups in the periodic table – Group 7 (6.6–6.13)
- Topic 6 Groups in the periodic table – Group 0 (6.14–6.16)
- Topic 7 Rates of reaction and energy changes – Rates of reaction (7.1–7.8)
- Topic 7 Rates of reaction and energy changes – Heat energy changes in chemical reactions (7.9–7.16)
- Topic 8 Fuels and Earth science – Fuels (8.1–8.17)

Core practical activities that **will be assessed**:

- Core Practical 7.1 Investigate the effects of changing the conditions of a reaction on the rates of chemical reaction

Topics **not assessed** in this paper:

- Topic 1 Key concepts in chemistry – Atomic structure (1.1–1.12)
- Topic 1 Key concepts in chemistry – Ionic bonding (1.21–1.27)
- Topic 1 Key concepts in chemistry – Covalent bonding (1.28–1.31)
- Topic 1 Key concepts in chemistry – Types of substance (1.32–1.42)

Paper 1SC0/2PF

Content **will be assessed** from the following topics:

- Topic 8 Energy – forces doing work (8.1–8.15)
- Topic 10 Electricity and circuits – Electrical circuit principles (10.1–10.17)
- Topic 10 Electricity and circuits – Electrical energy and power (10.22–10.31)
- Topic 10 Electricity and circuits – a.c. and d.c. used in practice (10.32–10.42)
- Topic 12 Magnetism and the motor effect – Magnets and magnetic fields (12.1–12.6)

Core practical activities that **will be assessed**:

- Core Practical 14.3 Investigate the densities of solids and liquids
- Core Practical 14.11 Investigate the properties of water by determining the specific heat capacity of water and obtaining a temperature time graph for melting ice.

Topics **not assessed** in this paper:

- Topic 9 Forces and their effects – describing and representing forces (9.1–9.2)
- Topic 10 Electricity and circuits – Electrical devices (10.18–10.21)
- Topic 12 Magnetism and the motor effect – Electromagnetism (12.7–12.9)
- Topic 13 Electromagnetic induction – Transformers (13.8–13.10)
- Topic 14 Particle model – Pressure of a gas (14.12–14.15)
- Topic 15 Forces and matter – Elasticity (15.1–15.6)

Paper 1SC0/2PH

Content **will be assessed** from the following topics:

- Topic 8 Energy – forces doing work (8.1–8.15)
- Topic 10 Electricity and circuits – Electrical circuit principles (10.1–10.17)
- Topic 12 Magnetism and the motor effect – Magnets and magnetic fields (12.1–12.6)
- Topic 14 Particle Model – Properties of solids, liquid and gases (14.1–14.5)

Core practical activities that **will be assessed**:

- Core Practical 10.17 Construct electrical circuits to A: Investigate the relationship between potential difference, current and resistance for a resistor and a lamp
B: test series and parallel circuits using resistors and filament lamps
- Core Practical 14.3 Investigate the densities of solids and liquids
- Core Practical 14.11 Investigate the properties of water by determining the specific heat capacity of water and obtaining a temperature-time graph for melting ice.

Topics **not assessed** in this paper:

- Topic 9 Forces and their effects – Describing and representing forces (9.1–9.5)
- Topic 10 Electricity and circuits – a.c. and d.c. used in practice (10.32–10.42)
- Topic 13 Electromagnetic induction – Transformers (13.8–13.10)
- Topic 15 Forces and matter – Elasticity (15.1–15.6)

END OF ADVANCE INFORMATION