

# Pearson Edexcel International GCSE (9–1)

**May–June 2022 Assessment Window**

Syllabus  
reference

**4SD0**

## **Science (Double Award) Advance Information Version 2**

**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 6 pages.

There are two option codes for this qualification. Some centres will enter for option “R”, depending on their location – if you’re unsure if your centre uses option “R” papers you should contact your centre who can confirm and check the [Information Manual](#). Please ensure you consult the advance information relevant to the option code used within your centre. Information related to the “R” option is indicated by an “R” after the paper number, e.g. 4SD0/1PR or Paper 1PR.

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## General advice

- In addition to covering the content outlined in the advance information, students and teachers should consider how to:
  - manage their revision of parts of the specification 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 which 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.
- Each exam paper may include some, or all, of the content in the listed topic.
- 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 any 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.

### Paper 4SD0/1B

- Topic 2d Movement of substances into and out of cells (including practical 2.17) (2.15 – 2.17)
- Topic 2g Gas exchange (including practical 2.50) (2.46 – 2.50)
- Topic 2h Transport (2.51 – 2.54, 2.59 – 2.62, 2.65 – 2.69)
- Topic 2j Co-ordination and response (2.80 – 2.94)
- Topic 3a Reproduction (3.1 – 3.9, 3.11 – 3.13)
- Topic 3b Inheritance (3.14 – 3.15, 3.19 – 3.20, 3.22 – 3.34, 3.38 – 3.39)
- Topic 5b Selective breeding (5.10 – 5.11)

Topics **not assessed** in this paper:

- Topic 1a Characteristics of living organisms (1.1)
- Topic 2a Level of organisation (2.1)
- Topic 2f Respiration (2.34 – 2.39)
- Topic 2i Excretion (2.70 – 2.71)
- Topic 4c Cycles within ecosystems (4.10)
- Topic 4d Human influences on the environment (4.12 – 4.17)
- Topic 5c Genetic modification (genetic engineering) (5.12 – 5.16)

### Paper 4SD0/1C

- Topic 1a States of matter (1.1 – 1.4)
- Topic 1c Atomic structure (1.14 – 1.17)
- Topic 1e Chemical formulae, equations and calculations (including practical 1.36) (1.25 – 1.33, 1.36)
- Topic 1g Covalent bonding (1.44 – 1.51)
- Topic 2c Gases in the atmosphere (2.9 – 2.14)
- Topic 2g Chemical tests (2.44 – 2.50)
- Topic 3b Rates of reaction (3.9 – 3.13, 3.15 – 3.16)
- Topic 4b Crude oil (4.7 – 4.18)
- Topic 4c Alkanes (4.19 – 4.22)

Topics **not assessed** in this paper:

- Topic 2a Group 1 (2.1 – 2.3)
- Topic 2b Group 7 (2.5 – 2.7)
- Topic 3a Energetics (3.1 – 3.8)
- Topic 3c Reversible reactions and equilibria (3.17 – 3.18)
- Topic 4e Synthetic polymers (4.44 – 4.47)

### Paper 4SD0/1P

- Topic 1b Movement and position (including practical 1.5) (1.3 – 1.10)
- Topic 2c Energy and voltage in circuits (2.7 – 2.21)
- Topic 3b Properties of waves (3.2 – 3.9)
- Topic 4b Energy transfers (4.2 – 4.10)
- Topic 5b Density and pressure (5.3 – 5.7)
- Topic 7b Radioactivity (7.2 – 7.15)
- Topic 8b Motion in the universe (8.2 – 8.6)

Topics **not assessed** in this paper:

- Topic 6b Magnetism (6.2 – 6.7)
- Topic 8c Stellar evolution (8.7 – 8.10)

### Paper 4SD0/1BR

- Topic 2e Nutrition (2.18 – 2.32)
- Topic 2g Gas exchange (including practical 2.50) (2.46 – 2.50)
- Topic 2j Co-ordination and response (2.80 – 2.94)
- Topic 3a Reproduction (3.1 – 3.9, 3.11 – 3.13)
- Topic 3b Inheritance (3.14 – 3.15, 3.19 – 3.20, 3.22 – 3.34, 3.38 – 3.39)
- Topic 4a The organism in the environment (including practical 4.2) (4.1 – 4.2, 4.5)
- Topic 4b Feeding relationships (4.6 – 4.9)
- Topic 5a Food production (5.1 – 5.8)

Topics **not assessed** in this paper:

- Topic 2d Movement of substances into and out of cells (2.15 – 2.17)
- Topic 2i Excretion (2.70 – 2.71)
- Topic 4c Cycles within ecosystems (4.10)
- Topic 4d Human influences on the environment (4.12 – 4.17)
- Topic 5b Selective breeding (5.10 – 5.11)

### Paper 4SD0/1CR

- Topic 1b Elements, compounds and mixtures (including practical 1.13) (1.8 – 1.13)
- Topic 1c Atomic structure (1.14 – 1.17)
- Topic 1e Chemical formulae, equations and calculations (including practical 1.36) (1.25 – 1.33, 1.36)
- Topic 1f Ionic bonding (1.37 – 1.43)
- Topic 1g Covalent bonding (1.44 – 1.51)
- Topic 3a Energetics (3.1 – 3.4, 3.8)
- Topic 3b Rates of reaction (3.9 – 3.13, 3.15 – 3.16)
- Topic 4b Crude oil (4.7 – 4.18)

Topics **not assessed** in this paper:

- Topic 1a States of matter (1.1 – 1.4)
- Topic 2b Group 7 (2.5 – 2.7)
- Topic 2e Acids, alkalis and titrations (2.28 – 2.32)
- Topic 2f Acids, bases and salt preparations (2.34 – 2.39)
- Topic 3c Reversible reactions and equilibria (3.17 – 3.18)
- Topic 4c Alkanes (4.19 – 4.22)
- Topic 4d Alkenes (4.23 – 4.28)

### **Paper 4SD0/1PR**

- Topic 1c Forces, movement, shape and momentum (1.11 – 1.24)
- Topic 2b Mains electricity (2.2 – 2.6)
- Topic 2c Energy and voltage in circuits (2.7 – 2.21)
- Topic 3c The electromagnetic spectrum (3.10 – 3.13)
- Topic 3d Light and sound (3.14 – 3.23)
- Topic 5b Density and pressure (including practical 5.4) (5.3 – 5.7)
- Topic 5c Ideal gas molecules (5.15 – 5.22)
- Topic 7b Radioactivity (7.2 – 7.16)
- Topic 8c Stellar evolution (8.7 – 8.10)

Topics **not assessed** in this paper:

- Topic 4c Work and power (4.11 – 4.17)
- Topic 7c Fission and fusion (7.17 – 7.26)

### **END OF ADVANCE INFORMATION**