

## Advance Information for Summer 2022

### GCSE (9–1)

### Chemistry A (Gateway Science)

### J248

We have produced this advance information to help support all teachers and students with revision for the Summer 2022 exams.

#### Information

- The format/structure of the papers remains unchanged.
- This notice covers all examined components.
- For each paper, the main 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, **not** in question order.
- Assessment of practical skills, maths skills, and Working Scientifically skills will occur throughout all of the papers.
- You are **not** permitted to take this notice into the exam.
- This document has **3** pages.

#### Advice

- It is advised that teaching and learning should still cover the entire subject content in the specification, so that students are as well prepared as possible for progression.
- Topics not explicitly given in either list may appear in low tariff questions or via synoptic questions (e.g., questions where students are asked to bring together knowledge, skills and understanding from across the specification).
- Students will still be expected to apply their knowledge to unfamiliar contexts.

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**J248/01**

- Section 2.1 Purity and separating mixtures
- Section 2.2 Bonding
- Section 2.3 Properties of materials
- Section 3.2 Energetics
- Section 3.3 Types of chemical reactions
- Section 3.4 Electrolysis

Required practical skills that **will be assessed**:

- Practical Activity Group 2: Investigate the electrolysis of aqueous solutions.
- Practical Activity Group 3: Use of appropriate apparatus to separate mixtures.
- Practical Activity Group 3: Use of chromatography to investigate dyes.
- Practical Activity Group 4: Investigate the separation of mixtures by distillation.
- Practical Activity Group 6: Techniques for the measurement of pH.
- Practical Activity Group 8: Investigate temperature changes in reactions.

There are **NO** topics that are **not assessed** in this paper.

**J248/02**

- Section 5.1 Monitoring chemical reactions
- Section 5.2 Controlling reactions
- Section 5.3 Equilibria
- Section 6.1 Improving processes and products
- Section 6.2 Organic chemistry

Required practical skills that **will be assessed**:

- Practical Activity Group 1: Investigate the reactivity series using displacement reactions.
- Practical Activity Group 5: Identify an unknown compound using cation tests, anion tests and flame tests.
- Practical Activity Group 8: Investigate factors which affect the rate of a reaction.

There are **NO** topics that are **not assessed** in this paper.

**J248/03**

- Section 2.1 Purity and separating mixtures
- Section 2.3 Properties of materials
- Section 3.1 Introducing chemical reactions
- Section 3.2 Energetics
- Section 3.3 Types of chemical reactions

Required practical skills that **will be assessed**:

- Practical Activity Group 3: Use of appropriate apparatus to separate mixtures.
- Practical Activity Group 3: Use of chromatography to investigate dyes.
- Practical Activity Group 4: Investigate the separation of mixtures by distillation.

There are **NO** topics that are **not assessed** in this paper.

**J248/04**

- Section 5.1 Monitoring chemical reactions
- Section 5.2 Controlling reactions
- Section 6.1 Improving processes and products
- Section 6.2 Organic chemistry

Required practical skills that **will be assessed**:

- Practical Activity Group 1: Investigate the reactivity series using displacement reactions.
- Practical Activity Group 5: Identify an unknown compound using cation tests, anion tests and flame tests.
- Practical Activity Group 6: Investigate acid/alkali titrations.
- Practical Activity Group 8: Investigate factors which affect the rate of a reaction.

There are **NO** topics that are **not assessed** in this paper.

**END OF ADVANCE INFORMATION**

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