

How to get a grade 5 in AQA GCSE Chemistry (Higher tier)

A grade 5 is a strong pass. On the Higher tier it comes from banking the accessible marks on every topic: recall, standard calculations, practical methods and clear short explanations. You don't need to crack every hard final part, but you can't afford whole topics you haven't learned.

What a grade 5 asks of you

- Secure recall across all ten topics: definitions, chemical tests, trends, equations and the eight required practicals.
- The standard calculations done reliably with units: relative formula mass, concentration in g/dm^3 , percentage yield, atom economy, R_f and mean rate.
- Balanced symbol equations for common reactions, and dot and cross diagrams for simple ions and molecules.
- Clear 2- and 3-mark explanations that use the key words: 'intermolecular forces', 'ions free to move', 'more frequent collisions'.
- 6-mark answers that reach at least the middle level: relevant points, in a sensible order, with some linking.
- The more approachable Higher-only ideas: simple moles calculations and oxidation and reduction as loss and gain of electrons.

Secure these topics first

- Atomic structure and bonding (4.1 and 4.2). They underpin both papers, because Paper 2 can draw on topics 1 to 3.
- Structure and properties: ionic, simple molecular, giant covalent and metallic, what each means for melting point and conductivity, and diamond, graphite and graphene.
- Chemical changes (4.4): the reactivity series and displacement, extraction with carbon, reactions of acids with metals, oxides, hydroxides and carbonates, making salts, pH and neutralisation, and the products of electrolysis.
- Rates (4.6.1): each factor that changes the rate and the collision theory explanation for it.
- Crude oil and hydrocarbons (4.7.1): alkanes, fractional distillation, how properties change with chain length, combustion and cracking.
- Chemical analysis (4.8): pure substances, formulations, chromatography and every test for gases and ions. These are memory marks.
- Atmosphere and resources (4.9 and 4.10): once learned, the questions are mostly recall and reading data.
- The eight required practicals, as they carry at least 15% of the marks.

Question types to practise

- Tick-one-box multiple choice, and one-word 'give' and 'name' answers.
- One-equation calculations with the unit: M_r , R_f , mean rate, concentration and percentage yield.
- Balancing equations, and completing electronic structures and dot and cross diagrams.
- Reading graphs and tables: reading off values, describing trends, working out means and spotting anomalies.
- Short 'explain why' questions: structure and properties, rates, group trends.
- 'Describe a method' for each required practical, as numbered steps.

An 8-week plan

- Aim for 3 or 4 sessions of about 45 minutes a week, plus the Daily 5 every day. With longer, spread each week over two; with less, pair the weeks up.
- Week 1: sit a timed mock of Paper 1 to find your starting point, then revise atomic structure and the periodic table (4.1).
- Week 2: bonding, structure and properties (4.2), then relative formula mass, conservation of mass and uncertainty (4.3.1).
- Week 3: the rest of quantitative chemistry (4.3) at grade 5 level, then reactivity of metals (4.4.1).
- Week 4: acids, salts and electrolysis (4.4.2 and 4.4.3) and energy changes (4.5), with the four Paper 1 practicals. Finish with a timed Paper 1 mock.
- Week 5: rates and reversible reactions (4.6), with the rates practical, and crude oil and hydrocarbons (4.7.1).
- Week 6: the rest of organic chemistry (4.7), and chemical analysis (4.8) with the chromatography and identifying ions practicals.
- Week 7: the atmosphere (4.9) and using resources (4.10), with the water purification practical. Finish with a timed Paper 2 mock.
- Week 8: your five weakest subtopics from Progress, the equation list and chemical tests every day, and one 6-mark method answer a day.

Using GCSE Paper Builder

- Notes: work through the grade-by-grade skill lists and tick off every grade 4 and grade 5 skill in the checklist. Each subtopic has notes, a cheatsheet and a worksheet with answers.
- Custom paper: after revising a subtopic, build a short paper on just that subtopic on Easy, mark it with the mark scheme, and move up to Medium once you score well.
- Daily 5: five questions a day, chosen mostly from your weakest topics. Keep the streak going; ten minutes a day adds up.
- Flashcards: quick recall questions on the topics you are revising, ideal for definitions (isotope, alloy, formulation, catalyst), chemical tests and key facts. Spaced repetition brings back the ones you get wrong just before you would forget them.
- Mock exams: sit the full timed papers in weeks 1, 4 and 7, in exam conditions.
- Progress: start each week with the weakest subtopics it shows, and redo the questions you dropped marks on.
- Whiteboard: set out calculations step by step and practise dot and cross diagrams on screen.
- If moles, electrolysis or equations still won't click, book the free 30-minute trial lesson with Chhetri Academy for 1-to-1 tutoring.

Timing in the exam

- About 1 minute per mark; give a 6-mark answer 6 to 8 minutes.
- Work through in order, but if a part beats you after a minute or two, circle it and move on. Accessible marks are spread through every question, including the last one.
- At 50 minutes you should be about halfway through the marks. If you are behind, speed up on the short recall parts, not the 6-mark answers.
- Keep the last 5 minutes to go back to anything you skipped and write your best attempt. No blanks.

Traps at grade 5

- Describing when the question says explain: an explanation needs a reason ('because...').
- Saying covalent bonds break when a simple molecular substance melts. It is the weak intermolecular forces that are overcome.
- Saying electrons move in molten or dissolved ionic compounds. It is the ions that move.
- Writing 'more collisions' instead of 'more frequent collisions'.
- Naming a product as an observation ('carbon dioxide is made') instead of what you would see ('fizzing').
- Changing subscripts to balance an equation.
- Leaving out units, or forgetting to convert cm^3 to dm^3 .
- Leaving the required practicals out of revision, even though they carry at least 15% of the marks.
- Giving two answers to a 'give one' question.

Free notes, worksheets, practice papers and mock exams at chhetriacademy.com. Written for this site; not taken from past papers.
Stuck? 1-to-1 tutoring with a free 30-minute trial lesson.