

How to get a grade 7 in AQA GCSE Biology (Higher tier)

A grade 7 needs secure knowledge of the whole specification, including the Higher tier and biology-only content, and the skill to apply it: explaining unfamiliar data, handling multi-step calculations and writing six-mark answers with the ideas linked. This plan focuses your revision on the questions that separate a 5 from a 7.

What a grade 7 asks of you

- Detailed knowledge of every topic, including the Higher tier and biology-only content, not just the core.
- Explanations written as linked chains (change, cause, effect) using precise terms, rather than single facts.
- Applying knowledge to organisms, diseases and experiments you have not met before, in 'Suggest', 'Explain' and 'Use the information' questions.
- Multi-step calculations: unit conversions, standard form, rearranging equations, percentage change, efficiency and the inverse square law.
- Six-mark answers that reach Level 3 most of the time.
- Evaluating investigations and claims: validity, repeatability, sample size, controls and whether the conclusion is supported.

Content to secure beyond grade 5

- Photosynthesis: how limiting factors interact, the inverse square law for light intensity, and the economics of controlling conditions in greenhouses.
- Exercise: oxygen debt, and lactic acid being carried to the liver and converted back to glucose.
- Hormones: glucagon and glycogen in blood glucose control; how FSH, LH, oestrogen and progesterone interact in the menstrual cycle; hormones in IVF; adrenaline, and thyroxine as an example of negative feedback; ADH and the kidney.
- Monoclonal antibodies: how they are produced and their uses, advantages and disadvantages.
- The nervous system in detail: the brain, the eye (accommodation, short and long sight) and control of body temperature.
- Plant hormones: auxin in phototropism and gravitropism, and uses of auxins, gibberellins and ethene.
- DNA structure and protein synthesis; how mutations can change a protein; the main steps of genetic engineering; cloning methods.
- Speciation, evidence for evolution, and classification including the three-domain system.
- Ecology: efficiency of biomass transfer between trophic levels, decomposition and the conditions for decay, and food security and farming techniques.
- Surface area to volume ratio and how exchange surfaces such as alveoli, villi and gills are adapted.

Question types to master

- 'Explain' questions on data: the trend, the biological reason for each part, and quoted values.
- Four- and six-mark 'Compare' and 'Evaluate' questions using given information, finishing with a reasoned conclusion.
- Required practical six-markers: describing or planning a method with values, controls, repeats and processing, and suggesting improvements.
- Multi-step calculations with rounding to the significant figures asked for.
- Genetic crosses and family trees: genotypes, probabilities as fractions, decimals or percentages, and carriers of inherited disorders.
- Questions set in unfamiliar contexts, where you must spot which specification idea is being tested.

Ten-week revision plan

- Every week: five sessions of about 45 minutes, plus Daily 5 and flashcards every day. Start each session with 10 minutes on an older topic so nothing fades.
- Weeks 1 to 3: Paper 1 topics (Cell biology, Organisation, Infection and response, Bioenergetics), paying particular attention to the Higher tier and biology-only detail. End each week with a Hard custom paper on that week's subtopics.
- Weeks 4 to 6: Paper 2 topics (Homeostasis and response, Inheritance, variation and evolution, Ecology) in the same way.
- Week 7: a timed mock of each paper. List the ten subtopics with the lowest scores.
- Week 8: fix those ten subtopics. Add one calculations session and two six-mark sessions (one practical method, one evaluation).
- Week 9: second timed mocks; redo every lost mark and rewrite your six-mark answers until they would reach Level 3.
- Week 10 and the gap between the papers: Paper 1 revision and practicals until Paper 1, then Paper 2, with one more timed Paper 2 mock in the gap.

How to use this website

- Notes: work through the grade 6 and 7 skills in the grade-by-grade checklist, and use the cheatsheets for the detail that is easy to forget (hormone roles, stages of processes).
- Worksheets: do one after each subtopic and check your answers against the given answers, correcting your wording as well as the facts.
- Custom paper: use Medium to warm up, then Hard, and pick subtopics from different topics in one paper so you practise switching between them.
- Mock exams: sit them timed and note where you are at 50 minutes.
- Progress: work from the weakest subtopic down and redo each dropped-mark question until you score full marks on it.
- Daily 5 and Flashcards: keep them daily; they stop Paper 2 content fading while you focus on Paper 1, and the other way round.
- Whiteboard: work through genetic crosses, standard form and inverse square calculations on screen.
- If six-mark answers stay stuck in Level 2, a free 30-minute trial lesson with Chhetri Academy can show you how to structure them.

Timing in the exam

- Aim for about 50 marks done at 50 minutes and to finish with 10 minutes to spare.
- Move quickly through recall questions so the data analysis and extended answers get the time they need.
- Plan each six-mark answer for 30 seconds, then write for about 6 minutes.
- Do not let one stubborn calculation eat five minutes: write the equation and your substitution, star it and return.

Traps at grade 7

- Explanations that stop one step short, such as 'the enzyme is denatured' without saying the active site changes shape so the substrate no longer fits.
- Not quoting data when the question says 'Use Figure 1' or asks you to compare results.
- Rounding in the middle of a calculation, or ignoring the significant figures the question asks for.
- Six-mark answers that list facts without linking them, or evaluations with no conclusion.
- Mixing up repeatable and reproducible, or accurate and precise.
- Treating a correlation as proof of cause.
- Genetic crosses without gametes, or giving a ratio when a probability was asked for.
- In 'Suggest' questions, writing a memorised answer that ignores the organism or situation in the 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.