

Structure of the new science assessments

Discussion: Managing formative assessment

The following points apply to all AQA GCSE science specifications that will be awarded in summer 2018.

Each award is made up of different numbers of papers.

All awarding bodies are given a set of criteria from Ofqual that we must apply to ensure the papers are balanced and meet these requirements. The following cover the high-level detail of these requirements, to support teachers when they are constructing their own assessments.

Levels of demand

- All papers available at Foundation and Higher tiers.
- Foundation papers have 60% of marks targeting low demand and 40% targeting standard demand.
- Higher papers have 40% of marks targeting standard demand and 60% high demand.
- 30% of the standard demand marks will be common between Higher and Foundation tier papers.
- Low demand questions are written to target grades 1–3. Standard demand questions target grades 4–5.
- High demand questions target grades 6–9.

Assessment objectives

- AO1 = 40% (range 37%–43%), of which no more than 15% can be knowledge in isolation (direct recall from the specification).
- AO2 = 40% (range 37%–43%).
- AO3 = 20% (range 17%–23%)

Practical skills

- 15% of marks will assess practical skills based on the required practicals.
- Could cover any aspect of an investigation – see page 60 of ‘Our exams explained’.
- Questions may cover any of the assessment objectives.
- If asked about methods/planning any suitable method or plan to achieve the outcome will gain marks.

Working scientifically

- Working scientifically will be assessed across all papers. There is no minimum mark for working scientifically.
- Examples of how working scientifically could be assessed are given in the specification.

Maths skills

- The maths criteria are outlined in the specification.
- Biology 10% of marks.
- Chemistry 20% of marks.
- Physics 30% of marks.
- Combined Science 20% of marks in the ratio of 1:2:3.
- Questions will be at all levels of demand.

Extended response

- No QWC marks but there will be questions that require students to write an extended response.
- Minimum marks: Foundation 10% of marks, Higher 15% of marks.
- Extended response is a question that 'requires a response of sufficient length to demonstrate the ability to construct and develop a sustained line of reasoning which is coherent, relevant, substantiated and logically structured'.
- An extended response question might be prose or a multi-step calculation.

Physics equations

- 23 physics equations that students need to know and be able to apply (21 in Combined Science).
- 12 further physics equations (7 in Combined Science) that students must be able to select from a list and apply. Students will be given the prompt 'Use the correct equation from the Equation sheet').
- In calculations targeted at grades 1–3 students will be given the equation to apply. Simple equations with substitution of two numbers, no transformations.
- Recall (AO1) Grades 1-3 may also be asked to recall an equation in order to address AO1 (eg by multiple choice, link boxes). Will only be worth 1 mark.
- Grades 4–5 will be given the prompt 'Write down the equation that links...' so they access AO1. Calculation will involve something 'extra' eg simple transformation.
- Grades 6–7 no prompt about which equation to use. Students will not gain marks simply for writing the equation down without doing something with it (so no AO1). Questions will involve transformations or 'something extra'.
- Grades 8–9 no prompts to help students remember the equation. Include complex equations. Will involve transformations and multiple steps.
- Calculations that involve multiple steps will have the prompt 'Write down any equations you use'.