

National 5 Biology



Guidance on gathering key evidence for producing estimates in session 2020–21

This document provides subject-level guidance to SQA approved centres on gathering key evidence to support estimates for National 5 Biology in session 2020–21. You should read this guidance alongside [National Courses: guidance on gathering evidence and producing estimates](#) and the SQA Academy resource, [Quality assurance of estimates for National Courses](#).

This document also includes information on subject-level assessment resources.

Gathering key evidence to produce estimates for National 5 Biology

Every year you provide estimates for your candidates. This document and *National Courses: guidance on gathering evidence and producing estimates* will give you additional support and guidance to support your decision making for session 2020–21. Evidence should be gathered later in the course, as a realistic reflection of a candidate's attainment. It is important to note that it is not the **quantity** of evidence, but the **quality** of evidence, in relation to its predictive value, that will support you during the estimation process.

The following types of key evidence are likely to provide a good predictive value and may be helpful, although there may be other types of key evidence you feel you would like to use.

Types of key evidence and assessment resources

The closer the evidence is to the standard of the biology course assessment, and the more closely your marking follows the national standard, the more realistic and reliable your estimates should be. You can use questions from past papers in your assessments. However, you should not use SQA past papers in their entirety.

You **must** base your estimates on demonstrated attainment.

Component 1: question paper

In biology, the key pieces of evidence can include:

- ◆ an examination, covering as much of the course as possible
- ◆ a supplementary examination, covering areas not included in the first examination
- ◆ end-of-topic tests, including grade A marks — you can use these as supplementary evidence, but they are limited in their reliability for estimating grades

You must gather key evidence in closed-book conditions and under a high degree of supervision and control.

You should use all the key evidence you gather to help you form a judgement about the estimated grade. You should consider weighting the judgement more towards the main instrument of assessment. However, your judgement should be holistic rather than focusing only on the piece of key evidence that gives the best grade for an individual candidate. You should give greater weight to the evidence that most closely mirrors the SQA question paper.

You may need to adjust the cut-off scores you use from notional, so that they are appropriate for your instrument(s) of assessment. Where it is necessary to split the examination over a number of class sessions, you should raise the cut-off scores to reflect this.

A supplementary examination should sample the knowledge not covered in the main examination, as well as skills. However, it is important that you do not repeat questions from the main examination in the supplementary examination, as all questions must be unseen.

The National 5 Biology question paper brief on the following page gives the structure of the SQA question paper, and the range of marks allocated to scientific problem-solving skills and knowledge and understanding. It gives the abbreviated codes for the knowledge and skills that are assessed. The question paper brief is a useful starting point to ensure that your questions have the correct balance and level of demand if you are constructing a centre examination.

You should ensure that marks are evenly distributed across each topic that you are assessing. You do not need to assess every key area within a topic, but you should sample across the key areas. Using questions that integrate more than one topic can set a higher level of demand. It is good practice to apply these principles to commercially purchased examinations or existing centre-devised examinations to ensure that there is the correct balance and appropriate level of demand. To do this, you may need to modify or substitute questions.

National 5 Biology question paper brief

Component	Marks		
	Knowledge and understanding	Skills	Total
question paper	70+/-5	30+/-5	100

Knowledge and understanding/skills	Range of marks
◆ demonstrating knowledge and understanding of biology by making statements, describing information, providing explanations and integrating knowledge (dKU)	min 25
◆ applying knowledge and understanding of biology to new situations, interpreting information and solving problems (aKU)	min 25
◆ planning and designing experimental/fieldwork investigations to test given hypotheses or to illustrate particular effects (PLAN)	25–35
◆ selecting information from a variety of sources (SEL)	
◆ presenting information appropriately in a variety of forms (PRES)	
◆ processing information (using calculations and units, where appropriate) (PROC)	
◆ making predictions and generalisations based on evidence/information (PRED)	
◆ drawing valid conclusions and giving explanations supported by evidence/justification (CONC)	
◆ suggesting improvements to experimental/fieldwork investigations (IMPR)	

Additional information

A maximum of two extended writing questions of 3–5 marks.
At least one question based on scientific literacy.
'A' type marks: approximately 30%.

End-of-topic tests

End-of-topic tests, which include questions containing grade A marks, can be useful supplementary evidence. These tests should contain approximately 30% grade A marks so that they are of an appropriate level of demand.

On their own, end-of-topic tests do not have high predictive value. They tend to compartmentalise subject content and test limited knowledge. Their focus is on testing knowledge and understanding rather than skills, and they rarely ask candidates to integrate knowledge and skills. You may need to adjust the cut-off scores you use from notional, so that they are appropriate for your instrument(s) of assessment.

Although the freestanding units are no longer part of the National 5 Biology course and do not contribute to a course award at National 5, we have updated the freestanding unit specifications and unit assessment support (UAS) packs to reflect the revised content in the National 5 course to support delivering centres. The UAS packs do not assess beyond C-grade level and may be useful to support an estimate at C-grade only.

Marking instructions

Centres must ensure that teachers and/or lecturers apply the marking instructions that accompany any piece of key evidence consistently. All marking should be cross-checked against the national standards exemplified in SQA past paper marking instructions and centres should confirm this by participating in centre-based or local moderation activities.

Component 2: assignment

The assignment has been removed from the National 5 Biology course for session 2020–21. You should not include any candidate evidence relating to the assignment when making your estimates.

Using additional assessment resources for session 2020–21: key information

It is important that you use valid and reliable assessments when gathering evidence to produce estimates for National 5 in session 2020–21.

In National 5 Biology, SQA will provide a question paper and an additional scientific literacy question for session 2020–21, which you can use when gathering evidence to support your estimates. Please note that the marking instructions have not been standardised based on candidate responses. You may therefore need to agree within your centre how to consistently mark an item if a candidate response is not covered by the marking instructions.

The National 5 question paper and scientific literacy question will only be available on SQA's secure website — you must treat these confidentially, in the same way as other live assessment materials.

You should carefully consider how best to use these materials to support candidates, to integrate with your programme of learning, and to help you collate evidence of candidate attainment. Given current public health advice and to maximise learning and teaching time, it is important to stress that there is no expectation that schools and colleges hold a formal diet of prelims for National 5. One of the key reasons for moving to an alternative model was to

create additional teaching time through removing the need for prelims and replacing the final examination diet with more flexible classroom-based assessment.

If you use a question paper in part or in its entirety, you should remind candidates that they must not discuss the content of the paper with anyone, including friends, family or on social media.

Many centres will have already developed their own assessments, and there is no requirement to use SQA's 2020–21 question paper. Centres that do not have a suitable supplementary assessment could extract a selection of questions from the 2020–21 question paper provided and from SQA past papers to produce an appropriate examination.

Understanding the national standard

Further information and guidance for National 5 Biology will be published on the [Understanding Standards website](#) in due course.