

Course report 2026

National 5 Biology, SCQF level 5

We've written this report for teachers and lecturers. We recommend you read this with the published course assessment documents and marking instructions.

Note: we've made changes to the course assessment from session 2026–27.

Check your [subject page](#) for more information.

The report:

- provides a summary of how each course component performed
- highlights areas of the question paper and coursework where candidates performed well and areas where they did not perform well
- has advice you might find useful when preparing candidates for assessment

We collect and prepare the statistics in course reports before we complete the appeals process.

Statistical and grade boundary information

Course entries

Number of resulted entries in 2025: 22,092

Number of resulted entries in 2026: 22,283

Distribution of course awards (including minimum mark to achieve each grade)

Course award	Number of candidates	Percentage	Cumulative percentage	Minimum mark required
A	7,402	33.2	33.2	86
B	3,879	17.4	50.6	74
C	3,679	16.5	67.1	62
D	3,354	15.1	82.2	50
No award	3,969	17.8	100	Not applicable

We've not applied rounding to these statistics.

In this report:

- 'Most' means greater than or equal to 70%.
- 'Many' means 50% to 69%.
- 'Some' means 25% to 49%.
- 'Few' or 'a few' means less than 25%.

You can find [statistical reports](#) on our website.

General commentary on grade boundaries

Our main aim when setting grade boundaries is to be fair to candidates across all subjects and levels, and to maintain comparable standards across the years, even as arrangements evolve and change.

For most National Courses, we aim to set examinations and other external assessments and create marking instructions that allow:

- a competent candidate to score a minimum of 50% of the available marks (the notional grade C boundary)
- a well-prepared, very competent candidate to score at least 70% of the available marks (the notional grade A boundary)

It's very challenging to get the standard on target every year, in every subject, at every level. Therefore, we hold a grade boundary meeting for each course to bring together all the information available (statistical and qualitative) and make final decisions on grade boundaries based on this information. Senior Qualifications Scotland staff normally chair these meetings.

Principal assessors use their subject expertise to evaluate the performance of the assessment and propose suitable grade boundaries based on the full range of evidence. We can adjust the grade boundaries as a result of the discussion at these meetings. This allows the pass rate to be unaffected in circumstances where there is evidence that the question paper or other assessment has been more, or less, difficult than usual.

- We can adjust the grade boundaries downwards if there's evidence that the question paper or other assessment has been more difficult than usual.
- We can adjust the grade boundaries upwards if there's evidence that the question paper or other assessment has been less difficult than usual.
- If levels of difficulty are comparable to previous years, we maintain similar grade boundaries.

Every year, we evaluate the performance of our assessments in a fair way, while ensuring standards are maintained so that our qualifications remain credible. To do

this, we measure evidence of candidates' knowledge and skills against the national standard.

For full details of the approach, please refer to the [Awarding and Grading for National Courses Policy](#).

How the course assessment performed

Question paper

Overall, the question paper performed as intended.

Markers commented that the question paper was fair and balanced. It provided a spread of marks across the course and gave candidates the opportunity to display a range of skills and demonstrate and apply their knowledge and understanding.

Assignment

The assignment performed as intended.

How candidates performed

Areas where candidates performed well

Most candidates made a good attempt at answering most of the questions.

Question paper

Section 1 (objective test)

Most candidates gave the correct response to the following questions:

- Question 1 cell structure that contains chlorophyll
- Question 2 the term used when potato cells gain water
- Question 5 process of genetic engineering
- Question 6 involvement of enzymes in respiration
- Question 10 identifying examples of continuous variation
- Question 18 abiotic factors
- Question 19 applying problem-solving skills to calculate the percentage of a total
- Question 22 definition of indicator species
- Question 24 applying knowledge of biological control to a food web scenario

Many candidates gave the correct response to the following questions:

- Question 3 location of production and structure of mRNA
- Question 4 structures involved in an enzyme-controlled reaction
- Question 9 identifying a haploid cell
- Question 11 applying knowledge of genetic crosses to calculate the expected number of pea plants
- Question 12 transport of sugar in plants

- Question 14 applying problem-solving skills to calculate percentage decrease
- Question 15 applying problem-solving skills to analyse data in a table
- Question 16 absorption by villi in the small intestine
- Question 17 definition of interspecific competition
- Question 21 applying knowledge of limiting factors to analyse data in a graph
- Question 23 accumulation of pesticide in a food web
- Question 25 applying problem-solving skills to analyse data in a graph

Section 2

Most candidates performed well in the following questions:

- Question 1(a) naming the vacuole and giving its function
- Question 1(c) selecting a structure found in cells and giving its function
- Question 2(a)(i) stating the colour of a solution in an investigation
- Question 2(b) naming the process as osmosis
- Question 3(a) naming the structure of a DNA molecule
- Question 4(b)(i) calculating an average using data from the table
- Question 5(a)(i) using results of an investigation to identify the type of respiration
- Question 6(b)(i) naming the process that allows the number of stem cells to increase
- Question 7(a) identifying a neuron from a diagram of a reflex arc
- Question 8(a) identifying the site of female gamete production
- Question 12(a)(ii) giving named examples of carnivore and omnivore using a food web

Many candidates performed well in the following questions:

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| Question 1(b) | describing a structural difference between typical plant and fungal cells |
| Question 2(c) | naming a component of a cell membrane |
| Question 3(b) | applying knowledge of DNA to name a base |
| Question 3(d)(i) | naming the term used to describe a section of DNA that codes for a protein |
| Question 4(a)(i) | stating two variables, not already mentioned, that should be controlled to ensure validity of an experiment |
| Question 5(a)(ii) | using results of an investigation to identify the type of cell where a respiration pathway would occur |
| Question 5(a)(iii) | using results of an investigation to state the location in the cell where a respiration pathway would be completed |
| Question 5(b) | calculating a simple whole number ratio |
| Question 6(a)(i) | stating the feature of stem cells that gives them potential to become many different body cells |
| Question 6(b)(ii) | calculating the time taken for 16 cells to be produced when given the doubling time |
| Question 6(c) | naming the system in the body of which white blood cells are part of |
| Question 7(d) | stating the function of a reflex |
| Question 8(b)(i) | describing how a hormone travels |
| Question 8(b)(iii) | calculating how many times greater the hormone concentration is using data from a graph |
| Question 9(a)(i) | applying knowledge to give the genotype |

Question 10(a)	naming the term 'control'
Question 10(b)	suggesting a reason why participants recording their own intake of protein was a limitation
Question 11	describing the pathway of blood through the heart
Question 12(b)	calculating the percentage of consumers in a pyramid of numbers
Question 13(b)	describing the effect an algal bloom has on the number of bacteria and giving a reason why
Question 14(a)	naming the stage of photosynthesis that produces oxygen
Question 14(b)	completing the vertical axis and plotting a line graph
Question 15(b)	applying knowledge of varieties interbreeding and producing fertile offspring to give a conclusion
Question 15(c)	naming the process by which the plants best suited to the environment survive and pass on favourable alleles to their offspring

Assignment

Section 1	Most candidates stated an appropriate aim.
Section 2	Many candidates gave an account of the biology relevant to the aim of their investigation.
Section 3(a)	Many candidates gave a brief description of the approach used to collect their data.
Section 3(b)	Nearly all candidates included sufficient raw data appropriate to their aim.
Section 3(c)	Many candidates presented their data in a table with clear headings.
Section 3(d)	Most candidates calculated their mean or average values correctly.

- Section 3(e) Most candidates included data or information relevant to their aim.
- Section 3(f) Nearly all candidates referenced their internet or literature source.
- Section 4(a) Nearly all candidates selected the correct format for their graphical presentation.
- Section 4(b) Most candidates provided suitable scales for their graph.
- Section 4(c) Most candidates provided suitable labels and units for the axes of their graph.
- Section 4(d) Many candidates plotted their data points accurately.
- Section 8(a) Most candidates provided an informative title for their assignment.
- Section 8(b) Most candidates wrote a clear and concise report.

Areas where candidates did not perform well

Question paper

Section 1 (objective test)

- Question 7 Few candidates identified the structures in a stage of mitosis.
- Question 8 Many candidates did not identify the location of the receptors for a hormone.
- Question 13 Many candidates did not correctly identify the rate of water gain using data from a graph.
- Question 20 Few candidates identified the correct statement about the number of plant species from the information given in the table.

Section 2

- Question 2(a)(ii) Few candidates explained the results of an investigation involving a model cell. Many candidates stated that iodine moved by osmosis.

Question 3(c)	Many candidates did not correctly calculate the total number of bases in a DNA strand.
Question 3(d)(ii)	Few candidates explained why the mutation would result in a change to the protein's shape and function.
Question 4(a)(ii)	Few candidates explained that three petri dishes were set up to increase reliability.
Question 4(b)(ii)	Few candidates explained why there was a clear area around each well.
Question 4(b)(iii)	Few candidates gave a suitable conclusion for the experiment. Many candidates stated what the optimum temperature was found to be.
Question 6(a)(ii)	Many candidates did not give a function of stem cells.
Question 7(b)(i)	Many candidates did not describe how a message travels along a neuron.
Question 7(b)(ii)	Few candidates described how the message was transferred between neurons.
Question 7(c)	Few candidates calculated the speed of the response when given the distance and time.
Question 8(b)(ii)	Many candidates did not describe the changes in the hormone concentration using the data in the graph.
Question 9(a)(ii)	Many candidates did not explain why the F ₁ generation all have short hair.
Question 9(b)(i)	Many candidates did not define the term 'mutation'.
Question 10(c)	Many candidates did not correctly calculate the knee strength after eight weeks.

- Question 10(d) Few candidates suggested why it may not be necessary to take the protein supplement.
- Question 12(a)(i) Many candidates did not give the term for all the organisms in the ecosystem.
- Question 12(a)(iii) Few candidates named the process that the capercaillie uses that will be available to the pine marten.
- Question 12(a)(iv) Few candidates explained why the red fox population had the least energy.
- Question 13(a) Some candidates explained why crop yields need to be increased.
- Question 13(c) Some candidates explained why an algal bloom would cause a decrease in the concentration of oxygen in the water.
- Question 13(d) Some candidates suggested an alternative that could be used to reduce the use of fertilisers.
- Question 14(c) Many candidates did not describe the relationship between temperature and the rate of photosynthesis. Many candidates described the effect on the volume of oxygen produced.
- Question 14(d) Many candidates did not explain why no oxygen would be produced at 70°C.
- Question 15(a) Few candidates gave the term to describe the characteristic.
- Question 15(d) Many candidates did not correctly calculate the time taken when given the distance and the speed.

Assignment

Section 5: analysis

Many candidates did not give a valid comparison in their analysis of the data they had gathered with data or information from the internet or literature. They did not fully

comment on similarities between the two sets of data, and ignored differences, especially when the researched data did not completely support their experimental data. Many candidates just restated their own results and did not compare the data.

Section 6: conclusion

Many candidates did not draw a valid conclusion that related to the aim **and** was supported by all the data or information in the report. Many candidates restated the results of their own experiment, which were not supported by other data in the report.

Section 7: evaluation

Many candidates did not produce an appropriate evaluation. Some candidates correctly identified a factor that would affect the results, but did not go on to describe what they did or could have done to minimise that effect.

Some candidates did not gain marks because they used the terms 'valid', 'reliable' and 'accurate' incorrectly. Candidates do not have to use these terms in the evaluation.

Preparing candidates for assessment

Question paper

Candidates should have a strong grasp of the course's mandatory knowledge and understanding. You should integrate revision activities throughout the course to help candidates reinforce terminology and key definitions.

Candidates must be able to apply what they know to demonstrate deeper comprehension. This skill can prove challenging, and many candidates struggle with questions that require application in unfamiliar contexts. Therefore, you should give candidates regular opportunities to practise answering these questions.

You should encourage candidates to take time to read all parts of each question, not just the introduction, with care and attention so they do not miss important information. Candidates may incorrectly interpret what questions ask them to do and give inappropriate responses.

Practising with past papers is a valuable revision exercise. However, candidates frequently provide responses that lack specificity when faced with unfamiliar question settings, for example, reliability and validity. You should remind candidates that definitions of these terms are included in the course specification and are assessable.

You should practise 'describe' and 'explain' questions with candidates. The general marking principles in the marking instructions contain information on valid responses to command words.

You should help candidates to develop the broad, generic skills listed in the 'Skills for learning, skills for life and skills for work' section of the [course specification](#). You should build these skills into the course where you can.

You should incorporate practical work into the course, where possible, to reinforce learning and provide opportunities for data analysis and evaluation.

You should remind candidates that the table of apparatus and techniques in the [course specification](#) is an assessable part of the course.

You should advise candidates not to write in pencil, as markers can find responses in pencil more difficult to read.

Candidates must complete the answer grid for their responses to the multiple-choice questions. You should prepare candidates by providing assessment opportunities that mirror the final exam.

Assignment

Assignment topics should give candidates the best chance of accessing full marks. Although many candidates carry out their experimental work effectively, they often do not demonstrate a secure understanding of key biological concepts or the underlying principles of their investigation. This is especially clear when candidates use indirect methods to measure dependent variables.

You should offer candidates a broad range of appropriate experimental topics. This enhances practical competence and lets candidates choose a topic they understand.

You should make sure candidates understand that they should give their report a suitable and informative title that reflects its content and does not simply repeat the aim. Before candidates begin, you must discuss and approve the feasibility of each candidate's aim. You cannot help candidates with the wording of their aim, but you can confirm that the investigation is practical. You should discourage candidates from having multiple aims, as this makes drawing conclusions more difficult.

All candidates must actively take part in experimental or fieldwork activities. Candidates must collect data that they can analyse in their report. You must follow the assessment conditions outlined in the [coursework assessment task](#).

You should make sure candidates understand not to include too much detail in their brief description. They do not need to include volumes, concentrations or temperatures.

Candidates should be able to calculate averages accurately. Some candidates miss out on marks because they round incorrectly. When rounding is necessary for graphing, candidates must round accurately and consistently.

You should make sure candidates understand how to correctly apply a common zero, which is frequently misused in graphs. Candidates should be able to produce a linear scale. You should remind candidates to use a ruler when drawing graphs.

Candidates can find section 5 (analysis) and section 6 (conclusion) challenging. Regular practical work supports the development of evaluation skills. Make sure candidates understand that their analysis needs to discuss patterns, trends, and differences instead of simply restating results. They should understand that they must link their conclusions directly to their aim and support their conclusions with the evidence in their report.

You should make sure candidates understand that, although there is no formal word limit, they only have 1 hour and 30 minutes to complete the report under strict supervision. They can do this in a single session or across several sessions, with their work stored securely between sessions. You should make sure candidates know that you cannot give them feedback on their reports, and that they cannot redraft their reports.

You should make sure candidates understand that they cannot use pre-prepared tables, templates, or modified candidate instructions.

Changes to the course assessment from session 2026–27

- Reduced the question paper from 100 marks to 80 marks. (Section 1 now has 20 marks instead of 25, and section 2 now has 60 marks instead of 75.)
- Reduced the duration of the question paper from 2 hours and 30 minutes to 2 hours.
- Assignment still has 20 marks. As the question paper now has 80 marks, we'll no longer apply scaling to the assignment marks.
- Removed 'Appendix 2: question paper brief' and published this as a separate document.

We've amended the question paper details in the course specification. There's no change to teaching and learning. You might want to update your assessments, for example prelims, to reflect the changes to the question paper.