



NQ Verification 2017–18 Key Messages Round 2

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Section 1: Verification group information

Verification group name:	Biology
Verification event/visiting information	Event: H20A 74; visiting H7W7 77
Date published:	May 2018

National Courses/Units verified:

H20A 74 National 4 Biology Assignment (Added Value Unit)
H7W7 77 Advanced Higher Investigative Biology Unit

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Section 2: Comments on assessment

Assessment approaches

H20A 74 National 4 Biology Assignment (Added Value Unit)

All centres used the Biology Assignment (National 4) Added Value Unit assessment.

Much of the evidence submitted for verification was in the form of a written report, and in many instances it was clear that this had been produced to meet the requirements of a National 5 coursework assignment. This approach can be adopted at the discretion of the centre; however, centres must realise that in such cases there will inevitably be a different emphasis in the assignment at each level. For example, at National 4 level the issue being investigated must have some relevance to the environment/society. It is important that the activity used to generate evidence is at the appropriate level and care should be taken to ensure that this is not too demanding for unit assessment.

Where a candidate fails to achieve the outcome in their first assessment opportunity, it is not necessary for them to redraft their entire report or presentation. Redrafting the relevant part(s), or adding some supplementary evidence to demonstrate that they have achieved the required number of marks would be sufficient. Evidence produced to meet the requirements of a National 5

coursework assignment will not necessarily allow candidates to achieve a pass for this unit and in many instances some redrafting will be required; specifically, assessment standards 1.1, 1.2, and 1.4.

H7W7 77 Investigative Biology Unit

Outcome 1

Most centres used a pilot study to meet the assessment standards for this outcome; others used the initial stages of their Advanced Higher project. This was in the form of either a written report or a daybook. In some instances these were used together as a means of providing the evidence to meet all of the assessment standards.

Outcome 2

There was evidence of SQA unit assessment support packages 1 and 2 being used by centres to meet the assessment standards for this outcome.

Where candidates failed to pass this outcome in their initial assessment the appropriate questions from the other package were used for re-assessment.

Assessment judgements

H20A 74 National 4 Biology Assignment (Added Value Unit)

Many centres subdivided the individual requirements for each assessment standard into a checklist, detailing the sub-points within each assessment standard. This is good practice, assisting candidates and assessors in ensuring that all aspects of each assessment standard had been addressed.

The following specific points relate to issues from the individual assessment standards.

Assessment standard 1.1 — Choosing, with justification, a relevant issue in biology

Almost all candidates were able to make some form of statement regarding the issue being investigated. However, the justification for choosing this must include a statement explaining the relevance of the issue to the environment/society, which was rarely included or correct. As there is also a requirement to explain the impact of the issue on the environment/society for assessment standard 1.4, it is clearly critical for this to be considered carefully at the outset when candidates are selecting their topics for research.

Assessment standard 1.2 — Researching the issue

The majority of candidates included relevant information/data from two sources in their evidence.

Some candidates used an experiment/practical activity as one of the two sources of data. If this approach is adopted it is important to ensure that it is clearly linked to an issue that satisfies the criteria for assessment standard 1.1, ie it has an impact on the environment/society.

Many candidates used data from their own experiment/practical activity as one of their sources. Centres are reminded that where this is the case then the title and aim must be recorded as the reference for this source. This must be separate from the title and aim of the investigation itself.

Assessment standard 1.3 — Processing and presenting appropriate information/data

Most candidates provided evidence of presenting one of their pieces of information/data in a different way to that found in the published source. In many instances, this was in the form of a graph or table but these were not always completed with the accuracy required at this level. Where a candidate chooses to present information/data in one of these formats, the correct headings, labels, scales and units are required.

Assessment standard 1.4 — Applying knowledge and understanding of biology involved

There is no requirement for the topic to include an application of biology.

Guidance should be given to candidates in the initial stages of choosing a topic to ensure that this is an assessment standard they can meet. Centres are reminded that marks can only be awarded for descriptions or explanations of underlying biology that are relevant to the issue being investigated. Candidates can only access the third mark for this assessment standard if the impact is explained/described using some knowledge of biology.

Assessment standard 1.5 — Communicating the findings of the investigation

Centres are reminded that candidates are required to draw a conclusion or to summarise their findings and that this must be backed up by the evidence in the investigation.

H7W7 77 Investigative Biology Unit

Outcome 1

Centres did make good overall assessment judgements using the detail provided in the judging evidence tables.

The following specific points relate to the individual assessment standards.

Assessment standard 1.1 — Designing investigative procedures appropriate to the aim

Most centres indicated that candidates had met this assessment standard when there was there was a lack of evidence for all of the evidence requirements. Centres should note that there are several evidence requirements needed to meet this assessment standard.

Issues arose where candidates devised an inappropriate aim. Centres should help candidates identify suitable topics for investigation and devise an aim that will allow them to meet the other assessment standards. Candidates must also formulate a hypothesis or question based on the aim.

The procedures should be described in enough detail to show that they are appropriate to the aim of the investigation. These should indicate that the candidates have at least considered:

- ◆ the use of suitable controls (negative and/or positive)
- ◆ the control of confounding variables
- ◆ the need for repeated measurements, ie replicate treatments or samples
- ◆ the need for repeated experiments, ie independent replication

It should be clear in the evidence provided that the main confounding variables have been considered. Some candidates chose to list these separately which allowed the candidate, the assessor and the verifier to see if they had been considered appropriately.

Assessment standard 1.2 — Taking account of ethical considerations

Most candidates met this assessment standard. Where an investigation had particular ethical considerations, candidates had addressed these appropriately. However, candidates should be advised that where there are no ethical considerations they should include a statement indicating that they have considered this.

Assessment standard 1.3 — Identifying potential hazards, assessing associated risks and applying appropriate control measures

Most candidates met this assessment standard. Some centres used a risk assessment form which allowed candidates to show that as well as being aware of the hazards they had controlled these appropriately when carrying out their investigation. Both of these elements are required to meet this assessment standard.

Assessment standard 1.4 — Collecting data with precision and accuracy

Most centres indicated that candidates had met this assessment standard when there was there was a lack of evidence for all of the evidence requirements.

Centres should note that there are several evidence requirements needed to meet this assessment standard.

Most candidates recorded their measurements/observations in a planned and organised way. The most common format used was a table of results which was appropriate for their data. However, these tables were often not completed with the accuracy required at this level. Centres should ensure that candidates use appropriate headings and units in tables.

There should be information within the evidence of the instruments/methods used to make measurements; these should be appropriate to generate data that is within a suitable range and of suitable accuracy and precision, eg it would be inappropriate to use a measuring cylinder to measure volumes with precision and accuracy.

Centres should advise candidates to consider the results generated from their investigation. Some candidates had results which showed a wide variation yet they failed to consider what this meant, ie was there an issue with their procedure that led to this variation?

Assessment standard 1.5 — Using initial results to develop or confirm procedures in the experimental design

Most candidates met this assessment standard. The focus of this assessment standard is the initial results. Candidates should review these and decide if further steps are needed, eg modifying the procedure. The reasons for any modifications should be explained and described. Where candidates are confirming that a procedure is appropriate for future work they should state what this work would be.

Outcome 2

Candidates are no longer required to pass each assessment standard (2.1, 2.2, 2.3 and 2.4) independently. Where a candidate achieves 50% or more of the total marks available in a single unit assessment they pass outcome 2 for this unit. Some centres showed good practice by discussing and amending the marking guidance before the assessments for this outcome were used. However, where this is the case care should be taken to ensure that alternative questions/answers are of a similar standard to those in the original SQA unit assessment support packs. Underlining and/or bracketing words in an answer often changes the level of difficulty and, as a result, these should be used with caution.

Most centres showed some degree of leniency in their application of the marking guidance. Centres are advised to apply the agreed marking guidance and use internal verification to ensure that all candidates are assessed accurately, fairly and consistently to national standards.

Section 3: General comments

Centres are advised to ensure that it is clear where candidates have met an assessment standard. Clear annotation by assessors on the candidate evidence, indicating where aspects of each assessment standard have, or have not, been met is very helpful for candidates, other assessors and verifiers. This makes clear what has been achieved, and what has yet to be achieved. Assessor comments on particular assessment judgements are also useful in helping to make it clear why these judgments have been made.

In many centres there was evidence of internal verification having taken place, specifically cross-marking, yet the centres were still lenient in their assessment judgements. Centres are advised to review the application of their internal verification process to ensure its effectiveness.