



**National Qualifications 2011
Internal Assessment Report**

**Biology, Human Biology and
Biotechnology**

The purpose of this report is to provide feedback to centres on verification in National Qualifications in this subject.

National Courses

Titles/levels of NQ Units verified

Biology (Access 3, Intermediate 1, Intermediate 2, Higher and Advanced Higher)

Human Biology (Higher)

Biotechnology (Intermediate 2)

General comments

Centres continue to use the appropriate assessment material provided through the National Assessment Bank and to provide evidence of the actual level of achievement.

There continues to be an improvement in the evidence supplied for external verification in centres that carry out their own internal procedures.

In assessing the practical skills and awarding the appropriate Pass/Fail, the central verification team appreciate the work done by centres where the staff indicate on candidate scripts where each of the Performance Criteria have been achieved by the candidates and use the appropriate comment space to explain why criteria have not been achieved.

The Visiting Verifiers and the centres visited continue to be very positive about the Advanced Higher Investigation visits prior to Course completion. While the centres visited provide 'Incomplete Evidence' the feedback given allows the internal verification process to proceed with more confidence and success.

Unit specifications, instruments of assessment and exemplification materials

All centres continue to use materials provided by SQA.

Evidence Requirements

The majority of centres are fully aware of the evidence required for external, central and visiting verification.

There was a lack of understanding by centres when assessing Outcome 3 of the Unit DF5F11 (The Biology of Microorganisms). This outcome is a problem solving activity, not a practical skills based activity.

Administration of assessments

The centres all use the appropriate level of assessment material and guidelines provided by SQA.

The majority of centres have a working procedure for internal verification. This practice is highly recommended.

Areas of good practice

Internal verification is encouraged and, where there is a discrepancy in the award of mark/criteria between the assessor and the verifier, the final decision must be clearly evident.

The use of peer-group monitoring/verification was seen as a worthwhile procedure for the AH Investigation in centres where there is a single member of staff.

Making a Performance Criteria checklist available to the candidates increases candidate awareness of what is required to pass the practical skills requirements at the different levels.

Specific areas for improvement

While internal verification is widely practised, there are still centres where its introduction would have benefits.

Centres are encouraged to build practical work into the Course, especially in the S3 and S4 Courses where basic techniques are assessed, as they are invaluable in later coursework.

Standard Grade

Titles/levels of Standard Grade qualifications verified

Biology (Standard Grade)

General comments

Several centres submitted two investigations where both booklets covered discontinuous variables. The Guidelines state specifically that at least one must involve a continuous variable.

There were also centres where the same variable, for example 'The effect of temperature on...' was tested in both investigations submitted in the sample.

The majority of centres submit the same two investigations for all the candidates in the sample with a great many of these being carried out in February/March of the fourth year. This may not allow candidates the opportunity to demonstrate the specified investigative skills.

While the candidates in most centres successfully mastered all ten techniques, there were several instances where the candidates were penalised a grade having failed one of the techniques — the most common being Technique 10: Setting up a Choice Chamber. While it is understandable that some centres have issues with keeping woodlice and some candidates do not like handling them, the achievement only requires the demonstration of setting up the chamber.

Teachers are encouraged to complete the marker comment section in the Investigation Booklet to highlight when a skills objective is **not** awarded.

The pooling of class results is not permitted as the Guidelines state clearly that for assessment purposes the candidates must carry out the Standard Grade investigations independently.

Administration of assessments

All centres sampled this year used materials and mark schemes/assessment criteria produced by SQA.

The vast majority of centres use some form of internal verification and this has greatly reduced the number of arithmetical errors and mistakes in the application of assessment criteria.

Areas of good practice/areas for improvement

More of the centres sampled were obviously doing more than the minimum number of investigations and integrating them in coursework with the result that more candidates were being given the opportunity to achieve the assessment criteria over the two years of the Course rather than two/three specific timetabled assessment slots.

Several centres used the available comment space in the booklet to indicate why their candidate(s) failed certain criteria and this greatly assisted the central verification process.

Most centres add graph paper to the booklet as this allows candidates to transfer tabulated information on to a bigger scale than is available in the booklet.

Specific areas for improvement

Candidates should be given more than one opportunity to attempt all ten techniques and several investigations throughout the two years of Standard Grade so that they can demonstrate mastery of all thirteen investigative skills.

While encouraging internal verification, the agreed final mark should be obvious to the central verification team.