National Qualifications 2011
Internal Assessment Report
Skills for Work: Laboratory Science

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

National Courses

Titles/levels of National Courses verified

Skills for Work: Laboratory Science (Intermediate 2) consisting of:

F86K 11: Careers using Laboratory Science
F86L 11: Working in a Laboratory
F86M 11: Practical Skills
F86N 11: Practical Investigation

General comments

This was the first year that the Course was delivered and although assessment exemplars were available and being used for all four Units of the Course, centres were still developing their understanding of the requirements of the national standards. This led to 30% of the centres receiving a Not Accepted judgement at the external verification of the Course.

At the time of the external verification visits, only 20% of centres had sufficient evidence for the Practical Investigation Unit to be verified.

Course Arrangements documents, Unit specifications, instruments of assessment and exemplification materials

In all centres the assessors were aware of the Course Arrangements document and the Unit specifications, and were using the exemplar instruments of assessment.

Evidence Requirements

Generally, the material for verification was well presented in student folders and was accessible, indicating an understanding of the requirements of the Course and Units. However, in some centres, some elements of a performance criterion were omitted, for example Outcome 2 p.c. (b) of Practical Skills and Outcome 3 p.c. (d) of Working in a Laboratory. In several centres, the internal verification procedures were very limited and did not provide good quality assurance of the assessment judgements.

Administration of assessments

Generally, the Units Working in a Laboratory and Practical Skills were tackled well by candidates and when the required standards in the assessment were not met in the first instance, feedback was given to candidates to enable them to reach the required standard. However, not all centres had documented evidence of internal verification taking place during the practical assessment.

Outcomes 1 and 2 of Careers using Laboratory Science were also assessed to an appropriate level. However, the evidence for Outcome 3 — the candidate reviews — had not always been completed at appropriate times within the Course and were limited in feedback to candidates, in some instances. Again, internal verification had not always been documented for this Unit.

Very few centres had completed delivery of the Practical Investigation Unit at the time of the external verification. However, the centre with an assessed Unit had tackled the Unit at an appropriate level with defined internal verification procedures.

Areas of good practice/areas for improvement

Assessment materials in centres were generally well organised with each candidate having a folder of the assessments and their notes for the practical Units and the Careers Unit.

Overall record sheets were used by some centres. This provides a useful means of tracking where each candidate is currently in terms of achieving each of the Outcomes of the Units.

The internal verification procedures had been developed in a small number of centres.

In one centre, a timetable of both practical observations and folder reviews had been planned to encompass the four Units within the Course. The recording of the outcomes of the internal verification procedure was documented, enabling actions to be taken when necessary. This methodology enables a centre to develop consistency with the national standards.

Another centre had a summary sheet which listed the various forms that internal verification was taking. This included visual verification, video verification, cross-marking candidate folio material, and candidate reviews across all Units in the Course. The assessor and Internal Verifier discussed assessments and what the required standard was. The use of video evidence is highlighted as good practice as this provides a basis for discussion and reflection.

Some candidate's employability reviews showed progression by candidates and feedback from the assessor.

When interviewed, the candidates were positive about their experiences. This is a credit to the members of staff delivering the Course, especially as this is the first year of delivery and the Course is quite different both in content and assessment methodology to other Courses in the science area.

Specific areas for improvement

Centres should:

- carry out and record internal verification by sampling all assessments — both written work and practical skills — within the Units. Internal verification of practical work should be carried out during the practical assessment. This should be signed and dated by the Internal Verifier on the appropriate piece of evidence on the day of the practical assessment.
- note the expected accuracy of measurements that are to be recorded by candidates on the centre's equipment. This will aid consistency in judgements of the candidates' competence in taking measurements.
- ensure that for Careers using Laboratory Science Outcome 3 assessment, the first candidate review is carried out at the beginning of the Course, the second review about half way through the Course, and the final review at the completion of the Course. Candidates should receive feedback from the assessor regarding each review.
- ensure contact with industry by visits to industrial laboratories, presentations from speakers from industry, and possibly work placements during the Course. Visits to further and higher education centres are recommended to enable candidates to gain knowledge of possible progression from the school sector.
- ensure that all calculations such as averages are correct to the same number of decimal places as the raw data.

- ensure that the equipment selected in the Practical Skills Unit Outcome 3 is not apparatus that has been used in previous studies in science, for example basic multimeters.
- ensure that candidates work in small groups for the Practical Investigation Unit to fulfil the requirements of Outcomes 1 and 4.
- ensure that the marking of the practical report for the Practical Investigation is clear and that, for each candidate, there is a clear indication on the script as to where they have achieved the performance criteria bullet points.
- ensure that all bullet points in performance criteria Evidence Requirements are completed.