



**National Qualifications 2015  
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:**

National 5 Skills for Work: Laboratory Science:

Careers Using Laboratory Science (F86K 75)

Working in a Laboratory (F86L 75)

Practical Skills (F86M 75)

Practical Investigation (F86N 75)

## **General comments**

The Course has been delivered by centres since session 2010–11.

All centres visited in session 2014–15 had a very good understanding of the requirements of the Course/Units and had made contact with other centres prior to undertaking the Course for the purposes of sharing resources and good practice.

The approval visits prior to the delivery of the Course have been particularly useful for both centres and verifiers. These provided opportunities to discuss any issues related to the Course which required clarification, including: appropriate internal verification procedures, appropriate Course assessment procedures, as well as what to expect in an external verification visit.

## **Course specification, Unit specifications, instruments of assessment and exemplification materials**

Assessors and internal verifiers in all centres were very familiar with the Course as a whole, as well as the Course and Unit specifications. The SQA assessment materials were used by all centres with appropriate changes to enhance the candidate experience. SQA support materials for the Units were also used, again with appropriate changes and additions to support learning and individual centre assessment strategies.

## **Evidence Requirements**

The evidence submitted by centres during external verification showed a clear understanding of the requirements by all centres.

Centres were aware of the four calculation types for Outcome 3 (PCd) of Working in a Laboratory required by each candidate. Centres were also aware that successful evidence for these calculations could be shown by candidates in any Unit of the Course.

At the time of external verification some centres were still completing the Practical Investigation Unit. These centres had good plans to ensure the delivery of this Unit.

### **Administration of assessments**

All centres assessed the Units of the Course to an appropriate standard and were able to justify both positive and negative outcomes of candidates' assessments for each Outcome or Unit. Assessment evidence for each candidate was well presented and easily accessible for external verification.

Appropriate internal verification was evident in all centres. All centres also had internal verification plans and documented evidence to show discussion of internal verification issues arising during the Course, as well as documented decisions regarding these issues. Internal verification had taken place in a formal, documented manner in all centres.

All centres had chosen to run the Careers Using Laboratory Science Unit simultaneously with other Units to ensure progression in candidate reviews and organisation of visits to local science-based industries. This Unit had been delivered throughout the year by many centres to allow external visits to local industries to be planned and effective. Centres found that this strategy also allowed the main themes of skills for work and employability skills to be reinforced all through the Course. Most centres were in the process of completing the Practical Investigation Unit at the time of external verification; however, all could show that good plans were in place to complete the teaching and assessment of the Unit.

### **Areas of good practice**

All centres visited presented the candidate evidence appropriately for external verification. The materials were well organised and easily accessible by External Verifiers. All centres had used the materials for recording evidence and tracking of candidate progress provided by the SQA, or had suitably adapted the recording materials to meet their own needs and the requirements for external verification.

All centres had good internal verification policies which recorded timing of verification as well as decisions made by practitioners during verification. Verification decisions were applied fairly across the candidate cohort.

Some centres had made temporary changes to timetables to ensure that candidate practical work had been suitably internally verified.

Nearly all centres could show progression in candidate employability skills in the review sheets for the Careers Using Laboratory Science Unit. Where the progression was not evident for any particular candidate, appropriate remediation had taken place.

In some centres very clear and useful links had been made with external agencies including the centre careers advisory service for inputs to the Course in terms of interview skills and completion of applications for employment.

Some centres had produced excellent materials for all areas of the Course and had ensured that these materials did not deviate from the requirements for external verification.

Many centres had used their science technicians to enhance the Course in areas such as career paths and qualification discussions and internal verification of practical work.

### **Specific areas for improvement**

- ◆ Centres should ensure that both written and practical candidate work is internally verified.
- ◆ Centres should ensure that calculations requirements for external verification (Working in a Laboratory Outcome 3) have appropriate units and significant figures for final answers. The number of significant figures is dictated by the apparatus used in the activity. Centres can also use the significant figures rules used in National 5 Courses which are externally examined.
- ◆ Where evidence for the four types of calculation required for Working in a Laboratory Outcome 3 are taken from other Units in the Course, then for the purposes of external verification, centres should make it clear where the evidence for the calculations can be found.
- ◆ Centres should ensure that assessors indicate where candidates have been successful or unsuccessful for each performance criterion in the report for the Practical Investigation.
- ◆ Centres should ensure that employability skills and self-analysis are a focus at appropriate points in the Course. The SQA materials give exemplification of the candidate responses in the candidate reviews of these skills, and progression in these skills should be evident for each candidate in their folio.
- ◆ Although external visits to local industries are not a requirement for external verification of the Careers Using Laboratory Science Unit, it is advised that centres should make efforts to make this possible. It is recognised that contact with local industries can be made electronically and that in some circumstances, due to location, this may be the only option available to centres.
- ◆ Centres should ensure that internal verification takes place as soon as possible after completion of the Outcomes and that internal verification is dated to show this.