

# **National Qualifications 2006**

## **Senior Moderator Report**

**Subject: Chemistry**

**Assessment Panel: Chemistry**

The purpose of this report is to provide feedback to centres on moderation which has taken place within National Qualifications in this subject.

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## STANDARD GRADE

### ELEMENT / COURSEWORK MODERATED

#### PRACTICAL ABILITIES; TECHNIQUES AND INVESTIGATIONS

### FEEDBACK TO CENTRES

#### General comments:

Central moderation events have shown that 70% to 80% of centres across all the regions are secure in their assessments and conform to national standards. These centres are aware of the requirements for internal assessment and have established procedures for departmental discussion of standards and internal moderation.

No non-standard Investigation booklets were seen and almost all centres used a pro-forma for techniques which showed clearly where and why marks were awarded.

There was some uncertainty about the correct selection of candidates for the verification sample. Advice to centres on the selection of the moderation sample from the form *Standard Grade Estimates and Assessment Grades, (SGEROO)* may need to be clarified.

#### Advice on good practice and areas for further development:

The majority of centres assessed candidate evidence accurately and rigorously to a slightly higher standard than seen last year. In the main these centres showed evidence of best practice of internal moderation. Poor diagrams and inaccurate observations were penalised in technique write-ups, marking of Investigations was thorough and data entered onto the SQA flyleaf was accurate. However, one centre, where assessment was accurate, rigorous and well above the national standard, submitted pupil evidence most of which had not been either initialed or dated by the class teacher.

In a minority of centres procedures for the internal moderation of standards have not been set up. This results in inconsistencies and errors in the centre's assessments and often means SQA requirements are not met. These centres generally showed inconsistencies in the standard of work accepted. An unusually high number of errors were seen, e.g. transcription errors from pupil evidence to the flyleaf and arithmetic errors on the flyleaf.

One centre included teacher checklists awarding marks for safety and manipulation where four candidates in the sample of twelve had no evidence to confirm some of the marks, e.g. in one case, 6 marks were awarded for both D1 and E1 but no pupil evidence was submitted for either technique.

A continuing trend in the Investigations is to award marks for RR3(d) when the candidate has not mentioned all the variables which must be controlled.

Recent annual reports on moderation have provided advice to centres; such advice continues to be relevant.

## NATIONAL UNITS

### TITLES/LEVELS OF NATIONAL UNITS MODERATED

#### NATIONAL UNITS MODERATED WERE;

DO73/13

DO69/12

DO66/11

DO63/10

### FEEDBACK TO CENTRES

#### General comments:

Assessment of Outcomes 1 and 2 was of a generally high standard. More centres are recognizing the benefits of internal moderation as it rectifies “unforced” assessment errors and allows a department to achieve consistency with national standards.

The majority of centres are aware of the “Update on Chemistry NABs” (issued with subject letter dated 8 January 2001) which lists changes to the original NAB mark schemes.

At all levels, Outcome 3 evidence for an appropriate PPA must be included as part of the evidence sent for moderation. If no O3 evidence is submitted the centre’s assessments cannot be accepted.

An increasing number of centres are encouraging candidates to re-draft O3 reports after detailed correction and an indication of areas which need improvement.

#### Advice on good practice and areas for further development:

##### Advanced Higher

**O 1 & 2;** The assessment seen by moderators was of a high standard. Some unforced assessment errors were seen and these would be rectified by cross marking of NABs, where this is possible. There is a tendency towards leniency when assessing incorrect units, e.g.  $\text{Kj mol}^{-1}$ , and with the use of lower case k to represent an equilibrium constant.

**O3:** The majority of centres have now adopted the best practice of recording achievement of individual PCs using a checklist of some form; it would be helpful to moderators if there was an indication on each report where the actual PC was overtaken.

The trend is still for overlong procedures but sparse conclusions and evaluations. Centres are directed to the National Course Specification (Advanced Higher), page 66, PC(b) “As experiments will follow a given procedure or method there is no need for a detailed description”. O3 reports frequently had insufficient detail to warrant a ‘pass’ for either PC(e) or PC(f) yet the centre had awarded a pass. Candidates would benefit from the advice on re-drafting given on page 67.

## Higher

**O 1 & 2:** Moderators found evidence of a high level of consistency with national standards in assessment and a growing awareness of the need for procedures for the standardization of internal assessment.

A small minority of centres are severe in their assessments as they are not using the “Update on Chemistry NABs” (issued with subject letter dated 8 January 2001) which lists changes to the original NAB mark schemes

Data entered on the *Internal Assessment Form – Moderation Sample* was often missing or in the wrong place.

**O3:** A minority of centres are advantaging their candidates by encouraging them to re-draft PPA reports in line with advice given on page 38 of the *National Unit Specification: support notes (cont.) Energy Matters*. There is a continuing trend for leniency in assessment of the following areas; incorrect, or no, units in tables, incorrect use of significant figures for calculated rates, incorrect scales for graphs, lines which are not ‘best fit’ and incorrect signs for enthalpies of combustion.

## Intermediate 2

**O 1 & 2:** The assessments seen were accurate, careful and in line with national standards. There was evidence of internal moderation in all centres.

**O3:** PPA reports do not seem to be internally moderated to the same extent as NAB tests. There was evidence of consistently lenient judgments when assessing graphs with inaccurate scales, lines which ‘joined the dots’ (so the candidate could not identify a rogue result), incorrect labeling of axes and arithmetic errors in the calculation of rates of reaction.

Recent annual reports on moderation have provided advice to centres. Such advice continues to be relevant.

## Intermediate 1

**O 1 & 2:** In the majority of centres the assessments seen were excellent, they were accurate, careful and above the national standard. There was evidence of internal moderation in all of these centres.

A small minority submitted evidence with inconsistent assessments, severe and lenient, as well as arithmetic errors. There was no evidence of internal moderation in these centres.

Recent annual reports on moderation have provided advice to centres. Such advice continues to be relevant.

**O3:** The O3 assessment seen in all centres moderated at this level was careful, accurate and in line with national standards.