

NQ Verification 2016–17

Key Messages Round 1

01

Section 1: Verification group information

Verification group name:	Chemistry
Verification event/visiting information	Event
Date published:	March 2017

National Courses/Units verified:

H21G 73	National 3	Chemical Changes and Structure
H4KH 76	Higher	Chemical Changes and Structure
H7XN 77	Advanced Higher	Inorganic and Physical Chemistry
H7XP 77	Advanced Higher	Organic Chemistry and Instrumental Analysis

02

Section 2: Comments on assessment

Assessment approaches

All centres should ensure that they refer to the 'Understanding the next steps for session 2016–17' documents which are available for each level. These documents explain the impact on assessment for candidates being presented in session 2016–17.

National 3

At National 3 a threshold to the number of assessment standards that candidates must meet to achieve outcome 1 has been introduced. Candidates are only required to achieve any four out of five assessment standards. It should be noted that candidates are to be given the opportunity to meet all assessment standards.

Outcome 2 can now be assessed by means of a single assessment with a combined cut-off score for assessment standards 2.1 (KU) and 2.4 (PS). Where a candidate achieves 50% or more of the total marks available in a single unit assessment they will pass outcome 2 for that unit. Some centres submitted evidence for assessment standards 2.2 and 2.3, however these assessment standards have been removed at National 3 (and National 4).

Centres that were verified used an experiment for outcome 1 which was suitable and related to a key area of the course.

Centres that were verified used the unit-by-unit approach to assess outcome 2 by means of a single assessment with a cut-off score.

Higher

At Higher a threshold to the number of assessment standards that candidates must meet to achieve outcome 1 has been introduced. This threshold is five out of the six assessment standards for outcome 1, excluding the *Researching Chemistry* unit. It should be noted that there will still be the requirement for candidates to be given the opportunity to meet all assessment standards.

It should be noted that the same transfer of evidence facility has been adopted for Higher which was previously available at Advanced Higher. Where the candidate's evidence meets the standards for the outcomes and assessment standards of the *Researching Chemistry* unit, this can be used as evidence for outcome 1 of the other units, without the need to match the evidence against the assessment standards. (The converse does not apply.)

Outcome 2 can now be assessed by means of a single assessment with a combined cut-off score for assessment standards 2.1 (KU) and 2.2 (PS). Where a candidate achieves 50% or more of the total marks available in a single unit assessment they will pass outcome 2 for that unit.

The majority of centres verified used the unit-by-unit approach with a small number using the portfolio approach. All approaches used an assessment which had at least one example of the four types of problem solving skill required for Higher.

When a centre accepts responses other than those in the marking guidance for assessment standards 2.1 and 2.2 there should be annotations to the marking guidance to reflect the additional correct responses. Some centres had made annotations to the marking guidance which was helpful. However, in a few cases the additional responses recorded on the marking guidance were incorrect. Centres should therefore ensure that any additional responses added to the marking guidance are appropriate.

Advanced Higher

At Advanced Higher a threshold to the number of assessment standards that candidates must meet to achieve outcome 1 has been introduced. This threshold is five out of the six assessment standards for outcome 1. However, centres are reminded that the transfer of evidence arrangements, that are already in effect for Advanced Higher, mean that most candidates will not be assessed on outcome 1 in the two units listed earlier. Where the candidate's evidence meets the standards for the outcomes and assessment standards of the *Researching Chemistry* unit, this can be used as evidence for outcome 1 of the other units, without the need to match the evidence against the assessment standards. (The converse does not apply.)

Outcome 2 can now be assessed by means of a single assessment with a combined cut-off score for assessment standards 2.1 (KU) and 2.2 (PS). Where a candidate achieves 50% or more of the total marks available in a single unit, assessment they will pass outcome 2 for that unit. The *Researching Chemistry* unit at Advanced Higher does not have assessment standard 2.2.

The majority of centres verified used the unit-by-unit approach with a small number using the portfolio approach. All approaches used an assessment which had at least one example of the three types of problem solving skill required for Advanced Higher when assessing the *Inorganic and Physical Chemistry* unit and the *Organic Chemistry and Instrumental Analysis* unit.

Assessment judgements

On the vast majority of candidate evidence submitted there were clear annotations where the assessment standards had been achieved. The majority of assessment judgements were accurate and reliable. Most centres submitted candidate record sheets to record the assessment decisions which aided the external verification process.

National 3

Centres that were verified were generally found to have made reliable assessment judgements. For assessment standard 1.2, candidates are required to generate a table of results to record observations/measurements. For assessment standard 1.3, candidates should process their results and present them in a given format using at least one of the following formats: extended table, line graph, bar chart or other appropriate format. In some cases the assessment judgements for these two assessment standards were not always reliable.

Centres that were verified were found to make reliable judgements for assessment standards 2.1 and 2.4 with the marking guidance consistently applied.

Higher

Some centres were found to make assessment decisions which were not always reliable. When centres are making assessment decisions at Higher they should consider the appropriate general marking principles which can be found in the published finalised marking instructions for past papers.

When assessing the *Chemical Changes and Structure* unit at Higher using the Unit Assessment Support Pack: Package 1 — questions 1, 7 and 8bii were found to be poorly assessed with assessment decisions not always being reliable. A correct response for question 1 would include the term 'successful' when referring to an increase in the number of collisions. In answering question 7, candidates must clearly describe that when graphite sublimates covalent bonds are broken or when fullerene sublimates only weak intermolecular forces or London dispersion forces are broken. In answering question 8bii, a correct response could include a description of the polarity being cancelled across the molecule, the polar bonds cancelling each other out, or demonstrate an understanding of how symmetry cancels out the effect of the polar bonds.

Advanced Higher

For those centres verified, assessors had made effective use of the information on judging evidence to support assessment judgements for each candidate. All centres had reliable judgements for assessment standards 2.1 and 2.2.

03 Section 3: General comments

This session in round 1, centres were either selected for verification in Chemistry for units at National 3 or units at Higher and Advanced Higher. The vast majority of centres were found to be using a valid approach and made reliable assessment decisions.

In general, annotations were made by the assessors on candidate evidence or on candidate assessment records and this gave a clear overview of the final assessment judgements.

For centres which are using a portfolio approach it is recommended that the date on which evidence is gathered is recorded to make it explicit to external verifiers which approach to assessment was used.

All centres submitted candidate evidence which had been internally verified. For most centres internal verification activity was well documented. During the internal verification process it is vital that the verifier's markings are clearly visible and any final decision, especially where there was a difference of opinion, is made clear.