



NQ Verification 2013–14

Key Message Reports

Verification group name:	Science
Levels	N3 and N4
Date published:	July 2014

This Report combines all Verification Key Messages for the academic session 2013-14.



NQ Verification 2013–14 Key Messages Round 1

01 Section 1: Verification group information

Verification group name:	Science
Verification event/visiting information	Event
Date published:	January 2014

National Courses/Units/Awards verified:

Code: 73, 74 National 3, 4 Science

02 Section 2: Comments on assessment

Assessment approaches

Most centres used the published SQA Unit assessment support packs. Other centres made minor modifications to aspects of the Unit assessment support packs. Provided this modified instrument of assessment still relates to the key areas of the Course, and is of an appropriate standard, such an approach is encouraged.

Centres are reminded that it may be possible to reduce the assessment burden on candidates by achieving some aspects of Assessment Standard 2.4 (solving problems) via a carefully designed experiment/practical investigation.

Outcome 2: The candidate will draw on knowledge and understanding of the key areas of the Unit and apply scientific skills by:

Assessment Standard 2.1 Making accurate statements

Any centre-devised instruments of assessment must be at a standard and level appropriate to Unit assessment, and questions must relate to a key area of the Course. Questions in the Unit assessments should not be more demanding than necessary.

Centres should make use of SQA's Prior Verification service where significant changes are made to the Unit assessment support packs, or for centre-devised assessments. Further information on SQA's Prior Verification service is located on the website at: <http://www.sqa.org.uk/sqa/63004.html>

Assessment Standard 2.4 Solving problems

Many centres have chosen to use the published SQA Unit assessment support packs. Other centres have made minor modifications to aspects of the Unit assessment support packs. Provided this modified instrument of assessment still covers the relevant problem solving skills, and is of an appropriate standard, such an approach is encouraged.

Centres are reminded that, where Unit assessment support packs are modified or where centre-devised instruments of assessment are used, individual problem solving skills should be easily identifiable. This is necessary to ensure that candidates are provided with the opportunity to demonstrate all three of the problem solving skills at National 3 and National 4 (making generalisations/ predictions, selecting information, processing information, including calculations, as appropriate).

Assessment judgements

Centres should ensure that their assessment decisions and internal verification decisions are clear.

Assessment Standard 2.1 Making accurate statements

At least half of the statements made by the candidate should be correct for each Unit.

Candidates should be given credit for each correct response. In some cases where questions required four correct responses, candidates were not awarded any marks if they got three out of the four correct.

Rigorous, accurate and consistent application of a marking scheme is essential. This can be facilitated by effective internal verification procedures within a centre.

Marking guidance provided in the Unit assessment support packs is not intended to be exhaustive of all possibilities and can be modified. Modifications, where made, should be noted and should be subject to effective internal quality assurance processes.

Where centres wish to assess more than one level (eg National 3 and National 4 candidates together) they must ensure that the marking scheme is applied consistently; in some cases an accurate response was deemed acceptable at National 4 but deemed unacceptable at National 3 (and vice versa).

Assessment Standard 2.4 Solving problems

Where candidates have more than one opportunity to demonstrate a specific problem solving skill in any given assessment, they must do so on at least half of those occasions. Where a specific problem solving skill has successfully been achieved in any given assessment, this problem solving skill can be ‘banked’, and there is no need to continually recalculate whether or not the candidate has achieved 50% of all further attempts.

03

Section 3: General comments

Centre staff are reminded that all centres offering SQA qualifications must have an effective internal quality assurance system that ensures that all candidates are assessed accurately, fairly and consistently to national standards. Centres selected for external verification are expected to provide details of their quality assurance policies and processes.

Centres should ensure that accurate details are entered on the verification sample form and candidate evidence flyleaf, and on the centre’s candidate assessment record or equivalent. Before submitting evidence for external verification, centres should ensure that they have referred to the guidance documents. Guidance on evidence required for external verification of Units and internally-assessed components of Course assessment is provided on our quality assurance web page (www.sqa.org.uk/cfeqa).

After each round of verification activity, SQA will publish common key messages that have been identified by the verification teams. Common key messages from Round 1 of NQ Verification 2013–14 are located on the website at:

www.sqa.org.uk/files_ccc/NQ_Verification_2013-14_Key_Messages_Round_1.pdf



NQ Verification 2013–14

Key Messages Round 2

01

Section 1: Verification group information

Verification group name:	Science
Verification event/visiting information	Event
Date published:	March 2014

National Courses/Units verified:

Code: 73, 74

National 3, 4

Science

02

Section 2: Comments on assessment

Assessment approaches

Outcome 1: The candidate will apply skills of scientific inquiry and draw on knowledge and understanding of the key areas of the Unit to carry out an experiment/practical investigation.

Most centres used an appropriate experiment/practical investigation to assess Outcome 1.

Centres are reminded that it may be possible to reduce the assessment burden on candidates by achieving some aspects of Assessment Standard 2.4 (solving problems) via a carefully designed experiment/practical investigation.

Outcome 2: The candidate will draw on knowledge and understanding of the key areas of the Unit and apply scientific skills by:

Assessment Standard 2.1 Making accurate statements

Most centres used the published SQA Unit assessment support packs. Centres are reminded to use the most up-to-date published SQA Unit assessment support packs.

Other centres made minor modifications to aspects of the SQA Unit assessment support packs. Provided this modified instrument of assessment still relates to the key areas of the Course, and is of an appropriate standard, such an approach is encouraged.

Any centre-devised instruments of assessment must be at a standard and level appropriate to Unit assessment, and questions must relate to a key area of the Course. Questions in the Unit assessments should not be more demanding than necessary.

Centres should make use of SQA's prior verification service where significant changes have been made to the SQA Unit assessment support packs, or for centre-devised assessments. Further information about SQA's prior verification service can be found here: www.sqa.org.uk/sqa/63004.html.

Assessment Standard 2.2 Describing an application

Assessment Standard 2.3 Describing a scientific issue in terms of the effect on the environment/society

Centres are advised that they must ensure that the activity is appropriate to the level being assessed. At National 3, if a suggested activity from the SQA Unit assessment support pack is used then this can only be assessed at National 3 level.

Assessment Standard 2.4 Solving problems

Most centres used the published SQA Unit assessment support packs. Centres are reminded to use the most up-to-date published SQA Unit assessment support packs.

Other centres made minor modifications to aspects of the SQA Unit assessment support packs. Provided this modified instrument of assessment still covers the relevant problem solving skills, and is of an appropriate standard, such an approach is encouraged.

Centres are reminded that, where SQA Unit assessment support packs are modified or where centre-devised instruments of assessment are used, individual problem solving skills should be easily identifiable. This is necessary to ensure

that candidates are provided with the opportunity to demonstrate all three of the problem solving skills at National 3 and National 4 (making generalisations/ predictions, selecting information and processing information, including calculations, as appropriate).

Assessment judgements

Centres should ensure that their assessment decisions and internal verification decisions are clear.

Outcome 1: The candidate will apply skills of scientific inquiry and draw on knowledge and understanding of the key areas of the Unit to carry out an experiment/practical investigation.

Centres should ensure that candidate scripts are annotated by the assessor to show where a particular Assessment Standard has been achieved.

Assessment Standard 2.1 Making accurate statements

At least half of the statements made by the candidate should be correct for each Unit.

Candidates should be given credit for each correct response. In some cases where questions required four correct responses, candidates were not given any credit if they got three out of the four correct.

Rigorous, accurate and consistent application of assessment judgements is essential. This can be facilitated by effective internal verification procedures within a centre.

Marking guidance provided in the SQA Unit assessment support packs is not intended to be exhaustive of all possibilities and can be modified. Modifications, where made, should be noted and should be subject to effective internal quality assurance processes.

Centres must provide clear commentary on making assessment judgements, and it is good practice to provide annotations to show all accepted answers.

Where centres wish to assess more than one level (eg National 3 and National 4 candidates together) they must ensure that assessment judgements are applied consistently; in some cases an accurate response was deemed acceptable at National 4 but deemed unacceptable at National 3 (and vice versa).

Assessment Standard 2.2 Describing an application

Assessment Standard 2.3 Describing a scientific issue in terms of the effect on the environment/ society

Centres must indicate clear reasoning for awarding a pass for Assessment Standards 2.2 and 2.3.

Assessment Standard 2.4 Solving problems

Where candidates have more than one opportunity to demonstrate a specific problem solving skill in any given assessment, they must do so on at least half of those occasions. Where a specific problem solving skill has successfully been achieved in any given assessment, this problem solving skill can be 'banked', and there is no need to continually recalculate whether or not the candidate has achieved 50% of all further attempts.

03 Section 3: General comments

Centre staff are reminded that all centres offering SQA qualifications must have an effective internal quality assurance system that ensures that all candidates are assessed accurately, fairly and consistently to national standards. Centres selected for external verification are expected to provide details of their quality assurance policies and processes.

Centre staff are further reminded that the correct SQA procedures with regard to sampling and verification should be followed. This includes the submission of the correct number of candidates for verification, ie 12 for one level, six for each level if submitting evidence for both National 3 and National 4.

Centres should ensure that accurate details are entered on the verification sample form and candidate evidence flyleaf, and on the centre's candidate assessment record or equivalent. Before submitting evidence for external verification, centres should ensure that they have referred to the guidance documents. Guidance on evidence required for external verification of Units and internally-assessed components of Course assessment is provided on SQA's quality assurance web page: www.sqa.org.uk/cfega.

Centres are advised to record any decisions taken during their internal verification process with appropriate statements on the candidate's work or an attached pro forma.



NQ Verification 2013–14 Key Messages Round 3

01

Section 1: Verification group information

Verification group name:	Science
Verification event/visiting information	Event
Date published:	June 2014

National Courses/Units verified:

National 4 Science Assignment (H26A 74) Added Value Unit

02

Section 2: Comments on assessment

Assessment approaches

Most candidate evidence submitted for verification took the form of written reports. Some excellent candidate material consisted of both a log/day book and a presentation or report. Although not necessary, it was seen to be a good strategy for overtaking all the Assessment Standards.

Posters seemed to be an effective means of engaging candidates and many good examples of posters produced by candidates were submitted for verification.

Assessment judgements

Centres should ensure that candidate scripts are annotated by the assessor to show where a particular Assessment Standard has been achieved. This is helpful

for candidates and for verifiers. Centres should also record reasons for judgements in a clear manner for verification purposes.

Candidates are allowed to redraft their report to ensure that all Assessment Standards have been met but this would count as a re-assessment opportunity.

03 Section 3: General comments

Assessment Standard 1.1 Choosing, with justification, a relevant issue in science

This Assessment Standard was generally completed well. The relevance to society was largely well described; however, this relevance must be referred to again to enforce the findings.

Some centres submitted evidence for this Assessment Standard in the form of a candidate's log/daybook. Although this is not necessary, this was seen as good practice.

Assessment Standard 1.2 Researching the issue

This Assessment Standard was generally completed well. Candidates should supply the full URL when referencing websites accessed. If one of the sources is an experiment/practical activity, then the title and aim should be recorded.

Some centres submitted evidence for this Assessment Standard in the form of a candidate's log/daybook. Although this is not necessary, this was seen as good practice.

Assessment Standard 1.3 Presenting appropriate information/data

This Assessment Standard was generally completed well; however, candidates must be encouraged to present some of their information/data in their own way. Hand-drawn graphs and tables are often of a much higher standard than computer-generated tables and graphs produced by candidates. The correct use of title, labels and units (where appropriate) is essential; although candidates should not be penalised if there are only minor omissions/errors to the presentation and there is sufficient detail to convey the information/data.

Assessment Standard 1.4 Explaining the impact, in terms of the science involved

Candidates must explain at least one impact of the issue on the environment/society. They should use relevant knowledge of science and refer to their processed data/information.

In their report, candidates should be encouraged to relate back to the topical issue.

Assessment Standard 1.5 Communicating the findings of the investigation

A summary paragraph, or conclusion, at the end of the report was often seen to be an effective means of ensuring that the candidate sums up the ideas, issues, findings or conclusions in response to the topical issue and its impact on the environment/society.

Centre staff are reminded that all centres offering SQA qualifications must have an effective internal quality assurance system that ensures that all candidates are assessed accurately, fairly and consistently to national standards. Centres selected for external verification are expected to provide details of their quality assurance policies and processes.

Centres are advised that it would be effective during their internal verification process to record decisions through discussion with appropriate statements on the candidates work or an attached pro-forma.