



Common questions about National 3, National 4 and National 5 Course Environmental Science

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General questions

Which documents have been updated in 2014?

As previously communicated to centres in SQA's [Curriculum for Excellence June 2014 update](#), Unit assessment support packs for National 3 to National 5, plus documents containing mandatory information on National 3 to National 5 Courses, Course and Unit Support Notes (National 3 – National 5) and Course Assessment Specification (National 5), were updated in June 2014. The purpose of these updates is to provide further clarification based on feedback received from practitioners.

In line with our standard practice, all documents and Unit assessment support packs contain version information. Centres should use the most up to date versions when planning their assessments. Any candidates that have already been assessed using previous versions of the Unit assessment support packs will not be disadvantaged at Verification events during session 2014/15, and these candidates do not need to be re-assessed on the updated version.

Further information is available on the Environmental Science subject page, here: <http://www.sqa.org.uk/sqa/45726.html>

A Notification of Changes table for the Sciences area is available here: www.sqa.org.uk/cfesubjectchanges

Outcome 1 — National 3, 4 and 5

Can we assess Assessment Standards 1.1 to 1.6 over a number of experiments/practical investigations rather than having a one-off set investigation?

Yes. Evidence for Outcome 1 may be gathered from a series of experiments/practical investigations from individual Units or across the Course. The Assessment Standards can be achieved via a number of pieces of evidence covering work done on different occasions.

At National 4, there are five separate Evidence Requirements for Assessment Standard 1.1:

- ◆ an aim
- ◆ a variable to be kept constant
- ◆ measurements/observations to be made
- ◆ the resources
- ◆ the method, including safety considerations

In order to achieve Assessment Standard 1.1, all five of these Evidence Requirements should be described in one experimental/investigation plan.

At National 5 there are six separate Evidence Requirements for Assessment Standard 1.1:

- ◆ an aim
- ◆ a dependent and independent variable
- ◆ key variables to be kept constant
- ◆ measurements/observations to be made
- ◆ the resources
- ◆ the method, including safety considerations

In order to achieve Assessment Standard 1.1, all six of these Evidence Requirements should be described in one experimental/investigation plan.

What level of guidance can candidates get before and during the write ups of Outcome 1?

Assessors can clarify with candidates how to produce evidence for their write up. They can advise candidates how to approach an activity or assessment and guide them in producing their response. Assessors may also prompt candidates, where appropriate, to clarify that they have met the requirements of the assessment; however they should not direct them to any specific response. For example, assessors should not provide specific advice on how to improve responses or provide model answers. Candidates, or groups of candidates, are expected to work with minimal teacher support other than in selecting and gathering of evidence .

Are candidates allowed to re-draft their Outcome 1 report?

Candidates should be given the opportunity to re-draft their report in order to meet the Assessment Standard(s) that they have not achieved. Guidance on re-assessment arrangements is provided in the Unit assessment support packs.

Can you confirm that replicates are not a requirement in the write up?

Replicates are not a requirement but they are good practice and where possible should be encouraged.

Can you confirm that in Assessment Standards 1.1 to 1.6 we need to write how variables are controlled?

Yes. Review the updated *Course and Unit Support Notes* as they now contain exemplification of standards.

Is it acceptable to give candidates a rough method, which they plan around?

Yes, this is appropriate support to give them.

Outcome 2 — National 3, 4 and 5

Assessment Standard 2.1

Can you please clarify the assessment of 2.1 Knowledge and Understanding?

Candidates are given opportunities to make accurate statements; the number of opportunities to make accurate statements should be appropriate to the size of the key area. At least 50% of the Knowledge and Understanding (KU) statements made by candidates must be correct in the Unit assessment; not 50% of each individual key area.

Should we be treating each part of a question from a Unit assessment support pack as an opportunity? For example if a question has parts (a) and (b) would this be two different opportunities?

If a question has parts, there may be more than one statement required within an opportunity; it depends on the question.

Candidates should be given credit for each correct response.

If a candidate scores less than 50% in a Unit assessment do they need to sit another holistic assessment?

It is at a centre's discretion as to how they re-assess their candidates. Candidates may be re-assessed only in the key areas of a Unit that they have failed or they could sit a new test covering all of the key areas.

Can tests be comprised of fewer key areas than the entire Unit (or a greater number across Units), providing each key area is tested and recorded under the correct Unit heading?

Yes. This should be treated as a portfolio approach. In order to decide whether candidates have achieved Assessment Standard 2.1 overall, at least half of the KU statements made by candidates must be correct for each Unit.

Do the X's on the assessment grid in the Unit assessment support packs indicate the number of correct responses required for each question?

No. Candidates are given opportunities to make accurate statements for each key area of each Unit of the Course. The X's on the assessment grid only indicate if the question is Knowledge and Understanding or Problem Solving; they do not indicate the number of opportunities.

In some instances there may be more than one opportunity within an X, ie parts A and B. In addition, within parts A and B, there may be more than one opportunity for candidates to make an accurate statement. In order to decide whether candidates have achieved Assessment Standard 2.1, at least half of the KU statements made by candidates must be correct for that Unit. Centres should not add up the number of KU X's on the assessment grid and apply 50% for a pass.

Assessment Standards 2.2 and 2.3

Are Assessment Standards 2.2 and 2.3 being removed from the National 4 and National 5 Environmental Science Course?

No. Assessment Standards 2.2 and 2.3 are not being removed from the National 4 and National 5 Environmental Science Course.

Assessment Standards 2.2 and 2.3 have been removed from the 'standard' Higher Units in Biology, Chemistry, Environmental Science, Human Biology and Physics. All relevant Higher documents will be updated to reflect this change.

Can Assessment Standards 2.2 and 2.3 be assessed with one piece of work?

Yes. There is no reason why candidates can't be assessed with one piece of work, assuming that the piece of work covers both Assessment Standards.

Assessment Standards 2.2 and 2.3 are independent of one another, and can therefore be assessed separately by the production of two separate reports, or can be assessed together in the production of one report.

In a report produced to meet Assessment Standard 2.3, the environmental science issue described need not be related to the application described in a separate report produced to meet Assessment Standard 2.2.

Can we give candidates a pro-forma/template?

No. Pro-formas/templates should not be used.

What information should we include in the write up? How will we know if candidates have 'passed' or met the standard?

Each Assessment Standard must be met. The appropriate science should be used to describe the application and impact. The word count is only a guide. The updated *Course and Unit Support Notes* contain exemplification of standards.

Will there be penalties for going over the word count?

No. The word count is only a guide.

Can candidates do the same investigation?

Yes. However, assessors must exercise their professional responsibility in ensuring that evidence submitted by a candidate is the candidate's own work.

Can you clarify the extent to which assessment activity 2 in the Unit-by-Unit approach Unit assessment support pack is intended to overlap with the Added Value Unit?

Assessment Standards 2.2 and 2.3 relate to Unit assessment. They are not part of the Course assessment. A candidate may choose to research an issue for Assessment Standards 2.2 and 2.3 and then research it further to a greater depth for the Added Value Unit, but they are assessed separately.

Assessment Standard 2.4

Can you clarify the assessment of problem solving?

At least one correct response for each problem solving skill is required; they do not all need to be from the same Unit. If a candidate is given more than one opportunity in a Unit assessment to provide a response for a problem solving skill, then they must answer at least 50% correctly.

Once a candidate has achieved a problem solving skill then this is effectively banked; further questions which may be given of that problem solving skill throughout the Course would not count towards assessment.

If a candidate has achieved a particular problem solving skill in test one but further questions are included in tests two and three, can they score out those questions in these tests as this problem solving skill has already been achieved?

Yes, but given that the candidate has already achieved the problem solving skill (and it can't be taken away) you could give them the additional opportunities in tests two and three to further develop them.

If a candidate fails to achieve a problem solving skill in test one they could be re-assessed via test two and/or three.

National 4 Added Value Unit

What aspect of the National 4 Added Value Unit is mandatory this year and next?

Centres must use the SQA-developed assignment on the secure site to assess the National 4 Added Value Unit in sessions 2013–14 and 2014–15.

The resource packs in the *Course and Unit Support Notes* for National 4 are only intended to exemplify material that might be given to candidates as a starting point for their research. It is not mandatory to use any of the topical issues, for example Natural and Artificial Fertilisers; centres are free to select other appropriate investigations.

Can we develop our own assessments for the National 4 Added Value Unit?

No, centres must use the SQA-developed assignment on the secure site to assess the National 4 Added Value Unit in sessions 2013–14 and 2014–15.

Can candidates research the same topic for Assessment Standards 2.2, 2.3 and their Added Value Unit?

Assessment Standards 2.2 and 2.3 should be viewed as preparation for the National 4 Added Value Unit, so the topic could be extended and further research carried out.

Are candidates allowed to re-draft their report after teachers have marked it?

Yes, candidates are allowed to re-draft their report but this would count as a re-assessment opportunity.

What can candidates have access to during the write up?

During Stage 2: the communication stage, candidates should have access to the material that they have generated in Stage 1: the research stage. During this stage the candidate selects, processes and presents their information/data which is generated in Stage 1: the research stage. Prepared drafts should not be used.

Can the research work and report that candidates have completed for the National 5 assignment be submitted as a National 4 Added Value piece of work?

If the candidate has written an assignment for National 5, then presumably this has been done to meet the marking criteria. Without tweaking, it would not necessarily meet all of the Assessment Standards for the National 4 Added Value Unit. However, with some careful planning it is possible to create a framework which covers both the National 5 marking criteria and the National 4 Assessment Standards. This would give the candidate and the assessor more work; however it could provide a situation where the report could be used for fallback from National 5 to National 4, assuming, of course, that the report meets the Assessment Standards for National 4.

National 5 Assignment

Can candidates use notes when completing the communication stage?

During the communication stage of the assignment, candidates should have access to the following resources:

- ◆ material collected by the candidate during the research stage — this may include, for example, statistical, graphical, numerical or experimental data; data/information from the internet; published articles or extracts; notes taken from a visit or talk; notes taken from a written or audio-visual source

The assessor should check that the material used by the candidate in this communication stage conforms to the criteria above. It must not include a prepared report.

Are candidates allowed to re-draft their National 5 assignment?

No, there should be no re-drafting. Reasonable assistance does not include: providing model answers/providing feedback on drafts.

Is it possible to provide clarification regarding a potential National 5 assignment task?

SQA do not approve investigation topics for the assignment; centres are free to develop their own investigations that are related to a key area of the Course.

Is there a support pack in terms of specific research topics?

The updated *Course and Unit Support Notes* contain suggested investigation topics and two resource packs. The resource packs contain background information on two topics, as well as links and suggestions to other sources of information. It exemplifies one approach to Stage 1 (research stage) of the investigation. Candidates may practice producing their report/communication using these resource packs as their sources of information/data for Stage 1 (research stage) of the investigation.

Is it acceptable to give candidates a list of sources to choose from?

Centres can provide a bank of data which candidates can then use to select appropriate information/data for their reports. Resources could be provided by a teacher; this could include books/articles/web links, etc.

During the research stage, can candidates gather evidence as a group and share it before writing the report?

Yes.

Can candidates use any material that they have found by doing independent research outwith class?

Yes, candidates can do some independent research outwith class however assessors must exercise their professional responsibility in ensuring that any materials used by a candidate is the candidate's own work, and that plagiarism has not taken place.

Can candidates write up their reports at home?

No. The write up must be carried out under supervised conditions.

Can candidates choose any topic to research for the assignment as long as it is relevant to the National 5 Course?

Candidates are free to select appropriate investigation topics that draw on one or more of the key areas of the Course.

Is it mandatory to include practical work in the National 5 assignment?

No. An appropriate experiment/practical activity may be used as one of the data sources but is not mandatory.

Can the research work and report that candidates have completed for the National 5 assignment be submitted as a National 4 Added Value piece of work?

If the candidate has written an assignment for National 5, then presumably this has been done to meet the marking criteria. Without tweaking, it would not necessarily meet all of the Assessment Standards for the National 4 Added Value Unit. However, with some careful planning it is possible to create a framework which covers both the National 5 marking criteria and the National 4 Assessment Standards. This would give the candidate and the assessor more work; however it could provide a situation where the report could be used for fallback from National 5 to National 4, assuming, of course, that the report meets the Assessment Standards for National 4.

Will there be penalties for going over the word count in the National 5 assignment?

The word count of 500–800 words is an indication as to the level of detail required for the assignment. Candidates will not be penalised for going over this limit but centres should make candidates aware that by exceeding this limit they may be self-penalising. Appendices should be kept to a minimum.

Does the one hour for the National 5 assignment need to be completed in one session or can it be split over a few periods?

The rule on the time allocated to the communication stage of the assignment at National 5 has been relaxed; it is recommended that no longer than eight hours is spent on the whole assignment. Candidates may produce their report over a period of time. If the report is completed over a number of sessions, then the assessor must retain the candidate's work between sessions. Following completion of the report there should be no re-drafting.

General Curriculum for Excellence questions and answers can be found on the [frequently asked questions section](#) of SQA's website.