

Environmental Science

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Changes to assessment at National 5, Higher and Advanced Higher

As announced by the Deputy First Minister in September 2016, units and unit assessments are being removed from National 5, Higher and Advanced Higher courses on a phased basis over three years:

- National 5 from 2017–18
- Higher from 2018–19
- Advanced Higher from 2019–20

For more information, including a Q&A on the implications of these changes, please visit our website at www.sqa.org.uk/nqchanges

Please note that Environmental Science is not available at Advanced Higher level.

Units that were previously part of National 5 courses

The units that were previously part of National 5 courses are now freestanding units at SCQF level 5. They can no longer be used to contribute to the achievement of a National 5 course.

We will remove all references to National 5 courses from the unit specifications, unit support notes and unit assessment support packs in due course, and the unit support notes will be added to the unit specifications as an appendix. The unit specifications will also be relocated to a new freestanding units web page for each subject.

Further information on the timescales for this will be provided in our weekly Centre News newsletter.

Changes to assessment in National 5

The National 5 Environmental Science course is now assessed through the following components:

| Component | Marks | Scaled mark |
|----------------|-------|-------------|
| question paper | 100 | n/a |
| assignment | 20 | 25 |

Marks for the assignment will be scaled to 25 marks in order to continue the 80/20 weighting of question paper and assignment.

Clarification of course content in the National 5 course

Course content has been clarified as follows:

- There has been minor rearrangement of some content to aid the linking of topics.
 - **Definitions** have now been included in each key area to provide clarity on what could be asked in the question paper and the detail required at National 5 level.
 - **Quantitative technique** for sampling plants and animals has been expanded to ensure a strong fieldwork focus. (Living Environment 1d).
 - **Techniques to measure abiotic factors** has also been expanded to ensure a strong fieldwork focus. (Living Environment 1e).
 - A minor amendment has been made to **Limitations of quantitative techniques and potential sources of error** (Living Environment 1e) from the course specification published in April 2017. 'The larger the sample the more *accurate* the results will be' has been amended in September 2017 to 'The larger the sample the more *reliable* the results will be'.
 - **Rock cycle processes** has been expanded to include named processes and examples of rock types. (Earth's Resources 2c).
 - Linking of the **geological and biological carbon cycles** to improve understanding of how these cycling processes fit together (Earth's Resources 2g).
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- Removal of 'discovery' from sections on **limestone, iron ore, crude oil** to remove confusion between discovery through surveying methods and discovery of deposits (Earth's Resources 2e, 2g, 2h).
 - **Water cycling** processes have been expanded to reduce the gap that existed between N5 and Higher content (Earth's Resources 3b).
 - **National organisations and legislation.** Living Environment 3f now covers SEPA, SNH and SSSI. Legislation (Wildlife and Countryside Act, Nature Conservation (Scotland) Act 2004) has been removed. Organisations, policies and legislation has been removed from Food, Water, Energy and Waste management in Sustainability. This has been replaced by the role of SEPA for Flood warning and water quality (Earth's Resources 3e), Water (Sustainability 3e) and Waste management (Sustainability 5d).
 - **Requirements for siting hydroelectric and tidal power stations** has been expanded to provide clarification (Earth's Resources 3f).
 - **Uses of nitrogen and oxygen** has been removed (Earth's Resources 5a).
 - **Composition of the atmosphere and importance of the 'natural' greenhouse effect** (Earth's Resources 5b) has been added to aid understanding of the 'enhanced' greenhouse effect (Sustainability 5c).
 - **Impacts of an increasing global population** to focus on social, economic and environmental aspects, with regard to supplies of food (Sustainability 2b), water (Sustainability 3b) and energy (Sustainability 4b) and links with waste (Sustainability 5b).
 - Change of development indicator terms from **LEDC and MEDC** to developing and developed respectively (in line with Geography).
 - **Apparatus and Techniques** is a new section in the content to ensure that candidates are familiar with experimental and fieldwork apparatus and techniques appropriate for the National 5 course. It may not always be possible to carry out a practical technique, candidates should be made aware of the purpose and methodology of the technique through teaching. Other resources such as videos could be utilised. This section also clarifies the skills required for reporting experimental work/fieldwork and calculations which are required at National 5 level.
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Changes to assessment in Higher courses from session 2018–19

Units and unit assessments will be removed from Higher courses from session 2018–19 and we have started our review of the Higher course assessments. For this, we are working closely with teachers and lecturers who currently deliver National Courses.

The publication of new and revised Higher materials will follow a similar timescale to National 5:

| | |
|--|---|
| End of April 2018 | Revised Higher course specifications |
| End of May to end of September 2018 | Course support notes New/revised specimen question papers New/revised coursework assessment tasks |

Following feedback from teachers and lecturers we will clarify content as we have done for National 5. We will also review mandatory content with a view to removing some of the peripheral content.

We will provide further information on what the changes to assessment are for each subject by the end of January 2018.

You can contribute to this review by completing the survey via the link below:

<https://www.surveymonkey.co.uk/r/GWLZHWZ>

Survey will close on Friday 17 November 2017.

Conditions of assessment for coursework

To ensure fairness for all candidates, it is essential that the specified assessment conditions for coursework are consistently applied in all centres. The following documents detail the specific conditions that must be followed in each assessment:

- course specification
- course assessment specification (Higher only)
- coursework assessment task (National 5 only)

In addition to these documents, you must also refer to the following document, which is available from the coursework section of the National 5 and Higher web pages:

- [Guidance on conditions of assessment for coursework](#)

This document provides important information on the time and volume of assessment, the use of resources, and the supervision, control and authentication of assessment — including examples.

Changes to documents

New and revised National 5 documents and assessment support materials

Following the removal of units and unit assessments from the National 5 Environmental Science course, we have strengthened the course assessment to ensure it assesses the full content of the course.

We have published revised course specifications and new assessment support materials for the National 5 course, which detail the requirements of the revised course assessments from session 2017–18 onwards. The documents are available from the National 5 subject web pages at www.sqa.org.uk/nqsubjects. Further information on the changes to documents and assessment support materials is provided below.

Course specification

In April 2017, we published a revised course specification which provided detailed information about the National 5 course and course assessment, including the conditions of assessment that must be followed. The revised document was produced by merging the previous course specifications, course assessment specifications and general assessment information into a single, streamlined document. Course support notes have been added to the course specification as an appendix.

The course specification is available on the [National 5 Environmental Science web page](#).

Specimen question paper

We have published a new specimen question paper to meet the revised course specification. It is mainly made up of past paper questions which you will be familiar with. The new 'application of environmental science' section can be found in Section 2. It is worth a total of 20 marks. Additional source material for this section is found in the supplementary booklet. This would be presented to candidates as a separate booklet, printed in colour.

The specimen question paper is available on the [National 5 Environmental Science web page](#).

A recently delivered presentation on assessment (including the specimen question paper) is now available. You can view this by selecting Environmental Science from the subject box on our [Understanding Standards website](#) then 'Presentations'.

Coursework assessment task

We have published the revised coursework assessment task. The task now requires candidates to carry out their own experiment/fieldwork to provide data that they can process and compare to a secondary source. The coursework assessment task document contains:

- instructions for teachers and lecturers
 - marking instructions
 - instructions for candidates
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The coursework assessment task is available on the [National 5 Environmental Science web page](#).

You can view two exemplar assignment reports and associated commentaries by selecting Environmental Science from the subject box on our [Understanding Standards website](#), then 'National 5', followed by 'Assignment'. A further two exemplars and commentaries will be available shortly.

A recently delivered presentation on assessment (including the revised coursework assessment task) is also available. You can view this by selecting Environmental Science from the subject box on our [Understanding Standards website](#), then 'Presentations'

Supportive resources

National 5 audio presentation

We have published an audio presentation that focuses on the requirements of the revised National 5 course assessment.

You can access the audio presentation from the **CPD webinar/audio and support** tab on the [National 5 Environmental Science web page](#).

Course Reports

Course Reports for National 5 and Higher Environmental Science external assessment in 2017 have been published. It is strongly recommended that teachers and lecturers read these reports as they provide useful detail on areas of the course where candidates do well or find difficult. These are published on the subject web pages and are therefore also available to candidates and parents.

Other resources

We have been working in partnership with the Scottish Seabird Centre in North Berwick to advise them on the production of a resource pack to support shoreline-based fieldwork as part of the National 5 Environmental Science course. We will contact you via Centre News as soon as it is published.

SSERC have produced resources to support the National 5 assignment for Biology, Chemistry and Physics. The experimental work in some of these guides could be used for an Environmental Science assignment, as long as a link to environmental science is made in the 'underlying environmental science' section. These are available on the subject pages of the [SSERC website](#).

Candidate evidence and commentary materials

We have published two exemplar National 5 assignment reports and associated commentaries.

These materials contain examples of real candidate assessment evidence and a commentary that explains why the evidence has, or has not, met the required assessment standards.

You can view these by selecting Environmental Science from the subject box on our [Understanding Standards website](#), then 'National 5', followed by 'Assignment'.

Further information and guidance

Unit assessment

Units remain in National 3 and National 4 Environmental Science. In session 2016–17 a threshold was introduced to the number of assessment standards that candidates must meet to achieve outcome 1. Candidates are no longer required to show full mastery of the assessment standards to achieve outcome 1. Assessment standards 2.2 and 2.3 were removed from outcome 2 and assessment standard 2.4 was renumbered as 2.2.

For session 2017–18 centres must use the criteria exemplified in the following guidance documents when carrying out assessments.

'National 3 Environmental Science: Understanding the next steps for session 2016–17'

'National 4 Environmental Science: Understanding the next steps for session 2016–17'

(You can find the marking scheme for the National 4 added value unit in 'National 4 Environmental Science: Understanding the next steps for session 2016–17')

You can view these documents on the [Environmental Science subject homepage](#) under the Understanding the next steps for Environmental Science tab.

The National 3 and National 4 Environmental Science unit specifications and unit assessment support packs are in the process of being revised to reflect the removal of assessment standards and the revised assessment criteria. They will be published in due course.

Recruitment

We are always looking for new markers at both National 5 and Higher level. Marking for the assignment and question paper at each level is carried out at a central event to ensure that markers coming from different subject specialisms can support each other. Feedback from markers suggests that this is an excellent personal and professional development opportunity.

If you are interested in joining us as a marker, please visit the [appointee opportunities](#) section of our website.

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