



# Questions & Answers

## Changes to assessment in National 5 Chemistry

### 1 Revised National Qualification course assessment

#### **Where can I find information on the National 5 Chemistry assignment?**

The assignment assessment task document can be found in the Assessment section of the National 5 Chemistry page under the Coursework tab.

[View the National 5 Chemistry coursework assessment task](#)

The document contains three sections: information for teachers and lecturers; marking instructions; and instructions for candidates.

#### **Are candidates still required to achieve outcome 1 in the National 5 course?**

No. The National 5 Chemistry course no longer contains any units or unit assessments, therefore outcome 1, which was part of the unit assessments for the previous course, is no longer a requirement.

Candidates will only be required to achieve outcome 1 if they are being presented for any free-standing SCQF level 5 units that were previously part of the National 5 course.

#### **Some content has been removed from the National 5 Chemistry course, and some has been moved. Will SQA be revising the unit tests in the unit assessment support packs to reflect these changes?**

No. Units and unit assessments have been removed from the National 5 Chemistry course and candidates will be assessed through the course assessment only.

The units that were previously part of the National 5 course will now be available as free-standing units at SCQF level 5 and the existing unit assessment support packs can still be used to assess these units. However, if centres choose to present candidates for the freestanding units, they should be aware that there is no change to the content of these units and they will not be updated to reflect any changes to the National 5 course.

## 2 Assignment — research stage

### **If a candidate has been frequently absent and hasn't generated any research data, can they still submit an assignment report?**

The assignment has been developed to allow the assessment of practical skills and contributes up to 20% of the overall course award. Candidates must carry out experimental work either individually or as part of a small group and teachers cannot provide candidates with a set of experimental data. As chemistry is a practical subject, there should be many opportunities for candidates to generate data which can be used in an assignment report.

If a candidate repeatedly misses opportunities to take part in an experiment, and submits their report without the experimental data, then the candidate will not be able to access all of the marks available in the report stage.

### **Can any research be done at home?**

Yes. During the research stage candidates do not need to be directly supervised and candidates may gather information on the underlying chemistry and internet/literature data outwith the school setting.

### **If a candidate's research results are not very good, will they lose marks?**

A mark is awarded to candidates who have collected sufficient raw data. The number of values recorded must be appropriate to the aim and, where appropriate, should include repeated measurements. This mark is not dependent on whether the values obtained by the candidate match what might be expected.

If the candidate's experimental data does not show the same trend as the internet/literature data, or if the values they have obtained are significantly different from the internet/literature values, the candidate can still access the analysis mark by describing the difference(s) between their experimental results and the internet/literature data.

If a candidate's results show no clear pattern or trend, they can still access the conclusion mark if they clearly state that their experimental data does not demonstrate a clear pattern or trend.

When the measurements obtained in the experiment are of disappointing quality, the candidate can still access the evaluation marks by:

- ◆ identifying a factor which may have had a significant effect on the reliability, accuracy or precision of the experiment
- ◆ explaining what could have been, or was done, to minimise the effect of the identified factor, or the evidence supporting the identification of the factor

### **What is the concordance value for titration volumes at National 5?**

In the course specification, the 'Chemical Analysis — Analytical methods' section of the mandatory knowledge table states that 'titre volumes within 0.2 cm<sup>3</sup> are considered concordant'.

However, in the assignment, no mark is awarded for achieving concordance. Candidates may choose to comment on concordance within the 'evaluation' section of the assignment report.

**For candidates undertaking freestanding SCQF 5 units, is it possible to collect evidence for assessment standards 1.1 (Planning an experiment) and 1.2 (Following procedures safely) of the freestanding units at the same time as undertaking practical work for the National 5 course assignment?**

In its [policy statement on the changes to National Courses](#) the Scottish Government states, 'the removal of mandatory unit assessments has the distinct purpose of reducing the amount of assessment experienced by young people taking National Qualifications and the teacher workload created as a result of administering the units'. It goes on to say, 'schools should therefore decide whether learners are entered for units or for the full course award'.

Following the Deputy First Minister's decision to retain the current mechanism of Recognising Positive Achievement for an interim period only, candidates can be entered for both the units and the National 5 course. However, the Scottish Government states, 'given the agreed need to reduce assessment-related workload, this pathway should only be used in a very limited number of exceptional circumstances, where the view of the teacher and head teacher, in discussion with parents and young people, is that it is in the interests of specific individual learners'. In such exceptional circumstances, it is possible for candidates undertaking freestanding SCQF 5 units to be assessed on assessment standards 1.1 and 1.2 while they are undertaking the experimental work for the assignment, providing certain conditions are met. Where this approach is being adopted the greatest care must be taken to ensure that the rules set out in the 'Instructions for teachers and lecturers' section of the assignment assessment task document are followed. In particular, during the research stage of the assignment, a teacher or lecturer must not provide feedback to candidates on their results. In the course of assessing whether assessment standard 1.1 of the freestanding unit has been met, teachers and lecturers must take great care to ensure that they do not:

- ◆ provide feedback to the candidates on the range of values chosen
- ◆ offer advice regarding the need to repeat experiments
- ◆ give candidates any feedback regarding measurements, calculations, tables, results, conclusions or evaluative remarks

Teachers and lecturers must not indicate to candidates whether assessment standard 1.1 has been achieved before they have completed the report stage of the assignment. In addition, teachers and lecturers must not read reports or provide any form of feedback to the candidates during the report stage.

Due to the difficulties of meeting the conditions of assessments for the assignment, and the conditions of assessment for the SCQF 5 unit simultaneously, centres are advised to base the assessment of outcome 1 on a separate experiment from that used as part of the assignment.

### 3 Assignment — report stage

#### What is meant by ‘underlying chemistry’?

Candidates undertaking the assignment should be encouraged to read the instructions for candidates extracted from the assignment assessment task. This gives clear guidelines on the structure and content of their report.

In the underlying chemistry section, candidates must explain the chemistry relevant to the aim of the assignment, using their own words as much as possible to demonstrate their understanding of the subject.

They may choose to include:

- ◆ formulae or balanced equations
- ◆ an explanation of properties
- ◆ explanations of relationships or trends
- ◆ an explanation of the meaning of any chemical terms used
- ◆ copies of diagrams that are difficult to draw, for example, complicated structural formulae

The underlying chemistry will be marked holistically and the candidate will be given credit for relevant chemistry, demonstrating an understanding at a depth appropriate to National 5.

In preparation for writing the report, candidates can gather information from websites, books or journals and can take copies of this information into the report stage. However candidates should not prepare a draft of this section and it is the responsibility of the teacher to ensure candidates do not take pre-prepared drafts into the report stage.

Exemplar assignment reports will be available with commentaries illustrating where marks are awarded.

#### **In the underlying chemistry section, does the chemistry need to be relevant to the aim, or can it be more loosely linked to the wider topic?**

Both the instructions for candidates and marking instructions state clearly that candidates should provide an account of the chemistry relevant to the aim of their investigation.

#### **Can candidates use values obtained by other groups?**

No. The assignment assesses candidates’ skills of scientific inquiry. To ensure that all candidates undertake a certain minimum level of experimental work, the maximum number of candidates allowed to work together is four. Any pooling of results between different groups is not allowed as this would effectively create a team of more than four candidates and would diminish the relative contribution of each candidate.

If sufficient equipment is available, members of a group could work concurrently on different samples, allowing up to four measurements to be recorded simultaneously.

**Candidates must include their results, which they can bring into the report stage. Is there a requirement for candidates to re-write this data into their report or can they attach their raw data and only tabulate the processed data?**

Candidates must show all of the measurements recorded in the experiment in the form of a table, with clear headings on every column and with units correctly stated.

Where a candidate has recorded their measurements in the form of a correctly drawn table during the research stage, this can be included in the report without needing to be re-written.

**Will a candidate be able to get marks for evaluation when they haven't provided a detailed procedure?**

Yes, candidates can access both evaluation marks without needing to provide a detailed experimental method.

It is important to note that, for the National 5 assignment, the procedure mark is only awarded when a candidate has demonstrated the ability to summarise their method. The full procedure should not be included.

**Is it okay if candidates do some of the calculations during the research stage, and work out averages in the report stage for the calculation mark?**

Candidates can carry out calculations during the research stage but they cannot take any of these calculated values into the report stage. The use of previously calculated values or specimen calculations is not permitted.

**Can a completed assignment report be used to provide evidence for outcome 1 of a SCQF 5 chemistry unit?**

In its [policy statement on the changes to National Courses](#) the Scottish Government states, 'the removal of mandatory unit assessments has the distinct purpose of reducing the amount of assessment experienced by young people taking National Qualifications and the teacher workload created as a result of administering the units'. It goes on to say, 'schools should therefore decide whether learners are entered for units or for the full course award'.

Following the Deputy First Minister's decision to retain the current mechanism of Recognising Positive Achievement for an interim period only, candidates can be entered for both the units and the National 5 course. However, the Scottish Government states, 'given the agreed need to reduce assessment-related workload, this pathway should only be used in a very limited number of exceptional circumstances, where the view of the teacher and head teacher, in discussion with parents and young people, is that it is in the interests of specific individual learners'. In such exceptional circumstances, where a candidate is being entered for both freestanding units and the course award, a National 5 assignment report can be used to provide evidence for assessment standards 1.3, 1.4, 1.5 and 1.6 by marking a copy of the assignment report against the standards set out in the 'Judging evidence' tables within the unit assessment support packages for the SCQF 5 unit. The unit assessment support packages are available from SQA's secure website.

Additional evidence will still be required to address assessment standards 1.1 and 1.2.