

## Physics

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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](http://www.sqa.org.uk/nqchanges)

### Units that were previously part of National 5 courses

The units that were previously part of the National 5 Physics course 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.

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## Changes to assessment in National 5

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

Component	Marks	Scaled marks
question paper	135	100
assignment	20	25

**Question paper:** the question paper has a total of 135 marks, with scaling to give a total of 100 marks (see below). It has two sections:

- section 1 (objective test) has 25 marks
- section 2 contains restricted and extended response questions and has 110 marks. This is scaled to 75 marks

**Assignment:** The topic chosen must include a mandatory practical experiment/activity and be related to a key area of the course. 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

The course content has been arranged into a different suggested teaching order. Centres are reminded that this is only a suggestion and they are free to deliver content in any order they wish.

Clarification of depth of treatment has been added to a number of statements within the content in response to stakeholder feedback. For example, the previous course support notes stated 'Awareness of the effect of an electric field on a charged particle', but did not clarify what types/shapes of field should be covered. This detail has now been added to clearly define the coverage required.

Experiments typically covered by physics teachers throughout the course have been specified.

Two statements have been deleted:

- Explanation of the connection between temperature and heat energy.
- Awareness of the potential benefits of space exploration.

The relationship  $f = \frac{N}{t}$  has been added to the relationship sheet.

This is not new content as the previous version of the course support notes had included the formula but it had been omitted from the relationships sheet.

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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 our National Qualifications Support Teams (NQSTs) for each subject. Our NQSTs include teachers and lecturers who currently deliver National Courses, and representatives of professional associations. We will also meet with a sample of teachers to gauge their views on the proposed changes and the implications of these.

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

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

As with revisions to National 5, we will providing clarification of required depth of knowledge where appropriate and including experiments typically carried out during the Higher Physics course.

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

## 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 and Advanced Higher only)
- coursework assessment task

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

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# Changes to documents

## Revised National 5 documents and assessment support materials

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

We have published revised course specifications and revised 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](http://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 Physics web page](#).

### Specimen question paper

The National 5 Physics question paper has been strengthened to allow increased sampling of knowledge and understanding and skills. The specimen question paper illustrates the standard, structure and requirements of the question paper candidates will sit. This also includes marking instructions and the relationships sheet. The specimen question paper is available in the 'Assessment' section of the [National 5 Physics web page](#).

### Coursework assessment task

The National 5 Physics assignment allows assessment of skills which cannot be assessed through the question paper; for example, research skills and the handling and processing of data gathered as a result of experimental work.

The coursework assessment task includes information that centres must use in administering coursework and must be read in conjunction with the course specification. The coursework assessment task is available in the 'Assessment' section (under the Coursework tab) of the [National 5 Physics web page](#).

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## Supportive resources

### National 5 CPD webinar

To help teachers and lecturers prepare for the changes to assessment in the National 5 course, we ran a series of subject-specific continuing professional development (CPD) webinar that focused on the requirements of the course assessment, in particular the assignment.

Recordings of these webinars are available to view online via our website and can be accessed from the **CPD webinar/audio and support** tab on the [National 5 Physics web page](#).

### Q&A document on the changes to assessment

During the question and answer section of the National 5 webinar, we received a number of questions about the changes to assessment. We have published a Q&A document that provides answers to the questions asked during the webinar, as well as some of the most frequently asked questions we have received from teachers and lecturers. You can access the Q&A document under the 'Updates and announcements' section of the [National 5 Physics web page](#).

### National 5 course events

We are hosting a series of subject-specific events that focus on the changes to assessment in National 5 courses. The events are running during November 2017 and provide delegates with the opportunity to participate in workshops and discuss the course documents, as well as have their questions answered by senior examining team members.

There are five events around the country, one of which is being held on a Saturday in order to allow teachers and lecturers who may have difficulty getting release to attend.

To view the event schedule and book your place, visit [www.sqa.org.uk/ngevents](http://www.sqa.org.uk/ngevents)

### Candidate evidence and commentary materials

We have recently published two exemplar National 5 Physics assignments with associated commentaries. You can view these by selecting Physics from the subject box on our [Understanding Standards website](#), then National 5, followed by 'Assignment 2017'.

SSERC, in partnership with SQA, have produced resources for the National 5 assignment. You can access these on [Newton's Thought Experiment](#) and [Heated Clothing \(Electrolycra®\)](#).

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## Further information and guidance

### National 3 and National 4 Physics

Units remain in National 3 and National 4 Physics. 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 Physics: Understanding the next steps for session 2016–17
- National 4 Physics: Understanding the next steps for session 2016–17

You can view these documents on the [Physics subject page](#) ('Understanding the next steps for Physics' tab).

The National 3 and National 4 Physics unit specifications and unit assessments 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.

### Higher Physics

In session 2016–17 a threshold was introduced to the number of assessment standards that candidates must meet to achieve outcome 1, if doing an outcome 1 for the content-based Units. Candidates are no longer required to show full mastery of the assessment standards to achieve outcome 1.

Transfer of evidence was also introduced so that candidates who successfully achieved the *Researching Physics* Unit could be credited with outcome 1 of the other units, without the need to match the evidence requirements for outcome 1 in the content-based units. Effectively, this means many candidates would not require an outcome 1 for those units, since they will achieve the *Researching Physics* unit.

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

- Higher Physics: Understanding the next steps for session 2016–17

You can view this document on the [Physics subject page](#) ('Understanding the next steps in Physics' tab)

### Higher Physics assignment

In 2016–17, a change was made to the Higher Physics assignment to require candidates to process and present their experimental data, as opposed to any secondary data. It is very pleasing to report that virtually all candidates followed this instruction and only a tiny number failed to do so. Even in those cases, candidates tended to include no processing or presenting rather than processing and presenting secondary data. Centres are reminded that the same

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rule applies for session 2017–18, ie candidates must process and present their own experimental data.

Candidates may still wish to process and present their secondary data in addition to the experimental data, as this may assist with their analysis, but only the processing and presentation of the experimental data is marked.

### **Advanced Higher Physics**

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. Existing transfer of evidence from the *Investigating Physics* Unit means that, for most candidates, an outcome 1 in the content-based Units will not be required.

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

- Advanced Higher Physics: Understanding the next steps for session 2016–17

You can view this document on the [Physics subject page](#) ('Understanding the next steps in Physics' tab)

### **Course Reports**

We strongly advise that you read the annual Course Reports for the subjects and levels you are teaching. These reports are produced following the annual diet of exams and are published by the end of October. The reports provide informed and valuable comment on the assessment for each component in the course, and include a summary of:

- candidate performance in the course assessment
- areas in which candidates performed well
- areas which candidates found demanding

The reports also contain advice on preparing future candidates, and statistical data relating to grade boundaries. Course Reports will be available from the relevant subject pages of our website at [www.sqa.org.uk/nqsubjects](http://www.sqa.org.uk/nqsubjects)

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