



Common questions about National 4, National 5, Higher and Advanced Higher Design and Manufacture

Units

What has happened to the units now they have been removed from the National 5, Higher and Advanced Higher courses?

These units remain available as freestanding units at SCQF level 5, SCQF level 6 and SCQF level 7. They no longer contribute to the National 5, Higher or Advanced Higher courses. You can present candidates for freestanding units as an alternative to the National 5, Higher or Advanced Higher courses.

Do candidates have to achieve all assessment standards to pass a unit?

No. There is a threshold defining the number of assessment standards candidates must achieve to pass a unit. Details of these thresholds are in the National 4 unit specifications on the [Design and Manufacture page of SQA's website](#).

The unit specifications for SCQF level 5, SCQF level 6 and SCQF level 7 units are available under 'freestanding units' on the Design and Manufacture page of SQA's website.

If candidates are only presented for units, will the threshold for the number of assessment standards remain the same?

Yes. The threshold applied to the number of assessment standards that candidates must meet to achieve each unit has not changed.

Do assessors need to use SQA's National 4 unit assessment support packs to assess candidates for the units?

SQA provides specimen tasks in the unit assessment support packs. Assessors can use SQA's sample tasks as they are, adapt or modify them, and/or use them to develop their own assessment tasks. If centres make their own tasks, these tasks must meet the demands of the assessment standards and the relevant SCQF level.

SQA will continue to provide a free prior verification service to schools and colleges that devise their own assessments, or significantly change SQA's assessments to suit their needs. You can find more information on prior verification on the [National Qualifications — prior verification page](#) on SQA's website.

Can centres use their own tasks or projects for unit assessments?

Yes. Centres can use any tasks that allow candidates to generate evidence at a suitable level to meet the assessment standards.

Do all centre-devised tasks have to be prior verified?

No. Prior verification is only required if centres make major changes to the approach to assessment. Centres should ensure that the tasks they use allow candidates to generate appropriate evidence for all assessment standards.

If candidates achieve the Design unit and the Materials and Manufacturing unit for the Design and Manufacture National 4 course, but do not pass the added value unit, can they be awarded a National 3 Design and Technology course?

Yes. Candidates in this position can be awarded a certificate for National 3 Design and Technology. However, this process is not automatic. Centres need to enter their candidates for the National 3 Design and Technology course.

Do candidates have to pass all the units to gain a course award?

At National 3 Design and Technology and National 4 Design and Manufacture, candidates must pass all three of the units to gain the course award. Details of unit requirements for each course can be found on the [National 3 Design and Technology](#) and [National 4 Design and Manufacture](#) subject pages.

For National 5, Higher and Advanced Higher, candidates do not have to attempt any of the freestanding units to gain the course award. The freestanding units for SCQF levels 5, 6 and 7 are available on the [Freestanding Design and Manufacture units web page](#).

Verification

How are units verified?

Level	Unit	Verification
National 4, SCQF Level 5 and SCQF Level 6	Design	The National 4, SCQF Level 5 and SCQF Level 6 Design unit evidence is portable. If a centre is selected for verification, they send evidence to SQA to be verified during verification events.
National 4 and SQCF Level 5	Materials and Manufacturing	The National 4 and SCQF Level 5 Materials and Manufacturing unit evidence is non-portable. Visiting verifiers will visit centres to verify a sample of assessment judgements.
SCQF Level 6	Materials and Manufacturing	The SCQF Level 6 Materials and Manufacturing unit evidence is portable. If a centre is selected for verification, they send evidence to SQA to be verified during verification events. Practical evidence should be submitted as a photograph.
National 4	Added value unit	The National 4 added value unit evidence is portable. If a centre is selected for verification, they send evidence to SQA to be verified during verification events. Practical evidence should be submitted as a photograph.
SCQF Level 7	All units	The evidence for all SCQF Level 7 units is portable. If a centre is selected for verification, they send evidence to SQA to be verified during verification events.

Coursework assessment

How is coursework assessed?

Level	Component	Verification
National 5	Assignment — design	Submitted to SQA for assessment.
National 5	Assignment — practical	Assessed by centre, verified by SQA.
Higher and Advanced Higher	Assignment	Submitted to SQA for assessment.

Assessment of National 4

How is National 4 assessed?

National 4 is internally assessed in centres and verified by SQA.

Candidates must gain a pass for the Design unit, the Materials and Manufacturing unit and the added value unit to gain the course award at National 4.

You can find details of the unit requirements on the [National 4 Design and Manufacture subject page](#).

Is there a bank of assessment tasks for the National 4 added value unit?

Yes. Specimen tasks are available on SQA's secure website, which you can access through your SQA co-ordinator.

Do centres need to use the National 4 added value unit assessment support pack to assess candidates?

The Design and Manufacture added value unit assessment is an assignment. Centres can adapt the published assessment or create their own within the limits described in the 'assessment overview' of the added value unit assessment.

The assessor provides overall guidelines for the assignment (including a brief and questions, tasks and prompts) to lead candidates through the assignment in clear stages.

Candidates design and manufacture a solution in response to a problem by:

- ◆ interpreting a brief
- ◆ creating and developing design ideas
- ◆ using practical skills to manufacture a prototype

SQA will continue to provide a free prior verification service to schools and colleges that devise their own assessments, or significantly change SQA's assessments to suit their needs. There is more information on prior verification on the [National Qualifications — prior verification page](#) on SQA's website.

Can centres use the National 5 assignment briefs set by SQA as assessment tasks for the National 4 added value unit?

Yes. Centres can use the National 5 briefs as assessment tasks for the National 4 added value unit.

Coursework assessment task — National 5

When are the assignments issued?

There is a choice of three briefs each year. The briefs are published annually at the end of November on SQA's secure website.

What is the submission date for sending in the assignment — design?

The National 5 assignment — design is uplifted from centres in April. Please see *Guide for SQA Co-ordinators* for more information.

How much time should candidates spend on the assignment — design?

Candidates generate evidence of their design skills over an extended period of time, allowing them to develop and refine their work before they present it for assessment.

How much time should candidates spend on the assignment — practical?

Candidates demonstrate their practical skills by manufacturing the proposal developed in their assignment. This manufacturing process takes place over an extended period of time, allowing candidates to develop and refine their work before they present it for assessment.

Can candidates produce the research pro forma electronically and print it out?

Yes. However, candidates must use the pro forma provided and not alter it in any way.

Can teachers, lecturers or technicians help candidates make models when completing the assignment — design?

Yes. At National 5 level, candidates can receive help to manufacture their models. Learners gain marks for their use of modelling, not the skills required to make them. Teachers or lecturers must not give direction on use of appropriate models. Candidates must make the decisions on the models they use to develop or communicate their proposal. Teachers or lecturers must not produce models for the whole class to use.

Should candidates use an orthographic drawing in the planning for manufacture?

No. Candidates must clearly communicate sizes and any other appropriate information required to manufacture their proposal. An orthographic drawing is not the only method of doing this. Candidates can use any suitable graphics for this purpose.

How does SQA verify measuring and marking out when the planning for manufacture pro forma is submitted as part of the assignment — design?

Centres must retain a copy of the planning for manufacture pro forma for verifiers to refer to during their verification visit. Centres must send SQA the original planning for manufacture pro forma with the assignment to be marked. They should retain a photocopy of the pro forma in centre to mark alongside the assignment — practical.

Can candidates achieve marks by using computer-aided design (CAD) or computer-aided manufacturing (CAM) for modelling?

In the assignment — design, the skill being assessed is ‘use of modelling’. Therefore, any suitable method of manufacturing models will attract marks, provided candidates use the models to develop the design proposal.

In the assignment — practical, it is the practical workshop skills of the candidate being assessed, and the evidence that attracts marks in this component must be their own work. Therefore, candidates will not attract marks if they use CAM to produce their evidence.

Is computer numerical control (CNC) machining allowed in the course assessment?

Yes. Candidates can produce models during the development of the proposal, or produce parts of the proposal using CNC machining. However, they cannot receive marks for practical skills for parts that are CNC-machined.

Can marks be awarded for practical skills for formers or jigs produced by candidates?

Yes. Candidates can gain marks for any activity where they demonstrate practical skills in manufacturing their proposal. Please refer to the range statements in the ‘detailed marking instructions’ published in the coursework assessment tasks.

Does the complexity of the proposal impact on the marks awarded for practical skills?

Yes. The proposal must allow candidates to demonstrate their practical skills. Very simple proposals (even if perfectly executed) are unlikely to gain full marks. Teachers and lecturers must make candidates aware of the skills they must demonstrate before they start the task, as this is likely to influence their design proposal.

Does the manufactured proposal have to be in response to the proposal designed in the assignment — design?

Yes. The coursework assessment task comprises two assignments: assignment — design and assignment — practical. The task requires candidates to fulfil the assignment —

practical by manufacturing what they have designed in the assignment — design. The same coursework assessment task covers both assignments.

Does using templates have an impact on the marks awarded for measuring and marking out?

Yes. Candidates must demonstrate their skill and accuracy in measuring and marking out. Templates created manually (for example, drawn out on card) are awarded appropriate marks by referring to the range statements in the detailed marking instructions. However, templates generated using computer-aided design (CAD) software, do not allow candidates to demonstrate the specified measuring and marking out skills and do not attract marks.

Can marks be awarded for measuring and marking out if candidates have not created a working drawing?

Yes. However, candidates are encouraged to create a working drawing, as this helps manufacturing and attracts marks in the 'communication' stage. Without a working drawing, the accuracy of their measuring and marking out would need to be assessed against other evidence, such as a dimensioned sketch.

Course assessment — National 5 question paper

Will the question paper have a similar format every year?

Yes. Questions are grouped into two sections each year, as described in the course specification.

Do candidates need to write extended responses to questions?

Extended responses are expected when a question asks candidates to 'explain', 'describe' or 'discuss'. Extended responses are not required when a question asks candidates to 'name', 'state' or 'outline'.

Coursework assessment task — Higher

When is the Higher assignment issued?

There is a choice of three briefs each year. The briefs are published annually at the end of November on SQA's secure website.

When is the submission date for the Higher assignment?

The Higher assignment is uplifted from centres in April. Please see the *Guide for SQA Co-ordinators* for more information.

How much time should candidates spend on their assignment?

Candidates generate evidence of their design skills over an extended period of time. This allows them to develop and refine their work before it is presented for assessment.

Can candidates use computer-aided design (CAD) or computer-aided manufacturing (CAM) in their Higher assignment?

The Higher assignment assesses both 'use of modelling' and 'practical modelling skills'. The use of CAD and CAM attracts marks for 'use of modelling', provided candidates clearly demonstrate how they used the models to develop their design proposal. The use of CAD and CAM does not attract marks for 'practical modelling skills' as this section assesses candidates' practical skills when manufacturing physical models.

Can teachers and lecturers, or technicians help candidates make models when completing the Higher assignment?

No. Teachers and lecturers, or technicians must not help their candidates create models. Candidates receive marks for 'applying modelling techniques' and 'demonstrating practical modelling skills'.

Do candidates have to record the information gained from using models when developing their design proposal?

Yes. Candidates must clearly communicate information gained from the models by annotating photographs of the models.

Do candidates have to produce rendered graphics to be awarded marks in the top band of 'applying graphic techniques'?

No. There is no requirement to produce rendered graphics when completing the Higher assignment. Graphics should be appropriate for their purpose.

Do candidates have to use one of the provided standard components in their Higher assignment?

No. Candidates do not have to use one of the standard components when undertaking their assignment. However, using the standard component can allow candidates the opportunity to generate marks in a number of sections across the assignment, for example, in exploring and refinement.

Coursework assessment task — Advanced Higher

What is the submission date for sending in the assignment?

The Advanced Higher assignment is uplifted from centres in April. Please see the *Guide for SQA Co-ordinators* for more information.

How much time should candidates spend on the assignment?

Candidates generate evidence of their design skills over an extended period of time, allowing them to develop and refine their work before they present it for assessment.

Course assessment — Advanced Higher question paper

Will the question paper have a similar format every year?

Yes. Questions are grouped into two sections each year, as described in the course specification.

General

What should centres do if they have a candidate whose handwriting is illegible in their assignment?

Centres should number each illegible comment on the candidate's assignment and scribe comments onto an A4 sheet of paper. Ensure the candidate's name and candidate number is included on the sheet before submitting it along with the assignment.

Do candidates have to refer to the data booklet when completing their National 5 assignment — design, Higher assignment or Advanced Higher assignment?

No. The data booklet is provided to reduce the time candidates spend researching relevant information on anthropometrics and manufacturing costs.

Will the data booklet be updated annually?

No. Information in the data booklet is for guidance only and does not have to reflect changes or fluctuations in the market.

Can candidates present information from the data booklet as research for the National 5, Higher and Advanced Higher assignments?

Yes. Candidates can draw information from the data booklet and include it in their research pro forma. Candidates are assessed on their ability to select and use relevant information to develop a specification.

Can external assessments be returned to centres after marking by SQA?

Yes. Centres can complete a *Request for Return of External Assessment Material* form. There is more information on the return of external assessments on the [National Qualifications — Exam results page](#) on SQA's website.

You will find general questions and answers about National Qualifications on our website at www.sqa.org.uk/faq.