



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

Units

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

SQA provides sample 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 who devise their own assessments, or who 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 their own tasks or projects for unit assessments?

Yes. Centres can use any task(s) 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 task(s) they use allows candidates to generate appropriate evidence for all assessment standards.

Do candidates have to achieve all assessment standards in order 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 from the Design and Manufacture page under 'freestanding units' on SQA's website.

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 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.

Verification

How are units verified?

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

Coursework assessment — National 4

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

Yes. A bank of assessment tasks is available on SQA's secure website, accessed via your SQA co-ordinator.

Do I 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 who devise their own assessments, or who 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?

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 it is presented 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 it is presented 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. Marks are awarded for the use of modelling, not the skills required to make them.

Will candidates be marked down if they have an exploded view rather than an orthographic to help with 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.

Can candidates achieve marks by using Computer-aided Design (CAD) and/or Computer-aided Manufacturing (CAM) for modelling?

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. Candidates will attract **no** marks if they use CAM to produce the prototype in the assignment — practical.

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, marks cannot be awarded 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 are required to 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?

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) and/or Computer-aided Manufacturing (CAM) in their Higher assignment?

The Higher assignment assesses both the '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 the candidate's practical skills when manufacturing physical models.

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

No. Teachers and lecturers or technicians must **not** help their candidates create models. Marks are awarded 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.

Coursework assessment task — Advanced Higher

What is the submission date for sending in the assignment?

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 it is presented 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 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.

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.

What should I do if I have a candidate whose handwriting is illegible?

Number each illegible comment on the candidate's folio 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 folio.

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. National Qualification questions and answers are on the [frequently asked questions section](#) of SQA's website.