



Higher  
Coursework  
Assessment Task



# Higher Design and Manufacture

## Assignment

### Assessment task

This document provides information for teachers and lecturers about the coursework component of this course in terms of the skills, knowledge and understanding that are assessed. It **must** be read in conjunction with the course specification.

**Specimen – valid from session 2019-20 and until further notice.**

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# Introduction

This document contains instructions for teachers and lecturers, marking instructions and instructions for candidates for the Higher Design and Manufacture assignment. You must read it in conjunction with the course specification.

This assignment has 90 marks out of a total of 170 marks available for the course assessment.

This is one of two course assessment components. The other component is a question paper.

# Instructions for teachers and lecturers

## Setting, conducting and marking the assignment

This assignment assesses the ability of candidates to apply design skills to develop a proposal according to a set brief.

The assignment allows candidates to demonstrate their ability to work independently and is sufficiently open and flexible to allow personalisation and choice.

The assignment is:

- ◆ set and marked by SQA
- ◆ conducted in centres under conditions specified by SQA

Evidence for the assessment is submitted to SQA.

Before candidates undertake the assignment, teachers and lecturers must ensure that they have the necessary design skills and are aware of the requirements of the assessment. Centres should give candidates the 'Instructions for candidates', which are at the end of this document.

Candidates receive:

- ◆ a choice of three briefs, from which they choose one
- ◆ 'research and specification' pro formas (two sheets)
- ◆ a 'planning for commercial manufacture' pro forma
- ◆ a 'practical modelling skills' pro forma

Candidates are assessed on:

Area	Marks
◆ carrying out research into a given brief	5 marks
◆ producing a specification	3 marks
◆ generating initial ideas	8 marks
◆ exploring ideas	12 marks
◆ refining ideas	6 marks
◆ applying knowledge and understanding of materials and assembly processes	10 marks
◆ applying knowledge and understanding of design	12 marks
◆ applying graphic techniques	12 marks
◆ applying modelling techniques	8 marks
◆ demonstrating practical modelling skills	8 marks
◆ producing a plan for commercial manufacture	6 marks

# Assessment conditions

## Time

Candidates produce evidence for the assignment over an extended period, allowing them to develop and refine their work before it is presented for assessment.

## Supervision, control and authentication

Teachers and lecturers must ensure that evidence submitted by a candidate is the candidate's own work. Candidates do not need to be directly supervised at all times. Teachers and lecturers must retain candidates' work between assessment sessions.

## Resources

There are no restrictions on the resources that candidates can access while producing their assignment.

## Reasonable assistance

Candidates must undertake the assessment independently. However, teachers and lecturers can provide reasonable assistance prior to the assessment. The assignment must be carried out without interruption by periods of learning and teaching.

If a candidate encounters difficulties at a particular part of a task, it is reasonable for teachers and lecturers to refer them to material covered in the course. Teachers and lecturers may also give candidates information on the range of materials that the centre can supply.

Candidates can seek clarification of the wording of a brief if they find it unclear. In this case, teachers and lecturers should normally give the clarification to the whole class. However, it is reasonable for teachers and lecturers to ask candidates to re-read the brief and/or their specification, giving them the opportunity to progress without providing them with specific information.

Teachers and lecturers must **not** provide candidates with:

- ◆ any additional information for the task, for example research material or specification points
- ◆ a structured layout for the folio, for example a pro forma with headings and/or descriptions of sections
- ◆ an exemplar response similar to the task being undertaken
- ◆ alternative ideas or solutions to encourage or enhance exploration
- ◆ specific advice, including any advice that would allow candidates to gain marks for work which is not their own, such as:
  - specific information on areas to research
  - advice on which research technique(s) to use
  - advice on which idea-generation technique(s) to use
  - starting points for ideas
  - sketches
  - suggestions on presenting evidence

— specific information on commercial manufacturing

## Evidence to be gathered

### Volume

Candidates develop a proposal for **one** of the design briefs. Their submitted work must occupy a maximum of 12 A3 sheets (or equivalent), including the four pro forma sheets issued annually with the assignment:

- ◆ research and specification pro formas (two sheets)
- ◆ planning for commercial manufacture pro forma
- ◆ practical modelling skills pro forma

This information indicates the volume of evidence required. There is no word count.

More information on assignment submission is available on the Higher Design and Manufacture subject page.

# Marking instructions

The following marking instructions are for the Higher Design and Manufacture assignment. In line with SQA's normal practice, they are addressed to the marker. They will also be helpful for those preparing candidates for course assessment.

Candidates' evidence is submitted to SQA for external marking.

## General marking principles

Always apply these general principles. Use them in conjunction with the detailed marking instructions, which identify the key features required in candidates' responses.

- a Always use positive marking. This means candidates accumulate marks for the demonstration of relevant skills, knowledge and understanding; marks are not deducted for errors or omissions.
- b If a specific candidate response does not seem to be covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your team leader.
- c When marking the assignment, you must refer to specific descriptions of competence for different mark ranges and allocate marks for each section using a 'best fit' approach.
- d The statements within the bands give an indication of what may appear in the evidence. Candidates do not need to meet every statement to achieve marks within a band.
- e Do not award marks where candidates' work does not meet the lowest range statement, or where they do not provide any evidence.

## Detailed marking instructions

Skill	Max mark	Make your marking judgements based on the candidate's ability to carry out appropriate research and their use of research techniques.		
		1-2 marks	3-4 marks	5 marks
Carry out research into a given brief	5	<ul style="list-style-type: none"> <li>◆ few issues researched are appropriate</li> <li>◆ limited use of primary and secondary research techniques</li> </ul>	<ul style="list-style-type: none"> <li>◆ most issues researched are appropriate</li> <li>◆ effective use of primary and secondary research techniques</li> </ul>	<ul style="list-style-type: none"> <li>◆ issues researched are appropriate</li> <li>◆ highly effective use of primary and secondary research techniques</li> </ul>
<b>Further information for assessing – ‘carry out research into a given brief’</b>				
<ul style="list-style-type: none"> <li>◆ Research should generate information that is suitable for a specification.</li> <li>◆ Do not award marks for research that generates generic information. Such research is not valid.</li> <li>◆ Research techniques must be appropriate to the information being gathered.</li> </ul>				

Skill	Max mark	Make your marking judgements based on the candidate's ability to produce a specification that has detail and covers a range of issues.		
		1 mark	2 marks	3 marks
<b>Produce a specification</b>	3	<ul style="list-style-type: none"> <li>◆ specification is limited in identifying the requirements of the proposal</li> <li>◆ specification covers a limited range of issues</li> <li>◆ specification contains limited detail</li> </ul>	<ul style="list-style-type: none"> <li>◆ specification adequately identifies the requirements of the proposal</li> <li>◆ specification covers an adequate range of issues</li> <li>◆ specification contains adequate detail</li> </ul>	<ul style="list-style-type: none"> <li>◆ specification clearly identifies the requirements of the proposal</li> <li>◆ specification covers a wide range of issues</li> <li>◆ specification is detailed</li> </ul>
<b>Further information for assessing – 'produce a specification'</b>				
<ul style="list-style-type: none"> <li>◆ Award a maximum of 1 mark for additional specification points that are drawn only from the brief and/or research.</li> <li>◆ Candidates must draw their additional specification points from their research.</li> <li>◆ Do not award marks for specification points that are based purely on candidates' personal opinion.</li> </ul>				

Skill	Max mark	Make your marking judgements based on the candidate's ability to generate a range of diverse and creative ideas that address the brief.		
		1-2 marks	3-5 marks	6-8 marks
<b>Generate initial ideas</b>	8	<ul style="list-style-type: none"> <li>◆ ideas show limited diversity</li> <li>◆ ideas show limited creativity</li> <li>◆ few ideas address the brief</li> <li>◆ ideas have limited detail</li> </ul>	<ul style="list-style-type: none"> <li>◆ ideas show some diversity</li> <li>◆ ideas show some creativity</li> <li>◆ some ideas address the brief</li> <li>◆ ideas have adequate detail</li> </ul>	<ul style="list-style-type: none"> <li>◆ ideas show diversity</li> <li>◆ ideas show creativity</li> <li>◆ ideas address the brief</li> <li>◆ ideas have effective detail</li> </ul>
<b>Further information for assessing – 'generate initial ideas'</b>				
<ul style="list-style-type: none"> <li>◆ Marks in this section are awarded for <b>initial</b> ideas. Award marks for additional ideas under 'exploration'.</li> <li>◆ To demonstrate the skills at the level of the top marks band, candidates need to generate a wide range of ideas.</li> <li>◆ Award marks for candidates' creativity and their ability to generate diverse ideas. Do not award marks for iterations of the same idea.</li> <li>◆ To gain marks, ideas must address the brief. Do not award marks, for example, for random shapes or forms.</li> <li>◆ Do not award marks above the bottom band for copies or slight alterations of existing ideas.</li> <li>◆ Candidates can communicate detail through graphics, models and/or annotations.</li> </ul>				

Skill	Max mark	Make your marking judgements based on the candidate's ability to explore ideas towards a proposal. This includes their ability to consider alternatives to evolve the proposal and the requirements of the proposal.			
		1-3 marks	4-6 marks	7-9 marks	10-12 marks
Explore ideas	12	<ul style="list-style-type: none"> <li>◆ limited exploration</li> <li>◆ limited consideration of alternatives</li> <li>◆ few requirements of the proposal have been considered</li> </ul>	<ul style="list-style-type: none"> <li>◆ some effective exploration</li> <li>◆ some consideration of alternatives</li> <li>◆ some requirements of the proposal have been considered</li> </ul>	<ul style="list-style-type: none"> <li>◆ effective exploration</li> <li>◆ good consideration of alternatives</li> <li>◆ most requirements of the proposal have been considered</li> </ul>	<ul style="list-style-type: none"> <li>◆ highly effective exploration</li> <li>◆ clear consideration of alternatives</li> <li>◆ the requirements of the proposal have been considered</li> </ul>
<b>Further information for assessing – 'explore ideas'</b>					
<ul style="list-style-type: none"> <li>◆ Meaningful exploration results in improvements to initial ideas. The requirements of the brief and specification should drive the exploration. Evidence of meaningful exploration is likely to look divergent and be fuelled by the candidate's creativity, problem-solving ability and knowledge and understanding of key areas of the Higher course.</li> <li>◆ Candidates can demonstrate exploration: <ul style="list-style-type: none"> <li>— throughout the folio; evidence is likely to be in the form of graphics, photographs of models and annotations</li> <li>— through considering the requirements of the proposal</li> <li>— through considering alternatives to the key aspects, such as functional requirements, safety, ergonomics, assembly and aesthetics, to evolve the proposal</li> </ul> </li> <li>◆ Exploration must be meaningful. Do not award marks for simple changes, such as rounding corners.</li> </ul>					

Skill	Max mark	Make your marking judgements based on the candidate's ability to refine ideas towards a proposal, and the range of aspects refined.		
		1-2 marks	3-4 marks	5-6 marks
Refine ideas	6	<ul style="list-style-type: none"> <li>◆ limited refinement of ideas</li> <li>◆ limited range of aspects of the proposal has been refined</li> <li>◆ limited detail to inform plan for manufacture</li> </ul>	<ul style="list-style-type: none"> <li>◆ adequate refinement of ideas</li> <li>◆ adequate range of aspects of the proposal has been refined</li> <li>◆ adequate detail to inform plan for manufacture</li> </ul>	<ul style="list-style-type: none"> <li>◆ thorough refinement of ideas</li> <li>◆ a range of aspects of the proposal has been refined</li> <li>◆ effective detail to inform plan for manufacture</li> </ul>
<b>Further information for assessing – 'refine ideas'</b>				
<ul style="list-style-type: none"> <li>◆ Thorough refinement will result in a detailed proposal. Evidence of refinement is likely to look convergent and be fuelled by the candidate's ability to test, evaluate and apply knowledge and understanding of key areas of the Higher course.</li> <li>◆ Refinement should lead to a level of detail that allows the candidate to produce a plan for commercial manufacture.</li> <li>◆ Candidates may refine a range of aspects of the proposal. These will depend on the proposal but may include function, sizes, materials, aesthetics and assembly.</li> <li>◆ Do not award marks above the bottom band for dimensioned drawing on its own.</li> </ul>				

Skill	Max mark	Make your marking judgements based on the candidate's ability to apply knowledge and understanding of materials, manufacturing and assembly processes to develop a design proposal.			
		1-2 marks	3-5 marks	6-8 marks	9-10 marks
Apply knowledge and understanding (KU) of materials, manufacturing and assembly processes	10	<ul style="list-style-type: none"> <li>◆ limited use of KU of materials, manufacturing and assembly to evaluate and inform decisions</li> <li>◆ limited KU of materials, manufacturing and assembly</li> </ul>	<ul style="list-style-type: none"> <li>◆ partially effective use of KU of materials, manufacturing and assembly to inform decisions</li> <li>◆ some KU of materials, manufacturing and assembly</li> </ul>	<ul style="list-style-type: none"> <li>◆ effective use of KU of materials, manufacturing and assembly to inform decisions</li> <li>◆ good KU of materials, manufacturing and assembly</li> </ul>	<ul style="list-style-type: none"> <li>◆ highly effective use of KU of materials, manufacturing and assembly to inform decisions</li> <li>◆ strong KU of materials, manufacturing and assembly</li> </ul>
<b>Further information for assessing – ‘apply knowledge and understanding of materials, manufacturing and assembly processes’</b>					
<ul style="list-style-type: none"> <li>◆ Evidence can be in the form of candidate annotations, comments, justification and evaluations.</li> <li>◆ To gain marks in the top band, candidates must demonstrate application of detailed and appropriate knowledge and understanding of materials, manufacturing and assembly processes in the development of their design proposal.</li> <li>◆ Candidates should apply their knowledge and understanding of materials, manufacturing and assembly processes to develop the proposal.</li> <li>◆ Do not award marks for generic statements about materials and processes.</li> <li>◆ Do not award marks for lists of archived facts about materials and processes.</li> </ul>					

Skill	Max mark	Make your marking judgements based on the candidate's ability to apply knowledge and understanding (KU) of design to develop a design proposal.			
		1-3 marks	4-6 marks	7-9 marks	10-12 marks
Apply knowledge and understanding (KU) of design	12	<ul style="list-style-type: none"> <li>◆ limited use of KU of design to inform decisions</li> <li>◆ limited KU of design</li> </ul>	<ul style="list-style-type: none"> <li>◆ partially effective use of KU of design to inform decisions</li> <li>◆ some KU of design</li> </ul>	<ul style="list-style-type: none"> <li>◆ effective use of KU of design to inform decisions</li> <li>◆ good KU of design</li> </ul>	<ul style="list-style-type: none"> <li>◆ highly effective use of KU of design to inform decisions</li> <li>◆ strong KU of design</li> </ul>
<b>Further information for assessing – ‘apply knowledge and understanding of design’</b>					
<ul style="list-style-type: none"> <li>◆ Evidence can be in the form of candidate annotations, comments, graphics and evaluations.</li> <li>◆ To gain marks in the top band, candidates must demonstrate application of detailed and appropriate knowledge and understanding of design in the development of their design proposal.</li> <li>◆ Candidates should apply their knowledge and understanding of design to develop the proposal. Do not award marks for information covered on the ‘planning for commercial manufacture’ pro forma.</li> <li>◆ Do not award marks for generic statements about design.</li> <li>◆ Do not award marks for lists of archived facts about design.</li> <li>◆ To achieve marks in the top band, candidates must apply design knowledge related to the key points in the specification.</li> </ul>					

Skill	Max mark	Make your marking judgements based on the candidate's ability to apply a range of appropriate graphic techniques to communicate the development and detail of the proposal.			
		1-3 marks	4-6 marks	7-9 marks	10-12 marks
<b>Apply graphic techniques</b>	12	<ul style="list-style-type: none"> <li>◆ limited communication through graphics</li> <li>◆ limited detail is communicated through graphics</li> </ul>	<ul style="list-style-type: none"> <li>◆ partially effective communication through graphics</li> <li>◆ partially effective detail is communicated through graphics</li> </ul>	<ul style="list-style-type: none"> <li>◆ effective communication through graphics</li> <li>◆ effective detail is communicated through graphics</li> </ul>	<ul style="list-style-type: none"> <li>◆ highly effective communication through graphics</li> <li>◆ highly effective detail is communicated through graphics</li> </ul>
<b>Further information for assessing – ‘apply graphic techniques’</b>					
<ul style="list-style-type: none"> <li>◆ Candidates must use recognised graphic types that are appropriate to their purpose.</li> <li>◆ Award marks for the appropriate use of graphics, not just the quality of the graphic.</li> <li>◆ Candidates should use graphics to communicate detail where appropriate.</li> <li>◆ To achieve marks in the top band, it is likely that the candidate will have used a range of graphic types that communicate details such as sizes, features of components and assembly.</li> <li>◆ Candidates can use graphics generated for the ‘planning for commercial manufacture’ as evidence for this section.</li> </ul>					

Skill	Max mark	Make your marking judgements based on the candidate's ability to apply a range of appropriate modelling techniques to inform and communicate design decisions.		
		1-3 marks	4-6 marks	7-8 marks
Apply modelling techniques	8	<ul style="list-style-type: none"> <li>◆ limited use of modelling to inform design decisions</li> <li>◆ limited use of modelling to communicate design decisions</li> </ul>	<ul style="list-style-type: none"> <li>◆ adequate use of modelling to inform design decisions</li> <li>◆ adequate use of modelling to communicate design decisions</li> </ul>	<ul style="list-style-type: none"> <li>◆ effective use of modelling to inform design decisions</li> <li>◆ effective use of modelling to communicate design decisions</li> </ul>
<b>Further information for assessing – ‘apply modelling techniques’</b>				
<ul style="list-style-type: none"> <li>◆ Candidates may carry out modelling at any stage of the design process.</li> <li>◆ To gain marks, candidates must indicate what they have learned from the models and what decisions they have reached.</li> <li>◆ To achieve marks in the top band, it is likely that the candidate will have used a range of modelling techniques.</li> <li>◆ Modelling can be in the form of computer-generated and/or physical models.</li> </ul>				

Skill	Max mark	Make your marking judgements based on the candidate's ability to produce detailed and accurate models.		
		1-3 marks	4-6 marks	7-8 marks
<b>Demonstrate practical modelling skills</b>	8	<ul style="list-style-type: none"> <li>◆ limited demonstration of practical skills</li> <li>◆ limited detail and accuracy</li> </ul>	<ul style="list-style-type: none"> <li>◆ adequate demonstration of practical skills</li> <li>◆ adequate detail and accuracy</li> </ul>	<ul style="list-style-type: none"> <li>◆ effective demonstration of practical skills</li> <li>◆ effective detail and accuracy</li> </ul>
<b>Further information for assessing – 'demonstrate practical modelling skills'</b>				
<ul style="list-style-type: none"> <li>◆ In this section, award marks for practical modelling skills. Do not award marks for computer-generated modelling.</li> <li>◆ Although the candidate may demonstrate skills across more than one model, it is possible to gain marks in the top band with a single model.</li> <li>◆ The candidate must demonstrate skills in models that develop or communicate the proposal.</li> </ul>				

Skill	Max mark	Make your marking judgements based on the candidate's ability to produce a plan that includes details of component parts and assembly of the design proposal.		
		1-2 marks	3-4 marks	5-6 marks
<b>Produce a plan for commercial manufacture</b>	6	<ul style="list-style-type: none"> <li>◆ limited detail of component parts</li> <li>◆ limited detail of assembly</li> <li>◆ product part table contains limited detail</li> </ul>	<ul style="list-style-type: none"> <li>◆ adequate detail of component parts</li> <li>◆ adequate detail of assembly</li> <li>◆ product part table contains adequate detail</li> </ul>	<ul style="list-style-type: none"> <li>◆ effective detail of component parts</li> <li>◆ effective detail of assembly</li> <li>◆ product part table contains effective detail</li> </ul>
<b>Further information for assessing – ‘produce a plan for commercial manufacture’</b>				
<ul style="list-style-type: none"> <li>◆ The plan should communicate information required for commercial manufacture through completed product part table (part name, materials, processes), graphic(s) and/or model(s) which communicate manufacturing details and key sizes.</li> <li>◆ Only award marks for evidence on the ‘planning for commercial manufacture’ pro forma sheet.</li> </ul>				

# Instructions for candidates

This assessment applies to the assignment for Higher Design and Manufacture. This assignment has 90 marks out of a total of 170 marks available for the course assessment.

It assesses the following skills, knowledge and understanding:

Area	Marks
◆ carrying out research into a given brief	5 marks
◆ producing a specification	3 marks
◆ generating initial ideas	8 marks
◆ exploring ideas	12 marks
◆ refining ideas	6 marks
◆ applying knowledge and understanding of materials and assembly processes	10 marks
◆ applying knowledge and understanding of design	12 marks
◆ applying graphic techniques	12 marks
◆ applying modelling techniques	8 marks
◆ demonstrating practical modelling skills	8 marks
◆ producing a plan for commercial manufacture	6 marks

Your teacher or lecturer will let you know if there are any specific conditions for doing this assessment.

In this assessment, you have to design a solution in response to a design brief.

You will receive:

- ◆ a choice of three design briefs
- ◆ 'research and specification' pro forma (two sheets)
- ◆ 'planning for commercial manufacture' pro forma
- ◆ 'practical modelling skills' pro forma

Things to remember:

- ◆ You must develop a proposal for one of the design briefs.
- ◆ Your work must be submitted on a maximum of 12 A3 sheets (or equivalent), including the pro formas ('research and specification', 'planning for manufacture' and 'practical modelling skills').
- ◆ Each A3 sheet must be labelled with your name, Scottish Candidate Number and page number, for example page 1 of 12.
- ◆ All the sheets must be single-sided.
- ◆ The work submitted must be your own.
- ◆ There are no restrictions on the resources you can use. You may use books, notes or the internet if you require information.

- ◆ You need to produce suitable evidence for the skills being assessed. The following table provides guidance to help you generate appropriate evidence.

Skill	What you have to do	Notes
<b>Carrying out research into a given brief</b>	Carry out research into a range of issues appropriate to the brief, using appropriate research techniques	<p>This section is worth 5 marks.</p> <ul style="list-style-type: none"> <li>◆ You must record your evidence for this skill on the ‘research’ and ‘research and specification’ pro formas.</li> <li>◆ Your research must be relevant to your chosen brief.</li> <li>◆ Your research must produce information that can be included in the specification.</li> <li>◆ You should research issues given within the brief, and any others you identify as important for your task. These may include answering questions on: <ul style="list-style-type: none"> <li>— Aesthetics: Do the aesthetics have to match other products? Do they have to match a location? Does the target market have any preferences? Does the client have any preferences?</li> <li>— Function: What does your proposal have to do? Who is going to use it? Are there any size restrictions?</li> <li>— Ergonomics: What are the key ergonomic issues? Who is going to use your proposal? What are the key sizes?</li> <li>— Performance: How long is your proposal expected to last? What conditions will it be used in?</li> <li>— Cost: How much is the target market willing to pay? How much is the client willing to pay? What are the costs?</li> </ul> </li> <li>◆ You must generate evidence using primary and secondary research methods. The methods you use must allow you to generate valid evidence.</li> <li>◆ Your research evidence may be in the form of sketches, notes, text, graphs or pictures.</li> </ul>
<b>Producing a specification</b>	Complete the specification using the information gained from your research	<p>This section is worth 3 marks.</p> <ul style="list-style-type: none"> <li>◆ You must add your specification points to the specification on the pro forma.</li> <li>◆ Your specification should cover a range of issues.</li> <li>◆ Your specification should include enough detail to help you develop a proposal.</li> </ul>

Skill	What you have to do	Notes
<b>Generating initial ideas</b>	Generate a range of creative and diverse ideas	<p>This section is worth 8 marks.</p> <ul style="list-style-type: none"> <li>◆ Your ideas should: <ul style="list-style-type: none"> <li>— show creativity</li> <li>— show diversity</li> <li>— address the brief</li> <li>— have enough detail to communicate that they address the brief</li> </ul> </li> <li>◆ You may use idea-generation techniques.</li> <li>◆ You should aim to generate a large number of ideas quickly – your sketches or models may be rough at this stage.</li> <li>◆ Your evidence for this skill may be in the form of annotated sketches, drawings, or photographs of models.</li> </ul>
<b>Exploring ideas</b>	Carry out exploration of your ideas	<p>This section is worth 12 marks.</p> <ul style="list-style-type: none"> <li>◆ Your exploration should consider a wide range of alternatives.</li> <li>◆ You should use the specification to help you explore.</li> <li>◆ Your exploration should aim to consider alternatives for a range of features.</li> <li>◆ Your exploration should significantly advance your initial idea, not make simple superficial changes.</li> <li>◆ You may display your exploration through graphics, models and annotations.</li> </ul>

Skill	What you have to do	Notes
<b>Refining ideas</b>	Carry out refinement of your ideas	<p>This section is worth 6 marks.</p> <ul style="list-style-type: none"> <li>◆ Your refinement should aim to produce a detailed proposal suitable for manufacture.</li> <li>◆ You should refine a range of features of the proposal, such as function, sizes, materials, aesthetics and assembly.</li> </ul>
<b>Applying knowledge and understanding of materials and assembly processes</b>	Apply your knowledge and understanding of materials and assembly processes to develop a proposal	<p>This section is worth 10 marks.</p> <ul style="list-style-type: none"> <li>◆ You must use your knowledge and understanding to help you develop the proposal. You will not receive marks for simply listing facts.</li> <li>◆ You should apply the detailed knowledge you have gained in the Higher course.</li> <li>◆ You may display your knowledge and understanding through your sketches, drawings and models, and clarify them through your written comments.</li> <li>◆ You should demonstrate that you have made valid decisions based on your knowledge.</li> </ul>
<b>Applying knowledge and understanding of design</b>	Apply your knowledge and understanding of design to develop a proposal	<p>This section is worth 12 marks.</p> <ul style="list-style-type: none"> <li>◆ You must use your knowledge to help you develop the proposal. You will not receive marks for simply listing facts.</li> <li>◆ You should apply the detailed knowledge you have gained in the Higher course.</li> <li>◆ You may display your knowledge and understanding through your sketches, drawings and models, and clarify them through your written comments.</li> <li>◆ You should demonstrate that you have made valid decisions based on your knowledge.</li> </ul>

Skill	What you have to do	Notes
<b>Applying graphic techniques</b>	Use graphics to communicate your proposal and its development	<p>This section is worth 12 marks.</p> <ul style="list-style-type: none"> <li>◆ Your evidence for this skill may be in the form of sketches, drawings and computer graphics throughout your folio.</li> <li>◆ You should use a range of graphic types that suit their purpose.</li> <li>◆ You should use graphics to communicate detail where appropriate.</li> <li>◆ You may use manual and computer graphics as appropriate.</li> </ul>
<b>Applying modelling techniques</b>	Use models to inform and communicate your decisions	<p>This section is worth 8 marks.</p> <ul style="list-style-type: none"> <li>◆ The evidence for this skill will be in the form of annotated photographs of the model(s).</li> <li>◆ You must consider the purpose of model(s) before you make them. You will not receive marks for simply making models.</li> <li>◆ You must clearly communicate any information gained from the model(s).</li> <li>◆ You may use physical and computer-generated models as appropriate.</li> <li>◆ Some of the models produced should allow you to demonstrate your practical modelling skills.</li> </ul>
<b>Demonstrating practical modelling skills</b>	Use practical modelling skills in developing your proposal	<p>This section is worth 8 marks.</p> <ul style="list-style-type: none"> <li>◆ In this section, you must demonstrate your skills through practical models. You will not receive any marks in this section for computer models.</li> <li>◆ You should demonstrate your skills through models that develop or communicate your proposal, ie your skills may be demonstrated in models which are used at any stage of your assignment, for example: <ul style="list-style-type: none"> <li>— exploring or refining your proposal</li> <li>— communicating your proposal</li> <li>— use of standard components</li> </ul> </li> <li>◆ The evidence for this must be in the form of photographs, which must be on the ‘practical modelling skills’ pro forma.</li> </ul>

Skill	What you have to do	Notes
		<ul style="list-style-type: none"> <li>◆ The photographs must be clear enough to show your skills.</li> <li>◆ You should demonstrate detail and accuracy in some of your models.</li> <li>◆ You should give an indication of the sizes of your models. You may do this by adding dimensions or including a ruler in your photographs.</li> </ul>
<b>Producing a plan for commercial manufacture</b>	Produce a plan which details the commercial manufacture for your proposal	<p>This section is worth 6 marks.</p> <ul style="list-style-type: none"> <li>◆ The evidence for this will be in the form of sketches, drawings and text which must be on the 'plan for commercial manufacture' pro forma.</li> <li>◆ Your plan should include: <ul style="list-style-type: none"> <li>— detail of component parts – this may be in the form of dimensioned drawings, sketches or photographs of models</li> <li>— details of assembly</li> <li>— a completed product part table</li> </ul> </li> </ul>

**Design brief exemplar**

This specimen assignment has one design brief for exemplification only. SQA provides three design briefs for you to choose from.

**Problem situation**

A company that specialises in designing and manufacturing shop fittings is considering introducing three new products. The three new products are described in the briefs below.

The company wants you to develop a proposal for **one** of the products.

The company has carried out some research and identified a number of requirements for each product.

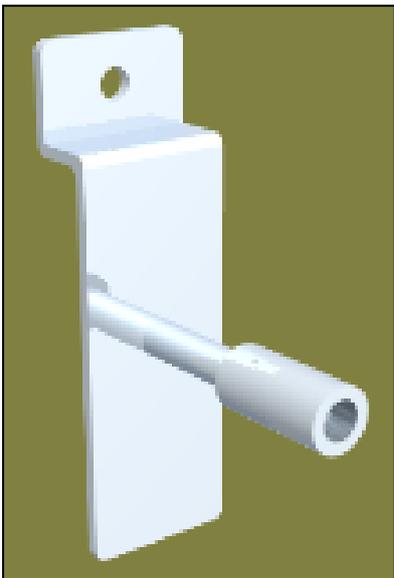
You should carry out further research to gather additional information and complete the specification.

**Design brief 1**

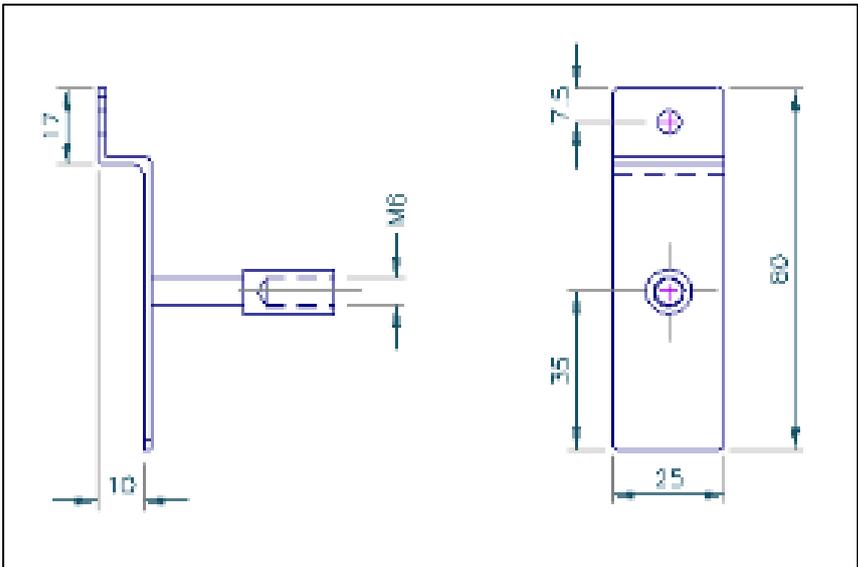
The company would like design proposals for new display units.

The choice of the retail environment and the items displayed is up to the designer. However, the unit must be suitable for placing on a shop floor of maximum area 800 x 800 mm. The design must allow different configurations for displaying products. You may use the chrome-plated standard components supplied by the company. Details of the standard components are given below.

You should identify a retail environment and items to be displayed, and carry out research to complete a detailed specification.



**Standard component**



**Dimensions of standard component**

**Design brief 2** – the live assessment has a total of three briefs

The company would like design proposals for ...

**Design brief 3** – the live assessment has a total of three briefs

The company would like design proposals for ...

# Administrative information

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Published: August 2019 (version 2.0)

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## History of changes

Version	Description of change	Date
1.1	One sentence deleted from the further information section of the marking instructions: <i>Do not award marks for information covered on the 'planning for commercial manufacture' pro forma or on summary evaluations.</i>	November 2018
2.0	<p>'The assignment must be carried out without interruption by periods of learning and teaching' added to 'Conditions of assessment' in 'Instructions to teachers and lecturers' section.</p> <p>Correction made to page 5 'Marking instructions' section to remove reference to annual assessment tasks.</p> <p>'Each A3 sheet must be labelled with the candidate's name, Scottish Candidate Number and page number, for example page 1 of 12' added to 'Instructions to candidates' section.</p> <p>'You may' added to design task page under design brief 1.</p> <p>Additional information added to 'Demonstrating practical modelling skills' heading p22 and 'Carrying out research into a given brief' headings p19 heading under 'Instructions to candidates' section.</p>	August 2019

Note: you are advised to check SQA's website to ensure you are using the most up-to-date version of this document.

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