



Non-Exam Assessment (NEA)

NCFE Level 1/2 Technical Award in Creative Design and Production (603/7003/8)

Centre version

October 2024 release

v1.0

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Introduction

The non-exam assessment (NEA) is a formal synoptic assessment that requires learners to independently apply an appropriate selection of knowledge, understanding, skills and techniques, developed through the full course of study, in response to a real-world situation, to enable them to demonstrate an integrated connection and coherence between the different elements of the qualification.

The NEA will contribute **60%** towards the overall qualification grade; therefore, it is important that the learner produces work to the highest standard that they can. The learner must not start the NEA until they have been taught the full course, to ensure that they are in the best position to complete the NEA successfully.

What is synoptic assessment?

Synoptic assessment is an important part of a high-quality vocational qualification because it shows that learners have achieved a holistic understanding of the sector. It also shows that they can make effective connections between different aspects of the subject content and across the breadth of the assessment objectives (AOs) in an integrated way. The Department for Education (DfE) has consulted with awarding organisations and agreed the following definition for synoptic assessment:

‘A form of assessment which requires a candidate to demonstrate that they can identify and use effectively in an integrated way an appropriate selection of skills, techniques, concepts, theories, and knowledge from across the whole vocational area, which are relevant to a key task.’

Synoptic assessment enables learners to show that they can transfer knowledge and skills learnt in one context to resolve problems raised in another. To support the development of a synoptic approach, the qualification encourages learners to make links between elements of the course and to demonstrate how they have integrated and applied their increasing knowledge and skills.

As learners progress through the course, they will use and build upon knowledge and skills learnt across units. The NEA will test the learners’ ability to respond to a real-world situation.

Information for learners

Introduction

The NEA will be assessed holistically using a levels of response marking grid and against five integrated AOs. These AOs and their weightings are shown below.

Assessment objectives (AOs)
AO1: Recall knowledge and show understanding The emphasis here is for learners to recall and communicate the fundamental elements of knowledge and understanding. 12 marks (12.5%)
AO2: Apply knowledge and understanding The emphasis here is for learners to apply their knowledge and understanding to real-world contexts and novel situations. 12 marks (12.5%)
AO3: Analyse and evaluate knowledge and understanding The emphasis here is for learners to develop analytical thinking skills to make reasoned judgements and reach conclusions. 12 marks (12.5%)
AO4: Demonstrate and apply relevant technical skills, techniques and processes The emphasis here is for learners to demonstrate the essential technical skills relevant to the vocational sector, by applying the appropriate processes, tools and techniques. 32 marks (33.3%)
AO5: Analyse and evaluate the demonstration of relevant technical skills, techniques and processes The emphasis here is for learners to analyse and evaluate the essential technical skills, processes, tools and techniques relevant to the vocational sector. 28 marks (29.2%)

Mark scheme

The purpose of this mark scheme is to give you:

- examples and criteria of the types of response expected from a learner
- information on how individual marks are to be awarded
- the allocated AOs and total marks for each question.

Marking guidelines

General guidelines

You must apply the following marking guidelines to all marking undertaken. This is to ensure fairness to all learners, who must receive the same treatment. You must mark the first learner in exactly the same way as you mark the last.

- The mark scheme must be referred to throughout the marking period and applied consistently. Do not change your approach to marking once you have been standardised.
- Reward learners positively, giving credit for what they have shown, rather than what they might have omitted.
- Utilise the whole mark range and always award full marks when the response merits them.
- Be prepared to award zero marks if the learner's response has no creditworthy material.
- Do not credit irrelevant material that does not answer the question, no matter how impressive the response might be.
- If you are in any doubt about the application of the mark scheme, you must consult with your internal quality assurer (IQA).

Guidelines for using extended-response marking grids

Extended-response marking grids have been designed to assess learners' work holistically. They consist of band-based descriptors and indicative content (IC).

Band-based descriptors

Each band is made up of several descriptors from across the AO range – AO1 to AO5, which when combined provide the quality of response that a learner needs to demonstrate. Each band-based descriptor is worth varying marks.

The grids are broken down into bands, with each band having an associated descriptor indicating the performance at that band. You should determine the band before determining the mark.

Indicative content reflects content-related points that a learner may make but is not an exhaustive list, nor is it a model answer. Learners may make all, some or none of the points included in the indicative content, as its purpose is to guide the relevance and expectation of the responses. Learners must be credited for any other appropriate response.

Application of extended-response marking grids

When determining a band, you should use a bottom-up approach. If the response meets all the descriptors in the lowest band, you should move to the next one, and so on, until the response matches the band descriptor. Remember to look at the overall quality of the response and reward learners positively, rather than focusing on small omissions. If the response covers aspects at different bands, you should use a best-fit approach at this stage and use the available marks within the band to credit the response appropriately.

When determining a mark, your decision should be based on the quality of the response in relation to the descriptors.

Documentation

Declaration of authenticity

The learner and assessor **must** complete the form at the end of the assessment and before any marking takes place. The assessor **must** check the number of tasks submitted by the learner is accurate.

The completed form **must** be retained within the centre and is not to be sent to the moderator or NCFE unless specifically requested.

Learner name:	
Tasks submitted:	
Learner declaration:	
I certify that the work submitted for this NEA is my own. I have clearly referenced any sources used in the work. I understand that false declaration is a form of malpractice.	
Learner signature:	
Date:	

Assessor name:	
Assessor declaration:	
I certify that the work submitted is the learner's own. The learner has clearly referenced any sources used in the work. I confirm that all work was conducted under conditions designed to assure the authenticity of the learner's work.	
Assessor signature:	
Date:	

Note: once completed, the declaration of authenticity **must** be stored securely within the centre, in line with NCFE Regulations for the Conduct of NEA – Non-Exam Assessment. A copy of this declaration form **must** be made available to NCFE upon request.

GDPR consent

Section A: this section must be completed by the learner

- NCFE may select your work for use at teacher training or standardisation events. Your work will be anonymised by removing your name. All materials will be reviewed regularly and will be removed if no longer required.
- NCFE may select your work at some point in the future for use in teaching and learning resources published on the NCFE website. Your work would be anonymised by removing your name. All materials will be reviewed regularly and will be removed if no longer required.
- You understand that this agreement may be terminated at any time through written request.
- For further details about how we process your data, please refer to the [legal information section on the NCFE website](#).

Please tick the option that applies, and sign and date the boxes below:

		Tick one only
I consent to my work being used in the manner detailed in section A		
I do not consent to my work being used in the manner detailed in section A		
Learner signature:		
Date:		

Section B: this section must be completed by any participants who feature in the work

Over 13 years old

- I am over 13 and I give my permission for my video and / or photographic image to be used as detailed in section A (above).

Under 13 years old

- I give my permission for my child's video and / or photographic image to be used as detailed in section A (above).

Name of participant (printed)	Participant / Parent / Carer signature	Date

If any of the participants have declined permission, please tick here: ☐

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Learner instructions

- Read the project brief carefully before you start the work.
- You **must** clearly identify and label all of the work you produce during the supervised time.
- You **must** hand in all of your work to the supervisor at the end of each timed session.

Learner information

- This NEA will assess your knowledge and understanding from across the qualification.
- The maximum mark for this NEA is **96**.
- The maximum completion time for this NEA is **16 hours** (plus **2 hours** preparation and research time).
- All of the work you submit **must** be your own.

Please complete the details below clearly and in BLOCK CAPITALS.

Learner name

Centre name

Centre number

Learner number

Learner signature

Preparation and research task

Maximum time: 2 hours

In addition to the allocated assessment time for this NEA, you are permitted to spend a maximum of **2 hours** to undertake research and develop a research pack that you can refer to during the formal NEA assessment time. During this 2-hour period, you may access all learning materials, the internet and other published materials.

You should use this time to create your own research pack, and it is this pack alone that you may use during the allocated time given to the NEA. This is the only support material that is permitted during the completion of NEA tasks (unless otherwise stated within each of the task instructions).

All research and data used in your final NEA **must** be referenced appropriately. As a minimum this **must** include the following:

- the use of quotation marks to clearly identify any passages not of your own words
- date accessed (websites only)
- name of source / author.

Evidence requirements: research pack of no more than four sides of A4, font size 12 (if word processed), to be returned to your assessor at the end of each task / session and submitted with the completed NEA.

Formal non-exam assessment (NEA)

Maximum completion time

You have been provided with a total of **16** hours to complete this NEA (plus 2 hours for preparation and research).

You may use some or all of the time provided for each task.

You are allowed to use any remaining time allocated to one task to rework previous tasks up to the maximum time allowed.

You are not allowed to exceed the total number of hours.

You should not start your NEA until you have been taught the full course of study. This will ensure that you are in the best position to complete the NEA successfully.

Project brief

Your manager has given you a design project for a 'museum of the home', which displays domestic / household items from the last 100 years.

The museum has just moved into new premises in a refurbished 1930s building. The building features architectural elements of Art Deco and Bauhaus style. They would like you to design an eye-catching, one-off, bespoke item for display in the entrance lobby to attract people's attention.

Your item may be functional or purely decorative, and it should reflect the museum's theme of domestic / household items. The museum has asked that your design should in some way reference one of the architectural styles of the building.

You should consider the impact of social factors (accessibility, audience demographic) on the item you design.

Client brief

Client type:

- public sector – museums, featuring the history of domestic design objects.

Client requirements:

- design an eye-catching, one-off, bespoke item for display
- your item may be functional or purely decorative, and it should relate to domestic / household items
- your item will be displayed in the entrance to the museum; it will be visible from the outside through large glass doors. Inside, visitors will be able to move around the display item
- be inspired by either:
 - Art Deco style
 - or
 - Bauhaus style.

Additional information

You will collect all your research, rough sketches and experimentation for this project in a digital portfolio. Your manager wants the progress of your project to feature in a project blog. You will select words and images from the portfolio to use in two blog posts, as directed (in **Tasks 1 (b)** and **5**). At the end of the project, your manager will use your project blog posts to help appraise your work.

You should read all task instructions carefully and keep all the work you produce, so you have a range of evidence to utilise when constructing blog posts.

Your digital portfolio should include the task title for each section, identifying clearly how your work relates to the requirements for each assignment.

Assessment tasks and mark schemes

Task 1 (a)

Research methods and techniques	
Maximum time	3 hours
Content areas assessed	1. Design and production in context 2. Design materials and processes
Assessment objectives (AOs)	AO1 – 4 marks AO2 – 4 marks AO3 – 4 marks
You are required to: Read the brief in order to identify the key needs of the client. Carry out research on both design styles/movements mentioned within the brief to include: • key social factors • key features • key designers Apply a range of research methods and techniques to develop at least three different initial ideas in response to the project brief. Explain how each of your initial ideas were informed by your research. You are permitted to use the internet for this task. You must reference all sources used. [12 marks]	
Evidence	Evidence of research you could include in your digital portfolio: • annotated primary sources • annotated secondary sources • potential materials – samples, experiments • notes on the impact of social factors linked to your design idea • mind maps • mood boards • a list of references for the sources you have used. You must include your three initial ideas in your digital portfolio: • annotated sketches of your three ideas • a brief explanation of how your research has informed and shaped your ideas. You must also submit your internet browsing history of sites used to support your response to the task.

Task 1 (a): research methods and techniques

Band	Mark	Descriptor
4	10 to 12	AO3 – makes judgements on the research findings, to inform their design, that are excellent, highly detailed and highly relevant to the requirements of the brief. AO2 – applies an excellent understanding of a wide range of research methods and techniques that include comprehensive and highly detailed links to the requirements of the brief. AO1 – excellent recall of knowledge and understanding of the key features of the design movement that is comprehensive, highly detailed and highly relevant to the requirements of the brief.
3	7 to 9	AO3 – makes judgements on the research findings, to inform their design, that are good, mostly detailed and mostly relevant to the requirements of the brief. AO2 – applies a good understanding of a range of research methods and techniques that include mostly detailed links to the requirements of the brief. AO1 – good recall of knowledge and understanding of the key features of the design movement that is mostly detailed and mostly relevant to the requirements of the brief.
2	4 to 6	AO3 – makes judgements on the research findings, to inform their design, that are reasonable, have some detail and some relevance to the requirements of the brief, though this may be underdeveloped. AO2 – applies a reasonable understanding of research methods and techniques that include some links to the requirements of the brief and have some detail, though may be underdeveloped. AO1 – reasonable recall of knowledge and understanding of the key features of the design movement that has some detail and some relevance to the requirements of the brief, though may be underdeveloped.

Band	Mark	Descriptor
1	1 to 3	AO3 – makes limited judgements on the research findings, to inform their design, with minimal detail and little to no relevance to the requirements of the brief. AO2 – applies a limited understanding of a minimal range of research methods and techniques that include minimal detail and little to no relevance to the requirements of the brief. AO1 – limited recall of knowledge and understanding of the key features of the design movement that has minimal detail and little to no relevance to the requirements of the brief.
0	0	No rewardable material

Note: it is not a requirement that the learner formulates a response in their portfolio specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

Indicative content

AO1: Recall knowledge and show understanding

The client has expressed two specific needs: to consider the impact of social factors on their design, because the item is to be situated in a public space, and for the design to link to the architecture of its setting. Learners may therefore make reference in their annotations of research findings (such as the work of other designers / magazine articles) to the following areas of knowledge:

- social factors:
 - age
 - disability
 - economic status
 - family size
 - gender
 - location.
- key features of the design movement:
 - key social factors
 - key features
 - key designers.

AO2: Apply knowledge and understanding

When considering placement within the bands, attention should be given to the range of different types of research method used, as well as the relevance and usefulness of the findings in terms of the brief. The digital portfolio may include a range of research methods and techniques such as:

- research methods and techniques:
 - primary:
 - questionnaires to the class to find out preferences of what they have seen or might like to see displayed in a museum entrance. Responses could be collated to show how the findings have informed ideas for their own design work
 - work of others such as looking at examples of existing museum / gallery displays seen on the internet. Notes or photographs could be annotated to show how these examples may inform their own design ideas.
 - secondary:
 - books such as key texts on design movements. Pages could be scanned and annotated to show how this has informed ideas for own design work
 - magazines that relate to design. Extracts could be annotated to show this has informed own design ideas
 - websites such as those of design practitioners. Printouts could be annotated to show how this will inform own ideas
 - household objects such as kitchen gadgets, furniture or electrical devices that could be used as inspiration. Samples could be photographed / scanned and annotated to show how this will inform own design ideas
 - study of settings such as exploring existing entrance displays in other museums. Photographs / scans could be annotated to show how this will inform own design ideas.

AO3: Analyse and evaluate knowledge and understanding

Judgements of how their initial ideas meet the needs of the brief will vary depending on the nature of the learner's ideas, though may include reference to:

- annotated investigations that review:
 - drawings / sketches with annotations may compare ideas to existing products on the market
 - mood boards with annotations to show how images have been collected and collated to communicate the chosen design movements
 - initial ideas with annotations to show how their ideas have drawn on research findings regarding household objects and suitability of their design in a museum entrance setting
 - material samples that show experimentation with materials suitable for a permanent display in a public entrance.

Note: This is not an exhaustive list and credit should be given for other appropriate research methods and techniques in relation to the requirements of the brief.

Task 1 (b)

Interpreting a design brief	
Maximum time	1 hour
Content areas assessed	1. Design and production in context 2. Design materials and processes 3. Design brief and production processes
Assessment objectives (AOs)	AO1 – 4 marks AO2 – 4 marks AO3 – 4 marks
You are required to: Write a blog post which explains how your three initial ideas may meet the requirements of the client. Your post should include: - an outline of all three initial ideas (including images, such as rough sketches) - the design style / movement reflected by each idea - a judgement of how your initial ideas meet the needs of the client, informed by your research findings - a final decision explaining which one idea you plan to take forward. Your blog post must be typed and should include images (it will not need to be posted online). You are not permitted to use the internet for this task. [12 marks]	
Evidence	Evidence you must include: a blog post outlining your proposal to the client, presented as an appropriately word-processed document with images. It should be included in your digital portfolio.

Task 1 (b): interpreting a design brief

Band	Mark	Descriptor
4	10 to 12	AO3 – makes judgements about the initial ideas that are excellent, highly detailed and highly relevant to the requirements of the brief (including the chosen design movement). AO2 – applies an excellent understanding of how to interpret a design brief and chosen design movement that is comprehensive, highly detailed and highly relevant to the requirements of the brief. AO1 – demonstrates an excellent understanding of how to interpret a design brief and of design movement that is comprehensive, highly detailed and highly relevant to the requirements of the brief.
3	7 to 9	AO3 – makes judgements for the initial ideas that are good, mostly detailed and mostly relevant to the requirements of the brief (including the chosen design movement). AO2 – applies a good understanding of how to interpret a design brief and chosen design movement that is mostly detailed and mostly relevant to the requirements of the brief. AO1 – demonstrates a good understanding of how to interpret a design brief and of design movement that is mostly detailed and mostly relevant to the requirements of the brief.
2	4 to 6	AO3 – makes judgements for the initial ideas that are reasonable, have some detail and some relevance to the requirements of the brief (including the chosen design movement), though may be underdeveloped. AO2 – applies a reasonable understanding of how to interpret a design brief and chosen design movement that has some detail and some relevance to the requirements of the brief, though may be underdeveloped. AO1 – demonstrates a reasonable understanding of how to interpret a design brief and of chosen design movement that has some detail and some relevance to the requirements of the brief, though may be underdeveloped.

Band	Mark	Descriptor
1	1 to 3	AO3 – makes limited judgements for the initial idea that has minimal detail and little to no relevance to the requirements of the brief (including the chosen design movement). AO2 – applies a limited understanding of how to interpret a design brief and of key features of chosen design movement that has minimal detail and little to no relevance to the requirements of the brief. AO1 – demonstrates a limited understanding of how to interpret a design brief and of chosen design movement and has minimal detail and little to no relevance to the requirements of the brief.
	0	No rewardable material

Note: it is not a requirement that the learner formulates a response in their portfolio specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

Indicative content

Credit should be given for how they recall and apply their knowledge and understanding of design briefs and design movements and how they use this to respond to the requirements of the brief. It is not a requirement that the learner formulates a response in their blog post specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

AO1: Recall knowledge and show understanding

Interpreting a design brief:

- client needs
- interpreting key information – product purpose.

Art Deco key features:

- sleek, elegant, aerodynamic forms
- geometric shapes (triangles, curves), often stepped
- metallic colours and ultra-modern materials.

Bauhaus key features:

- angular with simple geometric shapes
- pared down to essentials with little ornamentation
- emphasis on function

- primary colours or black and white.

AO2: Apply knowledge and understanding

Interpreting a design brief:

- (client needs) bespoke and eye-catching to attract new visitors; should reference something of everyday use
- (interpreting key information – product purpose) consider social factors regarding the setting and relate to the architecture of the building (Art Deco or Bauhaus).

Key features of the selected design movement will be applied to the requirements of the brief and inform the initial idea, for example, a giant kitchen hand whisk incorporating elegant sleek shapes referencing Art Deco design.

AO3: Analyse and evaluate knowledge and understanding

Judgements of how their initial ideas meet the needs of the brief will vary depending on the nature of the learner's ideas though may include reference to:

- (client needs) for example, be suitable for display in a museum entrance and visitors should be able to move around the display
- (client needs) for example, should relate to something of everyday use
- Interpreting key information:
 - ensuring the piece is suitable for an entrance space and accessible to all visitors
 - copyright issues if using any copyright material, for example, designs / techniques inspired by Bauhaus but used by a contemporary maker.

Note: This is not an exhaustive list and credit should be given for other appropriate responses to the requirements of the brief.

Task 2

Developing the designs	
Maximum time	3 hours
Content areas assessed	2. Design materials and processes 3. Design brief and production processes 5. Review of processes and solution
Assessment objectives (AOs)	AO4 – 12 marks AO5 – 12 marks
You are required to: Expand and develop your selected idea further by working through design solutions and applying relevant design principles. You must: • identify and explain your choice of materials with reference to suitability and design principles • create drawings (2D designs, hand rendered or CAD) including size and dimension information • review how your drawings communicate your intentions graphically with reference to design principles. You are permitted to use the internet for this task. You must reference all sources used. [24 marks]	
Evidence	Evidence you must include in your digital portfolio: • drawings: 2D designs, hand rendered or CAD • notes on experimental ideas • images of material samples • annotations on the drawings • a list of references for the sources you have used. You must also submit your internet browsing history of sites used to support your response to the task.

Task 2: developing the designs

Band	Mark	Descriptor
4	10 to 12	AO4 – excellent and highly proficient demonstration and application of technical production processes to create CAD or hand-drawn designs that are comprehensive and highly detailed. AO4 – excellent demonstration and application of the design process (including how to adjust and redesign ideas) that are comprehensive and highly relevant. AO4 – excellent demonstration and application of design principles when developing design ideas, which includes reference to appropriate materials, that are comprehensive, highly detailed and highly relevant to the requirements of the brief.
3	7 to 9	AO4 – good and mostly proficient demonstration and application of technical production processes to create mostly detailed CAD or hand-drawn designs. AO4 – good demonstration and application of the design process (including how to adjust and redesign ideas) that are mostly detailed and mostly relevant. AO4 – good demonstration and application of design principles when developing ideas, which includes reference to appropriate materials, that are mostly detailed and mostly relevant to the requirements of the brief.
2	4 to 6	AO4 – reasonable demonstration and application of technical processes, that show some proficiency to create CAD or hand-drawn designs that have some detail, though may be underdeveloped. AO4 – reasonable demonstration and application of the design process (including how to adjust and redesign ideas) that have some detail, and some relevance, though may be underdeveloped. AO4 – reasonable demonstration and application of design principles when developing ideas, which includes reference to appropriate materials, that has some detail and some relevance to the requirements of the brief, though may be underdeveloped.

Band	Mark	Descriptor
1	1 to 3	AO4 – limited demonstration and application of technical processes, that show limited proficiency, to create CAD or hand-drawn designs that have minimal detail. AO4 – limited demonstration and application of the design process (including how to adjust and redesign ideas) that have minimal detail and are mostly irrelevant. AO4 – limited demonstration and application of design principles when developing ideas, which includes reference to appropriate materials, that has minimal detail and are mostly irrelevant to the requirements of the brief.
0	0	No rewardable material

Note: it is not a requirement that the learner formulates a response in their portfolio specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

Indicative content

AO4: Demonstrate and apply relevant technical skills, techniques and processes

The emphasis here is for learners to demonstrate the essential technical skills relevant to the vocational sector, by applying the appropriate processes, tools and techniques.

Learners may choose to apply digital design software (or hand-drawn) skills to:

- develop idea
- conceptual design
- virtual modelling
- techniques (hand-drawn):
 - drawing
 - sketching
- output:
 - diagrams
 - working drawings
- qualities:
 - isometric
 - oblique
 - perspective.

Learners will apply a range of stages of the design process, such as:

- applying research findings
- applying principles of good design
- redesigning

- identifying materials (this will be informed by the learner's design idea):
 - plastics
 - papers, card and board
 - hardwood.

Learners may apply a range of design principles. When considering placement within the band; attention should be given to the effectiveness of the chosen design principles, rather than the range engaged with. Typical examples of design principles may include:

- emphasis, balance, contrast, harmony, repetition, texture, proportion, scale, movement space
- Dieter Rams' 10 Principles of Good Design.

Note: This is not an exhaustive list and credit should be given for other appropriate responses in relation to the requirements of the brief.

Task 2: developing the designs

Band	Mark	Descriptor
4	10 to 12	A05 – excellent analysis and evaluation of own technical production processes when creating CAD or hand-drawn designs that are comprehensive and highly detailed. A05 – excellent analysis and evaluation of own design processes when adjusting and redesigning ideas that are comprehensive and highly detailed. A05 – excellent analysis and evaluation of own design principles used when developing design ideas, which include reference to appropriate materials, that are comprehensive, highly detailed and highly relevant to the requirements of the brief.
3	7 to 9	A05 – good analysis and evaluation of own technical processes when creating CAD or hand-drawn designs that are mostly detailed and coherent. A05 – good analysis and evaluation of own design processes when adjusting and redesigning ideas that are mostly detailed and coherent. A05 – good analysis and evaluation of own design principles when developing own design ideas, which includes reference to appropriate materials, that are mostly detailed and mostly relevant to the requirements of the brief.
2	4 to 6	A05 – reasonable analysis and evaluation of own technical processes when creating a CAD or hand-drawn design that have some detail, though may be underdeveloped. A05 – reasonable analysis and evaluation of own design processes when adjusting and redesigning ideas that have some detail, though may be underdeveloped. A05 – reasonable analysis and evaluation of own design processes when developing own ideas, which includes reference to appropriate materials, has some detail and some relevance to the brief, though may be underdeveloped.

Band	Mark	Descriptor
1	1 to 3	AO5 – limited analysis and evaluation of own technical processes when creating a CAD or hand-drawn design that has minimal detail and is mostly irrelevant. AO5 – limited analysis and evaluation of own design processes when adjusting and redesigning ideas that has minimal detail and is mostly irrelevant. AO5 – limited analysis and evaluation of own design processes when developing own ideas, which includes reference to appropriate materials, has minimal detail and is mostly irrelevant to the requirements of the brief.
0	0	No rewardable material

Note: it is not a requirement that the learner formulates a response in their portfolio specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

Indicative content

AO5: Analyse and evaluate the demonstration of relevant technical skills, techniques and processes

Learners will analyse and evaluate their digital design software (or hand-drawn) skills, as relevant to their work on areas such as:

- develop idea
- conceptual design
- virtual modelling
- techniques (hand-drawn):
 - drawing
 - sketching
- output:
 - diagrams
 - working drawings
- qualities:
 - isometric
 - oblique.

Learners will analyse and evaluate a range of stages of the design process, such as:

- use of research findings
- principles of good design
- redesigning
- identifying materials (this will be informed by the learner's design idea):
 - plastics

- papers, card and board.

Learners will analyse and evaluate a range of design principles, such as:

- emphasis, contrast, harmony, texture, space
- Dieter Rams' 10 Principles of Good Design.

Note: This is not an exhaustive list and credit should be given for other appropriate responses in relation to the requirements of the brief.

Past paper

Task 3

Plan of production stages for prototype	
Maximum time	2 hours
Content areas assessed	2. Design materials and processes 3. Design brief and production processes
Assessment objectives (AOs)	AO1 – 4 marks AO2 – 4 marks AO4 – 4 marks
You are required to: Refer to your chosen design idea and create a production plan that covers 5 hours, which must include the processes and techniques required to create a prototype of your design solution. This should include a risk assessment for any materials, tools and techniques you plan to use. You are permitted to use the internet for this task. You must reference all sources used. The production plan and risk assessment must relate to your own design idea, and you must not use a pre-populated template from the internet or any other sources. [12 marks]	
Evidence	Evidence you must include in your digital portfolio: • production plan covering 5 hours • risk assessment of required materials, tools and techniques • a list of references for the sources you have used. You must also submit your internet browsing history of sites used to support your response to the task.

Task 3: plan of production stages for prototype

Band	Mark	Descriptor
4	10 to 12	AO4 – excellent demonstration and application of safe working practices and processes to create a risk assessment (including intended materials, tools and techniques), which is comprehensive and highly proficient. AO2 – applies an excellent understanding of production plan, processes, techniques and safe working practices that is comprehensive, highly detailed and highly relevant to the requirements of the brief. AO1 – excellent recall of knowledge and understanding of production plan, processes, techniques and safe working practices that is comprehensive, highly detailed and highly relevant to the requirements of the brief.
3	7 to 9	AO4 – good demonstration and application of safe working practices and processes to create a risk assessment (including intended materials, tools and techniques), which is mostly detailed and mostly proficient. AO2 – applies a good understanding of production plan, processes, techniques and safe working practices that is mostly detailed and mostly relevant to the requirements of the brief. AO1 – good recall of knowledge and understanding of production plan, processes, techniques and safe working practices that is mostly detailed and mostly relevant to the requirements of the brief.
2	4 to 6	AO4 – reasonable demonstration and application of safe working practices and processes to create a risk assessment (including intended materials, tools and techniques), which has some detail and some proficiency, though this may be underdeveloped. AO2 – applies a reasonable understanding of production plan, processes, techniques and safe working practices that shows some detail and some relevance to the requirements of the brief, though may be underdeveloped. AO1 – reasonable recall of knowledge and understanding of production plan, processes, techniques and safe working practices that has some detail and some relevance to the requirements of the brief, though may be underdeveloped.

Band	Mark	Descriptor
1	1 to 3	AO4 – limited understanding and application of safe working practices and processes to create a risk assessment (including intended materials, tools and techniques), which has minimal detail and limited proficiency. AO2 – applies a limited understanding of production plan, processes, techniques and safe working practices that has minimal detail and is mostly irrelevant to the requirements of the brief. AO1 – limited recall of knowledge and understanding of production plan, processes, techniques and safe working practices that has minimal detail and minimal relevance to the requirements of the brief and is inconsistent.
0	0	No rewardable material

Note: it is not a requirement that the learner formulates a response in their portfolio specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

Indicative Content

AO1: Recall knowledge and show understanding

Learners may recall a range of requirements for a production plan, such as:

- production stages:
 - sourcing materials and equipment
 - selection of tools and equipment
 - production techniques and processes to be used
 - testing
 - quality assurance
 - contingency.

Processes and techniques recalled may include:

- production processes:
 - using the design proposal to plan production processes
 - source materials
 - testing
 - quality control:
 - random sampling
 - visual
 - tolerances
- quality assurance:
 - responding to defects
 - inspection procedures

- materials:
 - buying
 - testing
 - checking
- production techniques:
 - cutting, joining and construction techniques
 - forming shape techniques
 - tools and equipment used for production techniques.

AO2: Apply knowledge and understanding

Note: Learners' application of knowledge and understanding of the production stages, processes and techniques in their action plan will be informed by their response to the brief in terms of their design solution. The knowledge and understanding recalled should be applied to their own design solution in terms of planning how they are going to create a prototype. Examples of the knowledge listed for AO1 should be applied to their own design and production plan, though typical responses may include:

- material required to realise prototype of design solution (for example, wood, papier-mâché):
 - (wood) sander and other appropriate tools
 - (wood) other resources: wax, varnish, paint
 - (wood) production techniques: cutting, joining
 - (papier-mâché) wire cutters, scissors and other appropriate tools
 - (papier-mâché) other resources: chicken wire, paper, paste, PVA glue, paint, ink
 - (papier-mâché) production techniques: cutting, joining
 - testing: strength, suitability for design, environmental impact.

AO4: Demonstrate and apply relevant technical skills, techniques, and processes

Note: Learners may include a range of information on the risk assessment as it will be informed and shaped by their response to the brief. Typical responses should include an analysis of the risks that are posed by their creative choices and then demonstrated in their risk assessment, this may include references to:

- risk assessment:
 - hazards: something that can cause harm
 - risks: the likelihood that the hazard will cause harm
 - control measures: actions, activities and / or equipment used or taken to prevent, eliminate or reduce the risk of a hazard occurring
 - personal protective equipment (PPE)
- health and safety legislation:
 - the Management of Health and Safety at Work Regulations 1999
- PPE at work:
 - eyes:
 - safety goggles
 - ears:
 - ear plugs
 - head and face:
 - face shield
 - face mask

- safety helmet
- hands, arms and feet:
 - protective gloves
 - leather gauntlets
 - steel toe-capped boots
- lungs:
 - respiratory filtered system
- whole body:
 - disposable overalls
 - boiler suit
 - apron.

Note: This is not an exhaustive list and credit should be given for other appropriate responses in relation to the requirements of the brief.

Task 4

Developing and reviewing a prototype	
Maximum time	5 hours
Content areas assessed	1. Design and production in context 3. Design brief and production processes 5. Review of processes and solution
Assessment objectives (AOs)	AO4 – 12 marks AO5 – 12 marks
You are required to: Use your design drawing and production plan to develop your design solution by creating: a prototype of your design (either actual size or scaled). As you create your design prototype, you must gather photographic evidence of your application of production processes and techniques. You must annotate the photographs to explain what you were doing and why at each point in the design process. You should take further photographs of your completed prototype and provide evaluative annotations. You must also provide a formative review of the design production process. You need to explain any changes you made to your initial design for the prototype during the production process. It is acceptable for you to ask someone else to take the photographs for you (such as another member of the class or teacher) as long as the annotations are only added by yourself. You may use a computer to add evidence to your digital portfolio. You are not permitted to use the internet for this task. [24 marks]	
Evidence	Evidence of research you must include in your digital portfolio: - annotated photographs of production techniques applied when creating the prototype - annotated photographs of your prototype - a written / word-processed formative review of your production processes and techniques.

Task 4: developing and reviewing a prototype

Band	Mark	Descriptor
4	10 to 12	AO4 – excellent and highly proficient demonstration and application of technical production processes (including changes to the design, where appropriate) AO4 – created a prototype that is comprehensive and highly detailed. AO4 – excellent demonstration and application of design principles when developing a prototype that is comprehensive, highly detailed and highly relevant to the requirements of the brief.
3	7 to 9	AO4 – good and mostly proficient demonstration and application of technical production processes (including changes to the design, where appropriate) AO4 – created a prototype that is mostly detailed and coherent. AO4 – good demonstration and application of design principles when developing a prototype that is mostly detailed and mostly relevant to the requirements of the brief.
2	4 to 6	AO4 – reasonably proficient demonstration and application of technical production processes (including changes to the design, where appropriate) AO4 – created a prototype that has some detail, though may be underdeveloped. AO4 – reasonable demonstration and application of design principles when developing a prototype that has some detail and some relevance to the requirements of the brief, though may be underdeveloped.
1	1 to 3	AO4 – limited proficiency in demonstrating and applying technical production processes (including changes to the design, where appropriate) AO4 – created a prototype that has minimal detail. AO4 – limited demonstration and application of design principles when developing a prototype that has minimal detail and is mostly irrelevant to the requirements of the brief.
0	0	No rewardable material

Note: it is not a requirement that the learner formulates a response in their portfolio specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

Indicative content

AO4: Demonstrate and apply relevant technical skills, techniques, and processes

Learners may choose to apply production process techniques, such as:

- using cutting, joining and construction techniques
- forming shape techniques
- using tools and equipment used for production techniques
- surface treatments and finishing techniques.

Learners may apply a range of stages of the design process, such as:

- applying research findings
- applying principles of good design
- testing
- redesigning.

Learners may apply a range of design principles, such as:

- emphasis, contrast, harmony, texture, space
- Dieter Rams' 10 Principles of Good Design.

Note: This is not an exhaustive list and credit should be given for other appropriate responses in relation to the requirements of the brief.

Task 4: developing and reviewing a prototype

Band	Mark	Descriptor
4	10 to 12	A05 – excellent analysis and evaluation of own technical production processes (including changes to the design, where appropriate) when creating a prototype that is comprehensive and highly detailed. A05 – excellent analysis and evaluation of own design principles used when developing a prototype that is comprehensive, highly detailed and highly relevant to the requirements of the brief. A05 – comprehensive, highly detailed and highly relevant formative review of the design production process.
3	7 to 9	A05 – good analysis and evaluation of own technical production processes (including changes to the design, where appropriate) when creating a prototype that is mostly detailed and coherent. A05 – good analysis and evaluation of own design principles used when developing a prototype that is mostly detailed and mostly relevant to the requirements of the brief. A05 – mostly detailed and mostly relevant formative review of the design production process.
2	4 to 6	A05 – reasonable analysis and evaluation of own technical production processes (including changes to the design, where appropriate) when creating a prototype that has some detail, though may be underdeveloped. A05 – reasonable analysis and evaluation of own design principles used when developing a prototype that has some detail and some relevance to the requirements of the brief, though may be underdeveloped. A05 – reasonably detailed and some relevance in the formative review of the design production process.
1	1 to 3	A05 – limited analysis and evaluation of own technical production processes (including changes to the design, where appropriate) when creating a prototype that has minimal detail. A05 – limited analysis and evaluation of own design principles used when developing a prototype that has minimal detail and is mostly irrelevant to the requirements of the brief. A05 – minimally detailed and mostly irrelevant formative review of the design production process.
0	0	No rewardable material

Note: it is not a requirement that the learner formulates a response in their portfolio specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

Indicative content

AO5: Analyse and evaluate the demonstration of relevant technical skills, techniques and processes

Learners may choose to analyse and evaluate process techniques, such as:

- using cutting, joining and construction techniques
- forming shape techniques
- using tools and equipment used for production techniques
- surface treatments and finishing techniques.

Learners may analyse and evaluate a range of stages of the design process, that informed or impacted upon their application of practical skills such as:

- applying research findings
- applying principles of good design
- testing
- redesigning.

Learners may choose to analyse and evaluate a range of design principles, that informed or impacted upon their application of practical skills such as:

- emphasis, contrast, harmony, texture, space
- Dieter Rams' 10 Principles of Good Design.

Note: This is not an exhaustive list and credit should be given for other appropriate responses in relation to the requirements of the brief.

Task 5

Reviewing the design project	
Maximum time	2 hours
Content areas assessed	4. Presentation of design solution 5. Review of processes and solution 6. Working in the design production industries
Assessment objectives (AOs)	AO3 – 4 marks AO4 – 4 marks AO5 – 4 marks
You are required to: Create a digital presentation in the form of a blog post. The post must include: • a review of the design production industry skills you have used throughout the project • a summative review of your final design solution • photographic evidence of your prototype. Note: you will not be delivering your digital presentation, and it will not be posted online. However, you will be assessed on the quality of your digital presentation. Your digital presentation may include any of the evidence you have collected for your digital portfolio. You should use a computer to add evidence to your digital portfolio. You are not permitted to use the internet for this task. [12 marks]	
Evidence	Evidence you must include: • a digital presentation in an appropriate blog file format • completed digital portfolio in an appropriate file format.

Task 5: reviewing the design project

Band	Mark	Descriptor
4	10 to 12	AO5 – excellent analysis and evaluation of own design production industry skills used throughout the design project that is comprehensive and highly detailed. AO4 – excellent demonstration and application of methods of presentation for a design solution that is comprehensive and highly detailed and highly relevant to the requirements of the brief. AO3 – excellent analysis and evaluation of the final design solution that is comprehensive and highly detailed supported by excellent and highly relevant links to design principles, design process and meeting the needs of the brief.
3	7 to 9	AO5 – good analysis and evaluation of own design production industry skills used throughout the design project that are mostly detailed and coherent. AO4 – good demonstration and application of methods of presentation for a design solution that is mostly detailed and mostly relevant to the requirements of the brief. AO3 – good analysis and evaluation of the final design solution that is mostly detailed supported by good and mostly relevant links to design principles, design process and meeting the needs of the brief.
2	4 to 6	AO5 – reasonable analysis and evaluation of own design production industry skills used throughout the design project that has some detail, though may be underdeveloped. AO4 – reasonable demonstration and application of methods of presentation for a design solution that has some detail and some relevance to the requirements of the brief, though may be underdeveloped. AO3 – reasonable analysis and evaluation of the final design solution that has some detail supported by reasonably relevant links to design principles, the design process and meeting the needs of the brief, though may be underdeveloped.

Band	Mark	Descriptor
1	1 to 3	AO5 – limited analysis and evaluation of own design production industry skills used throughout the design project that has minimal detail. AO4 – limited demonstration and application of methods of presentation for a design solution that has minimal detail and minimal relevance to the requirements of the brief. AO3 – limited analysis and evaluation of the final design solution that has minimal detail supported by limited and minimal links to design principles, design process and meeting the needs of the brief.
0	0	No rewardable material

Note: it is not a requirement that the learner formulates a response in their portfolio specifically against each AO as laid out in the indicative content. The evidence provided by the learner for each AO may be embedded throughout the evidence submitted for the task. Whilst it is likely that the responses will be illustrated by the indicative content points below, credit should be given for different approaches, providing they meet the key requirements of the task and mark scheme.

Indicative content

AO5: Analyse and evaluate the demonstration of relevant technical skills, techniques and processes.

Learners may comment on how they used design production industry skills throughout their project in a range of ways. They may also link these skills with examples from their own project and make additional links to other content areas. This is acceptable as long as the focus of the evaluation is the skill being discussed. Key skills evaluated may include:

- self-reflection
- resilience
- focus
- communication
- motivation
- thinking creatively:
 - invention
 - innovation
 - process.

AO4: Demonstrate and apply relevant technical skills, techniques and processes.

Learners' reports will be submitted electronically. Typical skills demonstrated may include:

- use of software (for example, to add audio, image, effects)
- individual presentation preparation (for example, documents are creatively prepared, not overly reliant on text, convey information clearly)
- clear purpose of presentation

- review
- evaluate.

AO3: Analyse and evaluate knowledge and understanding.

Learners may review how their design solution meets the requirements of the brief in a range of ways, though these may include:

- design principles (for example, aesthetics)
- design process (for example, effectiveness of redesigning)
- materials
- meeting the needs of the brief:
 - how challenges faced were resolved
 - future developments / modifications
- the extent to which the solution reflected the chosen design movement (as stated in the brief):
 - Art Deco:
 - sleek, elegant, aerodynamic forms
 - geometric shapes (triangles, curves), often stepped
 - metallic colours and ultra-modern materials
 - Bauhaus:
 - angular with simple geometric shapes
 - pared down to essentials with little ornamentation
 - emphasis on function
 - primary colours or black and white.

Note: This is not an exhaustive list and credit should be given for other appropriate responses in relation to the requirements of the brief.