



# Year 11 Design and Technology

## Task 3: Design Project & Folio

**Due Date:** Term 3 Week 5 23.08.2024

**Task Distributed:** 09.05.24

**Unit:** Mini Major

**Task Type:** Design Project & Portfolio

**Task Weighting:** 30%

**Outcomes:** P1.1, 3.1, 4.1, 4.2, 4.3, 5.1, 5.2, 5.3, 6.1

### Task Description

“Forests around the world are accessed to supply furniture, flooring, lumber, and other building materials to the booming global marketplace” (WWF, 2023). Deforestation is responsible for a loss in biodiversity (threatening about 80% of the population), soil erosion, and 15% of global greenhouse gas emissions.

#### Part A: Project (45 Marks)

You have been hired to create a new product that addresses the issue of deforestation by using only reclaimed/recycled timber and other materials. You need to submit 1 product, system or environment (model or finished design) that incorporates at least two woodworking skills. Your design/prototype cannot exceed 1m<sup>3</sup>.

#### Part B: Folio (70 Marks)

You will need to complete a folio (scaffold template will be provided)

- Project Proposal and Project Management
- Project Development and Realisation
- Project Evaluation

### NESA Glossary of Key Words

Understand the verb associated with the task. The verb will provide an understanding of the detail needed to successfully answer the question.

- **Analyse:** Identify components and the relationship between them; draw out and relate implications
- **Apply:** Use, utilise, employ in a particular situation
- **Critically (analyse/evaluate):** Add a degree or level of accuracy depth, knowledge and understanding, logic, questioning, reflection and quality to (analyse/evaluate)
- **Describe:** Provide characteristics and features
- **Evaluate:** Make a judgement based on criteria; determine the value of
- **Explain:** Relate cause and effect; make the relationships between things evident; provide why and/or how
- **Identify:** Recognise and name
- **Justify:** Support an argument or conclusion

### Details of Submission

The assessment will be developed in class time and at home during Terms 2 and 3.

**Part A**

Submit project to the teacher in the timber workshop before 3.30pm on the due date.

**Part B**

Submit the portfolio through the Google Classroom assignment link.

## Teacher Feedback and Student Self-Reflection

- The task will typically be returned to students within 14 days of the due date.
- At this time feedback including information on how to improve will be provided through Google Classroom.
- Students can clarify or seek further feedback by speaking with their teacher or the assessment marker.
- You will also receive feedback on your literacy performance based on the criteria in the school's literacy marking rubric. The marks achieved for literacy will account for between 10% – 20% of the maximum task value.

Upon completion of the task, students will be expected to complete an evaluation section. It is an important part of the learning process as it provides an opportunity to reflect on the strength of their performance, as well as areas that have been identified to strengthen in future tasks.

Students are to create a list of design factors to evaluate their success. This is what they wish to achieve by the completion of their assessment. At the end of the assessment students will need to evaluate their own work, to see if they have met “the criteria for success”.

## How does this link to my learning?

### What Areas of Learning will this Assessment Task Report on

- Knowledge and understanding of course content – 5%
- Knowledge and skills in designing, managing, producing, and evaluation design projects – 25%

### Report outcomes:

- P1.1 Examines and designs theory and practice, and considers the factors affecting designing and producing in design projects
- P3.1 Investigates and experiments with techniques in creative and collaborative approaches in designing and producing.
- P4.1 Uses design process in the development and production of design solutions to meet identified needs and opportunities
- P4.2 Uses resources effectively and safely in the development and production of design solutions
- P4.3 Evaluates the processes and outcomes of designing and producing
- P5.1 Uses a variety of management techniques and tools to develop design projects
- P5.2 Communicates ideas solutions using a range of techniques
- P5.3 Uses a variety of research methods to inform the development and modification of design ideas
- P6.1 Identifies a range uses a variety of research methods to inform the development and modification of design ideas

## Assessment Procedures

All students should be fully aware of the School Assessment Procedures for their year group. These were provided at the beginning of the school year and are available off the school website under the Learning Tab for each year group.

# Task 3: Design Folio & Project

## Mini-Major Project (45 Marks)

Marking Criteria	Descriptors				
<b>Size</b>	<b>0</b>				<b>1</b>
	Project is not completed within the size constraint.				Completes the project to be within the 1m <sup>3</sup> size limit.
<b>Quality</b>	<b>0-1</b>		<b>2-3</b>		<b>4-5</b>
	The project is completed without consideration of quality		Completes the project to a reasonable level of quality.		Completes the project to a high level of quality.
<b>Relevant to Design Brief</b>	<b>0-1</b>		<b>2-4</b>		<b>5-7</b>
	The project is created with or without links to the design brief. There is little or no consideration of the brief evident in the design of the PSE.		The project is created with some links to the design brief. Some consideration of the brief is evident in the design of the PSE.		The project is created with clear links to the design brief. Careful consideration of the brief is evident in the design of the PSE.
<b>Function</b>	<b>0</b>	<b>1-2</b>	<b>3</b>	<b>4</b>	<b>5-6</b>
	The project does not serve any function.	The project is designed to serve at least one function. However, it does not function as intended, or functions as intended with no consideration of quality.	The project is completed to serve at least one function. The project may or may not function as intended with some indication of quality.	The project is completed to serve at least one function. The project functions as intention and there is some indication of quality.	The project is completed to serve at least one function. The project functions as intended with clear indication of quality.
<b>Aesthetics</b>	<b>0</b>	<b>1-2</b>	<b>3</b>	<b>4</b>	<b>5-6</b>
	The project is completed without consideration of the aesthetics of the design.	Completes the project without consideration of the aesthetics of the design though finishes the timber.	Completes the project with some consideration of the aesthetics of the design by finishing the timber in a manner that may or may not be suitable.	Completes the project with consideration of the aesthetics of the design by finishing the timber in a manner that is suitable.	Completes the project with clear consideration of the aesthetics of the design by finishing the timber in a suitable manner.
<b>Evidence of Practical Skill</b>	<b>0</b>	<b>1-2</b>	<b>3-5</b>	<b>6-7</b>	<b>8-10</b>
	The project does not show evidence of any woodworking skills/ techniques.	The project was completed using at least one woodworking skill/technique.	The project was completed using at least one woodworking skill/technique that was completed to a high degree of quality OR the	the project was completed using at least two woodworking skills/ techniques that were completed to a reasonable degree of quality	The project was completed using at least two woodworking skills/techniques that were completed to a high degree of quality.

			project was completed using at least two woodworking skills/techniques that were completed without consideration of quality.		
<b>Prototype</b>	<b>0</b>	<b>1-2</b>	<b>3-5</b>	<b>6-7</b>	<b>8-10</b>
	There is no evidence of prototyping in the design project.	There is some evidence of prototyping in the project however, the purpose is unclear and the prototype is undocumented.	One prototype is created, with or without a specific, meaningful purpose.	One prototype is created with or without a specific, meaningful purpose and is tested and evaluated in the portfolio (see 2.4).	At least one prototype is created for a specific, meaningful purpose and is tested and evaluated in the portfolio (see 2.4).

Mini-Major Folio (70 Marks)

<b>Marking Criteria</b> (Adapted from HSC MDP Marking Guidelines shown by underline (BOSTES, n.d.))	<b>Descriptors</b>				
<b>1.1 Identification and Exploration of a Need</b>	<p style="text-align: center;"><b>0</b></p> <p><u>Need stated without clarity, nor explored in relation to the development of the project.</u></p>	<p style="text-align: center;"><b>1</b></p> <p><u>States a need with limited exploration in relation to the development of the project.</u> Identification of motivation and purpose, primary and secondary research, and identification and description of the target market may or may not be included.</p>	<p style="text-align: center;"><b>2</b></p> <p><u>States a need with some exploration in relation to the development of the project</u> through the identification of motivation and purpose, inclusion of primary and secondary research, and identification and description of the target market.</p>	<p style="text-align: center;"><b>3</b></p> <p><u>Identifies and provides an exploration of needs and opportunities, in relation to the development of the project</u> through the explanation of motivation and purpose, good-quality primary and secondary research, and accurate identification and description of the target market.</p>	<p style="text-align: center;"><b>4</b></p> <p><u>Identifies and provides a detailed exploration of genuine needs and opportunities, justifying final selection for the development of the project</u> through the detailed explanation of motivation and purpose, thorough and extensive primary and secondary research, and clear, accurate identification and description of the target market.</p>
<b>1.2 Areas of Investigation</b>	<p style="text-align: center;"><b>0</b></p> <p><u>Names an area of investigation.</u></p>	<p style="text-align: center;"><b>1</b></p> <p><u>Lists areas of investigation in relation to the need which may or may not relate to further action, or shows evidence of areas being investigated,</u> with or without a justification of the need for the investigation.</p>	<p style="text-align: center;"><b>2</b></p> <p><u>Identifies areas of investigation in relation to the need, or shows evidence of being investigated,</u> with or without a justification of the need for the investigation.</p>	<p style="text-align: center;"><b>3</b></p> <p><u>Describes some relevant areas of investigation in relation to the need and provides evidence that these were investigated,</u> and justifies the need for the investigation.</p>	<p style="text-align: center;"><b>4</b></p> <p><u>Describes relevant areas of investigation which relate clearly to the need, provides direction for further action,</u> and clearly justifies the need for the investigation.</p>
<b>1.3 Criteria to Evaluate Success</b>	<p style="text-align: center;"><b>0</b></p> <p><u>Lists criteria, some of which may be inappropriate to evaluate the success of the PSE.</u></p>	<p style="text-align: center;"><b>1</b></p> <p><u>Briefly describes criteria, some of which may be inappropriate to evaluate the success of the PSE.</u> Analysis may or may not include a brief explanation of the degree of importance, justification of the degree of importance, explanation of the methods of evaluation,</p>	<p style="text-align: center;"><b>2</b></p> <p><u>Briefly describes criteria to evaluate the success of the PSE, with no analysis of of these criteria.</u> Analysis includes some identification of the degree of importance, justification of the degree of importance, explanation of the methods of evaluation,</p>	<p style="text-align: center;"><b>3</b></p> <p><u>Describes appropriate functional and aesthetic criteria to evaluate the success of the PSE, with little analysis of these criteria.</u> Analysis includes some explanation of the degree of importance, justification of the degree of importance, explanation of the methods of</p>	<p style="text-align: center;"><b>4</b></p> <p><u>Establishes and analyses appropriate functional and aesthetic criteria to evaluate the success of the PSE.</u> Analysis includes a detailed explanation of the degree of importance, justification of the degree of importance, explanation of the method of evaluation and</p>

<b>Marking Criteria</b> (Adapted from HSC MDP Marking Guidelines shown by underline (BOSTES, n.d.))	<b>Descriptors</b>				
		and identification of a standard to achieve.	and identification of a standard to achieve.	evaluation, and identification of a standard to achieve.	identification of a standard to achieve.
<b>1.4 Action, Time and Finance Plan</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	<u>Action, time or finance planning not evident.</u>	<u>Some evidence of the application of action, time or finance planning.</u>	<u>Formulates and applies action and/or time and/or finance plans.</u>	<u>Formulates action, time and finance plans, and shows some evidence of their application to the PSE.</u>	<u>Formulates and critically evaluates well-documented action, time and finance plans with clear evidence of their application to the PSE.</u>
<b>2.1 Evidence of Creativity</b>	<b>0</b>	<b>1-2</b>	<b>3</b>	<b>4</b>	<b>5-6</b>
	<u>Provides limited evidence of ideas generation and/or exploration of existing ideas and/or degree of difference.</u>	<u>Provides some evidence of ideas generation and/or exploration of existing ideas and/or identification of degree difference.</u>	<u>Demonstrates some creativity in the development of the project through ideas generation, exploration of existing ideas, and identification of degree of difference.</u>	<u>Demonstrates application of creativity in the development of the project through ideas generation of a variety of solutions, exploration and evaluation of existing ideas, and identification of degree of difference.</u>	<u>Demonstrates the substantial application of creativity in the development of the project through detailed ideas generation of a wide variety of solutions, thorough exploration and evaluation of existing ideas, and identification of degree of difference.</u>
<b>2.2 Consideration of Design Factors Relevant to the MDP</b>	<b>0-1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<u>Limited evidence of design factors, few of which are relevant to the PSE OR factors affecting design are identified without application/consideration of impact.</u>	<u>Provides some evidence of design factors, most of which are relevant to the PSE and applies them.</u> Some of the factors affecting design are included and their impact considered, though not all of the impacts are relevant.	<u>Describes some design factors relevant to the PSE and applies them.</u> Some of the factors affecting design are included and their impact considered.	<u>Describes a range of design factors relevant to the PSE and applies them.</u> All of the factors affecting design are included and their impact considered.	<u>Analyses a range of design factors relevant to the PSE and applies them.</u> All of the factors affecting design are included, and their impact thoroughly considered.
<b>2.3 Appropriate Research and Experimentation of Materials, Tools, Techniques and Testing of Design Solutions</b>	<b>0-1</b>	<b>2-3</b>	<b>4</b>	<b>5</b>	<b>6-7</b>
	<u>Minimal evidence of appropriate research and/or experimentation and/or design solution testing.</u> The areas of research and	<u>Evaluates and/or applies limited appropriate research and/or experimentation and/or design solution testing.</u> The areas of research and	<u>Undertakes, evaluates and applies some appropriate research, experimentation and/or design solution testing in the development of the project.</u> The areas	<u>Undertakes, evaluates and applies appropriate research, experimentation and design solution testing in the development of the project.</u> The areas of	<u>Undertakes, evaluates and applies a range of appropriate research, experimentation and design solution testing in the development of the</u>

<b>Marking Criteria</b> (Adapted from HSC MDP Marking Guidelines shown by underline (BOSTES, n.d.))	<b>Descriptors</b>				
	experimentation are not drawn from the Areas of Investigation and Action Plans (1.2, 1.4). Research and experimentation includes minimal analysis and evaluation of results.	experimentation may or may not be drawn from the Areas of Investigation and Action Plans (1.2, 1.4). Research and experimentation may or may not be written up in scientific format with minimal analysis and evaluation of results.	of research and experimentation are drawn from the Areas of Investigation and Action Plans (1.2, 1.4). Research and experimentation are written up in scientific format with some analysis and evaluation of results.	research and experimentation are drawn from the Areas of Investigation and Action Plans (1.2, 1.4). Research and experimentation are written up in scientific format with good analysis and evaluation of results.	project. The areas of research and experimentation are drawn from the Areas of Investigation and Action Plans (1.2, 1.4). Research and experimentation are written up in scientific format with insightful analysis and evaluation of results.
<b>2.4 Application of Conclusions</b>	<p style="text-align: center;"><b>0</b></p> There is no evidence of design sketching, CAD drawings or cutting lists.  <u>Demonstrates minimal application of conclusions drawn from research and/or experimentation and/or design solution testing.</u>	<p style="text-align: center;"><b>1-3</b></p> Initial sketches are included.  The design is then expanded on.  The final proposed design is shown.  There is evidence of testing of the proposed design solution with or without analysis, evaluation and application of conclusions.  Drawings including a scale, rendering and fully dimensioned model with multiple views and/or a cutting list are included.  <u>Demonstrates limited application of conclusions drawn from research and/or experimentation and/or design solution testing.</u>	<p style="text-align: center;"><b>4-6</b></p> A minimum of four, annotated initial sketches are included.  Two of those designs are then expanded on and annotated.  The final proposed design is shown with multiple views and annotations.  Testing of the proposed design solution is written up in scientific format with some analysis, evaluation and application of conclusions.  CAD drawings including a scale, rendering and fully dimensioned model with multiple views and a cutting list are included.  <u>Demonstrates some selective application of conclusions drawn from</u>	<p style="text-align: center;"><b>7-9</b></p> A minimum of six, annotated initial sketches are included, showing creative design progression.  Two of those designs are then expanded on and annotated and shown as a CAD drawing.  The final proposed design is shown as a CAD drawing with multiple views and annotations.  Relevant testing of the proposed design solution is written up in scientific format with analysis, evaluation and application of conclusions.  CAD drawings including a scale, rendering and fully dimensioned model with multiple views and a cutting list are included.	<p style="text-align: center;"><b>10-12</b></p> A minimum of six clear, annotated initial sketches are included, showing creative design progression.  Two of those designs are then expanded on, thoroughly annotated, and shown as a CAD drawing.  The final proposed design is shown as a CAD drawing with multiple relevant views and detailed annotations.  Relevant testing of the proposed design solution is written up in scientific format with valuable analysis, evaluation and application of conclusions.  Detailed CAD drawings including a scale, rendering and fully dimensioned model with

<b>Marking Criteria</b> (Adapted from HSC MDP Marking Guidelines shown by underline (BOSTES, n.d.))	<b>Descriptors</b>				
			<u>research and/or experimentation and/or design solution testing.</u>	They are completed to a good level of quality.  <u>Demonstrates some application of conclusions drawn from the research and experimentation and/or design solution testing to the project.</u>	multiple views and a cutting list are included. They are completed to a high level of quality.  <u>Applies conclusions drawn from research and experimentation and design solution testing to the project.</u>
<b>2.7 Evidence and Application of Practical Skill to Produce a Quality Project</b>	<b>0-1</b> <u>Applies minimal practical skills in the development of the PSE; documented through written steps and/or photographs.</u>	<b>2</b> <u>Applies basic practical skills in the development of the PSE; documented through written steps and/or photographs. Problems encountered and creative solutions may or may not be identified.</u>	<b>3</b> <u>Applies sound practical skills in the development of the PSE; documented through written steps and accompanying photographs. Problems encountered and creative solutions are identified.</u>	<b>4</b> <u>Applies a range of sound practical skills in the development of the PSE; documented clearly through written steps and accompanying relevant and meaningful photographs. Problems encountered and creative solutions are clearly identified.</u>	<b>5</b> <u>Applies a range of high-quality practical skills in the development of the project; documented clearly through written steps and accompanying relevant and meaningful photographs. Problems encountered and creative solutions are clearly identified and highlight the use of problem solving skills in the development of the project.</u>
<b>3.1 Recording and Application of Evaluation Procedures Throughout the Design Project</b>	<b>0</b> <u>Describes, without justification, the success of an aspect of the PSE OR provides some evidence of evaluation in the PSE's development.</u>	<b>1</b> <u>Judges the success of some aspects of the PSE through stages of its development.</u>		<b>2</b> <u>Evaluates some aspects of the PSE throughout its entire development.</u>	<b>3</b> <u>Critically evaluate aspects of the PSE throughout its entire development.</u>
<b>3.4 Relationship of the Final Product, System or Environment to the Project Proposal</b>	<b>0</b> <u>Does not clearly relate the PSE to the design brief and does not conduct a personal evaluation of the final design.</u>	<b>1</b> <u>Checks the PSE against the design brief and/or conducts a brief personal evaluation of the final design.</u>		<b>2</b> <u>Compares the relationship of the PSE to the design brief. A thorough personal evaluation of the final design is included.</u>	<b>3</b> <u>Analyses the relationship of the PSE to the design brief. Critical and insightful personal evaluation of the final design is included.</u>

<b>Marking Criteria</b> (Adapted from HSC MDP Marking Guidelines shown by underline (BOSTES, n.d.))	<b>Descriptors</b>				
<b>Use of Communication and Presentation Techniques</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>
	Folio is not in colour.  Images are not clear and/or text is not easy to read.  Headings and fonts are inconsistent.  No page numbers are included.  Spelling and grammar mistakes appear on every page.	Folio is in colour.  Images are not clear and/or text is not easy to read.  Headings and fonts are inconsistent.  No page numbers are included.  Multiple spelling and grammar mistakes.	Folio is in colour.  Images may or may not be clear, and text may or may not be easy to read.  Headings are 20 points and the main body is 12 points.  Page numbers are included.  Some spelling and grammar mistakes.	Folio is in colour.  Images are clear, and text is easy to read with appropriate white space.  Headings are 20 points in a consistent font and the main body is 12 points in a consistent font.  Page numbers are included. Number of pages does not exceed 35 A3 or 70 A4.  Few spelling and grammar mistakes.	Folio is in colour.  Images are clear and are no smaller than 80mm x 50mm, and text is easy to read with appropriate white space.  Headings are 20 points in a consistent font and the main body is 12 points in a consistent and easy to read font (e.g. Arial, Times New Romans, Calibri, Century Gothic).  Page numbers are included. Number of pages does not exceed 35 A3 or 70 A4.  No spelling and grammar mistakes.
<b>Bibliography</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	
	Bibliography is not included.	Bibliography is included without following APA referencing style and/or without including in-text referencing.		Bibliography is included following APA referencing style including in-text referencing with some errors.	Bibliography is included following APA referencing style including in-text referencing with no errors.