Gymea Technology High School
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Year 12 Design and Technology

Task 3: MDP Production Processes

Due Date: Term 2 Week 6 29.05.26

Task Distributed: 24.04.26

Unit: Major Design Project

Task Type: Written Report

Task Weighting: 40%

Outcomes: H1.1, H1.2, H3.2, H4.1, H4.2, H4.3, H5.1, H5.2, H6.1

Task Description

The Major Design Project (MDP) is a large undertaking to be completed over the course of the HSC year. To manage the design, development, and production of the MDP a portfolio is created to document and evaluate each stage of the design process. As part of this portfolio, students complete a Project Proposal & Project Management, Project Development & Realisation, and Evaluation. Each section is of high importance to this MDP process and it is vital these are completed on time and to a high quality.

Written Report (30 Marks)

Please submit evidence of your project development and realisation including;

- Evidence of creativity
- Consideration of Design Factors Relevant to the Major Design Project
- Research & Experimentation
- Testing of Design Solutions & Application of Conclusions (Initial sketches, refinement of ideas, and proposed solution only)
- Ongoing Evaluations and Application of Conclusions

You will be assessed on your ability to;

- Show evidence of creativity
- Demonstrate consideration of the factors affecting design relevant to the MDP
- Provide evidence of appropriate research and experimentation
- Test design solutions and apply conclusions
- Conduct ongoing evaluations and identify applications of conclusions

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.

- https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/hsc/hsc-student-guide/glossary-keywords

Details of Submission

The assessment will be developed in class time and at home during the year.

Suggested length of response: 27-43 A4 or 13-22 pages

Submit the written report 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.

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 – 0%
- Knowledge and skills in designing, managing, producing, and evaluation design projects – 40%

Report Outcomes: H1.1, H1.2, H3.2, H4.1, H4.2, H4.3, H5.1, H5.2, H6.1

- H1.1 Critically analyses the factors affecting design and the development and success of design projects
- H1.2 Relates the practices and processes of designers and producers to the major design project
- H3.2 Uses creative and innovative approaches in designing and producing
- H4.1 Identifies a need or opportunity and researches and explores ideas for design development and production of the major design project
- H4.2 Selects and uses resources responsibly and safely to realise a quality major design project
- H4.3 Evaluates the processes undertaken and the impacts of the major design project
- H5.1 Uses a variety of management techniques and tools to develop design projects
- H5.2 Selects and uses appropriate research methods and communication techniques
- H6.1 Justifies technological activities undertaken in the major design project through the study of industrial and commercial practices

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 4: MDP Production Processes

Written Report					
Marking Criteria	Descriptors				
Show evidence of creativity	**0**	**1-2**	**3-4**	**5**	**6**
	Little/no evidence of creativity.	Explores and analyses a basic range of existing ideas with some consideration of the degree of difference. Shows basic critical analysis of design ideas with limited use of cognitive organisers. Demonstrates a basic level of creativity through the generation of a moderate range of possible design ideas.	Satisfactorily explores and analyses a range of existing ideas with consideration of the degree of difference. Shows satisfactory critical analysis of design ideas with some use of cognitive organisers. Demonstrates satisfactory creativity through the generation of a satisfactory range of possible design ideas.	Explicitly explores and analyses a wide range of existing ideas with a well-considered degree of difference identified. Shows strong critical analysis of design ideas through the use of cognitive organisers. Demonstrates strong creativity through the generation of a wide range of possible design ideas.	Exceptionally explores and analyses a comprehensive range of existing ideas with exceptional consideration of the degree of difference. Demonstrates exceptional critical analysis of design ideas through the extensive use of cognitive organisers. Displays exceptional creativity through the generation of an extensive range of possible design ideas.
Demonstrate consideration of the factors affecting design relevant to the Major Design Project	**0**	**1-2**	**3-4**	**5**	**6**
	Little/no consideration of design factors relevant to the MDP.	Provides basic critical analysis of relevant factors affecting the design and development of the MDP. Offers basic identification of how these factors will influence or have been incorporated into their design. Includes basic links to the Criteria to Evaluate.	Satisfactorily analyses all relevant factors affecting the design and development of the MDP. Explicitly identifies how these factors will influence or have been incorporated into their design. Includes satisfactory and meaningful links to the Criteria to Evaluate.	Critically analyses all relevant factors affecting the design and development of the MDP. Explicitly identifies how these factors will influence and/or have been incorporated into their design. Demonstrates strong and meaningful links to the Criteria to Evaluate.	Exceptionally critically analyses all relevant factors affecting the design and development of the MDP. Explicitly identifies how these factors will influence and/or have been exceptionally incorporated into their design. Includes exceptional and highly meaningful links to the Criteria to Evaluate.
Provide evidence of appropriate research and experimentation	**0**	**1-2**	**3-4**	**5-6**	**7**
	Little/no evidence of appropriate research and experimentation.	Shows basic appropriate research and experimentation of materials, tools, and techniques. Provides basic	Demonstrates satisfactory appropriate research and experimentation of materials, tools, and techniques. Successfully	Displays strong appropriate research and experimentation of materials, tools, and techniques. Successfully	Exhibits exceptional appropriate research and experimentation of materials, tools, and techniques. Exceptionally

		success in researching and/or experimenting with some areas of investigation using a limited range of resources. Offers basic application of conclusions developed from research and experiments, with a limited identification of how this research will assist in the design and production of the MDP.	researches and/or experiments with most areas of investigation using a satisfactory range of resources. Effectively applies satisfactory detailed conclusions developed from research and experiments, clearly identifying how this research will assist in the design and production of the MDP.	researches and/or experiments with all areas of investigation using a good range of resources. Applies detailed conclusions developed from research and experiments, clearly identifying how this research will assist in the design and production of the MDP.	researches and/or experiments with all areas of investigation using a wide range of high-quality resources. Effectively applies detailed conclusions developed from research and experiments, clearly and comprehensively identifying how this research will assist in the design and production of the MDP.
Test design solutions and apply conclusions	**0**	**1-2**	**3-4**	**5-6**	**7**
	Little/no evidence of testing of design solutions or application of conclusions to the production of the MDP.	Initial sketches show basic progression of design ideas with moderate quality. CAD refined sketches are basic, with some refinement and rendering, but lacks full dimensioning and annotation of proposed solutions. Proposed solution shows basic evidence of idea progression and some application of conclusions.	Initial sketches show satisfactory progression of design ideas with good quality. CAD refined sketches are of satisfactory quality, showing refinement, rendering, and inclusion of some dimensioning and annotation of proposed solution. Proposed solution shows satisfactory evidence of idea progression and application of conclusions.	Initial sketches show strong progression of design ideas with high quality. CAD refined sketches are of high quality, fully rendered, refined, and include dimensioning and annotation of proposed solutions. Proposed solution shows strong evidence of idea progression and application of conclusions.	Initial sketches show exceptional progression of design ideas with outstanding quality. CAD refined sketches are of exceptional quality, fully rendered, and include comprehensive dimensioning and annotation of refined sketches. Proposed solution shows exceptional evidence of idea progression and comprehensive application of conclusions.
Conduct ongoing evaluations and identify applications of conclusions	**0**	**1**	**2**	**3**	**4**
	Little/no evidence of ongoing evaluations and applications of conclusions	Shows basic critical evaluation of aspects of the design project throughout its development. Draws basic conclusions through each step of the design process, but lacks depth and detail.	Satisfactorily evaluates all aspects of the design project throughout its development. Draws satisfactory conclusions through each step of the design process, demonstrating a reasonable level of depth and detail.	Critically evaluates all aspects of the design project throughout its development. Draws strong and explicit conclusions through each step of the design process, demonstrating depth and detail.	Exceptionally evaluates all aspects of the design project throughout its development. Draws exceptional and explicit conclusions through each step of the design process, demonstrating comprehensive depth and detail.