



Year 7, Technology Mandatory

Task 1: Promotional Prototypes

Due Date: Projects and Portfolio 23/08/2024 Week 5

Task Distributed: 30/07/2024

Unit: Materials - Promotional Prototypes

Task Type: Projects and Portfolio,

Task Weighting: 40%

Outcomes: TE4-1DP, TE4-2DP, TE4-3DP, TE4-9MA

Task Description – Promotional Prototypes

DESIGN BRIEF:

You are a graphic designer that specialises in designing promotional and marketing materials using graphic technologies for multinational companies. You have been approached by two companies to create promotional materials for upcoming events. The first company wish to manufacture a Key Tag that will be distributed at Aboriginal and Torres Strait Islander Cultural Event. The second company (you will have a choice) is looking for a laser etched and cut display sign. In this task, students will use information technologies to generate a portfolio (in PDF format) that is to be submitted with your physical projects by the due date.

Product Restrictions:

The Key Tag must:

- Be 3D Printed using PLA Filament
- not exceed a build volume of 35,000mm³
- have a hole or provision to fit a 25mm diameter metal keyring
- incorporate Aboriginal and Torres Strait Islander relevance/connection
- function as a key tag (suitable shape and size to fit in a person's pocket)

The Laser Etched Sign must:

- Be Laser cut and etched onto Perspex
- not exceed build dimensions of 200mm x 150mm
- include a stand
- incorporate a clear and legible design
- ❖ May include provision to function as a LED lit display

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.

- **Explain:** Relate cause and effect; make the relationships between things evident; provide why and/or how
- **Evaluate:** Make a judgement based on criteria; determine the value of

Check the NESA Glossary of Key Words for further guidance <https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/hsc/hsc-student-guide/glossary-keywords>

Details of Submission

The successful completion of this task requires the PDF file to be submitted on google classroom and 3D printed prototype to be handed in to your classroom teacher by the due date. Online quiz must be completed in allocated class lesson

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 an annotated marking criteria.
- Students can clarify or seek further feedback by speaker 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 return of the task, students will also be expected to complete a self-reflection.

Students will be required to complete a self-reflection form at the time students receive their assessment mark and teacher feedback. Self-reflection is an important part of the learning process as it provides an opportunity to reflect on the strength of our performance, as well as areas that have been identified to strengthen in future tasks.

How does this link to my learning?

- Project work in the Technology Mandatory course is intended to give students the opportunity to plan, design and create a product that has a specific purpose. Students are to follow the design and production process to develop a 3D printed Key Tag and Laser Etched Display that fits the design brief.
- Students identify needs that have personal relevance, apply design theory and use design and production processes that encourage flexibility, resourcefulness and imagination in the development, communication and production of quality solutions. Through completion of this task, students will gain an understanding of modern digital design, manufacturing and communication methods and tools.
- **Report Outcomes**
 1. Designs, communicates and evaluates innovative ideas and creative solutions to authentic problems or opportunities.
 2. Plans and manages the production of design solutions. Selects and safely applies tools, materials and processes in the production of quality projects.
 5. Uses computer applications in the development of design project material.

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.

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Criteria	1	2	3	4	5
Identifying & Refining	Develops evaluation criteria for a product.	Develops an evaluation criteria for one product related to the design brief.	Develops a sound evaluation criteria for both products related to the design brief.	Develops a detailed evaluation criteria for both products directly related to the design brief.	Develops extensive evaluation criteria for both products, directly related to the design brief.
Research & Planning • Concept Sketches	Provides concept design sketch for each product or concept sketches for a product. Sketches contain limited information.	Provides concept design sketches for each product. Sketches contain basic information.	Provides three concept design sketches for each product. Sketches contain annotations	Provides three clear and legible concept design sketches for each product. Sketches contain detailed annotations.	Provides three clear and legible concept design sketches for each product. Sketches contain extensively detailed annotations.
Research & Planning • Design Concepts	Demonstrates a basic/limited use of; • design aspects to create a unique Key Tag or Laser Etch Display,	Demonstrates satisfactory knowledge and use of; • design aspects to create a unique Key Tag, adding 1 modification of the default 'Create Form and Shape' CAD tools or, • design aspects to create a unique Laser Etched display	Demonstrates sound knowledge and use of; • design aspects to create a unique Key Tag, adding 2 modifications of the default 'Create Form and Shape' CAD tools & • design aspects to create a unique Laser Etched display	Demonstrates a high-level knowledge and use of; • design aspects to create a unique and functional Key Tag, adding 3 or 4 modifications of the default 'Create Form and Shape' CAD tools & • design aspects to create a unique and engaging Laser Etched display	Demonstrates outstanding knowledge & use of; • design aspects to create a unique and functional Key Tag, by extensively modifying the default 'Create Form and Shape' CAD tools & • design aspects to create a unique and engaging Laser Etched display
Research & Planning	Demonstrates an ability to; • create a CAD model	Demonstrates a satisfactory ability to; • create a CAD model	Demonstrates a sound ability to; • create a CAD model,	Demonstrates a high ability to; • create an individualised CAD model	Demonstrates an outstanding ability to; • create an individualised CAD model

<ul style="list-style-type: none"> • CAD/CAM Drawing Skills (Key Tag) 	<ul style="list-style-type: none"> • produce a basic PDF print out of a non-dimensioned single view 	<ul style="list-style-type: none"> • produce a basic PDF print out of a partially dimensioned 2 views and title block 	<ul style="list-style-type: none"> • produce a PDF print out of a partially dimensioned 3 view orthogonal drawing with border and title block 	<ul style="list-style-type: none"> • produce a PDF print out of a partially dimensioned 3rd angle 3 view orthogonal drawing, fully rendered 3D view, border and title block 	<ul style="list-style-type: none"> • produce a PDF print out of a fully dimensioned 3rd angle, 3 view orthogonal drawing, including a fully rendered 3D view, border and title block.
<p>Producing & Implementing</p> <ul style="list-style-type: none"> • Key Tag 3D Print 	<p>Requires assistance to;</p> <ul style="list-style-type: none"> • create and import STL file into Flash Print Software. 	<p>Requires minimal supervision to;</p> <ul style="list-style-type: none"> • create and import STL file into Flash Print Software. 	<p>Demonstrates sound ability to;</p> <ul style="list-style-type: none"> • create and import STL file into Flash Print Software. 	<p>Demonstrates high ability to;</p> <ul style="list-style-type: none"> • create and import STL file into Flash Print Software, identifying possible machinery problems in STL file 	<p>Demonstrates outstanding ability to;</p> <ul style="list-style-type: none"> • create and import STL file into Flash Print Software, identifying and correct possible machinery problems in the STL file
	<ul style="list-style-type: none"> • operate 3D Printer to produce a functional Key Tag 	<ul style="list-style-type: none"> • operate 3D Printer to produce a functional Key Tag 	<ul style="list-style-type: none"> • operate 3D Printer to produce a functional Key Tag 	<ul style="list-style-type: none"> • operate 3D Printer to produce a functional Key Tag of excellent quality 	<ul style="list-style-type: none"> • operate 3D Printer, identifying and correcting minor issues to produce a functional Key Tag of professional quality
<p>Producing & Implementing</p> <ul style="list-style-type: none"> • Laser Etched Display 	<p>Requires assistance to;</p> <ul style="list-style-type: none"> • create and import CAM file to laser cutter software (LCS) 	<p>Requires minimal supervision to;</p> <ul style="list-style-type: none"> • create and import CAM file into LCS 	<p>Demonstrates sound ability to;</p> <ul style="list-style-type: none"> • create and import CAM file into LCS 	<p>Demonstrates high ability to;</p> <ul style="list-style-type: none"> • create and import CAM file into LCS, identifying possible machine problems in CAM files 	<p>Demonstrates outstanding ability to;</p> <ul style="list-style-type: none"> • create and import CAM file into LCS, identifying and correct possible machinery problems in CAM files
	<p>Requires assistance to;</p> <ul style="list-style-type: none"> • set up multiple jobs for one job run 	<p>Requires minimal supervision to;</p> <ul style="list-style-type: none"> • set up multiple jobs for one job run 	<p>Demonstrates sound ability to;</p> <ul style="list-style-type: none"> • co-ordinate with other students and set up multiple jobs for one cutting run 	<p>Demonstrates high ability to;</p> <ul style="list-style-type: none"> • co-ordinate with other students and set up multiple jobs for one cutting run 	<p>Demonstrates outstanding ability to;</p> <ul style="list-style-type: none"> • co-ordinate with other students and set up multiple jobs for one print run

	Requires assistance to; <ul style="list-style-type: none"> operate laser cutter machine 	Requires minimal supervision to; <ul style="list-style-type: none"> operate laser cutter machine 	Demonstrates sound ability to; <ul style="list-style-type: none"> operate laser cutter machine 	Demonstrates high ability to; <ul style="list-style-type: none"> operate laser cutter machine 	Demonstrates outstanding ability to; <ul style="list-style-type: none"> Operate laser cutter machine, identify and correct minor issues
Testing & Evaluating <ul style="list-style-type: none"> Evaluation 	Uses existing evaluation criteria to: <ul style="list-style-type: none"> provide a basic evaluation of a characteristic or feature of Key Tag or Display. 	Uses developed evaluation criteria to: <ul style="list-style-type: none"> provide a basic evaluation of characteristics and features of Key Tag & Display. 	Uses developed evaluation criteria to: <ul style="list-style-type: none"> evaluate the characteristics and features of Key Tag & Display. 	Uses developed evaluation criteria to: <ul style="list-style-type: none"> evaluate in detail the characteristics and features of Key Tag & Display. 	Uses developed evaluation criteria to: <ul style="list-style-type: none"> extensively evaluate the characteristics and features of Key Tag & Display.
	Uses existing evaluation criteria to: <ul style="list-style-type: none"> offer a suggestion for improvement 	Uses developed evaluation criteria to: <ul style="list-style-type: none"> offer a suggestion for improvement 	Uses developed evaluation criteria to: <ul style="list-style-type: none"> provides suggestions for aspects requiring further improvement 	Uses developed evaluation criteria to: <ul style="list-style-type: none"> provide detailed suggestions for aspects requiring further improvement 	Uses developed evaluation criteria to: <ul style="list-style-type: none"> provide extensively detailed suggestions for aspects requiring further improvement

Feedback:	Mark: / 60
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Literacy Outcomes	Elementary achievement You have:	Limited achievement You have:	Satisfactory achievement You have:	High achievement You have:	Outstanding achievement You have:
Vocabulary <i>Uses technical vocabulary to explain concepts and/or range of precise and appropriate words for effect</i>	Very limited response. Few content words used.	Only simple words are used.	Some precise and technical words are used.	Sustained use of precise and technical words.	Sustained, consistent and fluent use of precise and technical words.
	0	1	2	3	4
Punctuation <i>Use of correct and appropriate sentence and other punctuation for effect, and to aid in reading of the text</i>	No evidence of correct sentence punctuation.	Sentence punctuation is correctly used in at least one place - <i>one sentence is punctuated correctly.</i>	Some correct sentence level punctuation (at least 50%). May attempt other punctuation where it is required.	Mostly correct sentence level punctuation (80%) and at least two correct examples of other punctuation.	Writing contains accurate use of all applicable punctuation.
	0	1	2	3	4
Sentences & Cohesion <i>The intentional construction of a variety of sentences to match purpose and audience, and the control of multiple sentence threads across the whole text.</i>	No clear evidence of sentences: a list of words OR text fragments.	At least one sentence is used correctly. Some meaning can be construed from the text.	Some correct formation of sentences. Mainly uses simple and compound sentences, but may attempt more complex structures.	Most sentences are correct. Range of sentence types and connectives are evident, but with varied effectiveness.	All sentences are correct, effective and controlled, and include a range of sentence types and connectives (complex sentences and other sophisticated structures)
	0	1	2	3	4
Paragraphs <i>Paragraphs are used to effectively structure information and partition events and ideas</i>	No correct use of paragraphing; may be a block of text or random breaks.	Ideas are separated; paragraphs may contain some unrelated ideas.	At least ONE paragraph is well structured and develops an idea	Writing is organised into paragraphs that assist the reader to digest chunks of the text, but may not be linked or executed effectively.	All components of the paragraphs are evident and paragraphing is consistent and well-developed across the whole text.
	0	1	2	3	4
Text Structure <i>Uses features of the appropriate text type. No attempt to write in the appropriate text type and/or response is off task.</i>	No evidence of the structural features of the appropriate text type. <i>No attempt to write in the appropriate text type and/or response is off task.</i>	Minimal evidence of the structural features - <i>1 component evident</i> - of the appropriate text type.	Some evidence of the structural features - <i>2 components evident</i> - of the appropriate text type.	Substantial evidence of the structural features - <i>all components evident but there may be some lapses</i> - of the appropriate text type.	Coherent and controlled use of all the appropriate structural features of the text type.
	0	1	2	3	4
	Level of response is well below syllabus expectation	Level of response is below syllabus expectation	Level of response is equivalent to syllabus expectation	Level of response is above syllabus expectation	Level of response is well above syllabus expectation
Literacy		/10		Total /70	

