



CLANCY CATHOLIC COLLEGE

TAS- 2014

Year 8 - Rotation 1: Mixed Materials (Gumball)

Handed Out: Term 1 Week 3

(Circle) 10/2/14 11/2/14 12/2/14 13/2/14 14/2/14 Period: _____

Due Date: Term 2 Week 2

(Circle) 5/5/14 6/5/14 7/5/14 8/5/14 9/5/14 Period: _____

Name : _____ Teacher : _____

Assessment Policy:

This task is a formal assessment. It requires each student to demonstrate their understanding of the course studied by devoting sufficient time and effort to meeting the requirements as clearly stated below. I understand that this task must be submitted on time. The following reasons are not valid excuses for the late submission of tasks; computer difficulties, printer problems, or a student's lack of organisation. It is my understanding that any difficulty with the task must be brought to the attention of the classroom teacher several days before the due date of the task.

Declaration of Originality:

In accordance with the College Assessment Policy, I declare that this submission is my own work and that to the best of my knowledge, it contains no material previously published or written by another person except where acknowledgement has been made.

Student Signature: _____

ASSESSMENT SYLLABUS OUTCOMES: A student:

- 4.1.1 Applies design processes that respond to needs and opportunities in each design project
- 4.2.2 Selects, analyses, presents and applies research and experimentation from a variety of sources
- 4.5.2 Produces quality solutions that respond to identified needs and opportunities in each design project.
- 4.6.1 Applies appropriate evaluation techniques throughout each design project

Report Outcomes: A student has demonstrated the ability to:

- Utilises and effectively documents each stage of the design process
- Applies a range of tools, materials and techniques to complete quality design solutions in a safe and appropriate manner
- Identifies and explains ethical, social, environmental and sustainability considerations

TASK INSTRUCTION:

PRACTICAL COMPONENT:

Using the gumball dispenser booklet guide and a combination of tools and techniques, construct a gumball dispenser as per the specifications provided. You are permitted to make modifications to the inside of the gumball dispenser design following consultation with your teacher.

FOLIO COMPONENT:

Create a design portfolio that shows the steps in designing, making and evaluating your sustainable house design. The design portfolio is to be produced using Word Processing software, with the exception of sketches, which should be 'hand drawn'. The text types you will be using are: **recount, discussion, evaluation, report**. The portfolio must be submitted as a **hard copy** in an A4 plastic sleeve/folder, with your **assignment sheet attached** and include the following sections:

	Section	Explanation	Done?	Progress Check
1.0 Identification	(1.1) Title Page	Include the name of the project/product, your name, teachers name and class		Due Date: Parent Sign:
	(1.2) Design Situation	In four or more sentences, explain the design problem that needs to be solved.		Teacher Sign:
	(1.3) Design Situation	In one or more sentences, describe what you are required to do as "the designer".		
2.0 Preparation	(2.1) Limitations	Identify and explain FIVE (5) or more limitations or boundaries that will apply when developing your Gumball Machine		Due Date: Parent Sign:
	(2.2) Criteria for success	Identify and explain FIVE (5) or more criteria to determine the success of your project.		Teacher Sign:
	(2.3) Time Management	Develop a computer generated Gantt chart detailing the order and timing of each design process stage and construction step in the creation of your project		
	(3.1) Factors affecting design	<p>Below is a list of many factors that can influence a design:</p> <p><u>ACCESS FEELMS</u></p> <p>AESTHETICS</p> <p>Current resource availability</p> <p>Cost</p> <p>Ergonomics</p> <p>Safety</p> <p>Size & Scale</p> <p>FUNCTIONALITY</p> <p>Environment</p> <p>Ethics</p> <p>Legislation</p> <p>Materials</p> <p>Socio-Cultural</p> <p>3.1.1 For each factor, define the term (present this in a table)</p>		Due Date: Parent Sign: Teacher Sign:

3.0 Investigation	(3.2) Research	<p>Using a <i>wide variety</i> (FOUR OR MORE) of resources, report on the following</p> <p>3.2.1 Innovation and Emerging Technology</p> <p>Many items that were once made from timber are now made with other materials. Examples include boats, sporting bats and car parts.</p> <p>Select ONE (1) item that was historically made from timber, but is now made from another material (or combination of materials)</p> <p>Report on the historical use and development of timber by answering the questions below:</p> <p>i. Outline the historical developments of the item in the form of a timeline</p> <p>ii. Create a venn diagram that highlights the features of a product historically made from timber and compare this to its new material.</p> <p>iii. Explain how the evolution of this item has impacted both society and the environment. You must consider both the positive and negative impacts.</p>	Due Date:
	(3.3) Current designs	<p>3.1.1 Identify THREE (3) or more other gumball machine designs, providing a picture of each</p> <p>3.1.2 Evaluate the features of each design by listing what you like (positive), what you don't like (negative) and present this in a table</p>	Due Date: Parent Sign: Teacher Sign:
	(3.4) Possible Materials	<p>3.4.1 Using the following website: www.woodsolutions.com.au, conduct research into the following hardwoods and softwoods</p> <p style="padding-left: 40px;">Softwood: Radiata Pine and Redwood</p> <p style="padding-left: 40px;">Hardwood: Oak and Merbau</p> <p>i. Identify the origin of each timber</p> <p>ii. Describe the properties and characteristics of each timber</p> <p>iii. Identify common uses of each timber and provide an image of each (present this in a table)</p>	Due Date: Parent Sign: Teacher Sign:
	(3.5) Possible Tools	<p>3.5.1 Identify FIVE (5) possible tools that may be used to make your gumball machine and provide a picture of each</p> <p>3.5.2 For each tool, describe what it is used for and how you intend to use it while completing your gumball</p> <p>3.5.3 For each tool, Identify at least THREE (3) safety procedures when using each tool</p> <p>Present 3.5 as a table</p>	Due Date: Parent Sign: Teacher Sign:
	(3.6) Possible techniques	<p>3.4.1 Identify THREE (3) possible techniques that may be used to create your design and explain where you are most likely to use them</p> <p>3.4.2 Outline the advantages of using machine tools over hand tools</p>	Due Date: Parent Sign: Teacher Sign:

	(3.7) Evidence of research	Provide a minimum FIVE (5) statements that give evidence of decision-making based on all research findings. For example: <ul style="list-style-type: none"> As a result of research it has been found that Radiata pine would be the best timber for my project because... 		Due Date: Parent Sign: Teacher Sign:
4.0 Construction	(4.1) Ideas	Sketch (hand drawn) THREE (3) annotated (labeled) pictures of possible designs of your project. You can only use lead pencil in your sketches		Due Date: Parent Sign:
	(4.2) Idea selection	4.2.1 Select ONE (1) sketched idea to construct. 4.2.2 Justify your choice by providing THREE (3) or more reasons for selecting the idea by referring to the criteria for success for guidance		Teacher Sign:
5 5.0 Justification	(5.1) Evaluation	Evaluate your project using the following headings: 5.1.1 Function 5.1.2 Aesthetics For each heading, explain areas of success and areas where you face set backs and provide areas to improve if you were to construct the same project again.		Due Date: Parent Sign: Teacher Sign:
	(5.2) Bibliography	You must include a list of sources used to complete your folio, particularly that of the research section.		Due Date: Parent Sign: Teacher Sign:

Assessment criteria: Design project

4.1.1: Applies design processes that respond to needs and opportunities in each design project

Level of achievement	Indicators
A 9 - 10	<ul style="list-style-type: none">The student has comprehensively completed all aspects of the design folio as identified in the Design Folio scaffold to an excellent level.All components of the design folio have been communicated in a clear and logical manner, demonstrating excellent understanding of the design process as used by designers.
B 7 - 8	<ul style="list-style-type: none">The student has completed all aspects of the design folio as identified in the Design Folio scaffold.Some small inaccuracies exist in the order of the design folio, demonstrating a high understanding of the design process.
C 5 - 6	<ul style="list-style-type: none">The student has completed most aspects of the design folio as identified in the Design Folio scaffold.The design folio generally demonstrates an understanding of the design process, as it is presented mostly in a logical order.
D 3 - 4	<ul style="list-style-type: none">The student has completed some aspects of the design folio as identified in the Design Folio scaffold.The design folio demonstrates some understanding of and consideration for a design process. The folio is ordered correctly in only a few areas.
E 1 - 2	<ul style="list-style-type: none">The student has completed limited aspects of the design folio as identified in the Design Folio scaffold.The design folio is out of order and demonstrates little awareness of the correct design process.

4.2.2 selects, analyses, presents and applies research and experimentation from a variety of sources

Level of achievement	Indicators
<p>A</p> <p>9 - 10</p>	<ul style="list-style-type: none"> • The student has achieved a very high level of competence in selecting, analyzing, presenting and applying research and experimentation. • Student provided a highly detailed level of research. • Student has located relevant research information from FOUR or more (wide variety) of different sources (ie. books, internet, magazines, surveys, interviews etc). • Research and analysis is very well presented through the use of tables, graphs and various fonts.
<p>B</p> <p>7 - 8</p>	<ul style="list-style-type: none"> • The student has achieved a high level of competence in selecting, analysing, presenting and applying research and experimentation. • Student has provided detailed research. • Student has located relevant research information from THREE different sources. • Research and analysis is well presented through the use of tables, graphs and various fonts.
<p>C</p> <p>5 - 6</p>	<ul style="list-style-type: none"> • The student has achieved an adequate level of competence in selecting, analysing, presenting and applying research and experimentation. • Student has provided adequate. • Student has located researched information from TWO sources. • Research and analysis is presented at a satisfactory level through the use of tables and various fonts.
<p>D</p> <p>3 - 4</p>	<ul style="list-style-type: none"> • The student has achieved a limited level of competence in selecting, analyzing, presenting and applying research and experimentation. • Student has provided limited research. • Student has located research information from ONE source. • Research and analysis is presented at a basic level.
<p>E</p> <p>1 - 2</p>	<ul style="list-style-type: none"> • The student has achieved a very limited level of competence in selecting, analysing, presenting and applying research and experimentation. • Student has provided little to no evidence of research. • Student has provided little to no evidence of appropriate research. • Research and analysis is presented at a basic level.

4.5.2 Produces quality solutions that respond to identified needs and opportunities in each design project

Level of achievement	Indicators
<p>A 13 - 15</p>	<ul style="list-style-type: none"> • The student has achieved a very high quality project • Student demonstrates an excellent level of proficiency in the correct application of appropriate tools, materials and techniques in the production of the design project • The final solution satisfies the identified needs of the end user and demonstrates excellent understanding of product function
<p>B 10 - 12</p>	<ul style="list-style-type: none"> • The student has achieved a high quality project • Demonstrates a good level of proficiency in the correct application of appropriate tools, materials and techniques in the production of the design project. • The final solution satisfies many of the identified needs of the end user, demonstrating good understanding of product function •
<p>C 7 - 9</p>	<ul style="list-style-type: none"> • The student has achieved an project of adequate quality • Demonstrates a sound level of proficiency in the correct application of appropriate tools, materials and techniques in the production of the design project. • The final solution satisfies most requirements of the end user
<p>D 4 - 6</p>	<ul style="list-style-type: none"> • The student has a achieved a project of limited quality • Demonstrates a satisfactory level of proficiency in the correct application of appropriate tools, materials and techniques in the production of the design project. • The final solution satisfies only a few of the identified needs of the end user
<p>E 0 - 3</p>	<ul style="list-style-type: none"> • The student has achieved a project of very limited quality • Demonstrates a very limited level of proficiency in the correct application of appropriate tools, materials and techniques in the production of the design project. • The final solution fails to satisfy the needs of the end user

4.6.1 Applies appropriate evaluation techniques throughout each design project

Level of achievement	Indicators
A 9 - 10	<ul style="list-style-type: none"> The final evaluation of the product is extensive and justified Student evaluates in terms of function and aesthetics at a very high level. Student reflects in detail about their product and evaluates it in relation to the design brief and the criteria for success at a very high level. Appropriate, realistic and useful suggestions for future improvements of the product are clear and detailed
B 7 - 8	<ul style="list-style-type: none"> The final evaluation of the product is informative and justified Student evaluates in terms of function and aesthetics at a high level. Student reflects about their product and evaluates it in relation to the design brief and the criteria for success at a high level. Appropriate and useful suggestions for future improvements of the cushion are clear
C 5 - 6	<ul style="list-style-type: none"> The final evaluation of the product is adequate and justified A sound evaluation of functions and aesthetics is provided Student briefly reflects in relation to the design brief and the criteria for success at a sound level. Suggestions for useful improvements are made
D 3 - 4	<ul style="list-style-type: none"> The final evaluation of the product is minimal Little evaluation of function and aesthetic is provided. Criteria to evaluate success are poorly used, with little thought for the design brief. Few suggestions for improvements are made or suggestions made are not realistic
E 1 - 2	<ul style="list-style-type: none"> The final evaluation of the product is non existent or poorly completed Links to function and aesthetic are very basic or not made Criteria to evaluate the success are not used Suggestions for future improvements are not evident

Assignment Overall Mark and Grade

Overall Mark	A	B	C	D	E	Overall Grade
	45 - 38	37 - 29	28 - 20	19 - 11	10 - 0	A B C D E