# 2019
# YEAR 11 Design and Technology
# - Preliminary Sustainable Project Design

| Assessment Task No: 2<br>Presentation and Folio | Date Issued<br>Term 2, Week 5 | Date Due:<br>3rd July 2019<br>Term 2 Week 10 | Weighting %<br>40 | Total Marks<br>120 |
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## SUBMISSION INSTRUCTIONS

1. Students are required to submit on 3rd July, 2019.

2. Before 3:30pm to Miss Smith

## CONTEXT (OR PURPOSE) FOR THE TASK

In this unit of work students have learnt about skills in relation to sustainability, architectural design and the built environment.

Increasingly there is an expectation that designers will be accountable for the impact of their work on society and the environment. The concepts of sustainability and sustainable design are now common place and are considered an integral part of the design process.

*Sustainability is a characteristic of a process or state that can be maintained at a certain level indefinitely. The term, in its environmental usage, refers to the potential longevity of vital human ecological support systems, such as the planet's climatic system, systems of agriculture, industry, forestry, and fisheries, and human communities in general and the various systems on which they depend in balance with the impacts of our unsustainable or sustainable design.* Wikipedia

*Sustainable design (also referred to as "green design", "eco-design", or "design for environment") is the art of designing physical objects and the built environment to comply with the principles of economic, social, and ecological sustainability. It ranges from the microcosm of designing small objects for everyday use, through to the macrocosm of designing buildings, cities, and the earth's physical surface. It is a growing trend within the fields of architecture, landscape architecture, urban design, urban planning, engineering, graphic design, industrial design, interior design and fashion design.* Wikipedia

## TASK RUBRIC

In your response to the task and activities you will be assessed on how well you:

● Produce a professional project that makes use of the tools, materials and techniques learnt about in class.
● Create and present original ideas.
● Demonstrate safe work practices
● Present a Management Folio

| OUTCOMES BEING ASSESSED, GENERAL CAPABILITIES & CROSS CURRICULUM PRIORITIES | |
|---|---|
| P1.1 | Examines design theory and practice and considers the factors affecting designing and producing in design projects |
| P2.1 | Identifies design and production process in domestic, community, industrial and commercial settings |
| P4.1 | Uses design processes 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 and solutions using a range of techniques |
| P5.3 | Uses a variety of research methods to inform the development and modification of design ideas |

| THE TASK | MARKS |
|---|---|
| You are to design a sustainable structure that utilises at least one shipping container. Possible ideas could be a building, shop, cafe or house.<br><br>**Part 1:**<br>The final presentation is to be accompanied by a Design Folio that addresses the following:<br>● Design introduction (Brief and Limitations).<br>● Action Time Plan (Gantt Chart)<br>● Research on the following: Inspirational Design, Sustainable design, Different styles of architecture,<br>● Justification of final choices e.g. if you chose to use the process of 'hydroponics', where and how will it be used.<br>● Evaluation<br>● Bibliography<br>● Correct formatting: size 12 Times New Roman text for all writing, page numbers, contents, etc Page restriction: 60 pages | **60** |
| **Part 2:**<br>You will be required to create an CAD-Based scale model of your project that uses Solid Edge or Google Sketch-up as the driving program. Other programs can be used after consultation with the teacher. It will then be presented on an A2 display poster.<br><br>Elements that are to be included on the poster include (but not limited to):<br>● North, South, East and West Elevation drawings<br>● CAD 3D Drawing<br>● Finalised floor plan with dimensions<br><br>In addition, a Physical scale model will be produced. It should refer ACCURATELY, the plan of the building. Foamex, plastic, timber etc. can be used for the final product. | **60** |

# Part 1: Folio

| Project Proposal & Project Management / 15 | 13 – 15 | 10 – 12 | 7 – 9 | 4 – 6 | 1 – 3 |
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| Identification and exploration of the need | Identifies and provides a detailed exploration of genuine needs and opportunities, justifying final selection for the development of the corporate identity | Identifies and provides an exploration of needs and opportunities, in relation to the development of the corporate identity | States a need, with limited exploration in relation to the development of the corporate identity | States a need, with some exploration in relation to the development of the corporate identity | Need stated without clarity, nor explored in relation to the development of the corporate identity |
| Areas of investigation | Describes relevant areas of investigation which relate clearly to the need, and provides direction for further action | Describes some relevant areas of investigation in relation to the need and provides evidence that these were investigated | Lists one or two areas of investigation in relation to the need, which may not relate to further action<br><br>*May also be shown as evidence of areas being investigated* | Names areas of investigation in relation to the need which may not relate to further action, or shows evidence of areas being investigated | Names an area of investigation |
| Criteria to evaluate success | Establishes and analyses appropriate criteria to evaluate the success of the Product | Describes appropriate criteria to evaluate the success of the Product, with little analysis of these criteria | Briefly describes criteria to evaluate the success of the PSE, with no analysis of these criteria<br><br>*May also be shown by evidence of consideration of a range of evaluative criteria* | Briefly describes criteria, some of which may be inappropriate to evaluate the success of the Product, or provides evidence of consideration of a range of criteria | Lists mainly inappropriate criteria to evaluate the success of the Product or provides evidence of evaluative criteria being considered |
| Action, time and finance plans and their application | Formulates and evaluates well-documented action, time and finance plans with clear evidence of their application to their product | Formulates action, time and finance plans, and shows some evidence of their application to the Product | Formulates and applies action and/or time and/or finance plans | Some evidence of action, time or finance planning | Action, time or finance planning not evident |

| Project Development and Realisation / 35 | 29 – 35 | 22 – 28 | 15 – 21 | 8 – 14 | 1 – 7 |
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| Evidence of creativity - ideas generation, degree of difference and exploration of existing ideas | **Demonstrates the application of creativity in the development of the Corporate identity** | Demonstrates substantial application of creativity in the development of the Corporate identity | Demonstrates some creativity in the development of the Corporate identity | Provides some evidence of ideas generation and/or exploration of existing ideas | Provides limited evidence of ideas generation and/or exploration of existing ideas |
| Consideration of design factors relevant to the major design project | **Critically analyses a wide range of design factors relevant to the Product and applies them** | Critically analyses a range of design factors relevant to the PSE and applies them | Describes some design factors relevant to the Product and applies them | Provides some evidence of design factors, most of which are relevant to the Product and applies them | Provides limited evidence of design factors, few of which are relevant to the Product or shows evidence of the application of design factors |
| Appropriate research and experimentation of materials, tools, techniques and testing of design solutions | **Undertakes, evaluates and applies a range of appropriate research experimentation and design solution testing in the development of the design project** | Undertakes, evaluates and applies appropriate research, experimentation and design solution testing in the development of the corporate identity | Undertakes, evaluates and applies some appropriate research, experimentation and/or design solution testing in the development of the corporate identity | Evaluates and/or applies limited appropriate research and/or experimentation and/or design solution testing | Minimal evidence of appropriate research and/or experimentation and/or design solution testing |
| Identification and justification of ideas and resources | **Justifies the selection and use of resources in the idea development for the Product** | Explains the selection and use of resources in the idea development for the Product | Describes the selection and use of resources in the idea development for the Product | Describes some resources used for the Product | Lists few resources used for the Product |
| Use of communication and presentation techniques | **Succinctly demonstrates a range of appropriate quality communication and presentation techniques** | Demonstrates varied and appropriate communication and presentation techniques in a concise manner | Demonstrates some communication and presentation techniques | Demonstrates a basic range of communication and presentation techniques | Demonstrates minimal communication and presentation techniques |
| Evidence and application of practical skills to produce a quality project | **Applies a range of high-quality practical skills in the development of the Product** | Applies a range of practical skills in the development of the Product | Applies sound practical skills in the development of the Product | Applies basic practical skills in the development of the Product | Applies minimal practical skills in the development of the Product |

| Project Evaluation / 10 | 9 to 10 | 7 to 8 | 5 – 6 | 3 – 4 | 1 – 2 |
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| Recording and application of evaluation procedures throughout the design project | **Critically evaluates aspects of the Product throughout its entire development** | Evaluates most aspects of the Product throughout its entire development | Judges the success of some aspects of the Product through stages of its development | Describes, with little justification, the success of several aspects of the Product or exhibits evaluation in the PSE's development | Describes, without justification, the success of an aspect of the PSE or provides some evidence of evaluation in the PSE's development |
| Analysis and evaluation of functional and aesthetic aspects of design | **Analyses and critically evaluates the functional and aesthetic aspects of the Product** | Explains the functional and aesthetic aspects of the Product | Describes some functional and/or aesthetic aspects of the Product *May also be demonstrated through supporting evidence* | Describes a functional and/or aesthetic aspect of the Product *May also be demonstrated through supporting evidence* | Names a functional or aesthetic aspect of the Product |
| Final evaluation with respect to the project proposal and the project's impact on society and the environment | **Critically evaluates the impact of the Product on society and the environment** | Explains the impact of the Product on society and the environment | Describes the impact of the Product on society and/or the environment or exhibits evidence that the impact on the environment was considered | Briefly or inaccurately describes the impact of the Product on society and/or the environment | No description of the impact of the Product on society or the environment |

## Part 2: Model and presentation

| Outcome | Criteria | Descriptor | | | | | |
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| | | Poor | Elementary | Satisfactory | Good | Very Good | Excellent |
| P2.1, P4.2 | Presentation Board includes all required components. | 0 | 2 | 4 | 6 | 8 | 10 |
| P4.2 | Model is an accurate representation of the proposed plan | 0 | 2 | 4 | 6 | 8 | 10 |
| P4.2 | CAD 3D Drawing | 0 | 2 | 4 | 6 | 8 | 10 |
| P4.2 | Finalised floor plan with dimensions | 0 | 2 | 4 | 6 | 8 | 10 |
| P2.1, | Sustainable aspects of the design are represented in the presentation | 0 | 2 | 4 | 6 | 8 | 10 |
| P4.2 | Model is constructed with a strong attention to detail and neatness. | 0 | 2 | 4 | 6 | 8 | 10 |

Comments:

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