



Year 9 Design & Technology

Task 4: Digital Technologies: Architectural Design

Due Date: 13.09.24 Friday Week 8

Task Distributed: 24.07.24

Unit: Activity of Designers, Digital Technologies

Task Type: Project & Portfolio

Task Weighting: 25%

Outcomes: 1, 3, 4, 5, 6

Task Description – Architectural Design

DESIGN BRIEF:

The work of designers and home builders are continually evolving through the use of emerging technologies and ICT. As designers, it is important that we understand and have knowledge of traditional and contemporary techniques that have shaped and are used in design and production. We will be investigating this trend through the design field of architecture.

Once an architect has completed their design it must be shown and promoted to potential buyers. However, Many adults and homebuyers are time poor, struggling to find the time to travel to display centres to view new home designs. Therefore, in today's digital age, Design Companies rely on forms of digital communication to reach potential buyers and show off their designs. You are going to **develop a digital communication tool** that will help potential buyers discover and view your new home design.

Part A 30 Marks

TASK: You are to use and evaluate both traditional hand drawn sketches and modern online design and CAD processes to create a floor plan for a double storey, 3-bedroom home.

Theory

You will be required to compile an electronic Design Portfolio, documenting and evaluating the process involved with the project. Students are to utilize and complete the requirements of the provided portfolio scaffold.

Practical

- Create and present a floor plan for a double storey house using Floorplanner.com, including:
 - Garage
 - 3 Bedrooms (minimum)
 - 2 Bathrooms (1 can be an ensuite)
 - Kitchen
 - Study
 - Living/Dining Spaces
 - Media room
 - 1 unique room of your choosing (gym, library, games/rumpus etc)
- Using Sketchup for Schools, create a 3D mock up of your floor plan to be used to produce a scaled 3D printed model of your house design.

Part B 20 Marks

Digital Communication Platform 1: Promotional Sales Brochure

- Develop a brochure – Software options include:

[Canva.com](https://www.canva.com)

Adobe Photoshop

Adobe Illustrator

Google Slides

What to include in your brochure:

- Name of Design Company
- Name of Design
- Overview of design, styling and features
- 3D Rendering
- Floor Plan
- Gallery Images

Literacy 10 Marks

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.

- **Describe:** Provide characteristics and features
- **Outline:** Sketch in general terms; indicate the main features of
- **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 your Floor Plan and Design Portfolio to be submitted electronically via Google Classroom. The Scaled 3D Model will be printed at school and submitted by 3pm Friday of week 9, the 10 of September.

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?

- Students will gain an awareness of the traditional and contemporary forms of architectural design and production processes, and develop their ability to use these skills. Students develop an awareness of the importance of digital forms of communication in relation to the collaboration between designers, sharing and promoting of designs from the architect throughout to the end buyer and their effects on people and society.
- Students identify and describe the changing needs and focus, applied to design theory production processes that encourage flexibility, resourcefulness and imagination in the development and production of quality design and communication solutions.
- **Report Outcomes:**

1. Analyses, applies and justifies a range of design concepts and processes when developing design ideas and solutions.
3. Analyses the work and responsibilities of designers and the factors affecting their work and can evaluate designed solutions according to principles, ethics and preferred futures.
4. Develops and evaluates creative, innovative and enterprising design ideas and solutions using the appropriate management strategies and technologies competently.
5. Uses appropriate techniques when communicating design ideas and solutions to a range of audiences.
6. Applies risk management practices and works safely in developing design solutions.

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.

Part A: Architectural Design

| Criteria | 1 | 2 | 3 | 4 | 5 |
|---|---|--|---|--|---|
| Portfolio: <i>Design Brief and Success Criteria</i> | Provides a limited explanation of the design brief, and/or needs of the client and/or design restrictions. Develops limited evaluation criteria. | Provides a basic explanation of the design brief, needs of the client and/or design restrictions. Develops basic evaluation criterion. | Provides a sound explanation of the design brief, with reasoning of the needs of the client and design restrictions. Develops evaluation criterion directly related to the design brief. | Provides a clear explanation of the design brief, with detailed reasoning of the needs of the client and design restrictions. Develops detailed evaluation criterion directly related to the design brief. | Provides an outstanding explanation of the design brief, with extensive reasoning detailing the needs of the client and design restrictions. Develops extensive evaluation criterion directly related to the design brief. |
| Portfolio: <i>Design Ideas and Planning</i> | Communicates information using appropriate software. Provides a concept sketch from one view of house design exterior or house site elevations from at least 2 directions. | Communicates information using appropriate software. Provides a legible concept sketch from one view of house design exterior and house site elevations from at least 2 directions. | Communicates information using appropriate software and forms of media. Provides a legible concept 3D sketch from one view of house design exterior and house site elevations from all 4 directions. | Communicates information in an appealing manner via appropriate software and forms of media. Provides clear and legible concept 3D sketches from multiple views of house design exterior and house site elevations from all 4 directions. | Communicates complex Information dynamically using appropriate software and forms of media. Provides clear and legible concept 3D renderings or sketches from multiple views of house design exterior and house site elevations from all 4 directions. |
| Portfolio: <i>Floor Plan</i> | Demonstrates limited use of design aspects to create a floor plan, including some required rooms set out in the design brief. | Demonstrates satisfactory knowledge and use of design aspects to create a floor plan, including most required rooms set out in the design brief. | Demonstrates sound knowledge and use of design aspects to create a functional floor plan, including all required rooms set out in the design brief and 1 unique room of choosing. | Demonstrates high-level knowledge & use of design aspects to create a flowing and functional floor plan, including all required rooms set out in the design brief and 1 or more unique rooms of choosing. | Demonstrates outstanding knowledge & use of design aspects to create a flowing and functional floor plan, including all required rooms set out in the design brief and 1 or more unique rooms of choosing. |

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|--|---|---|---|--|--|
| Portfolio: <i>Evaluation</i> | Provides a limited evaluation of the impact emerging technologies and the use of ICT have on the work of architects, stating a positive or negative aspect of their design or the processes required for manufacturing. | Provides a basic evaluation of the impact emerging technologies and the use of ICT have on the work of architects, detailing positive and/or negative aspects of their design or the processes required or manufacturing. | Provides a sound evaluation of the impact emerging technologies and the use of ICT have on the work of architects, detailing positive and negative aspects of their design or the processes required for manufacturing. | Provides detailed evaluation of the impact emerging technologies and the use of ICT have on the work of architects, detailing positive and negative aspects of designs and the processes required for manufacturing. | Provides an extensive evaluation of the impact emerging technologies and the use of ICT have on the work of architects, detailing positive and negative aspects of designs and the processes required for manufacturing. |
| Practical: <i>CAD Model</i> | Demonstrates ability to create a CAD model. | Demonstrates satisfactory ability to create a CAD model. | Demonstrates sound ability to create a CAD model. | Demonstrates high ability to create an individualised CAD model. | Demonstrates outstanding ability to create an individualised CAD model. |
| Practical: <i>Scaled Model</i> | Produces and assembles a scaled 3D model. | Demonstrates ability to produce and assemble a scaled 3D model of satisfactory quality. | Demonstrates sound ability to produce and assemble a scaled 3D model of good quality. | Demonstrates high level ability to produce and assemble a scaled 3D model of excellent quality. | Demonstrates outstanding ability to produce and assemble a scaled 3D model of professional quality. |

Feedback:

Part A Total:

/30

Part B: Digital Communication Platform 1: Brochure

| Criteria | 1 | 2 | 3 | 4 | 5 |
|------------------|--|--|--|---|---|
| Brochure | Student has presented their design in a way that may or may not appeal to the target audience. Brochure contains an overview of some features or design concepts incorporated, or floorplan or images of some spaces. Brochure features numerous formatting or technological errors. | Student has presented their design in a way that may appeal to the target audience. Brochure contains an overview of some features and design concepts incorporated, floorplan and images of some spaces. Brochure features numerous formatting or technological errors. | Student has presented their design in a considered way that would appeal to the target audience. Brochure contains a clear overview of features and design concepts incorporated, legible floorplan and images of multiple spaces. Brochure features less than 2-3 formatting or technological errors. | Student has presented their design in an aesthetically pleasing way that would appeal to the target audience due to its design considerations and layout solution. Brochure contains a clear and emotive overview of features and design concepts incorporated in design, clear and legible floorplan and annotated images of multiple spaces. Brochure has 1-2 formatting/ technological issues. | Student has presented their design in an innovative way that would appeal to the target audience due to its creative design choices and layout solution. Brochure contains an extensive, clear and emotive overview of features and design concepts incorporated in design, clear and legible floorplan and annotated images of multiple spaces. Brochure has 0-1 formatting/ technological issues. |
| Rendering | Student has not included a complete or legible 3D rendering. Numerous formatting or technological errors. | Student has included a 3D rendering though some parts are incomplete or not legible. Some formatting or technological errors. | Student has included a 3D rendering is provided, easy to read. 2-3 formatting or technological errors. | Student has utilised an innovative design to ensure at least one 3D rendering is provided, easy to read and has a contemporary design which matches the theme. 1-2 formatting or technological errors. | Student has utilised an innovative design to ensure multiple 3D renderings are provided, easy to read and has a contemporary design which matches the theme. 0-1 formatting or technological errors. |
| | Student has not included a floor plan or parts were incomplete or not attempted. Student has provided a limited overview of some features or design concepts incorporated. Numerous formatting or technological errors. | Student has included a floor plan, though some parts were incomplete or not attempted. Student has provided a brief overview of some features and design concepts incorporated. Some formatting or technological errors. | Student has included a floor plan that is easy to read. Student has provided a clear overview of features and design concepts incorporated. 2-3 formatting or technological errors. | Student has utilised an innovative design to ensure the floor plan is easy to read and has a design which matches the theme. Student has provided a clear and emotive overview of features and design concepts incorporated. 1-2 formatting or technological errors. | Student has utilised an innovative design to ensure the floor plan is easy to read and has a contemporary design which matches the theme. Student has provided an extensive, clear, and emotive overview of features and design concepts incorporated. 0-1 formatting or technological errors. |
| | Student has included a gallery consisting of clear images for some | Student has constructed a gallery consisting of clear images for some areas of | Student has constructed a gallery consisting of clear and legible images for most areas | Student has constructed a gallery consisting of multiple clear and legible images for most areas of | Student has constructed a gallery consisting of multiple clear and legible images for |

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|-------------------------|--|---|---|---|--|
| | areas of design. Images are annotated. Numerous formatting or technological errors. | design. Images are annotated. Some formatting or technological errors. | of design. Images are clearly annotated. 2-3 formatting or technological errors. | design. Images are clearly and extensively annotated. 1-2 formatting or technological errors. | all areas of design. Images are clearly and extensively annotated. 0-1 formatting or technological errors. |
| Feedback: | | | | | Total /20 |
| ASSESSMENT TOTAL | | | | | /50 |

| 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 |

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|--|---|--|--|--|---|
| Text Structure <i>Uses features of the appropriate text type</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 |
| Final Mark: | | | | | /60 |