# **Design and Visual Communication Level 1 Course Outline 2**

# Guide to aid teacher planning only - designed to be printed or viewed in A3, Landscape.

## Purpose

This sample Course Outline has been produced to help teachers and schools understand how the Significant Learning from the Learning Matrix and Achievement Standards can be structured within a year-long teaching and learning programme.

## Context: Spatial and Product Design

|  |  |  |
| --- | --- | --- |
| **Significant Learning** | **Learning activities and assessment opportunities**Throughout the year assessment for learning happens often. Evidence may also be collected for summative assessment. | **Duration** Total of 32 weeks |
| Develop visual skills and techniques for generating and exploring design ideas | **TEACHING Spatial design visual techniques*** Sketching exercises (elevations, isometric, 2pt perspective)
* Learning SketchUp basics
* Hand sketching over SketchUp mass models.
 | 2 weeks |
| Explore and consider design tikanga, practices, principles, and techniques from te ao Māori, and Indigenous cultures within Design and Visual CommunicationDevelop visual skills and techniques for generating and exploring design ideasDevelop the practice of generating design ideas that explore possibilities beyond first thoughtsUse both divergent and convergent thinking in developing design outcomesDevelop good practice in the attribution and acknowledgement of sources when using third-party content | **PART ONE: ŌKAREKA LAKE HOUSE IDEAS** **Achievement Standard 1.1** ***Generate product or spatial design ideas using visual communication techniques in response to design influences.* (Internal, 5 Credits)****ACTIVITY: Students will explore ideas for a Lake House for a site on the shores of Lake Ōkareka near Rotorua**STARTING POINT 1: The Ranginui and Papatūānuku creation story. STARTING POINT 2: Students choose one of the following architects:* Ludwig Mies van der Rohe
* Glenn Murcutt
* Shigeru Ban
* Rau Hoskins
* Daniel Liebeskind
* Nicola and Lance Herbst
* John Scott
* Belinda George
* Bronwyn Kerr
* Pete Ritchie.

FOR EACH STARTING POINT STUDENTS WILL:* show source images for each selected starting point and label characteristics
* use visual techniques to explore ideas from each starting point
* use visual techniques (could be different techniques) to experiment with and extend these ideas towards ideas for a lake house
* consider combining ideas from each starting point or can extend each separately.

Visual techniques that could be used include sketch models, quick SketchUp, 2D and 3D sketches, photography, and overlays. | 5 weeks |
| Develop visual skills and techniques for generating and exploring design ideasDevelop the practice of generating design ideas that explore possibilities beyond first thoughts | **PART TWO: ŌKAREKA LAKE HOUSE REFINEMENT****Students will clarify an idea further to reach a final outcome by:*** selecting one of their ideas to extend and clarify to create a final idea for the lake house
* thinking about the form, materials, and details and the building’s relationship with the site
* considering the people who will be using the holiday home
* using Freehand sketches, site plans, models, photos, overlays, SketchUp, etc.

*This section of work is not assessed but is preparation for the presentation in the next part.* | 3 weeks |
| Develop visual skills and techniques to communicate details of design ideas and outcomesEngage with decision making that is connected to people, places, cultures, and design knowledge in developing design outcomes | **PART THREE: ŌKAREKA LAKE HOUSE PRESENTATION** **Achievement Standard 1.2*****Use representation techniques to visually communicate own product or spatial design outcome* (Internal, 5 Credits)****ACTIVITY: Students will select and use representation techniques to present their final Lake House design ideas.**Students will communicate their final design in a way that promotes the idea to members of the school community using one of the following techniques:* rendered CAD drawings
* hand-rendered presentation sketches
* architectural models
* computer animations or flythroughs.

Students will:* select a suitable representation technique from above
* research and learn the skills needed to execute the technique
* practise the technique
* execute the final presentation.
 | 5 weeks |
|
| Develop visual skills and techniques for generating and exploring design ideasDevelop the practice of generating design ideas that explore possibilities beyond first thoughts | **TEACHING Product design visual techniques:*** isometric sketching exercises
* exploded isometric
* section views
* pulling apart an existing design and sketching all the parts
* overlays or tracing.
 | 2 weeks |
| Develop visual skills and techniques for generating and exploring design ideasUnderstand that the purpose of design is to enhance people’s lives and their environments using aspects of kaitiakitanga, hauora, alofa, and empathyDevelop visual skills and techniques for generating and exploring design ideasDevelop the practice of generating design ideas that explore possibilities beyond first thoughtsEngage with decision making that is connected to people, places, cultures, and design knowledge in developing design outcomesUnderstand that the purpose of design is to enhance people’s lives and their environments using aspects of kaitiakitanga, hauora, alofa, and empathyEngage with decision making that is connected to people, places, cultures, and design knowledge in developing design outcomesDevelop visual skills and techniques to communicate details of design ideas and outcomesUnderstand and use the design principles of aesthetics and function in own design thinking | **WATER BOTTLE DESIGN** **PART ONE: STARTING THOUGHTS:*** There are mountains of plastic waste.
* Many people have no access to safe drinking water.
* When do the students drink water?
* Who do they know who likes to drink water on the go?
* Do they want to help anyone to make a healthy choice?

**PERSONAL DESIGN STATEMENT:***(Note: The design statement can relate to a global issue eg plastic waste. Or it could be personal eg I need to take a water bottle to netball practice. Or it could relate to another person eg my little sister needs a water bottle for school.)*Students will use the thoughts above to create their own design statement for designing a water bottle. They will include a specific situation and person or people who the water bottle will be for.**PART TWO: GENERATE IDEAS** Students will pick one of the phrases below to help them to explore shapes and forms for a water bottle:* *Go with the flow.*
* *Living on the edge.*
* *There’s joy in repetition.*

**PART THREE: DEVELOP AN OUTCOME**Students will select one of their ideas to develop into a final design for a water bottle based on their design story. They will use visual communication techniques to develop and explain their water bottle. Students will show consideration of:* who will use the bottle?
* where the bottle will be used and what functionality it will need?
* what are the parts and how are they assembled?

Collecting evidence of learning for assessment portfolio towards: **Achievement Standard 1.3 *Develop product or spatial design ideas informed by the consideration of people.* (External, 5 Credits)** **Due Term 4.** | 6 weeks |
|
|  | **PREPARATION for EXTERNAL SUBMISSION of 1.3** | 1 week |
| Use visual communication and visual presentation techniques to communicate the qualities of design ideas and outcomesDevelop visual skills and techniques to communicate details of design ideas and outcomes | **TEACHING CAD BASICS for Product design:*** Teach basics of CAD (Solidworks, OnShape, or Rhino).
* Creating simple parts.
* Adding features.
* Editing.
* Making assemblies.
* Creating drawings (3rd angle Orthographic views, section views, paraline views, cutaway views, exploded views, etc).
 | 2 weeks |
|
| **PART FOUR: INSTRUMENTAL DRAWING OF FINAL WATER BOTTLE** Students will use instrumental drawing techniques to communicate the features and details of their final water bottle:* They will use CAD to create the parts and details for their bottle.
* They will make an assembly of the parts.
* They will create 1-2 drawing sheets of their assembly that show the features and details of their water bottle.
* They will select instrumental views and techniques that show the features of their design most clearly.

Collecting evidence of learning for assessment portfolio towards: **Achievement Standard 1.4 *Use instrumental drawing techniques to communicate own product or spatial design outcome* (External, 5 Credits)** **Due Term 4.** | 5 weeks |
|  | **PREPARATION for EXTERNAL SUBMISSION of 1.4** | 1 week |