

TESAC CONFERENCE – CHRISTCHURCH 2024:

# L1DVC LEARNING IN 2024

## **PART ONE:** CONCEPTS BEHIND AN APPROACH TO ACTIVATE LEARNING

Motu Samaeli  
16 April 2024

# PART ONE: CONCEPTS

---

1. **MY CONTEXT** – personal background ≈5min
2. **MY PEDAGOGY** – my values and philosophies in teaching ≈10min
3. **LEARNING FROM THE MINIPILOT AND PILOT** ≈10min
4. **TAKAPUNA GRAMMAR CONTEXT** – summary of DVC and MPC courses ≈10min
5. **SPATIAL DESIGN 2024** – programme and projects ≈20min
6. **SELF ASSESSMENT** – trialling a new approach (first iteration) ≈15min
7. **STANDARDS & STUDENT OUTCOMES** ≈30min
8. **REFLECTIONS ...** ≈10min

**L1DVC LEARNING IN 2024**  
**MY OWN CONTEXT**

our spontaneous actions, or are we just responding to what has become  
 with overlapping and interchanging currents of objects and matter. (T  
 at what is immediately passed and what is immediately going to pass  
 of a supermarket building into a church. \*Something Good To It  
 wise building in Seaview Rd for less than a third of the govern  
 religious celebration. Church members have been working ha  
 tern subjects. - The Christchurch Mail, Monday, Deco  
 market and a church. Here there are questions of definit  
 into the whole architectural system exploding its limits w  
 e life into the dormant sleeping beast of the in-between  
 e while being simultaneously reformed into an alleg  
 eahn and the shift from one defined moment to th  
 estation. Three basic icons were to be used to defi  
 the New Brighton coastline. These would be u  
 the conceptual design processes. The final sc  
 was presented by the pastor to his congrega  
 (development), but subject they were to follow

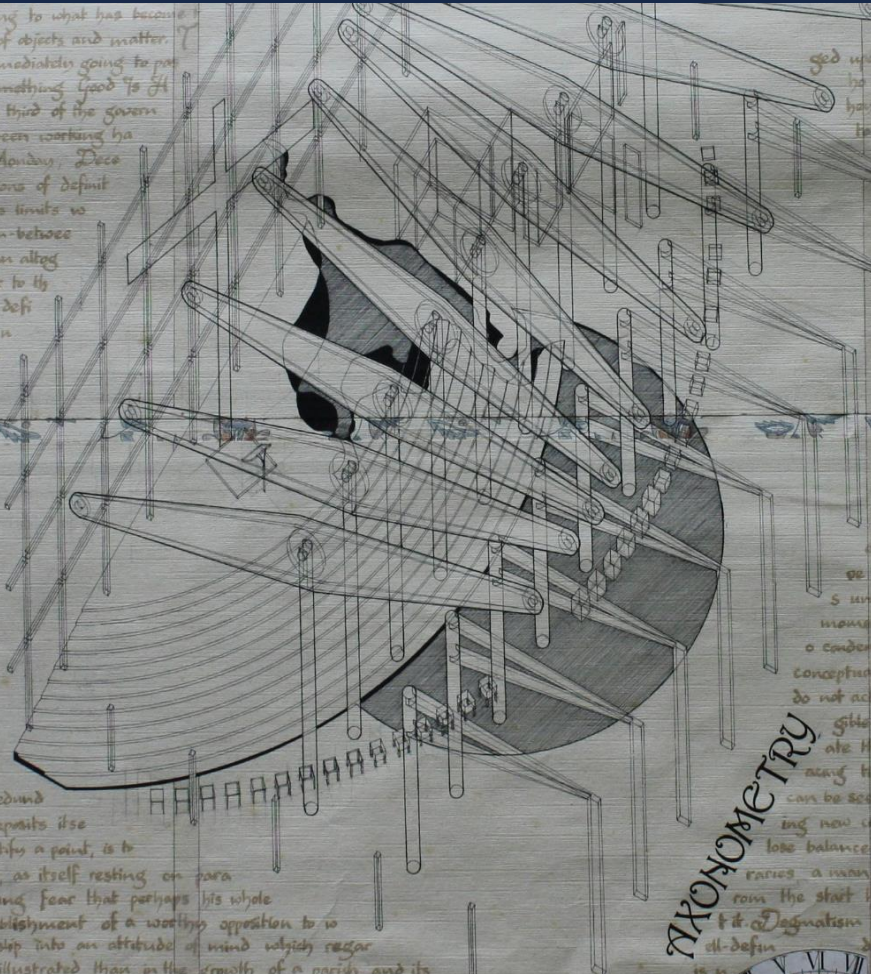
well as each other. The dawn of the first

» History can be defined as a sequenc  
 of events, each encompassing a specific  
 span of time. As such, events segment the  
 continuum of time into fragments of  
 reality. History has brought about the  
 erosion and dissection of the infinite  
 strands of time, the denial of the  
 instantaneous moment, the abandonment  
 of actuality.

It is the fleeting moments of actuality,  
 the in-between realm in history which  
 stitches together the threads of our  
 existence. The in-between realm - the  
 hybrid between past and future. Not only  
 representing past and future but also  
 defining them. Through the virtual  
 superimposition of past and future, the in-  
 between realm creates its own creature of  
 consequence. And yet its captivity is  
 unattainable through the continual  
 passages of time instantaneously  
 abandoning the captured hours

"Actuality is when the lighthouse is  
 dark between flashes: it is the instant  
 between the ticks of the watch: it is a void  
 interval slipping forever through time: the  
 rupture between past and future: the gap  
 at the poles of the revolving magnetic  
 field, infinitesimally small but ultimately  
 real. It is the interchronic pause when  
 nothing is happening. It is the void  
 between events."

- G. Kubler.



can never be specifically ascertained, but should be  
 enjoyed, superimposed and hybridised elements and  
 god man was to discover the moment of actuality, the re  
 he believe in a big God. The 70-strong congregation  
 has believe in miracles. The doors officially open this  
 to a multipurpose facility seating 500 will serve the  
 red moment between the changing definition an  
 erimposition and combination, which trigger  
 d realise the undefined utility that dwell  
 of the hybrid of the in-between; be  
 n process, the design process with re  
 uted the church from the super  
 al scheme of program. These  
 n this scheme, they are given  
 m. The significance of the maxi tent,  
 church, where no definitive future had  
 ice the pav arrangement of the scheme.

their arrangement was such that there were to  
 way through time, from one moment to the next  
 unchanged as so its surrounding location and gener  
 eally growing chairs. This are proceeds from the  
 ce manner. Questions arise as to when the chair  
 s unattainable, as it cuts through the large centrally  
 moment of reality. 'Though finite, the total number of  
 o condense the multiplicity and the redundancy of his sign  
 conceptualisation of two idealised distinguishable buildings  
 do not actually counter each other, but lapse into each other  
 gible balance. 'Life is a phenomenon of changes - a n  
 ate the relevant myths of action, existence, and being.  
 acing trend, no longer believable ones.' - K. H. James  
 can be seen as the quest to renew old stances and gods.  
 ing new conditions and means that were not significant in t  
 lose balance. The elusiveness of balance is to always to be ou  
 raries a man would than be forced to commit himself totally,  
 rom the start he would recognise with perfect good humour that ne  
 it. Dogmatism would be out of fashion.' - A. Mehl  
 ell-defin den, complete and satisfying in themse  
 is u h... er, that a church as it is now may be  
 ated signs of the history of th

AXONOMETRY

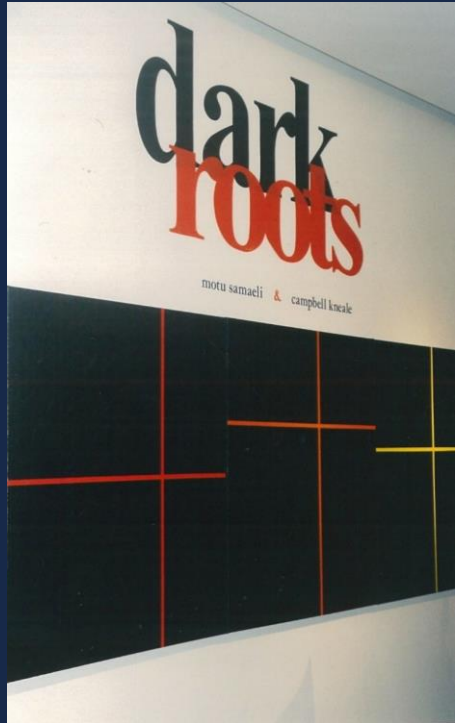


COMMENTENT



I have the I di





I.

my first

19.42

january i

18.35

january iii

19.25

january vi

19.44

II.

january xi

20.09

january xii

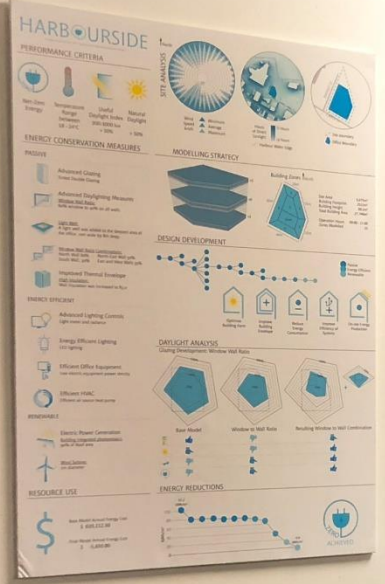
17.53

skies at dusk

38.21

m . o . t . u .

best of a  
beginning



A small white card or notice pinned to the wall below the poster.

## MY CURRENT ROLES (and the creative things I do):

- HEAD OF FACULTY – TECHNOLOGY: Takapuna Grammar School
- DVC TEACHER (Years 10 – 13): Takapuna Grammar School
- DVC CURRICULUM TUTOR: Auckland University of Technology
- DVC CURRICULUM ADVISOR: NZGTTA
- DVC SUBJECT EXPERT GROUP (SEG): Ministry of Education
- MUSIC MAKER (sound is my medium): for myself
- PARENT: to my 16-year-old daughter

L1DVC LEARNING IN 2024

MY PEDAGOGY



## THE EXTROVERTED MBTI TYPES



ESTP - The Persuader



ESTJ - The Director



ESFP - The Performer



ESFJ - The Caregiver



ENTP - The Champion



ENFJ - The Giver

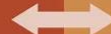


ENTJ - The Debater



ENTJ - The Commander

EXTRAVERSION



INTROVERSION

SENSING



INTUITION

THINKING



FEELING

JUDGING



PERCEIVING

## THE INTROVERTED MBTI TYPES



ISTJ - The Inspector



ISTP - The Crafter



ISFJ - The Protector



ISFP - The Artist



INFJ - The Advocate



INFP - The Mediator



INTJ - The Architect



INTP - The Thinker

For understanding people, **Myers Briggs Type Indicator (MBTI)** can give a framework to explain how we are all different. **Each temperament** not sitting as binary opposites to each other, rather **sitting along a continuum, which can shift with experience and reflect a changing balance of what is learnt and what is innate.**

# MYERS BRIGGS

The central tenet of **Paulo Freire's 'naming your reality'** (Freire, 2005) has informed my teaching practice and many of the creative heritage activities I have developed for my students.

**EDUCATION ... IS THE PRACTICE OF FREEDOM, THE MEANS BY WHICH MEN AND WOMEN DEAL CRITICALLY AND CREATIVELY WITH REALITY AND DISCOVER HOW TO PARTICIPATE IN THE TRANSFORMATION OF THEIR WORLD.**

PAULO FREIRE

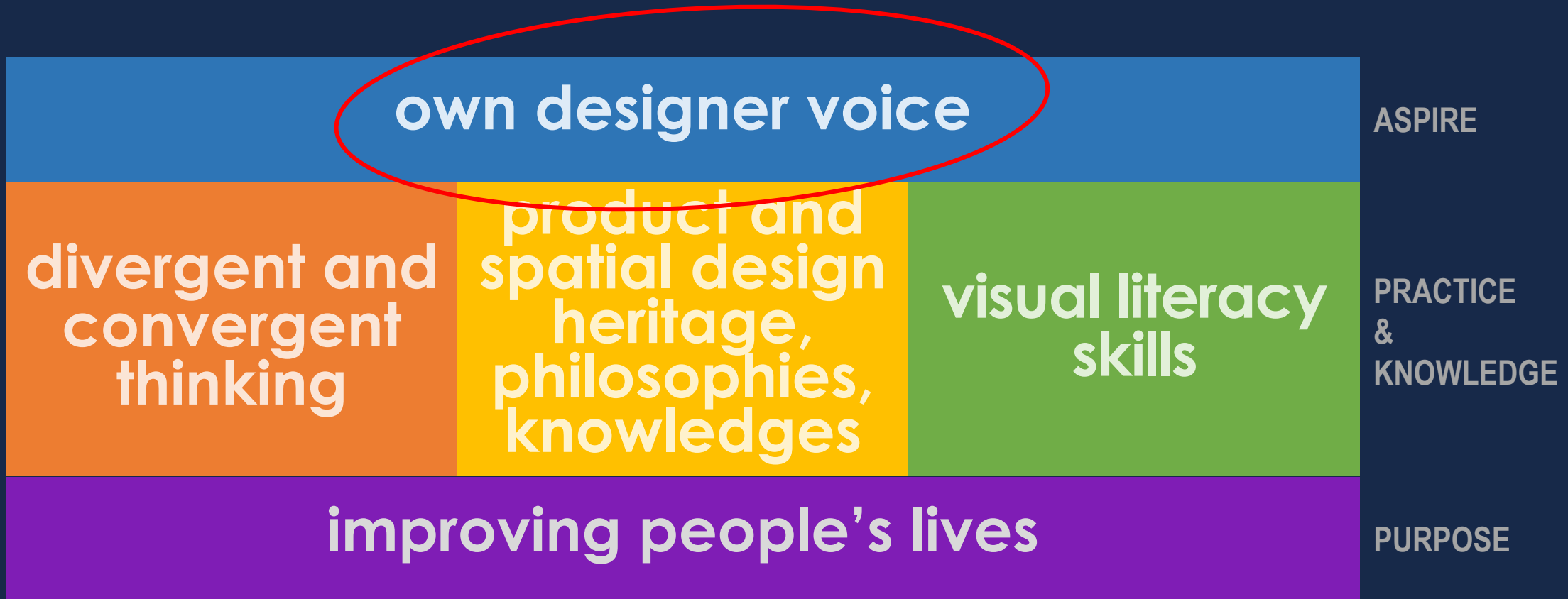
**FREIRE**





9 T D T  
2 0 2 4

you all have  
your own stories to tell,  
your own perceptions,  
your own ways of  
**seeing the world**, your  
own set of unique  
experiences, your own  
values and beliefs,  
and this forms  
**your own voice.**

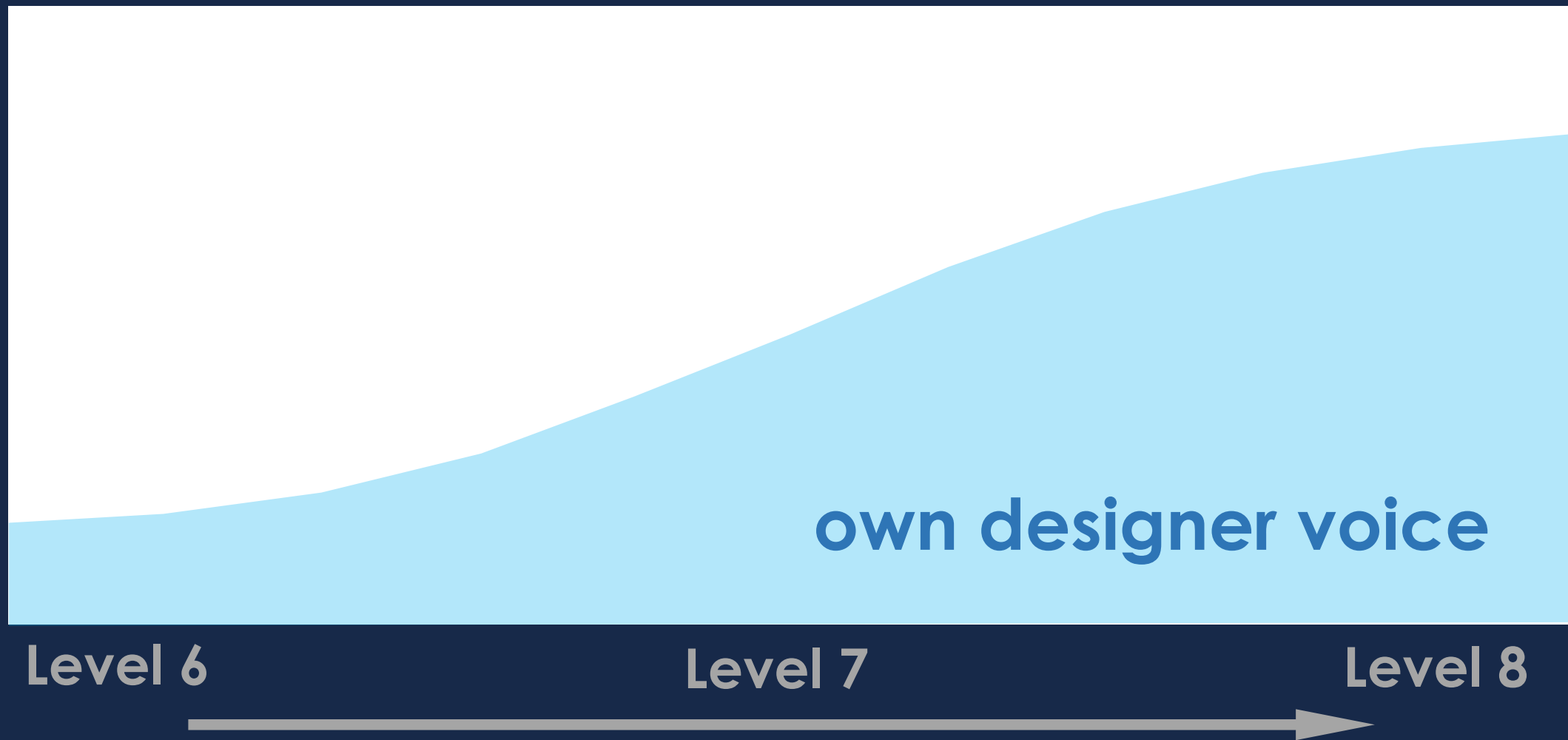


# DESIGN AND VISUAL COMMUNICATION

## SUBJECT BIG IDEAS – A SUMMARY

level 1 2024





**DVC BIG IDEAS** – a progression scenario



Level 6

Level 7

Level 8

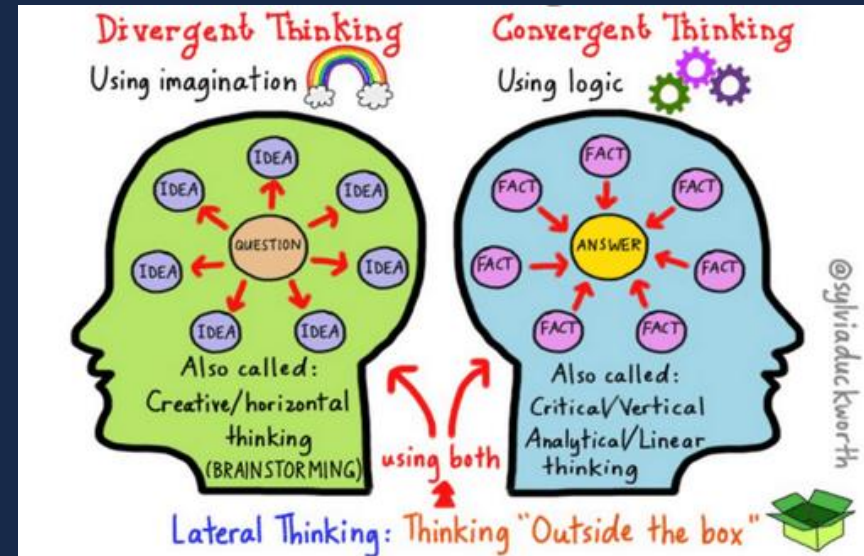
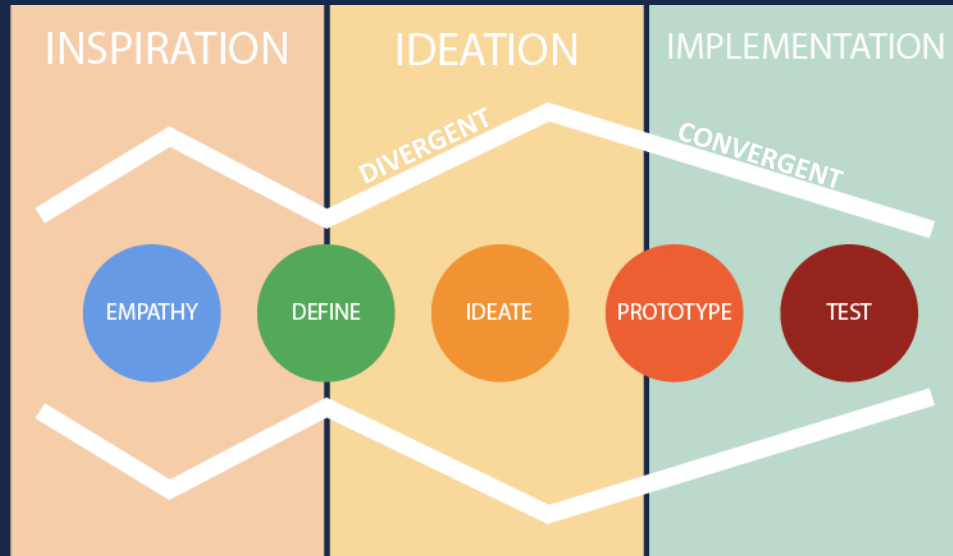


level 1 2024

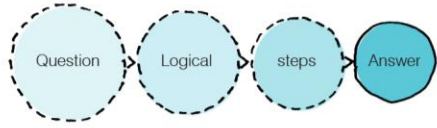
# DESIGN AND VISUAL COMMUNICATION

## BIG IDEAS – A PROGRESSION SCENARIO

Divergent thinking and convergent thinking are two sides of thinking utilised in designing. These **constantly fluctuate throughout a design process** that might begin with divergent thinking and end with convergent thinking



# DESIGN THINKING



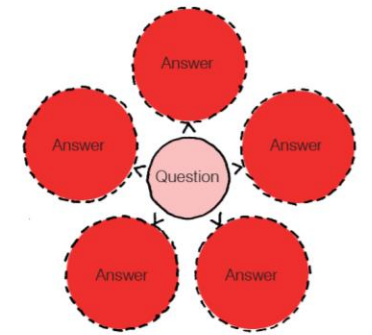
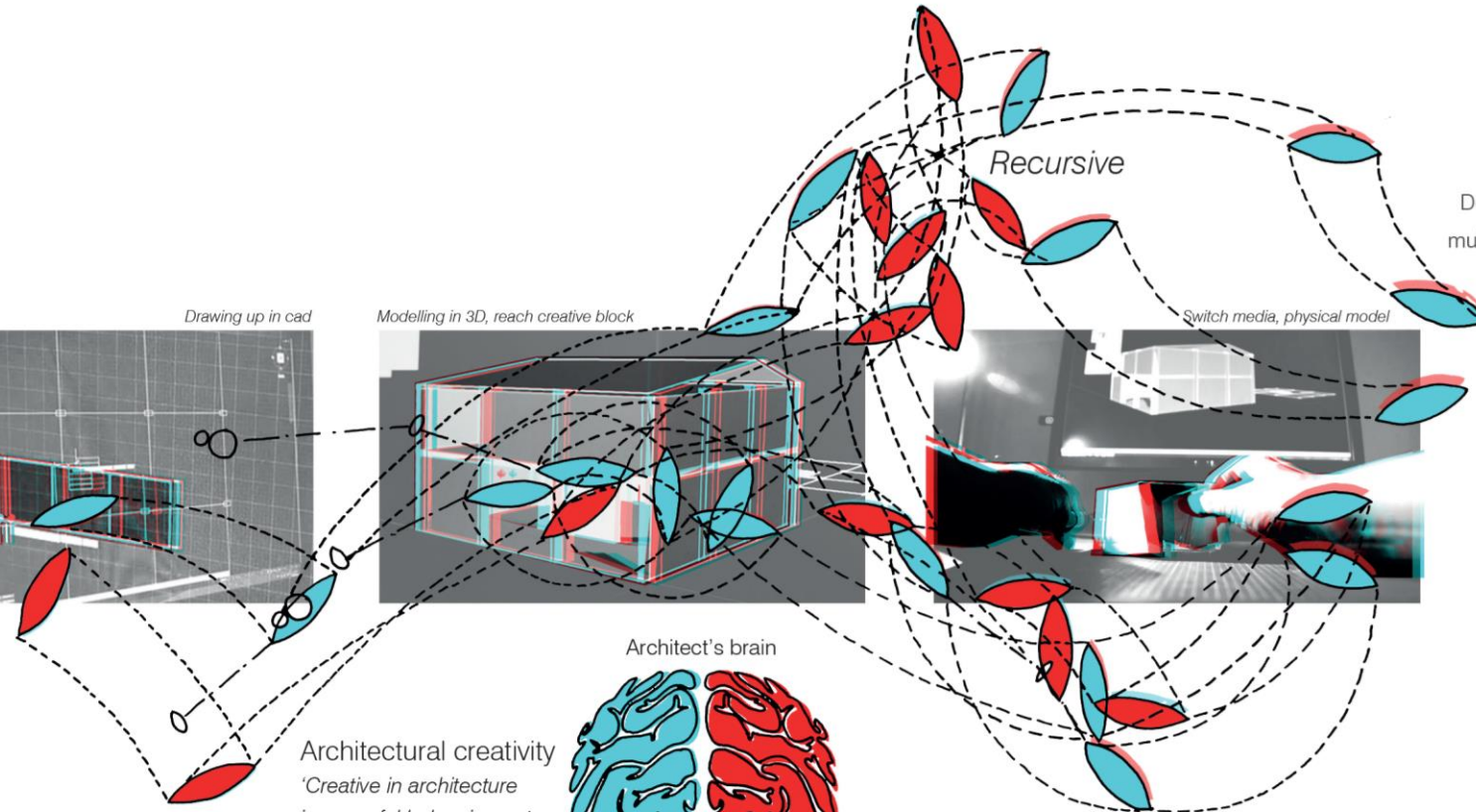
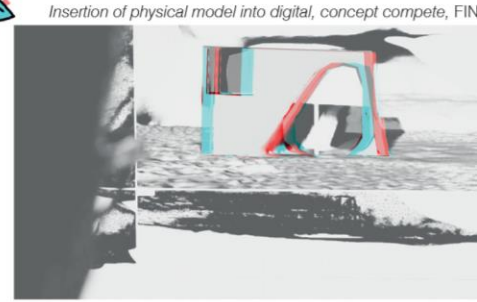
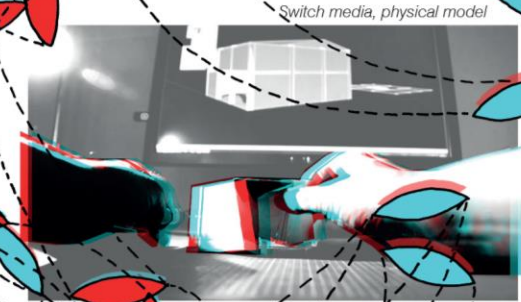
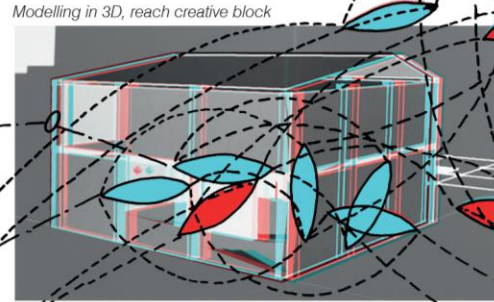
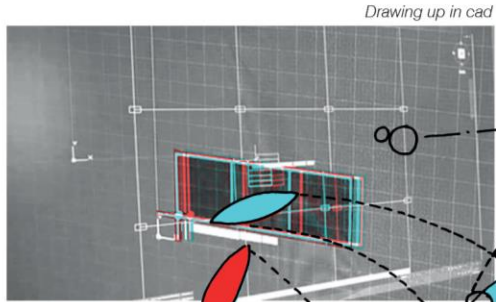
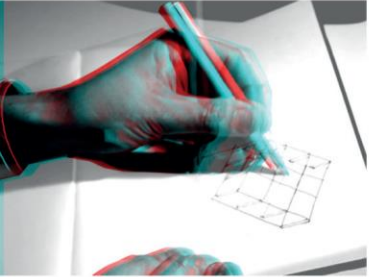
### Convergent thinking

designer takes an initial question and then uses logical steps to come to an answer.

Guilford, J. P. (1967). *The nature of human intelligence*

### Design process diagram

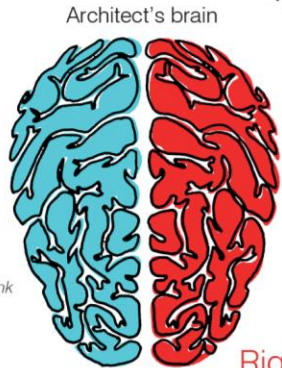
Start, Initial sketch of house



### Divergent thinking

Designer starts with a question and then uses multiple approaches to explore multiple answers

Guilford, J. P. (1967). *The nature of human intelligence*



Architectural creativity  
 'Creative in architecture is a careful balancing act between convergent and divergent thinking.'

Lawson, B. (2006) *How designers think*

Diagram abstracted from Ariel Greis, RIBA presidents medials submission 1998



Left logic  
 Convergent

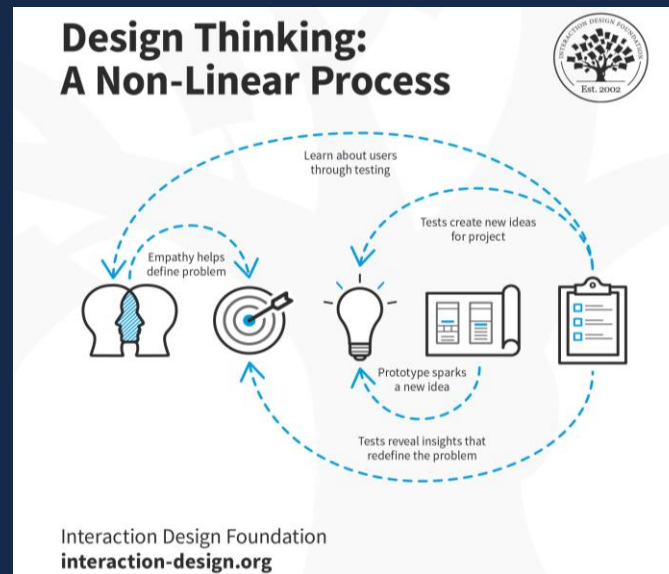
Right creative  
 Divergent





Nigel Cross refers to **design thinking** as being “inherent within human cognition; it is a key part of what makes us human”.

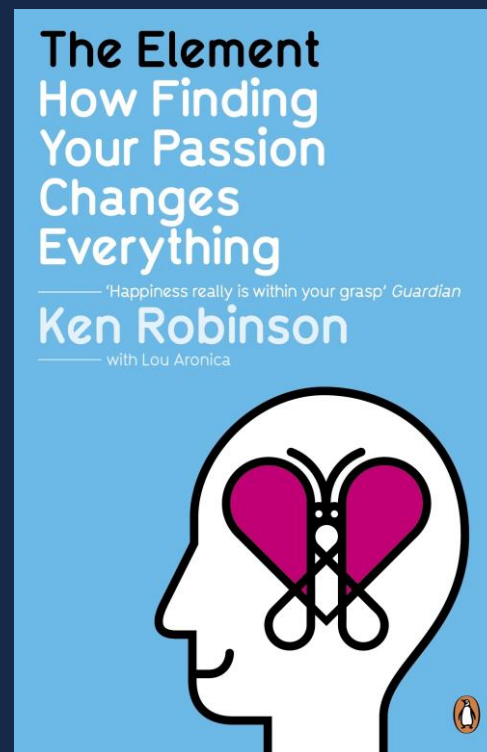
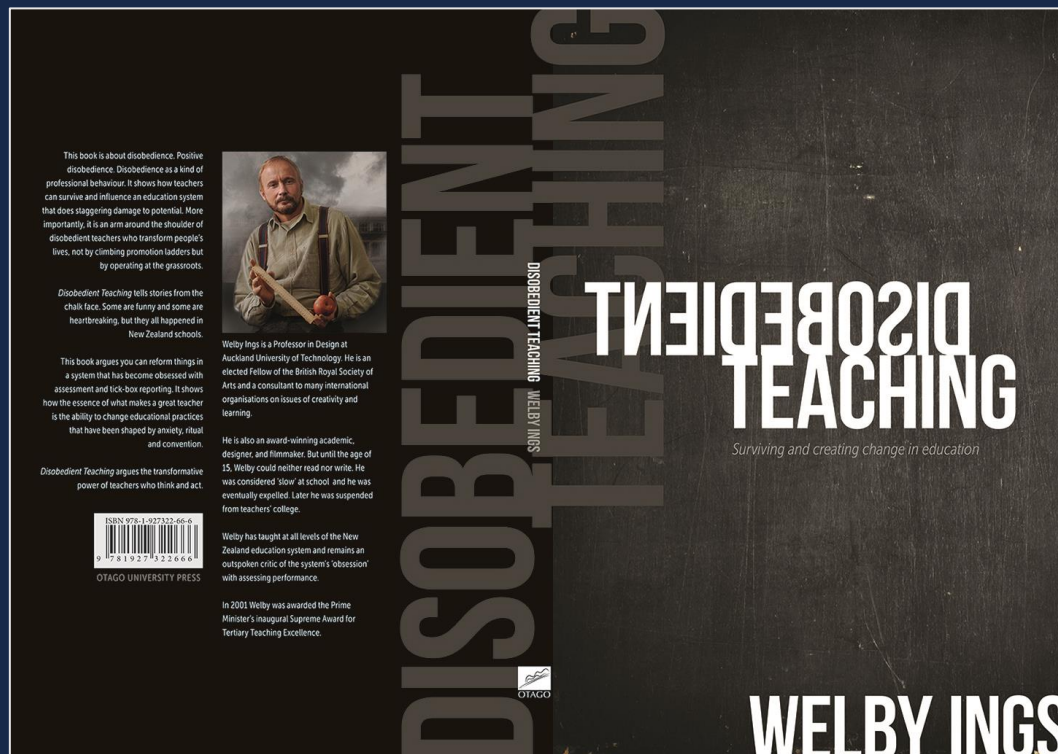
**Designers** do not approach each design problem anew, rather they **bring their own motivations, beliefs, values and attitudes** (Lawson, 2005; Lawson, 2007) that is likely to grow and change as a designer develops.



In the current New Zealand Technology Curriculum, design thinking is seen as supporting “**students to be innovative, reflective and critical in designing**” (Ministry of Education, 2017, p. 1).

The process of design thinking can be **iterative, introspective and deeply personal** (de Vries, 2012).

‘planting seeds’



BOOKS

# L1DVC LEARNING IN 2024

## LEARNING FROM THE (MINI)PILOT

# THE **FOUR** ACHIEVE- MENT STANDARDS (2022-24)

ONE STANDARD is about **influences on design ideas** (DVC 1.1)

ONE STANDARD is about **representation techniques** (DVC 1.2)

ONE STANDARD on **developing design ideas** (DVC 1.3)

ONE STANDARD on **instrumental drawings** (DVC 1.4)

ALL are worth the same number of credits (5 credits)



# OVERALL REFLECTIONS:

(from the 2022 mini-pilot & 2023 pilot)

## SOME NOTABLE CHANGES (based on **doing all four standards**):

- by starting with generating ideas, students get to engage with **creative thinking immediately** and **to learn about different perspectives** (as well as their own)
- **all modes of visual communication for designing available** for students (not just prioritising freehand sketching)
- the **purpose of developing ideas for people** to the fore (as opposed to just working through stages of a design process)
- instrumental drawings require students to understand **the technical details of their design outcomes** (not just applying the methods and conventions of different drawing systems)
- focus on **representation techniques** in themselves (rather than composition principles and layout)
- students learn to **curate their own work**

Our preferred programme **for 2024 at our school\*** would be to **offer two of the four DVC standards** (AS92000 – DVC 1.1 Int. and AS92002 – DVC 1.3 Ext.)

(\* urban Decile 10 coeducational school)

ACADEMIC YEAR

SCHOOL A

SCHOOL B

SCHOOL C

TERM ONE

**PROJECT ONE**  
**School Shade Structure\***  
 (7 weeks)  
 92000 (DVC 1.1)  
 Due Term One week 10

**PROJECT ONE**  
**Outdoor Shelter & Seating Area\***  
 (8 weeks)  
 92000 (DVC 1.1)  
 Due Term Two week 2

**PROJECT ONE**  
**Local Seating\***  
 (8 weeks)  
 92000 (DVC 1.1)  
 Due Term Two week 1

TERM TWO

**PROJECT TWO**  
**Outdoor Chair**  
 (12 weeks)  
 92002 & 92003 (DVC 1.3 & 1.4)  
 Due Term Three week 4

**PROJECT TWO**  
**Cosmetics Container**  
 (9 weeks)  
 92002 (DVC 1.3)  
 Due Term Three week 2

**PROJECT TWO**  
**School Showcase\***  
 (8 weeks)  
 92001 (DVC 1.2)  
 Due Term Three week 2

TERM THREE

**PROJECT THREE**  
**School Showcase\***  
 (7 weeks)  
 92001 (DVC 1.2)  
 Due Term Four week 2

**PROJECT THREE**  
**Final Representation\*** (either Spatial or Product)  
 (5 weeks)  
 92001 (DVC 1.2)  
 Due Term Three week 7

**PROJECT THREE**  
**Electric Vehicle Charging Station**  
 (10 weeks)  
 92002 & 92003 (DVC 1.3 & 1.4)  
 Due Term Two week 1

TERM FOUR

**PROJECT FOUR**  
**Instrumentals** (either Spatial or Product)  
 (4 weeks)  
 92003 (DVC 1.4)  
 Due Term Three week 3

\*(based on NCEA Education Activity)

BIG IDEAS :

improving people's lives

divergent & convergent thinking

own designer voice

product & spatial design

visual literacy skills

# L1DVC LEARNING IN 2024

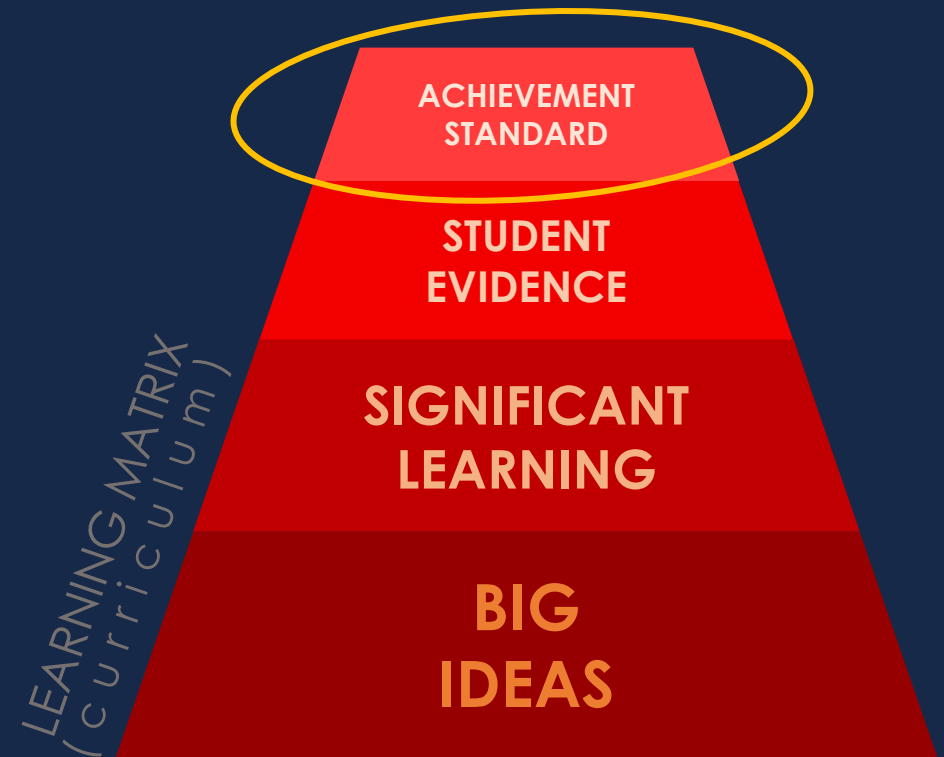
## TAKAPUNA GRAMMAR CONTEXT

At Takapuna Grammar it was decided by SLT to **reduce the number of credits for every new Level One courses in 2024** – subjects would offer two or three standards, with two standards (an Internal and an External) being the preference.

This was a conscious shift of emphasis from assessment towards **learning**.

*(Knowing that for almost every one of our students the minimum aim is to pass Level Two.)*

In the Technology Faculty, the three DVC/MPT courses all chose to offer **two Achievement Standards for 2024 ...**



The three Level One DVC/MPT courses offered at Takapuna Grammar:

## PRODUCT DESIGN

### **92001 (DVC 1.2)**

Use representation techniques to visually communicate own product or spatial design outcome

### **92015 (MPT 1.4)**

Demonstrate understanding of techniques selected for a feasible Materials and Processing Technology outcome

**THREE CLASSES: 78 students**  
– 33 students (42%) not done the subject in Year 10

## SPATIAL DESIGN

### **92000 (DVC 1.1)**

Generate product or spatial design ideas using visual communication techniques in response to design influences

### **92002 (DVC 1.3)**

Develop product or spatial design ideas informed by the consideration of people

**TWO CLASSES: 50 students**  
– 33 students (66%) not done the subject in Year 10

## TEXTILES DESIGN

### **92013 (MPT 1.2)**

Experiment with different materials to develop a Materials and Processing Technology outcome

### **92015 (MPT 1.4)**

Demonstrate understanding of techniques selected for a feasible Materials and Processing Technology outcome

**TWO CLASSES: 46 students**  
– 23 students (50%) not done the subject in Year 10



The projects for each of the three Level One DVC/MPT courses offered:

## PRODUCT DESIGN

### UNIT ONE

Develop a concept through model making from a choice of three projects: a chair; a light; a mechanical device that can make a noise or carry out an action

### UNIT TWO

Taking their learning and exploring from the detailed model outcome, develop a full-size functioning product. The outcome will be the focus of a school exhibition to round out the unit

## SPATIAL DESIGN

### P1: RACK for Audio

Explore ideas for an audio rack in response to a range of influences

### P2: STRUCTURE for Shade

Explore ideas for a shade structure in response to te ao Māori and another design influence

### P3: BOX for Letters

Design a letterbox considering its aesthetic and functional details

### P4: SEAT for Outdoors

Design a seat suitable for an outside entertainment area suited for the use and activities in that location

## TEXTILES DESIGN

*“Habitats”*

### 1: Drop Dead Thread

Machine knowledge and basic skills

### 2: Garment Bag

Basic procedures using textiles materials

### 3: Community Project

Fairy abodes – accommodation for the fae

### 4: Couture

TBC – *not assessed*

### 5: Revision & Writing

Explain and evaluate understanding of selected techniques for an authentic and feasible outcome

**LEVEL ONE**

**SPATIAL DESIGN**

**TAKAPUNA GRAMMAR SCHOOL 2024**

The **Takapuna Grammar SPATIAL DESIGN programme** is committed to fostering a **positive and productive learning ecology.**

The Department is keen in facilitating a

**culture of independent, proactive and resilient learning**

in the context of design, creativity and architecture through the **Design and Visual Communication Curriculum and its Big Ideas.**

## Technology Learning Area Whakatauki

Design, as an act of manaakitanga, seeks new ways to improve the lives of people and their places

Design tikanga weaves together both divergent and convergent thinking in the generation, exploration, refinement, and resolving of design ideas and outcomes

Designers bring their own unique voice that draws from their personal experiences, cultures, values, perspectives as well as those of other people

Design has a whakapapa – heritage, philosophies, knowledges, both functional and aesthetic, in relation to product and spatial design

Visual communication is a set of visual literacy skills that allow designers to think about, evaluate and appropriately present product and spatial design ideas and outcomes

Level Six DVC Significant Learning

*'Good architecture is like a piece of beautifully composed music crystallised in space that elevates our spirits beyond the limitation of time.'*  
- Tao Ho

level 1 2024

**spatial design**  
takapuna grammar

# the LTSD programme: (learning to design)

Students undertake a **four-part full-year programme** that covers **learning how to apply divergent thinking, convergent thinking, and the visual communicating of design thinking and ideas.**

## part one: RACK for AUDIO [TERM ONE]

You are **generating a range of creative ideas** for storing a audio system and vinyl records. You will use a range of visual communication modes and media and a range of ideation strategies.

## part two: STRUCTURE for SHADE [TERM ONE – TERM TWO]

You are **generating and exploring ideas** for a shade structure outside Te Poho at Takapuna Grammar School. Your ideas will be **in response to te ao Māori and another design influence.**

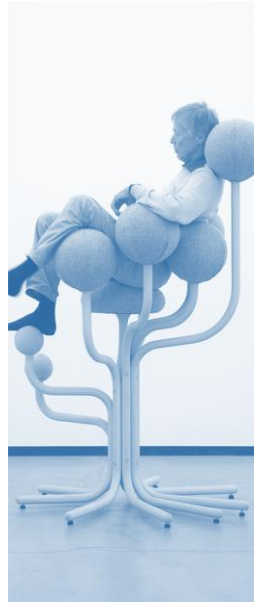
## part three: BOX for LETTERS [TERM TWO]

You are **designing a letter box for storing mail** (letters, newspapers and small packages). Your ideas will be inspired by concepts in architecture.

## part four: SEAT for OUTDOORS [TERM THREE – TERM FOUR]

You are **designing outdoor seating** suitable for **your identified outdoor area** (e.g. café, barbeque area, deck, beach, park, etc.) The seat is to suit the specific requirements of a specified setting and be suitable for **general outdoor use for that location.**

You are to also communicate the construction and assembly details of your outdoor chair design outcome using 2D and 3D instrumental drawings.



*globe garden  
chair  
- peter opsvik*

level 1 2024

**spatial  
design**  
takapuna grammar

TERM ONE

PROJECT ONE

**RACK for audio (5 weeks)**  
Due Term One week 8

**ALL ABOUT LEARNING**  
(self-assessment)



PROJECT TWO

**STRUCTURE for shade (8 weeks)**

**ONE INTERNAL STANDARD: 92000 (DVC 1.1)**

Due Term Two week 6



TERM TWO

PROJECT THREE

**BOX for letters (3 weeks)**  
Due Term Two week 10

**ALL ABOUT LEARNING**  
(self-assessment)



TERM THREE

PROJECT FOUR

**SEAT for outdoors (9 weeks)**

**ONE EXTERNAL STANDARD: 92002 (DVC 1.3)**

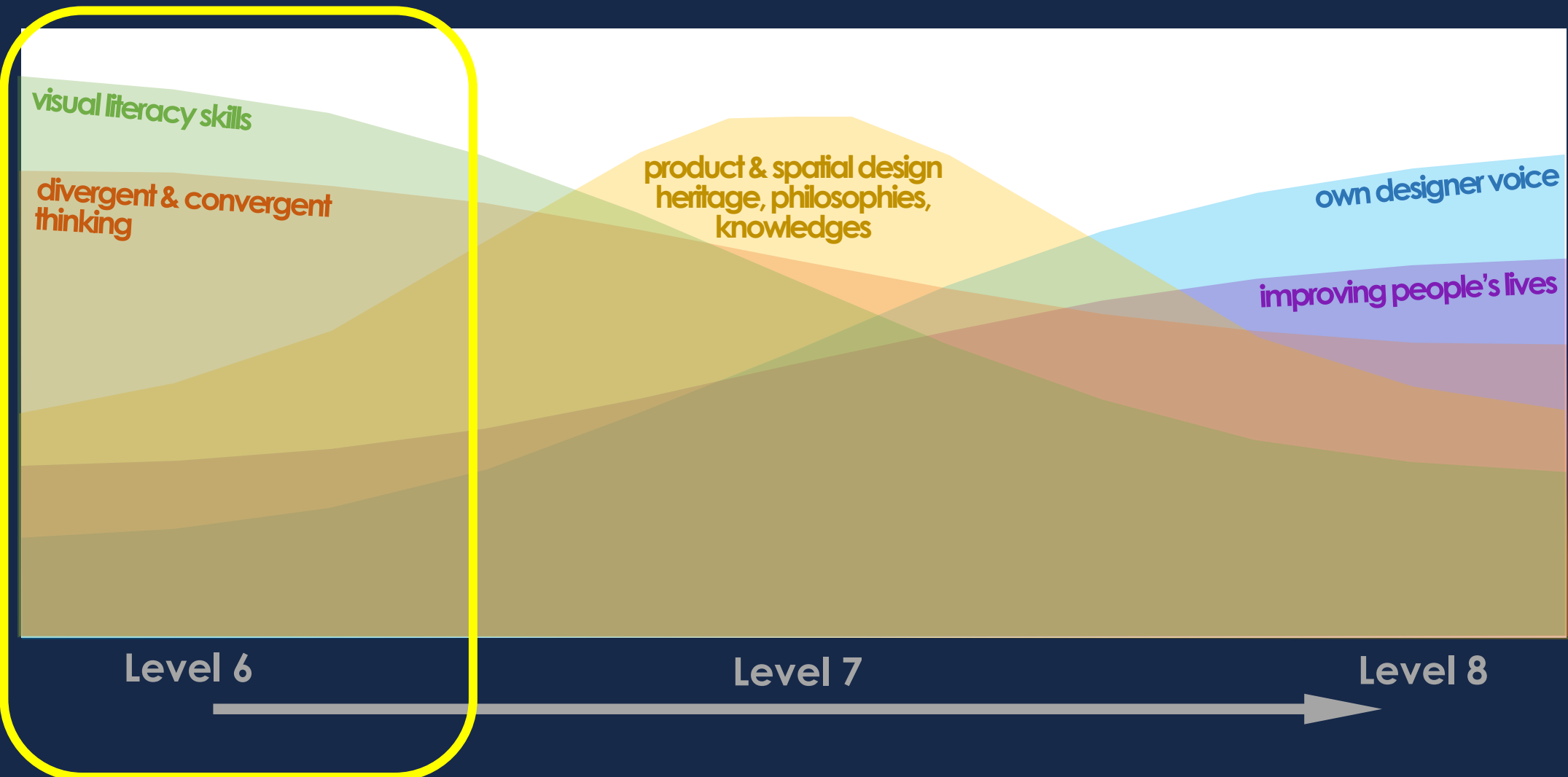
Due Term Four week 1



SCHOOL EXAMS

TERM FOUR





# DESIGN AND VISUAL COMMUNICATION

## BIG IDEAS – A PROGRESSION SCENARIO

**LEVEL ONE**

**SPATIAL DESIGN**

**STARTING WITH SELF-ASSESSMENT**

**“The drawing were a good starting point to give me a picture of what I imagined my audio rack to look like. The glass had an unusual shap to it and looked like it was thrown on. The midde parts didn't connect and the colour wasn't how I invishined.”**

**Starting point 1, I was able to make a range of different ideas from all aspects of the Ellen gray side table, including ideas from close-up details. Starting Point 2 was also successfull at generating creative ideas and creating interesting shapes that are innovative. In starting point 3 i did have some creative shapes but rather I believe I was less successful at the last one most likey due to not looking at a good enough varity of insperation pictures.**

TERM ONE

PROJECT ONE

**RACK for audio** (5 weeks)  
Due Term One week 8

**ALL ABOUT LEARNING**  
(self-assessment)



PROJECT TWO

**STRUCTURE for shade** (8 weeks)  
**ONE INTERNAL STANDARD: 92000** (DVC 1.1)  
Due Term Two week 6



TERM TWO

PROJECT THREE

**BOX for letters** (3 weeks)  
Due Term Two week 10

**ALL ABOUT LEARNING**  
(self-assessment)



TERM THREE

PROJECT FOUR

**SEAT for outdoors** (9 weeks)  
**ONE EXTERNAL STANDARD: 92002** (DVC 1.3)  
Due Term Four week 1



SCHOOL EXAMS

TERM FOUR

# project://one/RACK (for audio)

## activity summary:

**Generate and explore a range of ideas** for an audio rack unit for storing vinyl records and a HiFi set up. Your ideas will be **in response to a range of design influences**.

## considerations:

You will generate and explore a range of ideas for an audio rack unit, that will accommodate at least 100 records, and a turn table system, inspired by:

1. An iconic piece of furniture
2. An iconic piece of audio equipment
3. The work of an influential product designer



*'Good design  
is making  
something  
intelligible and  
memorable.'*

*'Great design is  
making  
something  
memorable and  
meaningful'  
- Dieter  
Rams*

level 1 2024

**spatial  
design**  
takapuna grammar



# project requirements:

In working through this assignment you will need to consider and carry out the following:

**Starting Point ONE: An iconic piece of furniture** (week 3)

~~**Starting Point TWO: An iconic piece of audio equipment** (week 4)~~

**Starting Point THREE: A design from an influential product designer** (week 5)

## **For EACH of the Starting Points (above):**

- **Engage** with ONE selected design – gathering a range of images (different views, drawings, close up details, etc.) and very brief written information  
*[1 SLIDE]*
- **Generate** at least FIVE starting ideas. **Experiment with ideas** (3D forms, 2D shapes/patterns, materials, etc.) **influenced by your furniture**  
*[1-2 SLIDES]*

*What are the characteristics of these images that capture your attention?*

- Use at least TWO visual communication modes (hand drawing, paper modelling, digital modelling) to help **explore quick ideas**.



level 1 2024

spatial  
design  
takapuna grammar

**Starting Point ONE:**

An iconic piece of furniture

(week 3)

**Starting Point TWO:**

An iconic piece of audio equipment

(week 4)

**Starting Point THREE:**

A design from an influential product designer

(week 5)

**ENGAGE:** (1 slide)

images  
+ text

images  
+ text

images  
+ text

**GENERATE:** (1-2 slides)

starting  
ideas

starting  
ideas

starting  
ideas



**REFLECTION:** we will only do two starting points (iconic furniture & influential product designer) next year and focus more time on extending ideas

chair



coffee table



side table



Start Point ONE:

iconic  
furniture

blue and red  
chair

noguchi  
coffee table

eileen gray  
side table

alto  
tea cart

tizio  
desk lamp

barcelona  
day bed

level 1 2024



spatial  
design  
takapuna grammar

tea cart



desk lamp



day bed







eames



jalk



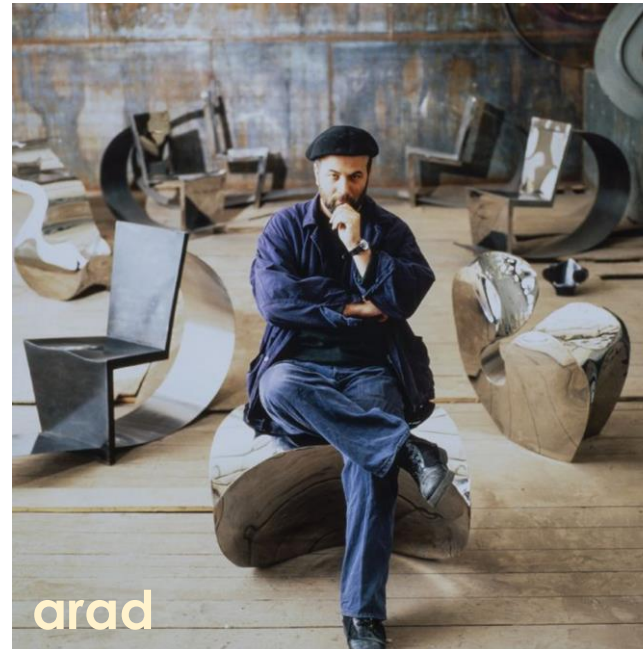
rams



lovegrove



rashid



arad

## Start Point THREE: influential designers

charles and ray  
eames

grete  
jalk

dieter  
rams

ross  
lovegrove

karim  
rashid

ron  
arad

level 1 2024

spatial  
design  
takapuna grammar

## project requirements: (continued)

In working through this assignment you will need to consider and carry out the following:

### Extending your ideas further (week 6)

**Extend some of your preferred ideas** further by experimenting with them to find out how they could be used as an audio rack for vinyl records and a turntable system.

[2-3 SLIDES]

*You might extend the ideas separately or you may combine them together.*

### Present your design outcome (week 7)

**Use visual communication techniques to visually explain your concluding idea** showing its details and overall design from different viewpoints.

Communicate the form, materials, colour, size, and details of your design.

[1-2 SLIDES]

*Think about the functions of storage while retaining aspects of your starting points.*

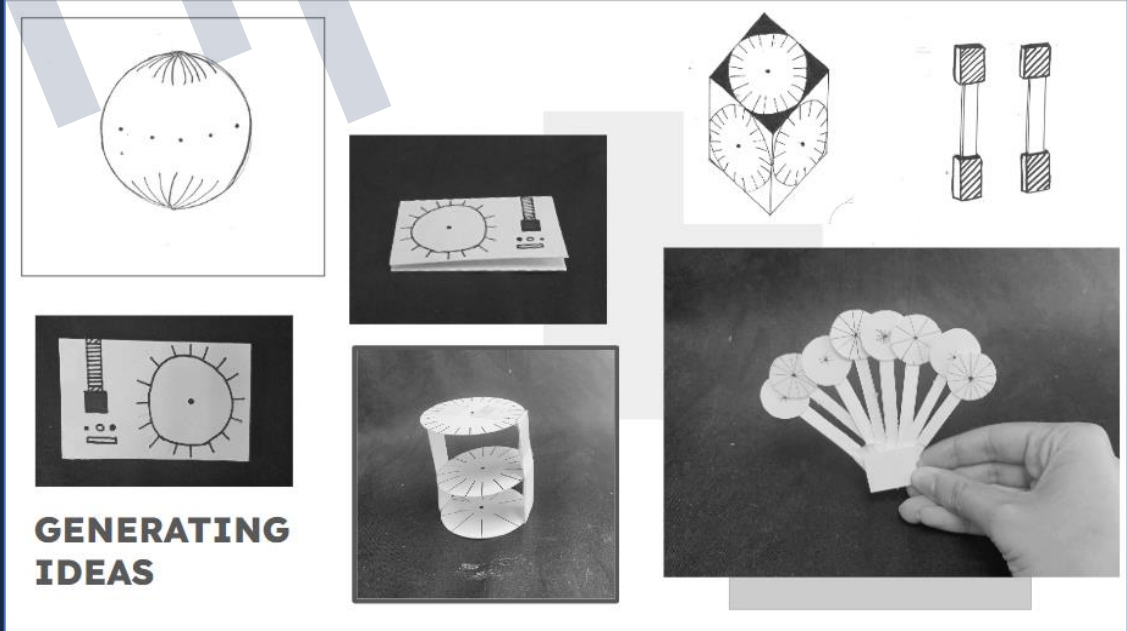
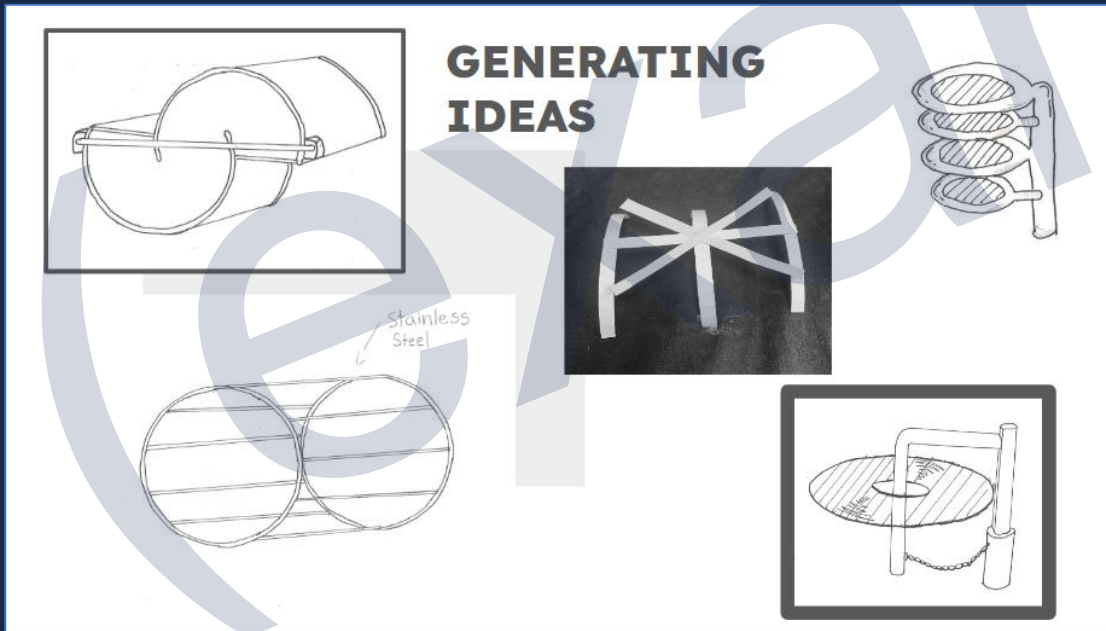




## Level One Spatial Design 2024 - Project One: RACK for audio

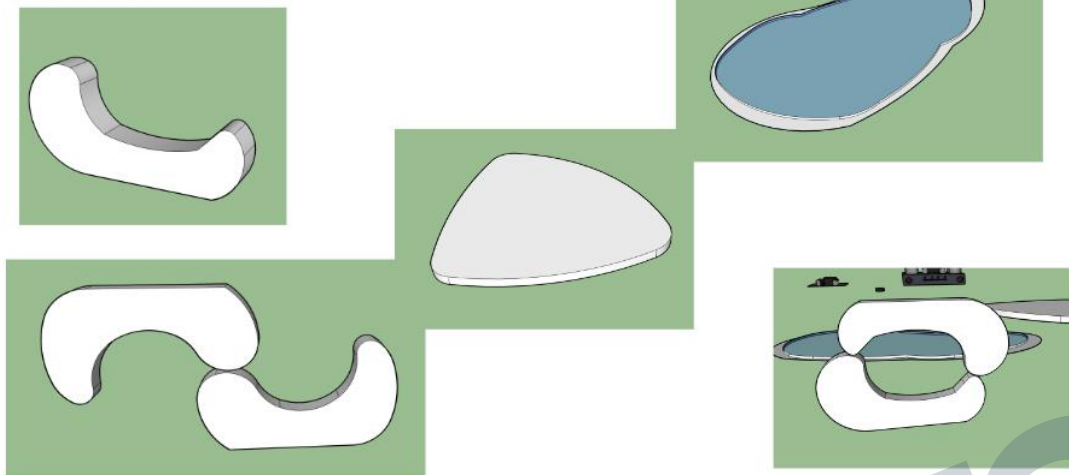
### Assessment Rubric (for self assessment)

NAME:		DATE:					
Activity	Grade (select 1)	Activity	Grade (select 1)	Activity	Grade (select 1)	OVERALL (select 1)	
<b>Starting Point 1: iconic furniture</b>		<b>Starting Point 2: iconic audio gear</b>		<b>Starting Point 3: work of a famous designer</b>			<i>(ave. best two SP results)</i>
For E; you have used a <b>range of methods of experimentation</b> to create <b>creative</b> starting ideas that are <b>innovative or original responses</b> to the design influence	E	For E; you have used a <b>range of methods of experimentation</b> to create <b>creative</b> starting ideas that are <b>innovative or original responses</b> to the design influence	E	For E; you have used a <b>range of methods of experimentation</b> to create <b>creative</b> starting ideas that are <b>innovative or original responses</b> to the design influence	E	E	
For M; you have used <b>experimentation</b> to create <b>some creative</b> starting ideas that <b>respond</b> to the design influence	M	For M; you have used <b>experimentation</b> to create <b>some creative</b> starting ideas that <b>respond</b> to the design influence	M	For M; you have used <b>experimentation</b> to create <b>some creative</b> starting ideas that <b>respond</b> to the design influence	M	M	
For A; you have generated <b>different</b> starting ideas that <b>relate</b> to the design influence	A	For A; you have generated <b>different</b> starting ideas that <b>relate</b> to the design influence	A	For A; you have generated <b>different</b> starting ideas that <b>relate</b> to the design influence	A	A	
For N; you have generated <b>similar</b> starting ideas that <b>do not relate</b> to the design influence	N	For N; you have generated <b>similar</b> starting ideas that <b>do not relate</b> to the design influence	N	For N; you have generated <b>similar</b> starting ideas that <b>do not relate</b> to the design influence	N	N	
<b>Reasons for judgements:</b>							
<b>Extending your design ideas*</b>						<b>OVERALL (select 1)</b>	
<i>* design ideas are audio racks for a turntable, records, etc.</i>							<i>(carry across your result)</i>
For E; you have extended <b>new</b> design ideas, incorporating function and aesthetics, through <b>divergent thinking</b> and reflection/decision making that <b>creatively</b> responds on the design influences	E					E	
For M; you have <b>extended</b> design ideas, <b>incorporating function and aesthetic considerations</b> , through reflection/decision making that <b>responds</b> on the design influences	M					M	
For A; you have <b>added more</b> design ideas with <b>some reflection/decision making</b> that <b>relates</b> on the design influences	A					A	
For N; you have <b>not added any more</b> design ideas or if so, they <b>do not relate</b> to the design influences	N					N	
<b>Reasons for judgements:</b>							
<b>Finalising your design ideas*</b>						<b>OVERALL (select 1)</b>	
<i>* design ideas are audio racks for a turntable, records, etc.</i>							<i>(carry across your result)</i>
For E; you have clearly shown a final design in terms of its features and <b>key details that relate to the design influences</b>	E					E	
For M; you have shown a final design from more than one viewpoint to show its <b>overall design in terms of its features</b> (form, function, materials, colour and sizes)	M					M	
For A; you have <b>shown</b> a final design from <b>more than one viewpoint</b>	A					A	
For N; you have <b>not shown</b> a final design with any suitable drawings	N					N	
<b>Reasons for judgements:</b>							

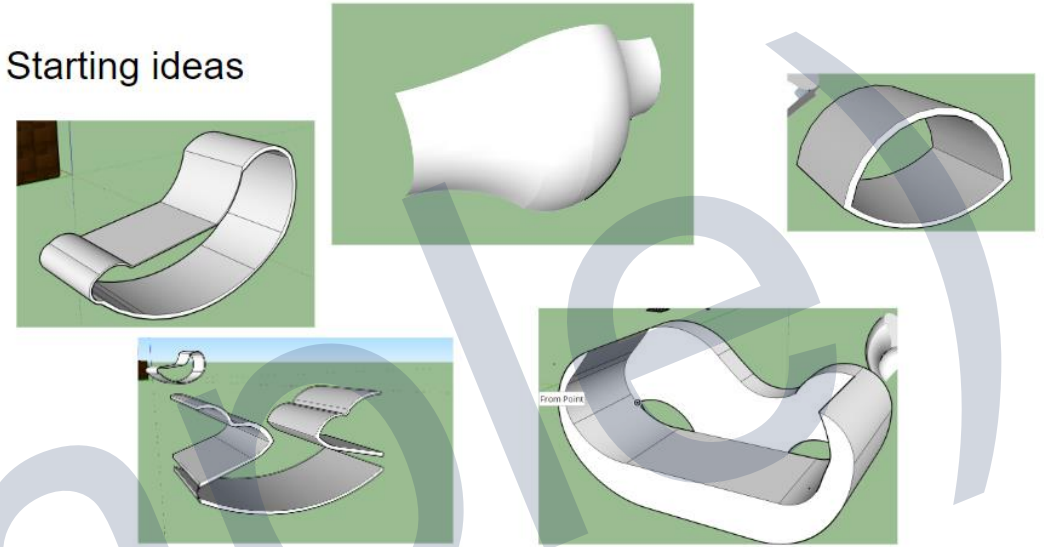




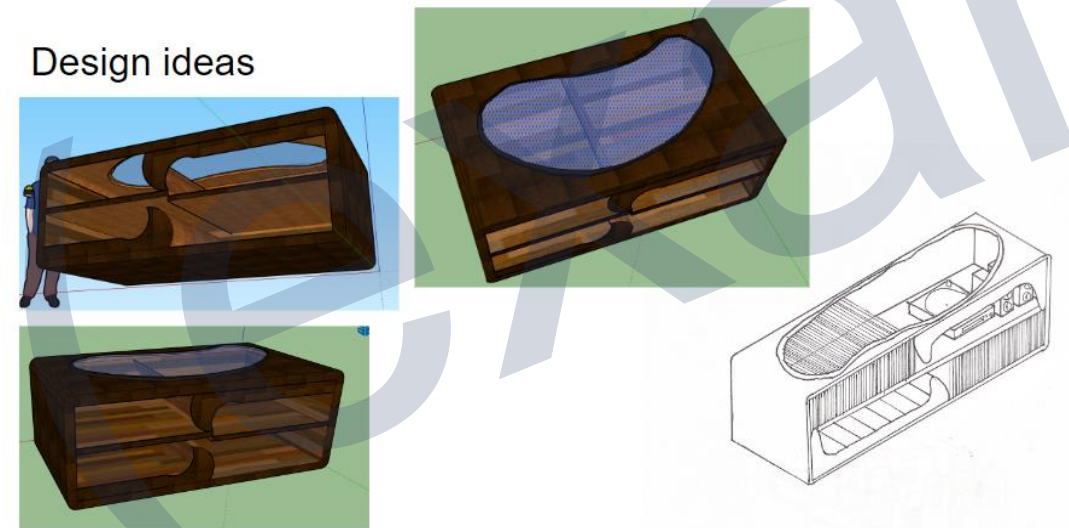
### Starting ideas



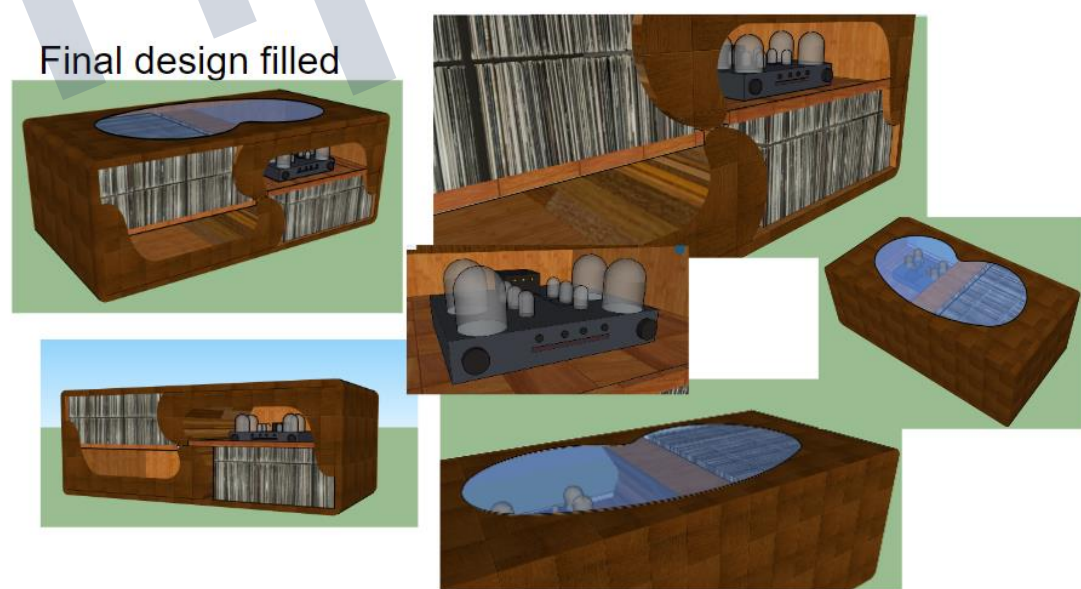
### Starting ideas



### Design ideas



### Final design filled



Level One Spatial Design 2024 - Project One: RACK for audio						
Assessment Rubric (for self assessment)						
NAME:	DATE:					
Activity	Grade (select 1)	Activity	Grade (select 1)	Activity	Grade (select 1)	OVERALL (select 1)
<b>Starting Point 1: Iconic furniture</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	<b>Starting Point 2: Iconic audio gear</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	<b>Starting Point 3: work of a famous designer</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	(ave. best two SP results) E M A N
<b>Reasons for judgements:</b> Starting point 1, I was able to make a range of different ideas from all aspects of the Ellen gray side table, including ideas from close up details. Starting Point 2 was also successful at generating creative ideas and creating interesting shapes that are innovative. In starting point 3 I did have some creative shapes but rather I believe I was less successful at the last one most likely due to not looking at a good enough variety of inspiration pictures.						OVERALL (select 1) (carry across your result) E
<b>Extending your design ideas*</b> For E: you have extended new design ideas, incorporating function and aesthetics, through divergent thinking and reflection/decision making that creatively responds on the design influences For M: you have extended design ideas, incorporating function and aesthetic considerations, through reflection/decision making that responds on the design influences For A: you have added more design ideas with some reflection/decision making that relates on the design influences For N: you have not added any more design ideas or if so, they do not relate to the design influences						OVERALL (select 1) (carry across your result) E M A N
<b>Reasons for judgements:</b> With my extended ideas it was clearly shown on how I incorporated my generating ideas, shading and function that relates to audio racks and my design influences.						OVERALL (select 1) (carry across your result) E
<b>Finalising your design ideas*</b> For E: you have clearly shown a final design in terms of its features and key details that relate to the design influences For M: you have shown a final design from more than one viewpoint to show its overall design in terms of its features (form, function, materials, colour and sizes) For A: you have shown a final design from more than one viewpoint For N: you have not shown a final design with any suitable drawings						OVERALL (select 1) (carry across your result) E M A N
<b>Reasons for judgements:</b> My final design was clearly shown and thought out and shown in many perspectives. There are key changes from my chosen extended idea within the draft/alternations. A close up view of new implemented details and use of items and examples of what could be used in my final design.						

Level One Spatial Design 2024 - Project One: RACK for audio						
Assessment Rubric (for self assessment)						
NAME:	DATE:					
Activity	Grade (select 1)	Activity	Grade (select 1)	Activity	Grade (select 1)	OVERALL (select 1)
<b>Starting Point 1: Iconic furniture</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	<b>Starting Point 2: Iconic audio gear</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	<b>Starting Point 3: work of a famous designer</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	(ave. best two SP results) E M A N
<b>Reasons for judgements:</b> All of the starting ideas have a creative and different theme to each other and relate to the design. They all come together and look well placed together. The designers starting ideas was the hardest but came up with good starting points of it. The connecting starting idea was one of the best because it showed a connecting between the 2 pieces of the noguchi table.						OVERALL (select 1) (carry across your result) E M A N
<b>Extending your design ideas*</b> For E: you have extended new design ideas, incorporating function and aesthetics, through divergent thinking and reflection/decision making that creatively responds on the design influences For M: you have extended design ideas, incorporating function and aesthetic considerations, through reflection/decision making that responds on the design influences For A: you have added more design ideas with some reflection/decision making that relates on the design influences For N: you have not added any more design ideas or if so, they do not relate to the design influences						OVERALL (select 1) (carry across your result) E M A N
<b>Reasons for judgements:</b> The drawing were a good starting point to give me a picture of what I imagined my audio rack to look like. The glass had an unusual shape to it and looked like it was thrown on. The middle parts didn't connect and the colour wasn't how I envisioned.						OVERALL (select 1) (carry across your result) E M A N
<b>Finalising your design ideas*</b> For E: you have clearly shown a final design in terms of its features and key details that relate to the design influences For M: you have shown a final design from more than one viewpoint to show its overall design in terms of its features (form, function, materials, colour and sizes) For A: you have shown a final design from more than one viewpoint For N: you have not shown a final design with any suitable drawings						OVERALL (select 1) (carry across your result) E M A N
<b>Reasons for judgements:</b> The aesthetics have improved by the colour of the audio rack. The front design had included starting idea of Arads design, improving the look and keeping the same connection as the noguchi table. The glass became more symmetrical and held in place by the other half of the table.						

Level One Spatial Design 2024 - Project One: RACK for audio						
Assessment Rubric (for self assessment)						
NAME:	DATE:					
Activity	Grade (select 1)	Activity	Grade (select 1)	Activity	Grade (select 1)	OVERALL (select 1)
<b>Starting Point 1: Iconic furniture</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	<b>Starting Point 2: Iconic audio gear</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	<b>Starting Point 3: work of a famous designer</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	(ave. best two SP results) E M A N
<b>Reasons for judgements:</b> I gave my self A on the iconic furniture piece as I could of had better designs that related more to noguchis Coffee.						OVERALL (select 1) (carry across your result) E M A N
<b>Extending your design ideas*</b> For E: you have extended new design ideas, incorporating function and aesthetics, through divergent thinking and reflection/decision making that creatively responds on the design influences For M: you have extended design ideas, incorporating function and aesthetic considerations, through reflection/decision making that responds on the design influences For A: you have added more design ideas with some reflection/decision making that relates on the design influences For N: you have not added any more design ideas or if so, they do not relate to the design influences						OVERALL (select 1) (carry across your result) E M A N
<b>Reasons for judgements:</b> I felt that my starting designs incorporated all the things to get this grade						OVERALL (select 1) (carry across your result) E M A N
<b>Finalising your design ideas*</b> For E: you have clearly shown a final design in terms of its features and key details that relate to the design influences For M: you have shown a final design from more than one viewpoint to show its overall design in terms of its features (form, function, materials, colour and sizes) For A: you have shown a final design from more than one viewpoint For N: you have not shown a final design with any suitable drawings						OVERALL (select 1) (carry across your result) E M A N
<b>Reasons for judgements:</b> I think that my final design incorporated all the standards merit incorporated						

Level One Spatial Design 2024 - Project One: RACK for audio						
Assessment Rubric (for self assessment)						
NAME:	DATE:					
Activity	Grade (select 1)	Activity	Grade (select 1)	Activity	Grade (select 1)	OVERALL (select 1)
<b>Starting Point 1: Iconic furniture</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	<b>Starting Point 2: Iconic audio gear</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	<b>Starting Point 3: work of a famous designer</b> For E: you have used a range of methods of experimentation to create creative starting ideas that are innovative or original responses to the design influence For M: you have used experimentation to create some creative starting ideas that respond to the design influence For A: you have generated different starting ideas that relate to the design influence For N: you have generated similar starting ideas that do not relate to the design influence	E M A N	(ave. best two SP results) E M A N
<b>Reasons for judgements:</b> I gave myself a merit because my design looked like my iconic furniture						OVERALL (select 1) (carry across your result) E M A N
<b>Extending your design ideas*</b> For E: you have extended new design ideas, incorporating function and aesthetics, through divergent thinking and reflection/decision making that creatively responds on the design influences For M: you have extended design ideas, incorporating function and aesthetic considerations, through reflection/decision making that responds on the design influences For A: you have added more design ideas with some reflection/decision making that relates on the design influences For N: you have not added any more design ideas or if so, they do not relate to the design influences						OVERALL (select 1) (carry across your result) E M A N
<b>Reasons for judgements:</b> I gave myself an achieved because I didnt extend my design						OVERALL (select 1) (carry across your result) E M A N
<b>Finalising your design ideas*</b> For E: you have clearly shown a final design in terms of its features and key details that relate to the design influences For M: you have shown a final design from more than one viewpoint to show its overall design in terms of its features (form, function, materials, colour and sizes) For A: you have shown a final design from more than one viewpoint For N: you have not shown a final design with any suitable drawings						OVERALL (select 1) (carry across your result) E M A N
<b>Reasons for judgements:</b> Because my design matched my iconic furniture						

**LEVEL ONE SPATIAL DESIGN**

**TWO ACHIEVEMENT STANDARDS**





assessments:

P1 – RACK for AUDIO

P2 – STRUCTURE for SHADE

P3 – BOX for LETTERS

P4 – SEAT for OUTDOORS

Internal

Self-assessment

AS92000 – DVC 1.1

Self-assessment

External

AS92002 – DVC 1.3

level 1 2024





TERM ONE

PROJECT ONE

RACK for audio (5 weeks)  
Due Term One week 8

ALL ABOUT LEARNING  
(self-assessment)



TERM TWO

PROJECT TWO

STRUCTURE for shade (8 weeks)  
ONE INTERNAL STANDARD: 92000 (DVC 1.1)  
Due Term Two week 6



PROJECT THREE

BOX for letters (3 weeks)  
Due Term Two week 10

ALL ABOUT LEARNING  
(self-assessment)



TERM THREE

PROJECT FOUR

SEAT for outdoors (9 weeks)  
ONE EXTERNAL STANDARD: 92002 (DVC 1.3)  
Due Term Four week 1



SCHOOL EXAMS

TERM FOUR

# project://two/STRUCTURE (for shade)

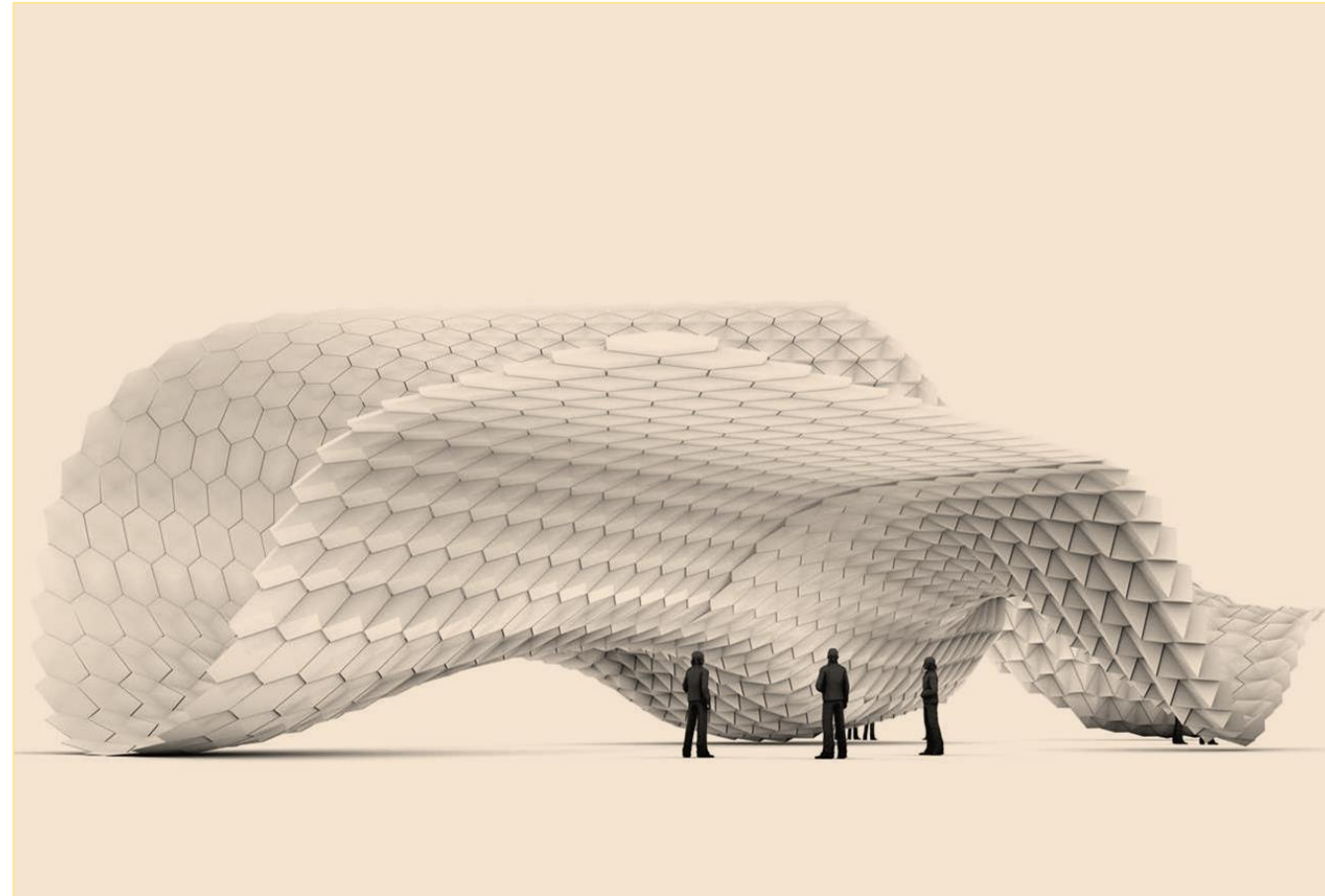
## activity summary:

**Generate and explore a range of ideas** for a shade structure on the grass area outside Te Poho at Takapuna Grammar School. Your ideas will be **in response to te ao Māori and another design influence.**

## what to do:

You will generate and explore a range of ideas for a shade structure on the site adjacent to Te Poho. Use both starting points below to help you to generate, experiment, and extend ideas.

- **Starting Point One:** The wharehau – nga whare tupuna (house of ancestors)
- **Starting Point Two:** The work of an architect



*'Space has always been the spiritual dimension of architecture.'*

*'It is not the physical statement of the structure so much as what it contains that moves us.'*

*- Arthur Erickson*

level 1 2024

spatial  
design  
takapuna grammar





location:





# project requirements:

In completing this assignment you will need to consider and carry out the following:

## Starting Point 1: The whakapapa, meaning and elements of the wharenuī

**1A: ENGAGE** with the origins, meaning and elements of the wharenuī, through researching and analysing at least TWO existing examples.

*Engaging with this understanding allows you to start thinking about how te ao Māori might influence your design ideas.*

**Identify and show aspects of TWO different wharenuī** (one traditional and one contemporary). These can be shown as **a collection of images** (photographs, drawings, details, etc.) with brief notes explaining your thinking and any decisions.

**1B: GENERATE** a range of starting ideas. **Experiment** with different 3D forms, materials, colour, patterns, etc.) **influenced by the wharenuī and images you have collected.**

*What are the characteristics of these images that capture your attention?*

*What are the cultural safety aspects to consider in using designs from te ao Māori?*

Use any visual techniques (sketching, modelling, digital) that will help you to **explore quick ideas.**

*The wharenuī should influence your form generation and give meaning to your ideas.*

level 1 2024



## project requirements: (continued)

In completing this assignment you will need to consider and carry out the following:

### Starting Point 2: The work of an architect

Choose **ONE** of the following architects:

Tadao Ando

Andrew Pattison

Mies van der Rohe

Zaha Hadid

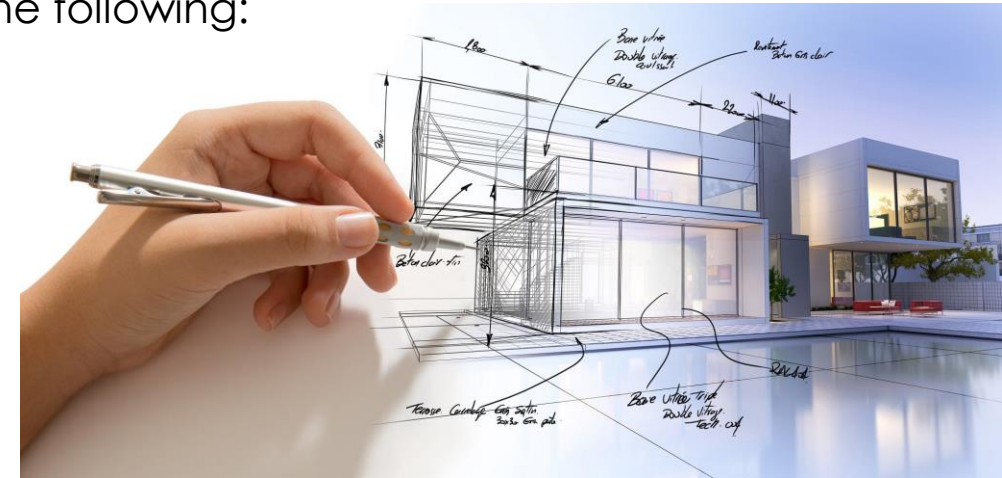
John Scott

Santiago Calatrava

Daniel Liberskind

Nicholas Dalton

Nicola & Lance Herbst



**2A: ENGAGE** with at least THREE examples of works designed by your chosen architect.

**Identify and show** aspects of their work that you would like to use for idea generation. These can be shown as **a collection of images** (photographs, drawings, details, etc.)

**2B: GENERATE** a range of starting ideas. **Experiment** with different 3D forms, materials, colour, patterns, etc.) **influenced by the architect's works and images you have collected.**

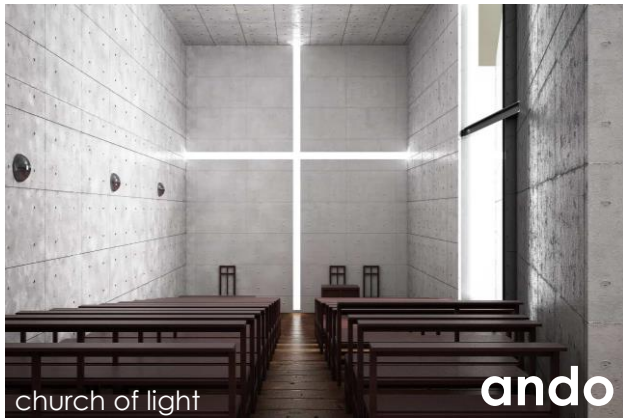
*What are the characteristics that capture your attention? Are these characteristics aesthetic, functional, spiritual, or metaphorical?*

Use any visual techniques (sketching, modelling, digital) that will help you to **explore quick ideas.**

level 1 2024

spatial  
design  
takapuna grammar





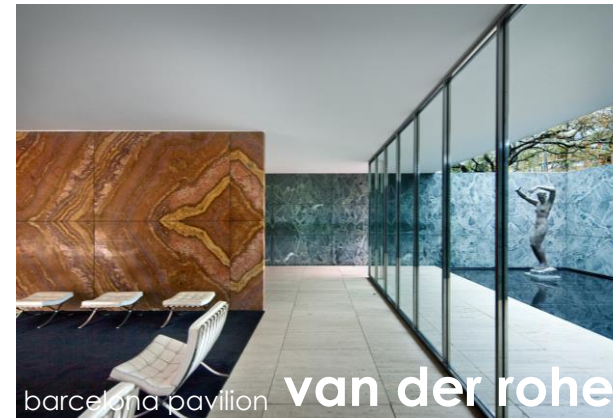
church of light

ando



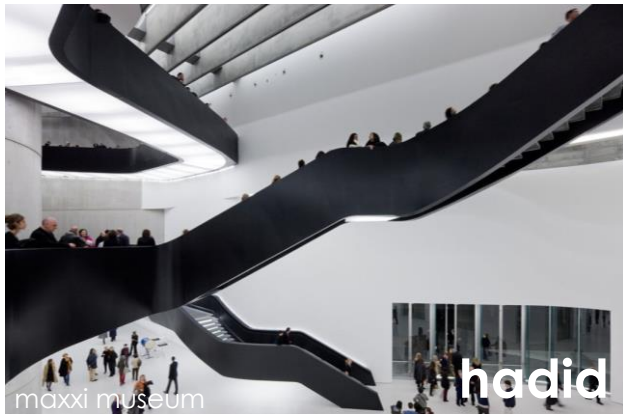
geyser

patterson



barcelona pavilion

van der rohe



maxxi museum

hadid



futuna chapel

scott



the oculus

calatrava



denver art museum

libeskind



maungarongā

dalton



pohutukawa house

herbst

# influential contemporary architects

- tadao ando
- andrew patterson
- mies van der rohe
- zaha hadid
- john scott
- santiago calatrava
- daniel libeskind
- nicholas dalton
- nicola & lance herbst

level 1 2024

# A FORMAT FOR YOUR SLIDES

(starting point 1):  
THE WHARENUI

T1 week 8



## 1ST EXAMPLE OF WHARENUUI

**(Traditional)** (1 slide)

Text and images – name, location, interiors & exteriors – *referenced*



## 2ND EXAMPLE OF WHARENUUI

**(Contemporary)** (1 slide)

Text and images – name, location, interiors & exteriors – *referenced*

week 9



## AT LEAST 5 QUICK 3D IDEAS (1 slide)

**Simple abstract forms** inspired by the wharenuui – images and notes (sketches/models/SketchUp/etc.)

week 10



## 1ST BASIC DESIGN IDEA (1 slide)

**Potential shade structure** inspired by the wharenuui – images and notes (sketches/models/SketchUp/etc.)



## 2ND BASIC DESIGN IDEA (1 slide)

**Potential shade structure** inspired by the wharenuui – images and notes (sketches/models/SketchUp/etc.)

# A FORMAT FOR YOUR SLIDES

(starting point 2):  
A SELECTED ARCHITECT

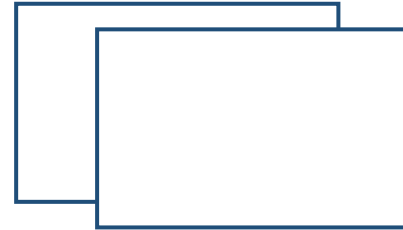
week 11



## INFORMATION ON A SELECTED ARCHITECT

(1 slide)

Text and images – name, country, dob, quotes – *referenced*



## EXAMPLES OF AT LEAST 3 SIGNIFICANT WORKS (1-2 slides)

Images that are labelled – building name, location, key characteristics – *referenced*

T2 week 1



## AT LEAST 5 QUICK 3D IDEAS (1 slide)

**Simple abstract forms** inspired by architect's works – images and notes (sketches/models/SketchUp/etc.)

week 2



## 1ST BASIC DESIGN IDEA (1 slide)

**Potential shade structure** inspired by architect's works – images and notes (sketches/models/SketchUp/etc.)



## 2ND BASIC DESIGN IDEA (1 slide)

**Potential shade structure** inspired by architect's works – images and notes (sketches/models/SketchUp/etc.)



## project requirements: (continued)

In completing this assignment you will need to consider and carry out the following:

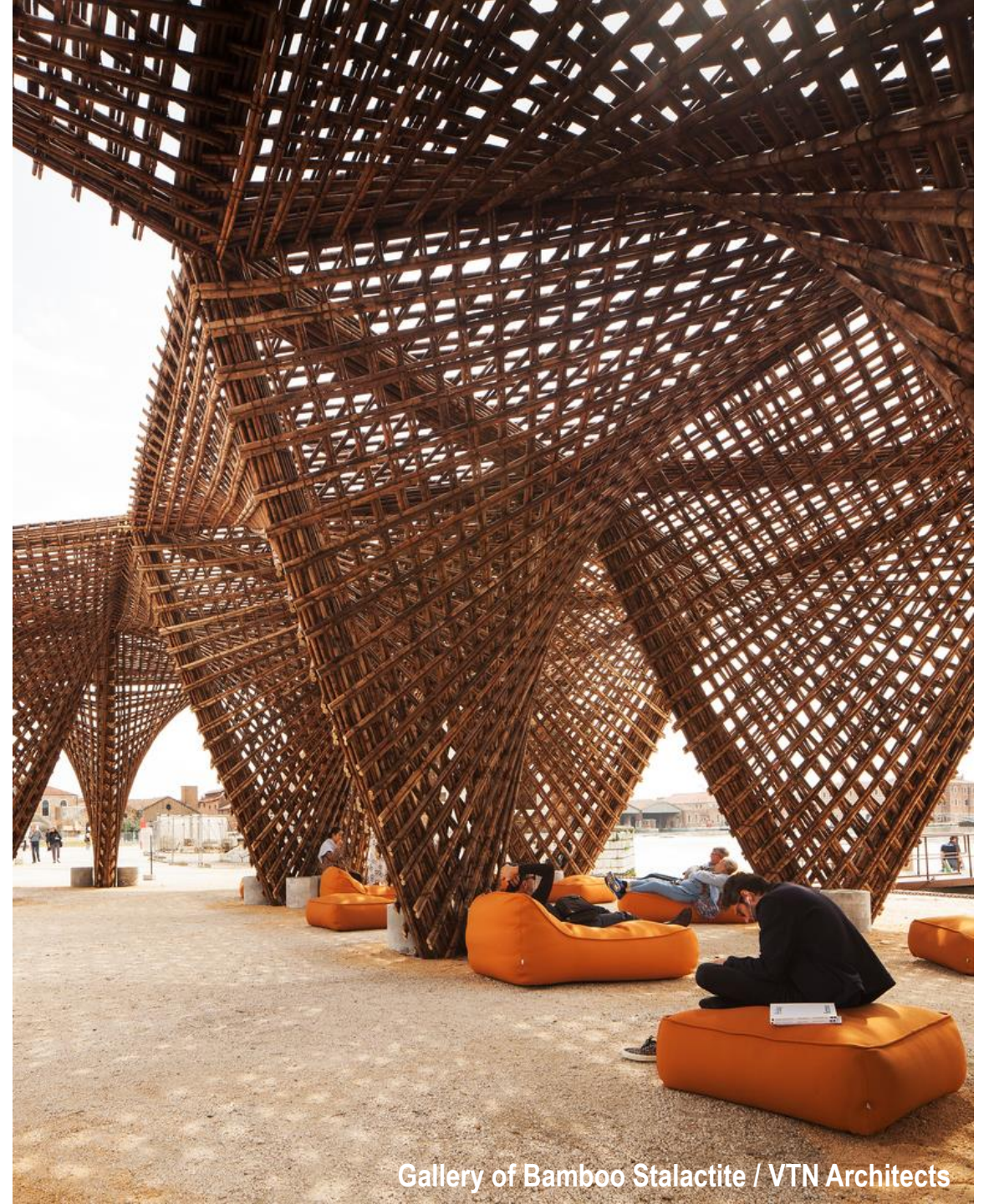
### Extending your ideas further

**Extend some of your ideas** further by experimenting with them to find out how they could be used as a shade structure for this site. You should extend some ideas from each starting point (the wharenuī, and the works of your chosen architect). You might extend the ideas separately or you may combine them together.

**Use visual communication techniques to extend your ideas** in interesting directions. Experiment further with form.

*You could add in features such as spatial arrangements and experiences, architectural materials, relationship with site, people and purpose. Use visual techniques such as quick physical and digital models, freehand sketches and exploratory drawings.*

Think about the canopy (roof), the platform (base) and any seating in between.



Gallery of Bamboo Stalactite / VTN Architects



# presenting your learning:

In completing this assignment you will need to submit a portfolio of work that will include:

- showing source images for each selected starting point
- brief notes or labels that identify characteristics (aesthetic, functional, spiritual or metaphorical) of the source images
- exploring starting ideas (as simple 3D forms) from each of the source materials you collected
- extending ideas for a shade structure design using visual techniques to experiment with aspects of form and function
- extending ideas from each starting point either separately or in combination

Visual communication techniques used include:

- sketch models; quick SketchUp (CAD); 2D and 3D sketching; photography; overlays



Flower Field Bamboo Pavilion / Atelier cñS

<https://www.stirworld.com/see-features-atelier-cns-designs-swirling-bamboo-edifices-at-flower-field-bamboo-pavilion>



Contemplative Footbridge / Daoust Lestage Lizotte Stecker

<https://www.azuremagazine.com/article/a-quebec-city-footbridge-connects-to-the-past-and-future/>



Cultural Shade Structure / Dave Giddens Sailmakers

<https://sailmakers.co.nz/cultural-shade-structure/>

**LEVEL ONE SPATIAL DESIGN**

**STUDENT OUTCOMES FROM 2023**



## 3D forms, inspired by the creation story:

The roof is representing Ranginui, the poles represent Tane Mahuta, the cylinders at the end represent Papatuanuku.

Tane (the poles) is separating Ranginui (the roof) and Papatuanuku (the cylinders) from each other.

The Koru on the top of the shape represents Ranginui looking down onto Papatuanuku.

Papatuanuku is represented by the Koru on the base of the shape growing towards the sky trying to reach Ranginui.

The Korus on the triangular shapes of the dome represent mother earth's (Papatuanuku) wildlife and the triangular shapes that would be glass represent the Sky Father (Ranginui).

This shape represents the connection of Ranginui and Papatuanuku before they were separated by Tane Mahuta.

The designs on the top of the pole like shape are the sky father and the wind blowing. The Vines on the bottom represent nature and mother earth.

This relates to the creation story as the Koru on the top represent Ranginui trying to reach the mother earth which are the Koru on the bottom representing Papatuanuku.

## 3D forms, inspired by the characteristics of your chosen architect's work

This shape is inspired by Mies Van der Rohe's Edin farnsworth house. I incorporated the minimalist design with glass and basic squares to create a shape similar to the house.

This shape is inspired by Mies Van der Rohe's Villa Tugendhat. I incorporated triangles into the shape to reference the triangular shapes in the building for example the railings on the stairs and the rood awnings over the windows.

This shape is inspired by the two buildings Villa Tugendhat and the Barcelona Pavilion. The sharp corners reference the 90 degree angles on the barcelona pavilion and the triangular shaped cover/roof references the triangles on the Villa Tugendhat.

This shape is inspired by Mies Van der Rohe S. R. Crown Hall. I used colour, shapes and materials to show references to the design of the Crown Hall, also with similar shapes.

This shape is partly inspired by the Edin Farnsworth house. I used similar materials to the Edin Farnsworth house but I incorporated my own designs with arches.

## Final design idea:

This final design is a combination of my for designs on the creation story and the architect I chose, Mies Van Der Rohe. It is designed to be a shade structure and communal space that can host outdoor classes and can be used at lunch times.

Inspired by my previous designs:

Use of natural materials to tie in to the surrounding environment.

There are small seating areas scattered around with fake architectural trees for a shaded area. These can be used at lunch or for interviews. The simplicity of the trees and furniture is inspired by Mies Van Der Rohe's designs.

The wood triangles are inspired Papatuanuku, they have nature inspired material of wood. The glass triangles represent Ranginui parting from Papatuanuku up to the sky.

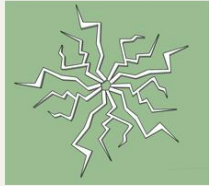
The triangular shapes roof is inspired by Mies Van Der Rohe's designs as some of his designs have triangular roofing and railing. - the glass would be UV protective to ensure sun safety for the people sitting underneath.

Papatuanuku is the trunk - grounded and wood  
Ranginui is the leaves - above everyone, looking down  
Tane Mahuta is the rectangular branch like supporting shapes pushing Ranginui and Papatuanuku away from each other.

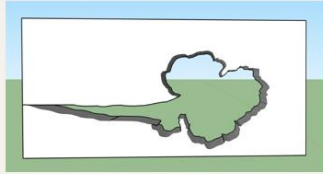
Fake wooden trees to make shade and to represent the creation story.



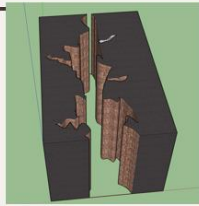
## Ideas / Shapes



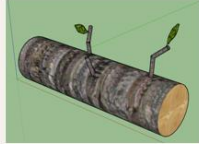
Lightning



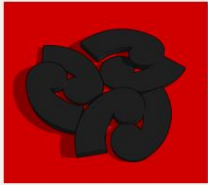
Wind



Ruamoko  
(god of earthquakes)



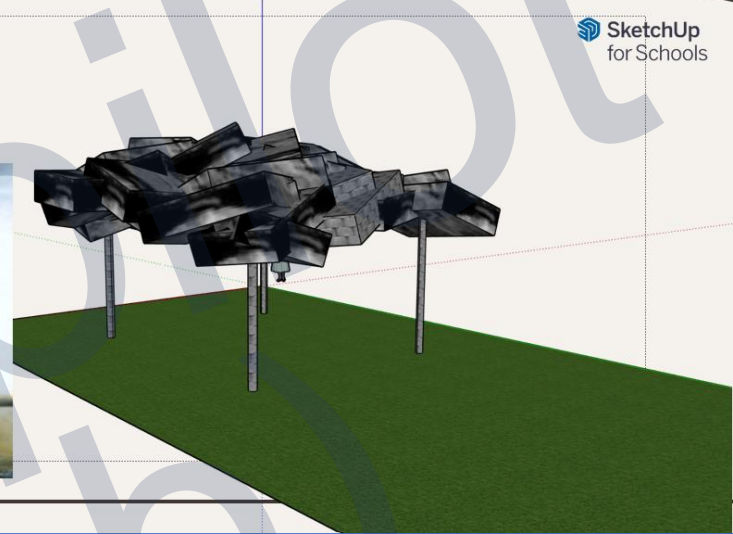
Tawhirimatea (god of the weather)



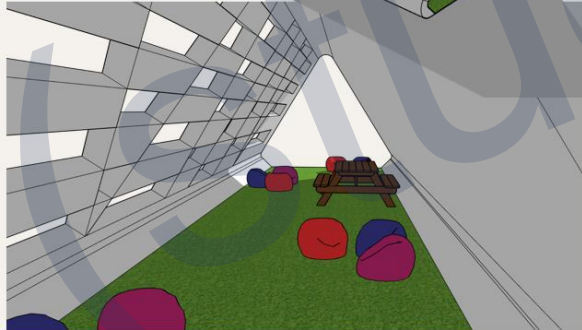
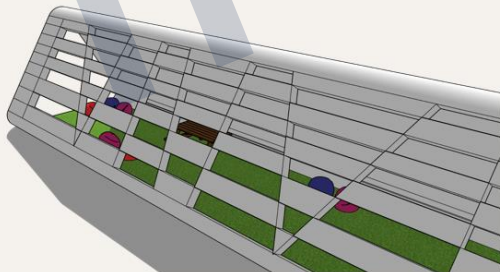
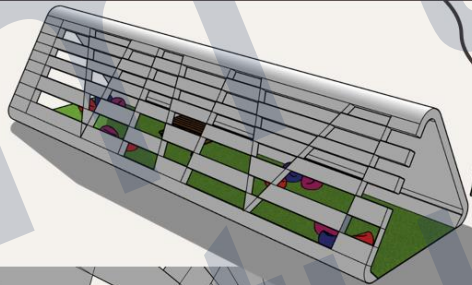
## Basic idea two

Click to add text

SketchUp  
for Schools



## Zaha Hadid design



## Final design - from the ground

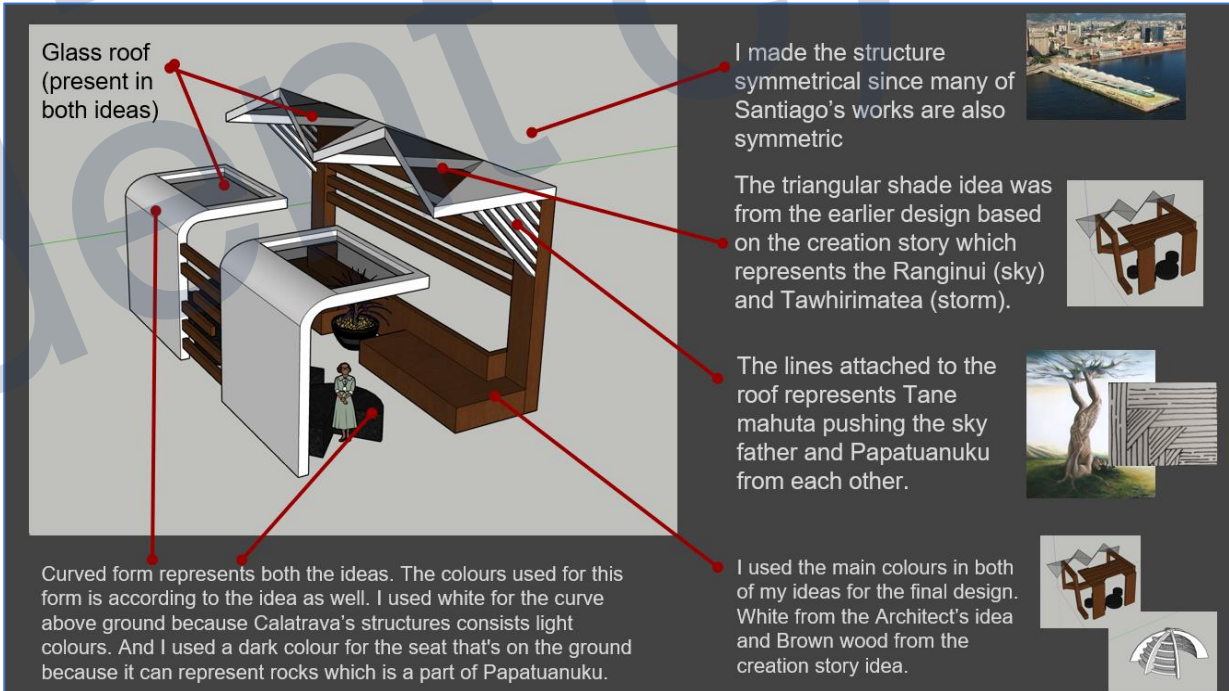
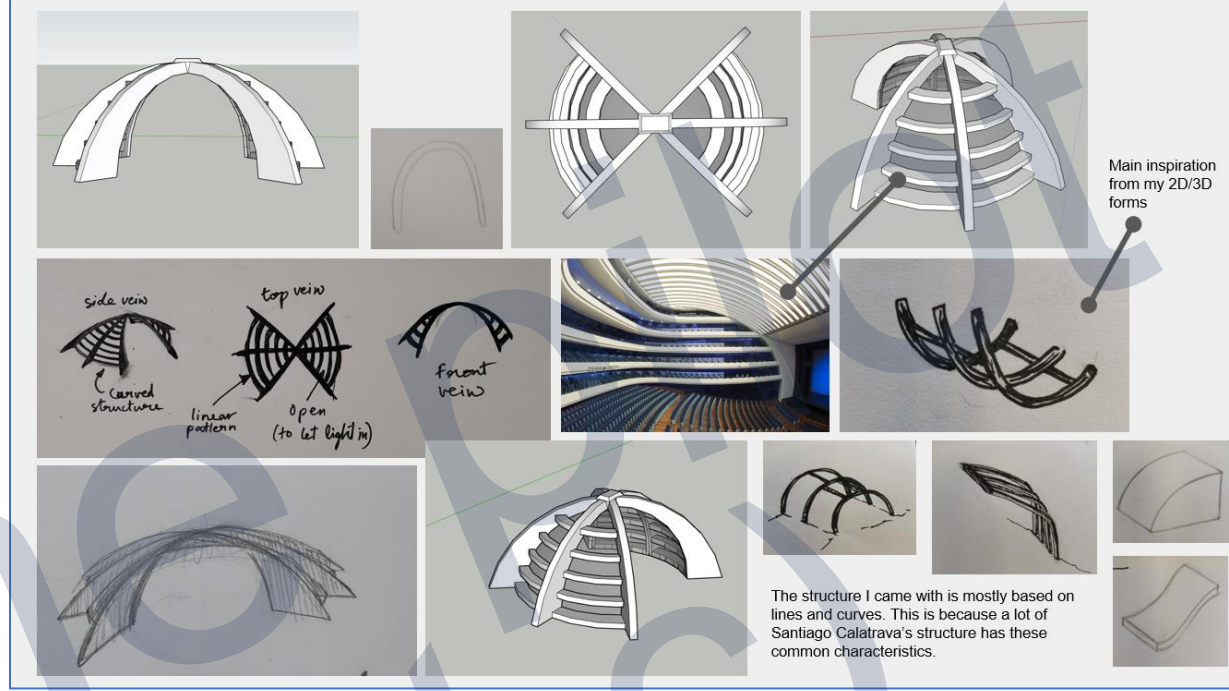
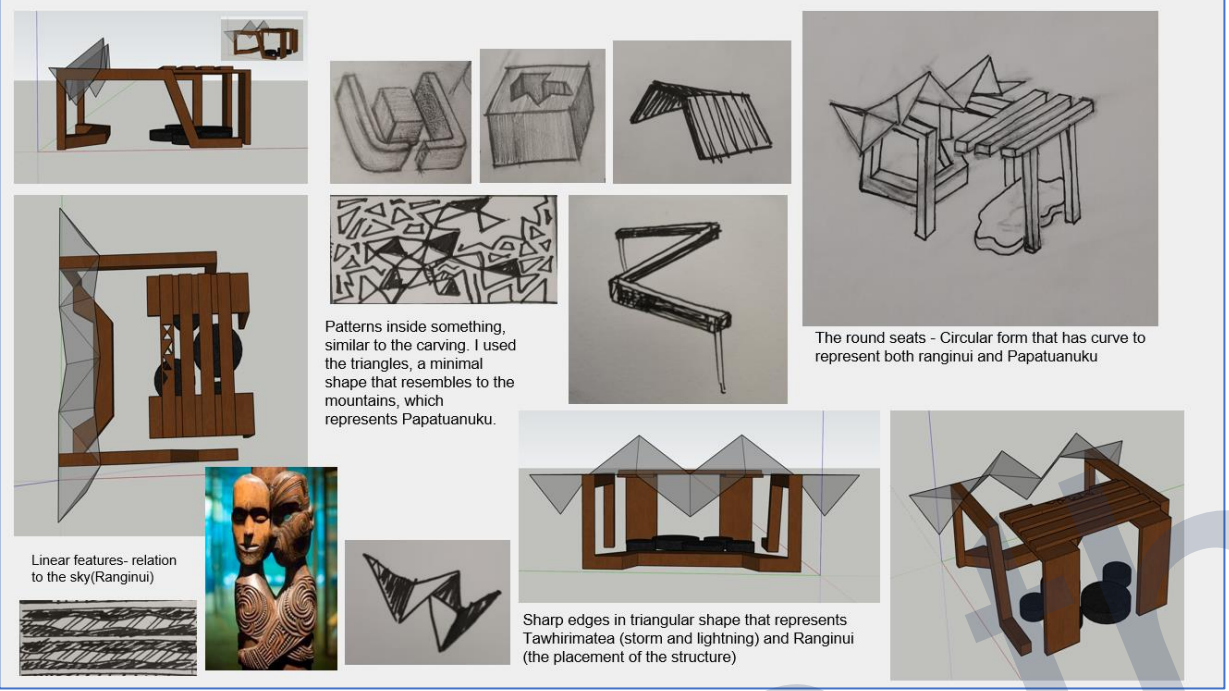


**My final design is inspired by the Maori creation story and Zaha Hadid**

The curved shell like structure is inspired by Zaha Hadid's countless curved futuristic looking designs like the Galaxy Soho and the Heydar Aliyev Centre but it's also inspired by the god of Weather Tawhirimatea. The structure reflects a cloud like shape with the separated beams displaying streams of wind sliding over it.







TERM ONE

PROJECT ONE

**RACK for audio** (5 weeks)  
Due Term One week 8

**ALL ABOUT LEARNING**  
(self-assessment)



PROJECT TWO

**STRUCTURE for shade** (8 weeks)  
**ONE INTERNAL STANDARD: 92000 (DVC 1.1)**  
Due Term Two week 6



TERM TWO

PROJECT THREE

**BOX for letters** (3 weeks)  
Due Term Two week 10

**ALL ABOUT LEARNING**  
(self-assessment)



PROJECT FOUR

**SEAT for outdoors** (9 weeks)  
**ONE EXTERNAL STANDARD: 92002 (DVC 1.3)**  
Due Term Four week 1



TERM THREE

TERM FOUR

SCHOOL EXAMS



# project://three/BOX (for letters)

*(Quote to come...)*

## activity summary:

Develop the design concept of a unique and original letterbox for where you (or another family member) live.

## considerations:

You are required to develop the design of a letterbox that will:

- consider **functional elements and principles** relating to outdoor conditions and security, storage and accessibility to packages, envelopes, newspaper, flyers, etc.
- consider **aesthetic elements and principles** relating the outside of the letterbox design (such as style, form, shape, colour, pattern, texture, etc.)



level 1 2024

spatial  
design  
takapuna grammar



(new for 2024)

TERM ONE

PROJECT ONE

**RACK for audio** (5 weeks)  
Due Term One week 8

**ALL ABOUT LEARNING**  
(self-assessment)



PROJECT TWO

**STRUCTURE for shade** (8 weeks)  
**ONE INTERNAL STANDARD: 92000 (DVC 1.1)**  
Due Term Two week 6



TERM TWO

PROJECT THREE

**BOX for letters** (3 weeks)  
Due Term Two week 10

**ALL ABOUT LEARNING**  
(self-assessment)



TERM THREE

PROJECT FOUR

**SEAT for outdoors** (9 weeks)  
**ONE EXTERNAL STANDARD: 92002 (DVC 1.3)**  
Due Term Four week 1



SCHOOL EXAMS

TERM FOUR

# project://four/SEAT (for outdoors)

## activity summary:

Design an **outdoor seat** suitable for an **outside entertainment area** (e.g. café, barbeque area, deck, beach, park, etc.) The seat is to suit the specific requirements of a specified setting and be suitable for **general outdoor use for that location**.

## considerations:

You are required to design an outdoor seat that will:

- consider the specific requirements of **your selected setting**
- consider **functional elements and principles** relating to outdoor furniture and equipment (such as durability, materials, maintenance, construction, ergonomics, etc.)
- consider **aesthetic elements and principles** relating to inside and outside furniture design (such as style, form, shape, colour, pattern, texture, etc.)



*'Always design a thing by considering it in its next larger context - a chair in a room, a room in a house, a house in an environment'*  
- *Eero Saarinen*

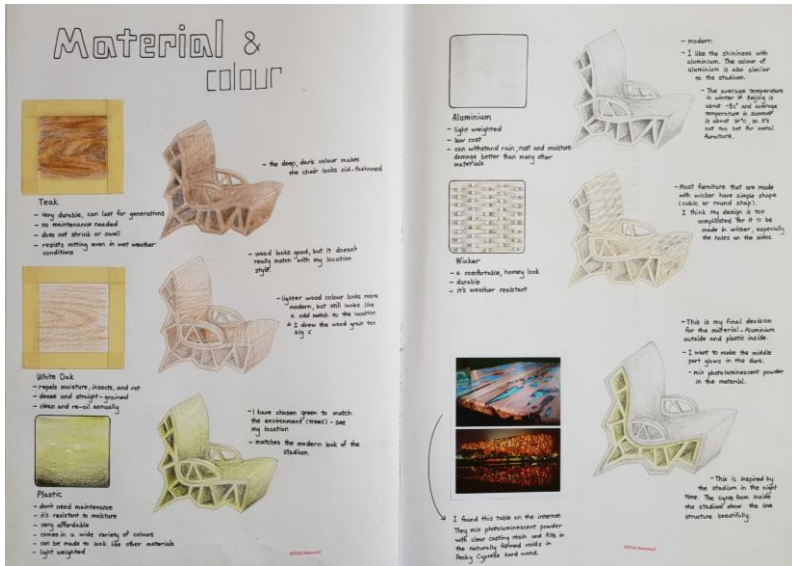
level 1 2024

spatial  
design  
takapuna grammar

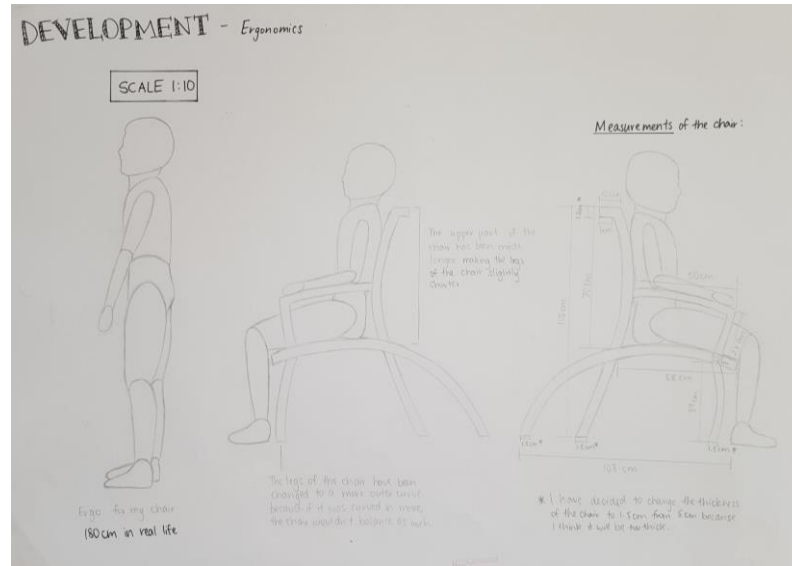
# Develop and refine design ideas informed by the consideration of people:

- using visual communication techniques to consider **functional and aesthetic details of a design outcome and key design decisions**
- demonstrating that **people**, and their connection with place, **have informed the progression of design ideas**
- integrating functional and aesthetic features that **improve the design outcome**
- developing a design outcome that shows an understanding of **what people will experience**

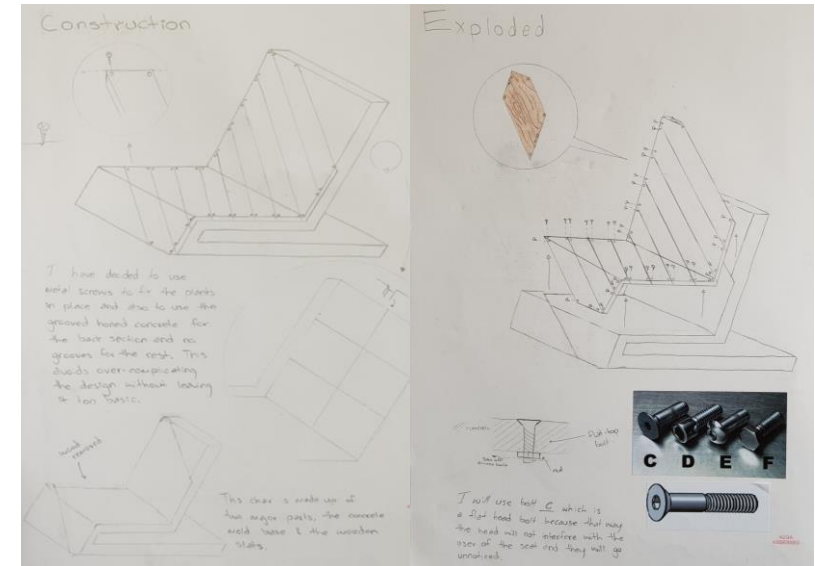
## MATERIALS & COLOUR



## ERGONOMICS & MEASUREMENTS



## CONSTRUCTION & ASSEMBLY





# P2: FORMAT OF SLIDES – excellence example 2

(meeting the external requirements – max. 15 pages):

1

CONTEXT +  
PRELIMINARY IDEAS

2

INITIAL DESIGN  
IDEA #1

3

INITIAL DESIGN  
IDEA #2

4

INITIAL DESIGN  
IDEA #3

5

DEVELOPING  
AESTHETIC DETAILS

6

DEVELOPING  
OVERALL FORM

7

DEVELOPING  
MATERIALS /  
COLOUR

8

DEVELOPING  
CONSTRUCTION  
DETAILS

9

DEVELOPING  
CONSTRUCTION  
DETAILS

10

DEVELOPING  
ERGONOMICS /  
SIZES

11

DEVELOPING  
CONSTRUCTION  
DETAILS

12

PRESENTING FINAL  
DESIGN

13

PRESENTING FINAL  
DESIGN

**INITIAL IDEA 1**

**Industrial aesthetic to reflect Silo Park's industrial past.**

Chair shape is square and regular to fit a common user's size and build, allowing optimum comfort.

Cylindrical shape is organic and is more comfortable for the user (eg hurting themselves on it is far less likely). It fits to the shape of their arm, hands etc.

A backrest benefits the user in that it allows them to lie back and rest their weight on the chair. It allows them to sit in other positions, adding appeal and value.

Frame of chair is a cylindrical shape, similar to the historic silos at Silo Park. To further relate the two, I could add pipes running down them or use the same material (concrete).

**USER**

- Both the diagonal grid and lattice options include gaps which could potentially be uncomfortable for the user. For this to be overcome, the scale and measurements must be adjusted to make the gaps small.
- A lattice pattern waves up and down which would cause rainwater to drain out of the chair unless a solid sheet of fabric or other alternatives. This allows the user to use the chair rain or shine.
- A simple two stripe or single stripe could work, but it doesn't really relate to Waiwera Quarry. It also isn't visually interesting to the user. Large gaps as found in this design could be uncomfortable for them as well.
- Lattice, diagonal and grid all share the idea of a linear square pattern as the garter in Silo Park and sloped steps entering the water.
- The lattice in particular waves up and down like the waves in Waitemata Harbour.

**DEVELOPING IDEA SEAT SUPPORT PATTERNS FRAME SHAPES EVALUATING USER'S EXPERIENCE**

- Lounger is ergonomically fit for young and middle aged people, but not feasible for elderly as they are low.
- Strong material necessary as it holds whole human's weight.
- Benches take the ergonomic factors of an ordinary seat and stretch it horizontally.
- Good because allows multiple people to sit at once. Because Silo Park is busy with office workers, restaurant customers etc, benches could be a good option for best use of space.
- Stronger material required and potentially more legs as 2-3 times the weight support required than ordinary chair.
- Standard chair are a good all round option as it can comfortably seat a person. Tailors to all age groups and sizes as it is a reasonable height and size.
- As it is being placed in such a trendy youthful place it is likely to get more use from younger more flexible people. Good because backrest can recline to the user's comfort.

**OVERALL FORM AND AESTHETICS FIRE HYDRANT DEVELOPMENT ARM REST COMPLETED IDEA**

- Arm rests allow user to place their arms on the structure in a way which feels comfortable.
- Arm rest can detach so that backrest can recline if user wants to lie down.

**Flexible**

- Woven lattice material provides more comfort than ordinary solid support.
- Also allows rainwater to pass through so user can use in any weather.
- Very light so increases portability for user.

75cm

**COMPLETED FORM**

- Fire hydrants represent the past of Silo Park, so including them can inform and educate the user.
- These joineries will also come into play in the construction side.

**REFINED DESIGN**

Moving the bar joining the two sides together back means the user's back will not rest on it, improving comfort.

To make construction easier and more realistic, the pipe joinery has been moved.

The old design had a 90° backrest which didn't consider the user's form. Thus, the new design reclines at 115°.

The armrest and backrest recline was not practical as it had to be assembled, confusing the user. It makes more sense to have a universal recline.

The fabric material has been changed to rattan. This is a more sustainable resource than plastic upholstery fabric while delivering more ergonomic properties.

**CONSTRUCTION DETAILS SCREENS STITCHING**

If the user wanted to mass produce the seat individually tying each not would not be practical.

Instead, stitching using a sewing machine etc would be more efficient and potentially remove the risk of human error.

**RATTAN** is a natural resource made from fibres of palm trees. It is noticeably durable and flexible, perfect for the user's needs. Pairing it with synthetic plastic can improve waterproofing, but can go against a common user's passion for the environment as it is not sustainably sourced.

(Right), a third option of how to join the materials, but would involve glue etc and not practical.

Simpler example of rattan string on chair. Lounger needs more support than more strings.

**SIMILAR STYLES**

The new material is a rattan type, but in a string form. Ordinary rattan is less malleable.

The string will be wrapped around a pipe, then pulled around the other with knots on each side to keep it in place.

1168 String Chair

**ERGONOMICS AND SIZE HEIGHT, WIDTH, DEPTH COMFORT**

Rattan string can flex to the user's body.

Ergonomics of 90° angle. Obviously not practical.

160cm

130cm

~1:40

50cm

70cm

Ergonomics for prior design

70cm

160cm

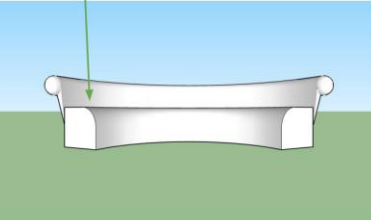
50cm, 130cm

Taken measurements from a lounger I found comfortable as the average sized human (~180cm male). Below is comfortable angle of recline.



## INITIAL IDEA 2

The curved shape of the mushrooms is represented in my design by the rounded edges of the chair. **The rounded edges makes the seat more comfortable**

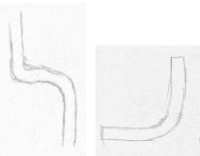


It is a bench type design so **multiple people can use this chair at once.**

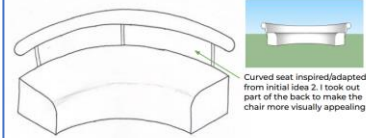
It has a rounded/curved shape so the users can look at different parts of the view from the top of Mt Victoria



This initial idea was inspired by the shape of the mushrooms on Mount Victoria.



## IDEA PROGRESSION



1

I added a clip for dog leash so the users **wouldn't have to hold their dog** while sitting down, and could enjoy the view



I added the back rest for the lower level to make it connect with the upper level. I think this makes the upper and lower part of the chair look more connected

2

I kept the clip in this design so the users **could tie up their dog** while sitting down



I made the lower level a dog bowl because dogs wouldn't sit on the seat, so it would have been a waste of space. I made it a dog bowl so the dogs of the users could be hydrated on a walk.

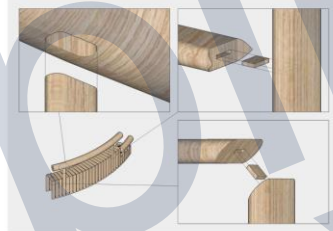
3

I included the water fountain in my design so the back of the lower level would have a function. I also did this so the users **wouldn't have to supply their own water.**

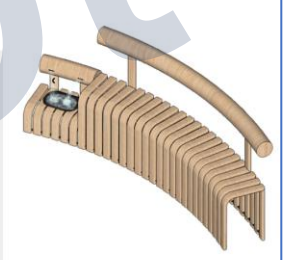


I made the edge of the chair rounded so it is more comfortable to sit on for the user's legs. It also made more sense to be curved instead of a sharp edge because the design of the chair is arched.

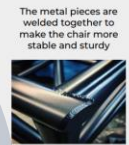
## CONSTRUCTION DETAILS 2



Each piece of the chair is put together using a 45° biscuit miter joint, held together using wood glue. This technique is repeated 29 times for each piece of the chair.



The tap for the fountain is made using two waterfall taps which are directed into the bowl to fill it up.



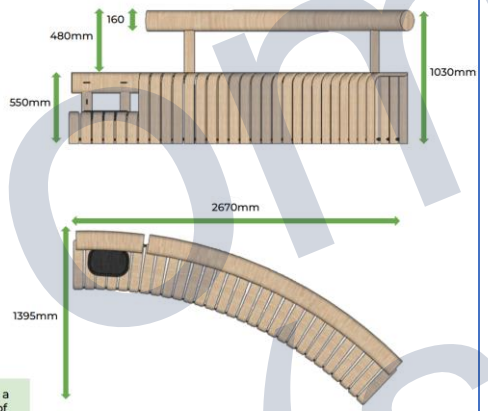
The metal pieces are welded together to make the chair more stable and sturdy

The wooden slats are bent using steam bending

## Ergonomics & Size

My outdoor chair is a bench type design, this is so lots of people can use it at once. Mt Victoria is a common walking place for groups of tourists and locals, so I wanted the chair to be able to seat multiple people at once. I made the lower part of the chair a dog bowl because many people walk their dogs around the mountain.

I made the backrest of the chair 480mm above the seat so it would be a comfortable height for the user to rest against. I made the length of the chair 2670 mm so it could fit at least 3 users. I made the depth of the seat, 400mm because that is the length of an average adult users leg.



The dog bowl is 75mm deep so it is a good depth for a dog to drink out of

## FINAL DESIGN FOR CHAIR



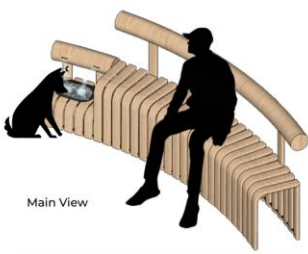
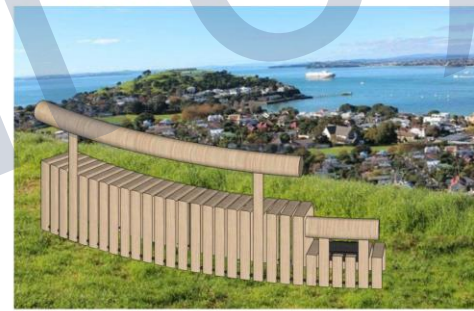
I made it so there was two poles supporting the lower part of the chair instead of one because there was an even amount of pieces on the lower part so there I was unable to put the pole in the middle, and I thought it looked better this way

I made the edges of the backrest flat instead of rounded because I thought it looked better.

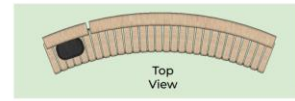
While I was building my chair, I changed a few parts of my design to make it look better. I created different pieces because I thought it looked more modern.

I couldn't have an empty space underneath the chair because of how the chair curved, so I came up with a solution to have lots of curved pieces connected together through a piece of metal at the bottom of the chair.

## FINAL DESIGN



Main View



Top View



Side View



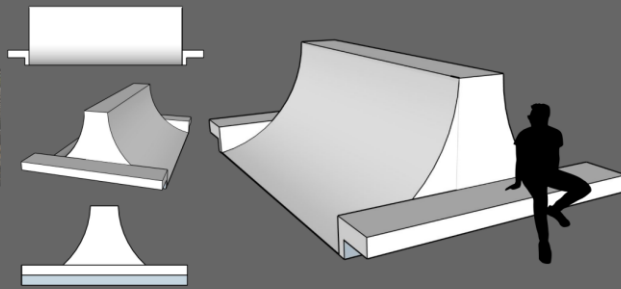
Front View

## Initial Idea 2

### Inspiration Images



### Inspiration Drawing

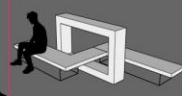


-Incorporating the skatepark into the design by adding a ramp for skaters  
 -Blends in with the skatepark while also being functional  
 -Seats could be better guarded from the ramp potentially could add rails

## Idea Development



Tunnel for skaters to get through, impractical for location, would be too big and overpower the seating.



Skateable, square in the middle could be lower as an obstacle for skaters to jump.



Park bench style, could be put anywhere, skateable, doesn't draw enough inspiration from location.

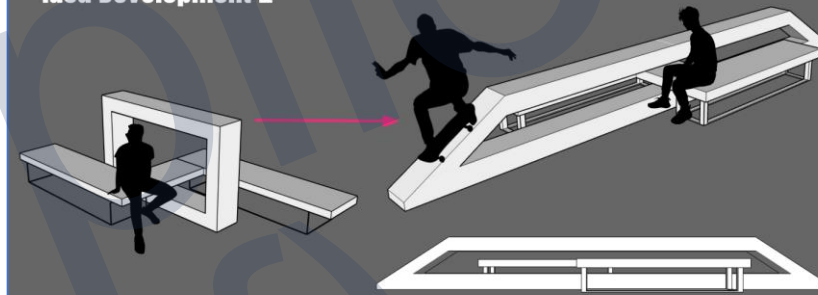


Skateable, allows different seating positions, could be put anywhere, not the style of the location.



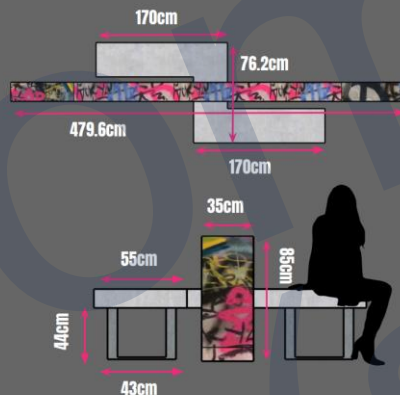
Previous ideas either weren't skatable or didn't match the aesthetics of the skatepark, with further research into skateable furniture and more skatepark elements I came up with these concepts.

## Idea Development 2



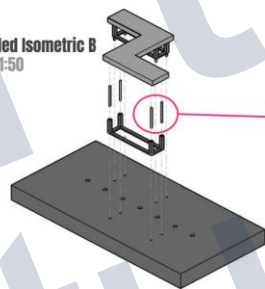
I changed the height of the square in the middle to make it more easily skateable, as well as changing the shape to make the ends ramps to make it easier to skate, a result of this was the lengthening of the square to be longer and provide more area to skate without disturbing sitters. I also made the chair supports thicker to support the bench and people sitting on it and the width of the square bigger to accommodate a skateboard.

## Ergonomics and Size

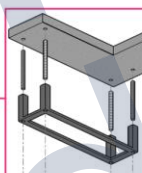


To accommodate both skaters and sitters my design has a seat with a large concrete structure through the middle, this can be used as an obstacle or to skate across. It can also be used as a backrest for sitters. I have made the seat big enough for 3 people to sit either side, and I have made the concrete structure thick enough to be skated across comfortably.

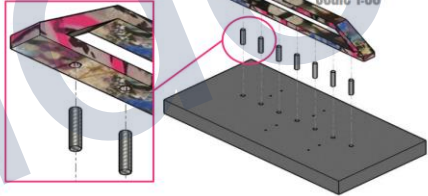
### Exploded Isometric B Scale 1:50



### Exploded Isometric Detail B Scale 1:20



### Exploded Isometric A Scale 1:50



### Exploded Isometric Detail A Scale 1:20

## Chair in Location

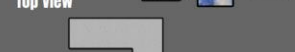
### Main View



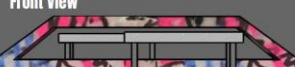
### Side View



### Top View



### Front View





**THANK YOU**  
**GO WELL WITH YOUR YEAR AHEAD**