



National Certificate of Educational Achievement  
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

## **Exemplar for Internal Achievement Standard Design and Visual Communication Level 2**

This exemplar supports assessment against:

**Achievement Standard 91340**

Use the characteristics of a design movement or era to inform own design ideas.

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade boundaries.

New Zealand Qualifications Authority

To support internal assessment

	Grade Boundary: Low Excellence
1.	<p>For Excellence, the student needs to use the characteristics of a design movement or era to effectively inform their own design ideas.</p> <p>This involves generating design ideas where it is evident that the identified characteristics of the design movement or era have been interpreted and embedded into the design ideas.</p> <p>This student has designed a structure (building), and provided descriptions of the design era of high-tech modernism. They have also described the social factors that have influenced the design era or movement, linking the era to the Space Race (1).</p> <p>The student has explained the elements of design that characterise the design era, and there are good links to the relevant chosen images (2) that support the explanation.</p> <p>The characteristics of the era flow into the idea generation (3) and exploration (4). The high-tech modernist characteristics start to become integrated (5) and embedded into the design ideas.</p> <p>For a more secure Excellence, the student could show a stronger interpretation of the characteristics of the design era into their own design ideas.</p>

# CHARACTERISTICS

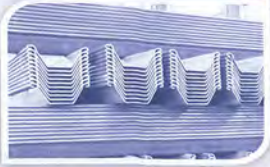
2

**GLASS:**  
 One major characteristic used in Hi-Tech modernism is the use of glass. In many designs throughout this genre glass is used in great quantities. Glass is a perfect substitute to other materials because it is transparent. This therefore enables people to examine the structural components behind them, also at the same time keeping a modern and normal shape to the building. Glass also allows the building to be viewed from all angles allowing nothing. This is varied from other buildings from other eras because these buildings contain closed in areas, while the glass walls in Hi-Tech Modernism create a see all, bear all environment.

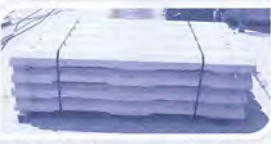
**COMPLEXITY:**  
 Complexity is a very important characteristic in Hi-Tech modernism (HTM) because it is what determines it from other forms of design. The design movement before HTM was minimalism. This involved very minimalist designs, hence the name Minimalism. HTM can have all the buildings structural parts on the outside of the building, where they can be seen. Walls or roofs usually hide these parts in most other design eras. With the lack of walls and roofs because the inner parts of the building needing to be displayed there is a lack of structural support. The walls and roofs of a building usually supply this support. The architects then need to be able to use these functional parts to provide support to the building as well as an elegant and neat appearance.



**STEEL:**  
 Steel has strongly influenced this design movement. Steel brings to aspects to the table, strength and appearance. Steel is stronger than most other metals. It is not only sturdy but can be shaped and molded into preferable shapes and sizes malleable. This is similar to other metals but what really separates from the rest is its appearance. Steel has a very shiny appearance, which is very attractive to look at. This therefore allows it to be molded into the desired shape while offering great support and appearance.



**PREFABRICATION:**  
 As technology develops so do the ways in which we use it. This is why and how HTM gets its name. Technology lets our designs and structures to become more Hi-Tech because it is easy to do which was once hard to do. A perfect example of this is prefabricated materials such as concrete supports. The cap above the arches to incorporate into the design, features which would usually need to be made on sight. Technology allows him to use these elements without them having to be built on sight. They are prefabricated at another location. This is both time and cost effective. It allows more money to spend on other important areas of the project which in turn makes the concept much more Hi-Tech because there is more money in the pot than in previous eras.



- KEY DESIGNERS IN THIS MOVEMENT:**
- DAVID AJAYE**  
 BUILDINGS INCLUDE:  
 • ELEKTRA HOUSE  
 • DIRTY HOUSE  
 • WHITECHAPEL
  - SHIGERU BAN**  
 BUILDINGS INCLUDE:  
 • NOMADIC MUSEUM  
 • TAKATORI CATHOLIC CHURCH  
 • CENTRE POMPIDOU-METZ
  - SANTIAGO CALATRAVA**  
 BUILDINGS INCLUDE:  
 • CITY OF ARTS AND SCIENCES  
 • AUDITORIO DE TENERIFE  
 • GARE DE LYON SAINT-EXUPÉRY
  - GIGON**  
 BUILDINGS INCLUDE:  
 • HOUSING COMPLEX BRUNNENHOF  
 • ROAD TRANSPORT HALL  
 • ARCHAEOLOGICAL MUSEUM AND PARC KALKRIESES
  - SEAN GODSELL**  
 BUILDINGS INCLUDE:  
 • GLENBURN HOUSE  
 • ST ANDREWS BEACH HOUSE  
 • WOODLEIGH SCHOOL SCIENCE BUILDING

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# MOVEMENT INFLUENCES

The movement of Hi-Tech Modernism has been around for a few decades. The earliest form of high tech modernism was just after World War II in Chicago, USA. The style was called the "Second Chicago School". At this time there were many buildings with this particular style being constructed. The style involves the use of framed tubes that are concreted into the foundation. These tubes consist of four or three inter connected columns. These support the building from horizontal forces such as wind. The whole building is anchored to these central columns and can be seen throughout the whole structure. This is where HTM first was established because these structural features of the building would usually be hidden but in this style they are displayed for visual preferences. Also most of this building was created from both steel and glass. This is to of the biggest characteristics of the High Tech Modernism era. Most of the buildings exterior is a dark tinted glass. While the structural supports of the building are mostly made up of steel girders and beams. Another important influence on the High-Tech Modernism movement was the Space-Race. This was the race between Russia and the United States of America for supreme space exploration. When USA landed the first man on the moon "Neil Armstrong" it was said to be the climax. With these high technological steps came people's imagination for using it to construct other earth bound structures. This technology was invested into the development of technology used to create and start the movement of High-Tech modernism.



**INITIAL IDEAS**  
 CONCEPT 1  
 3  
 Large, prefabricated, multi-story concrete shell with glass panels.  
 - Glass panels  
 - Steel frame  
 - Prefabricated concrete  
 - Large glass windows  
 - Steel supports

**INITIAL IDEAS**  
 CONCEPT 2  
 3  
 Large glass walls and windows.  
 - Large glass walls  
 - Steel frame  
 - Prefabricated concrete  
 - Large glass windows  
 - Steel supports

**INITIAL IDEAS**  
 CONCEPT 3  
 3  
 Prefabricated concrete structure with large glass windows.  
 - Prefabricated concrete  
 - Large glass windows  
 - Steel frame  
 - Steel supports

**INITIAL IDEAS**  
 CONCEPT 4  
 4  
 Steel frame structure with large glass walls and windows.  
 - Steel frame  
 - Large glass walls  
 - Large glass windows  
 - Steel supports

# EXTERIOR DEVELOPMENT



I came up with this building idea by looking at the layout plan from my previous developments, initial concept ideas, chosen ideas, both my research. High-Tech Modern buildings and fully existing buildings around the school. The large glass walls and windows are inspired by the High-Tech Modern buildings in this case the Gare de Lyon. It has large walls which are entirely made of glass.

And is why I decided to make these walls the building has large amount of exterior glass panels to help natural light into the building. This creates an open space area. At the moment though the building looks using glass for the past these glass walls, I should have top this further.

The bank side of the building east has been left blank for this reason. There are no features except for the large tiles of prefabricated concrete that will structure the wall. Windows both high and low would prove to be pointless because the amount of light that would come on would be very minimal.

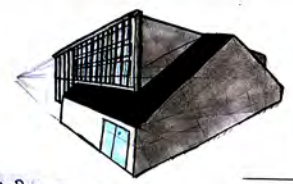
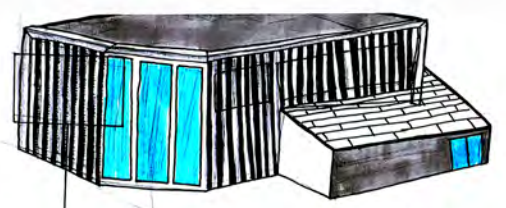
Currently the front and side of the building are very boring and very minimalist. So I have added a lip to all these sides, North, east, North and west. These sides all have large glass windows and walls. The lip will run along there to give it character and will be made of concrete with a steel top.

1 This development of the lip has a flat edge and then a steep gradient. It is then covered in a thin steel plate which is bolted to the concrete.

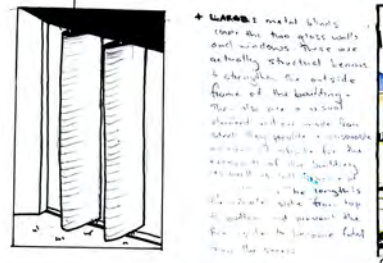
2 This development of the lip has a flat edge and then a steep gradient. It is then covered in a thin steel plate which is bolted to the concrete.

3 Development of the lip is the last. It can be a steep concrete wall with a thin steel plate on the outside.

The new lip that I have added to this side of the building is great but this side of the structure still has a bit more. Maybe something else could be added to make it more attractive. After this development of the bank side of the building is needed.



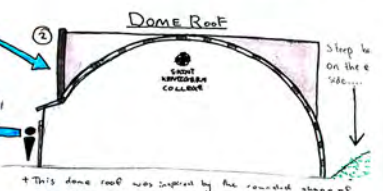
metals blinds attached looks more interesting for the whole design and makes it more like a high-tech modern building. This is because of the fact that it's using the use of steel parts for architectural support for the usual effects around the second part being that it's using the same concept as the outside of it windows, carrying this with the rest of the building.



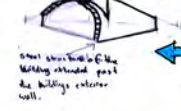
METAL BLINDS

These metal blinds cover the main glass walls and windows. There are actually structural beams to strengthen the outside frame of the building. They also serve as a second structural wall to support the weight of the building. The blinds are attached to the outside of the building. The blinds are attached to the outside of the building. The blinds are attached to the outside of the building.

The Dome shapes is pulled from the West stand at Eden Park. It also is very similar to one of the neighbouring buildings.

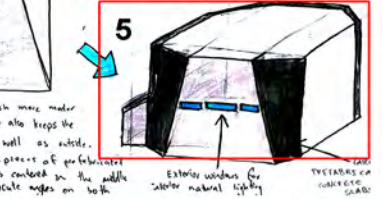


DOME ROOF



This dome roof was inspired by the rounded shape of Eden Park's new west stand. Instead of being a circle wall it was made the roof a circle. This creates a very open feel inside the building and makes the exterior of the building look much bigger. But the domed edge roof does not really fit with the rest of the structure so I could mix it with the previous design.

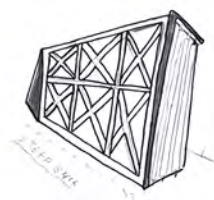
SK.C. Logo could be added here....



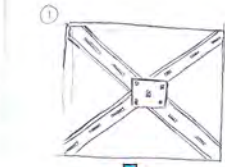
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If my new development looks much more modern than the dome roof stand. It also keeps the feel but it is big inside as well as outside. It consists of three large pieces of perforated concrete. The largest one is centered on the middle with the two other ones at acute angles on both sides.

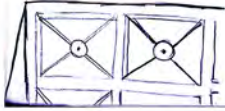
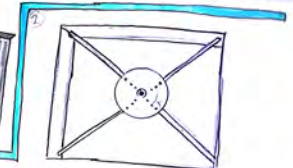
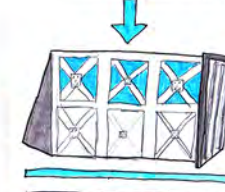
Exterior window for interior natural lighting. PERFORATED CONCRETE SLABS.



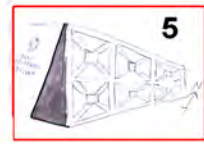
The west wall of the gallery was previously just a plain wall made of concrete. I am now developing this by putting in structural supports that are usually not seen in other high-tech modern buildings. They will be located into cavities in the concrete wall. My next task is to develop these further. Maybe a high window could be inserted.



Steel girders will be placed diagonally in each of the six bays. They will then be welded to a square steel plate. This will provide a great deal of structural support as well as adding visually. These will be symmetrically done throughout each bay. Also the top three could be made to be a window. This design was used in the Grande Gym.



This development involves a circular steel plate that bolts together to steel poles together. It provides structural enhancement with a nice visual appearance. The circular element of the SKC and poster is inspired by Eden Park. It may be a bit to create a strong building.

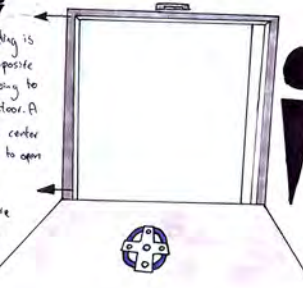


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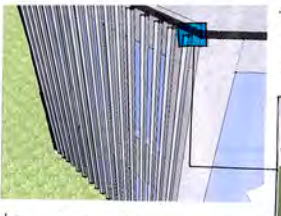
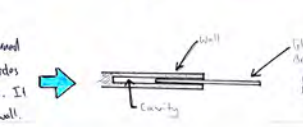
I have decided to go with the first development. The second one involved too many spherical shapes and doesn't fit in with the overall image of my gallery. Development one is much more appropriate because it is neat angles like in the rest of the structure and makes nice straight angles. Also high-tech modern buildings usually are made with these neat angles and straight lines.



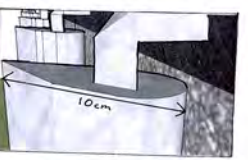
The main entry of the building is located on the western side opposite the car park. The door is going to be a automatic glass sliding door. A sensor will be placed in the center of the top to indicate when to open and close.



But there is a problem they were going to be two glass panels that slide away from one another, but due to the lack of wall space on the right hand side it had to be based into a single panel which slides to the left when it opens. I do this by a cavity in the wall.



The metal blinds which cover most sides of the walls with windows will be connected by little arms which are attached into the frame.



10cm

The metal blinds will be approximately 10cm long with spaces of 20cm between each individual one. This will be beneficial for both the wind and sun which could affect the building.

**SUN**  
The blinds will limit the amount of sun light entering through the window. This is needed to prevent the art from fading in the light.

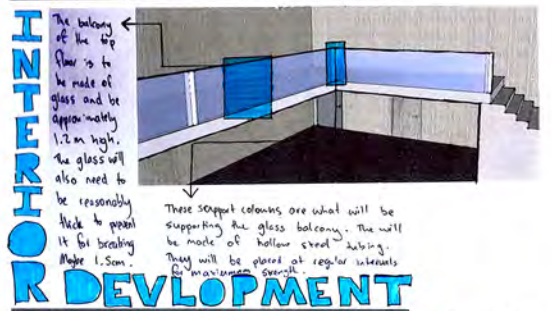
**WIND**  
The blinds should reduce the amount of weathering of the building. This will be reduced by the blinds. The wind is heavy because it is funnelled through the estate to the north of the building.



I have had to divide the third window into two sections this is because of the bath/office wall. My reception area was to simple and noisy before so I added a room out of reception and to space it up a bit.



A staircase with a single column stair idea. It would have been very simplistic so I have gone with the traditional stairs idea, but added a high-tech modern touch. It will be entirely made of smooth concrete.



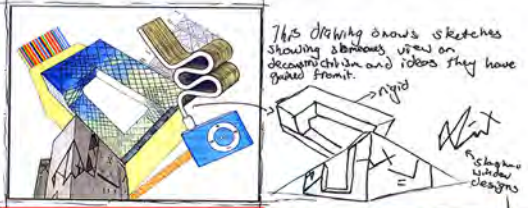
**INTERIOR DEVELOPMENT**  
The balcony of the top floor is to be made of glass and be approximately 1.2m high. The glass will also need to be reasonably thick to prevent it from breaking. Maybe 1.5cm.

These support columns are what will be supporting the glass balcony. They will be made of hollow steel tubing. They will be placed at regular intervals.



ART CAN BE PLACED ON BOTH SIDES ON THE WALLS. Also the large space in the middle allow for tall and wide statues to be exhibited inside the building.

	Grade Boundary: High Merit
2.	<p>For Merit, the student needs to use the characteristics of a design movement or era to clearly inform their own design ideas.</p> <p>This involves:</p> <ul style="list-style-type: none"><li>• explaining the elements of design that characterise the design movement or era</li><li>• generating design ideas where it is evident that the identified characteristics of the design movement or era have been linked to the design ideas in a considered manner.</li></ul> <p>This student has designed a structure (building) and has provided descriptions of the de-constructivism and minimalism design era (1). They have also described the related social factors that have influenced the design era (2).</p> <p>The student has clearly explained the elements of design that characterise the era throughout the portfolio.</p> <p>Images (3) show how the design ideas have been linked in a considered manner to the design era characteristics (4).</p> <p>For Excellence, the student could further interpret the characteristics of de-constructivism/minimalism, and integrate these further into the design ideas to show how they have been fully embedded. The ideas tend to be linked to the era characteristics rather than being interpreted and embedded.</p>



This drawing shows sketches showing elements used on deconstruction and ideas they have guided from.

This building incorporates cylindrical and more rounded elements to its deconstruction style. This building to me looks as if it has been made with building blocks but on a much larger scale as the edges are straight and profiles how they don't stack over each other evenly.



Sustainable material



This is another environment bedroom design. The large space makes the bed stand out in the room which I find effective on the balance is both minimalism as the bed is simple but two of the walls are paneled. This room is also very friendly as the large space is easy to walk around (no clutter). The lighting is also effectively used. The skylights illuminate the bed.



Skylights

This room has a definite symmetry with the table and the chairs totally up to it which looks great. This room also has a large space without clutter. This works fantastic well into an art gallery with the symmetry of the artwork replacing the furniture. The natural light coming in through the large windows showing the true colors of the room and artwork in the case of the art museum.

## DECONSTRUCTIVISM INFLUENCES

Jacques Derrida, a French philosopher, was who most Deconstructivist Architects were influenced by. Eisenman knew Jacques Derrida well and gained knowledge of deconstruction from him. Deconstructivism was realized as radical changing to formal architecture. Deconstructivism was also influenced by 'geometric imbalances of Russian constructivism'. Other movements that influenced deconstructivism were expressionism, minimalism, contemporary art and especially cubism. Deconstructivism breaks through the 'rules' of modernism.

## MINIMALIST HISTORY

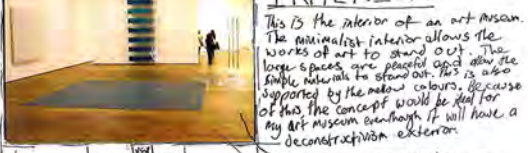
Minimalism describes movements in different forms of art or design which works by using the works most fundamental features. Minimalist architecture has been highly influenced by Japanese traditional design and architecture. Architect Ludwig Mies van der Rohe refers to minimalism in the sense that "Less is More" to convey the idea of simplicity and a very basic but effective design. Minimalism movement started in early 1950s. I think that this way of designing would be ideal in an art gallery because the reduction in complexity allows the artwork to stand out and be the main focus. Minimalist interiors also highlight lighting as focus. Minimalism shows darker and lighter areas. The simple interior should be kept in mind. Factor is important to keep in mind. One interior minimalist designer that employs good techniques to be used in an art museum is John Pawson. He uses natural lighting to his advantage and uses wide, open spaces.



## PETER EISENMAN

Born: August 11, 1932 in Newark, New Jersey  
 Peter Eisenman is one of the most pronounced deconstructivist architects, building many demanding projects to date. Peter Eisenman gained influence from close friend and post-structuralist thinker Jacques Derrida. Eisenman first became known as a member of The New York Five. The other Architects of this group were Charles Gwathmey, John Hejduk, Richard Meier and Michael Graves, whose work was shown at conference in 1967. Eisenman did architectural work for the Graham Foundation around that time. People viewed 'The New York Five' as doing reworking of designs by Le Corbusier. This led on to each of the five to develop unique styles of architecture, with Eisenman developing deconstructivism. Eisenman's original deconstructive projects had been poorly constructed due to unsatisfactory material specifications and elementary design faults (such as art exhibitions being exposed to intense sunlight). Such is the case with the Wexner Center. Due to many years of experience Eisenman has improved his architecture with a unique deconstructivist style. He has designed such remarkable sites such as 'Memorial to the Murdered Jews of Europe' in Berlin, and the University of Phoenix Stadium in Glendale, Arizona. A current project that Eisenman has designed is the 'City of Culture of Galicia' in Santiago de Compostela, Spain which design, employs the iconic 'way-roof' and strong deconstructivist style of Eisenman and is truly remarkable. This is why I have chosen Peter Eisenman.

## MINIMALIST INTERIOR



This is the interior of an art museum. The minimalist interior allows the works of art to stand out. The large spaces are peaceful and allow the simple minimal to stand out. This is also supported by the neutral colours because of this the concept would be ideal for any art museum. Although it will have a deconstructivist exterior.

Effective lighting techniques  
 balance

## DECONSTRUCTIVISM HISTORY

Deconstructivism was born in the late 1980s so it is a fairly recent design move. Deconstructivism relates to the ideas of buildings being fragmented and the surface of a building being contorted into unique shapes. Cubism also has a large influence in deconstructivism. It goes against the general rules of architecture with uneven walls and roof-tops. Deconstructivism is often described as 'controlled chaos'. The first point in the movement of deconstructivism was in the 1950s from Pierre de Villotte architectural design competing with designs from Jacques Derrida and Peter Eisenman. Next was the Museum of Modern Arts 1988 Deconstructivist Architecture exhibition. At this exhibition, there were works from some of the best Deconstructivist architects such as Peter Eisenman, Frank Gehry, Zaha Hadid and Daniel Libeskind.



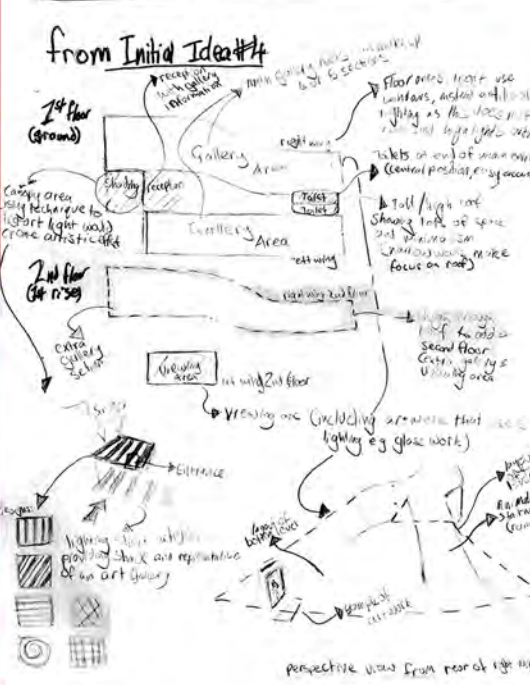
## PETER EISENMAN



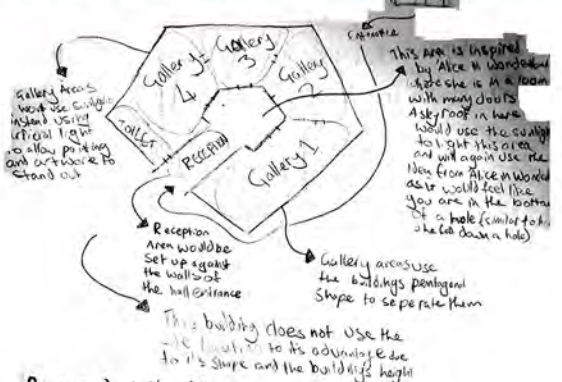
## MOCK-UPS



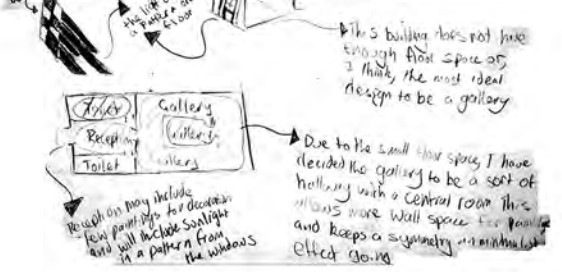
## FLOOR PLAN IDEAS



## from Initial Idea #1



## from Initial Idea #2



## Building #2



## SOCIAL FACTORS

Social factors that influence Peter Eisenman and the Deconstructivist style will influence the design of an art gallery. The social factors are the surrounding town and urban planning. Many Deconstructivist architects, particularly Eisenman, were influenced by Jacques Derrida's program, a post-structuralist theory of deconstruction which had implications on literature, social sciences, and art. Derrida's work on social and political structures, being strong action to support social and political structures, being strong action to support what he believed. This was not just deconstruction. He was die to non-conflicting and his complex mind. Deconstructivism was, when minimalism became an architectural and the social idea of non-uniformity of architectural structures. When Eisenman's rules, the architectural and business influenced by Eisenman's deconstructivism to have in the building, they are, building that style of deconstruction. Social factors that will influence my art gallery will mainly include the surrounding landscape and buildings and the needs of the building. When the art gallery is located in a central area, it will have the large and open of art galleries that will appeal to the general public. Social factors may include a large area for the gallery, the building of the gallery, the building of the gallery, the building of the gallery. The building of the gallery will be a large and open of art galleries that will appeal to the general public. Social factors may include a large area for the gallery, the building of the gallery, the building of the gallery. The building of the gallery will be a large and open of art galleries that will appeal to the general public. Social factors may include a large area for the gallery, the building of the gallery, the building of the gallery. The building of the gallery will be a large and open of art galleries that will appeal to the general public.



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3.	<p>For Merit, the student needs to use the characteristics of a design movement or era to clearly inform their own design ideas.</p> <p>This involves:</p> <ul style="list-style-type: none"><li>• explaining the elements of design that characterise the design movement or era</li><li>• generating design ideas where it is evident that the identified characteristics of the design movement or era have been linked to the design ideas in a considered manner.</li></ul> <p>This student has designed a structure and used the minimalist design era influences and Mies van der Rohe's influence (1).</p> <p>The social influences are lightly covered, with references back to World War 2 (WW2) and Dutch neo-plasticism and Russian influences (2).</p> <p>The student describes the characteristics of the era and starts to explain them (3). There are good visual links back to the design characteristics of the era in the development of design ideas (4) with the use of columns as support beams, the use of glass and straight uncluttered lines.</p> <p>For a more secure Merit, the student could deepen the explanation of the characteristics of the design era, maintaining a broader focus on the era instead of individual designers from within that era such as van der Rohe. The visual linkage between the design ideas and the design era could also be expanded to better show the connections.</p>





**Style**  
 In Europe, before World War II, Mies Van Der Rohe emerged as one of the most innovative leaders of the modern movement, producing visionary projects for glass and steel and executing a number of small but critically significant buildings. In the United States, after 1938, he transformed the architectural use of the steel frame in American architecture and left an unmatched legacy of teaching and building.  
 After 1923, Mies's style shifted, and he came under the influence of Dutch neo-plasticism and Russian suprematism. Along with the work of Frank Lloyd Wright, Mies began to experiment with independent walls and ceilings arranged in an open plan design. This influenced Mies to consider the reduction of these elements into compositions of pure shapes in space. After his arrival in the United States in 1937, Mies van der Rohe went on to significantly change the American architectural landscape, particularly during the rebuilding after World War II. Mies designed the Barcelona Pavilion in 1929, setting a major precedent for the Farnsworth House.

**Aesthetic and functional elements.**  
 The contrast of a simple structure in a simple environment gives an idea of blending in and using the. Rather than surroundings in its natural self. Instead of changing the environment the building enhances its location. The I-beams are both structural and expressive. They are exposed to the eye and are used as support columns as well as enhancing the design, contrasting with the thick tree trunks surrounding it. Rather than being hidden by materials to conceal the structure of the building. Also the smaller size of the Farnsworth house and the isolated area allows for calmness and simplicity—which was harder to be found in more larger urban projects.

# Ludwig Mies Van Der Rohe



## The Farnsworth House



**History :**  
 The architecture of the house represents the ultimate refinement of Mies van der Rohe's minimalist expression of structure and space. Designed in 1944 as a country retreat for Dr. Edith Farnsworth, and built in 1951. In 1947 its significance was recognised even before it was built when a model of the Farnsworth house was exhibited at the museum of modern art in New York. It was described as 'A radical departure from his last European domestic projects.'

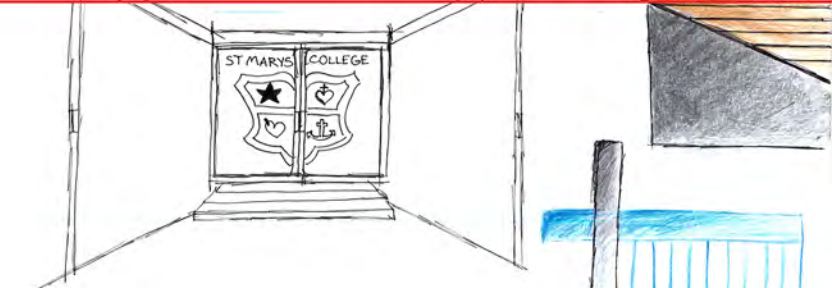
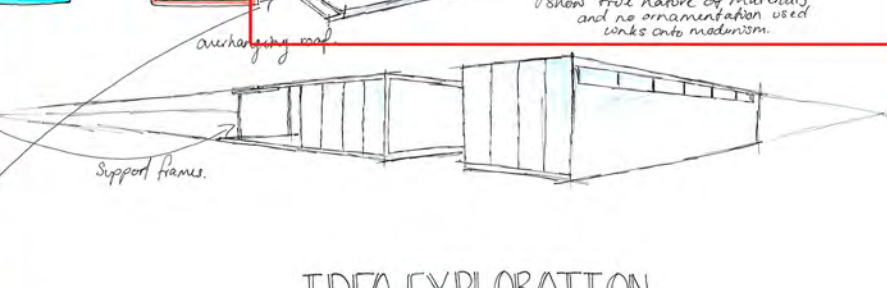
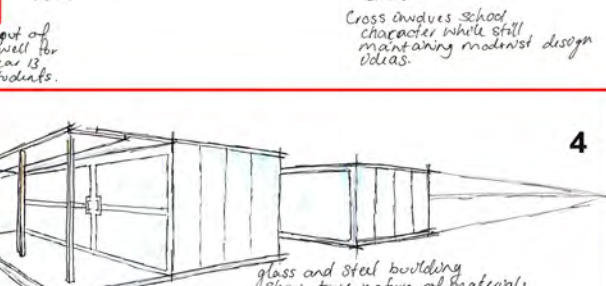
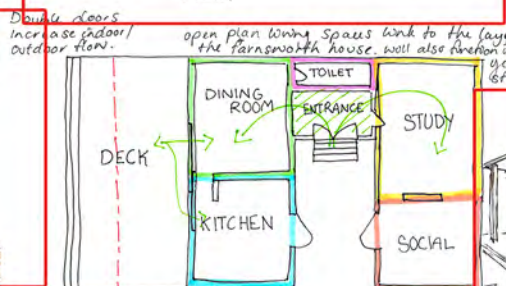
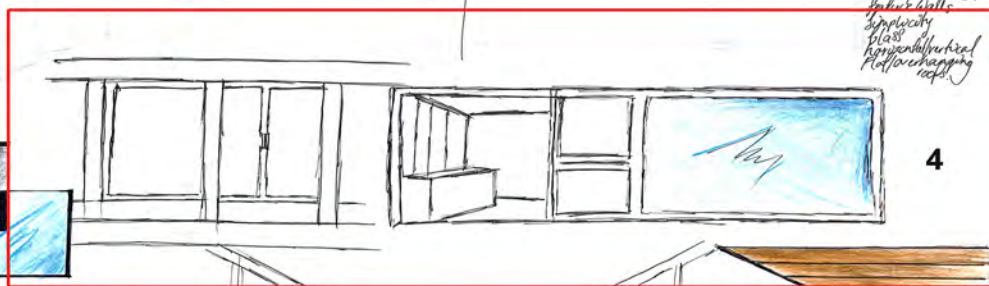
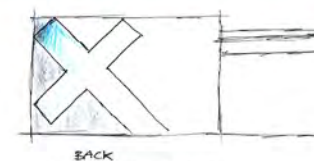
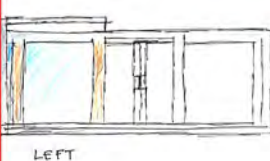
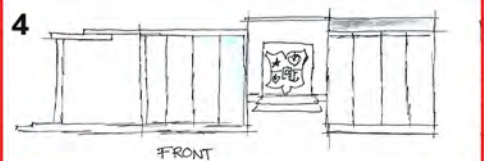
**Key features:**  
 8 steel support columns framing a glass box.  
 It is made up of three strong horizontal forms—The terrace, the floor of the house and the roof—attached to the steel I-beam support columns.  
 It is one of the most minimized designs of the time.  
 An open plan interior design which changed the path of modernist architecture. With the open spaces and an unclutteredness that is blended with the simplicity of the structure itself.



# IDEA GENERATION



*Modernism:  
 Geometric shapes  
 Squares/Rectangles  
 Structure  
 True nature of materials  
 no ornamentation  
 Simple, unpretentious  
 Functional  
 Simplicity  
 Glass  
 Horizontal/vertical  
 Flat/overhanging  
 roofs*



# IDEA EXPLORATION



	Grade Boundary: High Achieved
4.	<p>For Achieved, the student needs to use the characteristics of a design movement or era to inform their own design ideas.</p> <p>This involves:</p> <ul style="list-style-type: none"><li>• describing the way elements of design are used within the design movement or era</li><li>• describing social factors that influenced the design movement or era</li><li>• generating design ideas that incorporate the identified characteristics of a design era or movement.</li></ul> <p>The student has designed a structure (building) and has provided a description of the elements that characterise the minimalism design era (1).</p> <p>The social factors that influenced the design movement or era are shown (2). The social factors are also embedded in the research phase, i.e: the contact with nature and simple shapes (3).</p> <p>The student uses a range of basic mock-ups to show some of the forms associated with minimalism. These mock-ups help to show how the design ideas have been informed.</p> <p>To reach Merit, the student could show more depth in the description of how the social factors have influenced the design era or movement.</p> <p>The ideas and identified characteristics need to show more links to meet the criteria of 'clearly inform'. The image (4) talks about light, which is a characteristic, however this would need to be further developed and be more consistent across the development of the design ideas.</p>

## Key Designers & Characteristics

Many other architects and designers took on similar mottoes such as Designer Buckminster Fuller adopted the engineer's goal of "Doing more with less", a similar sentiment was industrial designer Dieter Rams' motto, "Less but better" adapted from van der Rohe. Yoshio Taniguchi and Tadao Ando are two key Japanese architects who have incorporated Japanese culture and traditions in to the movement



Minimalist structure uses relatively simple elegant designs, with most designers going with quality rather than quantity.

The buildings minimalist look is shown by using:

- Lighting effectively
- Basic geometric shapes as outlines
- Similar like shapes for components
- Tasteful non-fussy bright colour combinations
- Natural textures, colours and
- Clean and fine finishes
- Natural patterns on stone cladding and real wood encapsulated within ordered simplified structures
- Real metal producing a simplified but prestigious architecture and interior design.
- May use colour brightness balance and contrast between surface colours to improve visual aesthetics
- Space age style utilities (lamps, stoves, stairs, technology, etc.)
- Neat and straight components (like walls or stairs)
- Flat or nearly flat roofs
- Pleasing negative spaces
- Large windows to let in lots of sunlight



## Influences

The minimalist movement has inspired many other designers and architects throughout the years. De Stijl was one of the first architects to express the key elements of minimalism and he has influenced others such as Ludwig Mies van der Rohe, who has influenced one of the key designers of the movement, Tadao Ando. His Japanese heritage has expressed through his works and influences of the movement. Many cities and towns within Japan have a minimalist design, being very traditional and simplistic which is a key characteristic within the movement.

### More initial ideas

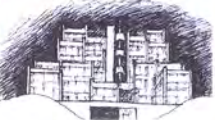


I have continued to keep a flat roof as it is a strong characteristic of minimalism. I also kept the strong shape of my building/box.



## Rokko Housing

Tadao Ando is the designer and architect of Rokko Housing 1, 2 and 3. With his Japanese heritage, he used harmony between elements of nature and Japanese culture to design the minimalist look of Rokko housing in Kobe. Using the natural landscape, lighting, flat roofs and natural elements, the Rokko Housing's are a key example of the minimalist movement.



The whole design has blended in and surrounded by the natural habitat and environment

Rokko housing uses flat roofs to flow with the minimalist look of simple shapes

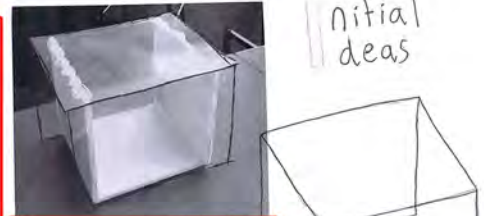
Large windows to let lots of natural sunlight in



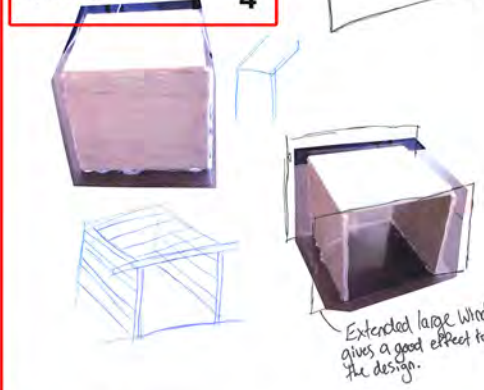
Simple shapes are used within the whole design, mainly squares and rectangles are used in Rokko Housing.

Each house has contact with nature, with grass courtyards

The natural landscape has been used to offer great views for every house

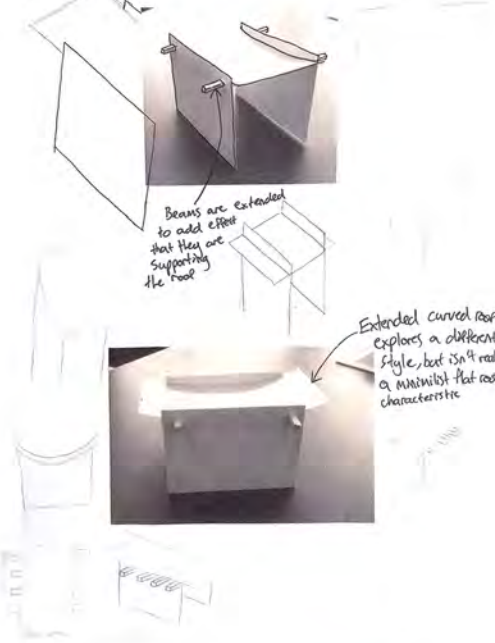


This idea explores many key features of minimalism design. Such as natural light, flat roof, straight lines and basic shapes.



Extended large window gives a good effect to the design.

This idea shows a curved roof that is supported by wooden beams. Draws minimalist characteristics with its basic design but also explores different ideas of extended features.



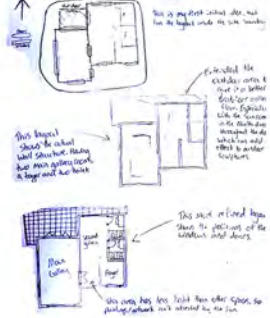
Beams are extended to add effect that they are supporting the roof

Extended curved roof explores a different style, but isn't really a minimalist flat roof characteristic

## Layout Ideas



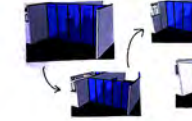
## Site layout Development



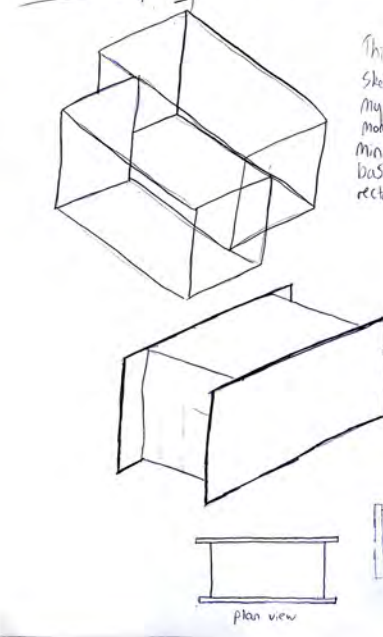
## Re-Design



## Developed on sketch-up



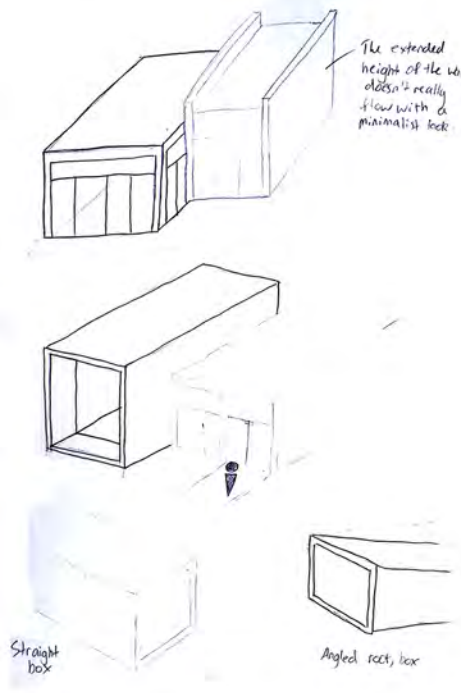
## Developing Exterior



This is the basic skeleton shape of my exterior at the moment. Has a minimalist look with basic shapes of a rectangle and square.

plan view

Front view

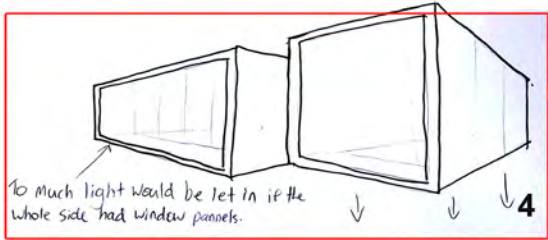


The extended height of the wall doesn't really flow with a minimalist look.

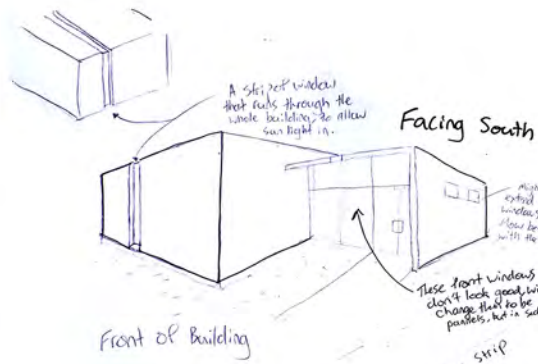
Straight box

Angled roof, box

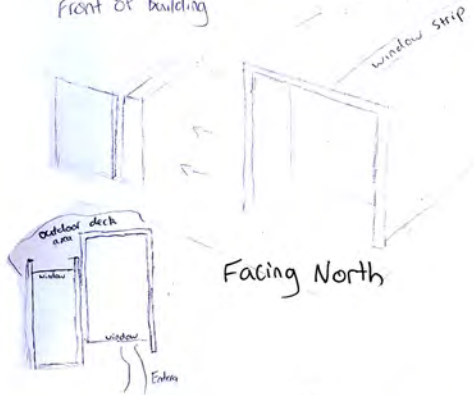
# Continued Development



Going to have only sections of windows - small squarish

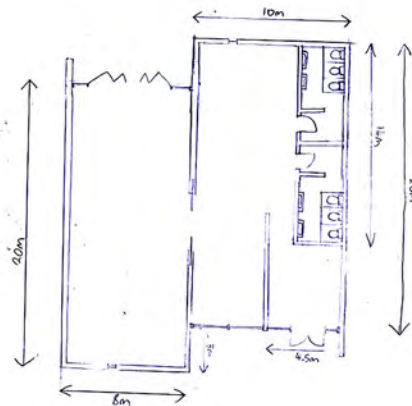


Front of Building

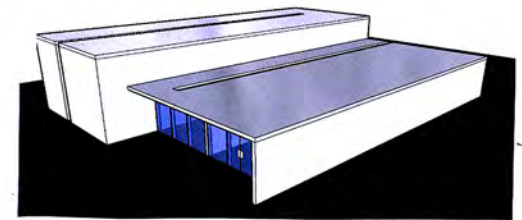


Facing North

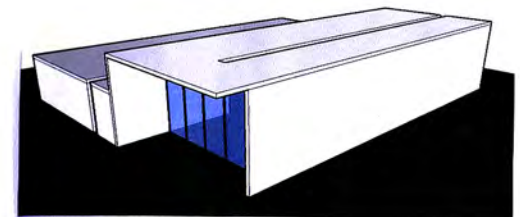
## Refined Floor Plan



## Final Design



Isometric



	Grade Boundary: Low Achieved
5.	<p>For Achieved, the student needs to use the characteristics of a design movement or era to inform their own design ideas.</p> <p>This involves:</p> <ul style="list-style-type: none"><li>• describing the way elements of design are used within the design movement or era</li><li>• describing social factors that influenced the design movement or era</li><li>• generating design ideas that incorporate the identified characteristics of a design era or movement.</li></ul> <p>This student has designed a structure using the influence of the Modernist Architecture design era.</p> <p>The student has identified and described the basic characteristics of the era (1), e.g. simple designs, steel glass and concrete, white walls. The student's description starts to explain these characteristics.</p> <p>The social influences that affected the design era have been described, i.e: WW2 and the more simplistic feel of architecture after the war years (2).</p> <p>The student's own design ideas have some linkage to the identified characteristics, e.g. the expansive use of glass and clean lines and start to incorporate these characteristics into their ideas (3).</p> <p>For a more secure Achieved, the student could show more linkage between the characteristics of the era or movement and the design ideas explored, to show how the characteristics of the era have been incorporated.</p>



Peaceful, spacious, glass, there's Shade if wanted to study/eat (etc.) outside, visual emphasis on horizontal and vertical lines. Simplification of form used.



Bright colour, levels, spacious, private, outside areas, clean.



Big/spacious, peaceful, it contrasts with environment (wood feature). Visual emphasis on the horizontal and sloping lines.



Spacious/big, glass windows open, outside areas, friendly. Horizontal lines visually emphasised, simple but clean design.

# MODERNISM



Long rectangular shapes, white contrasts with environment, glass windows and doors. It's simple and clean, levels are used and it's private.



Unnecessary details are eliminated. Simple but functional, comfortable, saves un-needed space.



Clean and spacious cupboard area, black and white contrasts with environment, simple living.



Simple, clean, compact, there are six big cupboards which are very useful.



Bright colour, spacious, clean and private, a lot of cupboards high and low are very useful.



Simple, spacious, clean, an elimination of unnecessary details is used.



Light colour, white contrast with environment, simple, spacious.

1

## History of Modern Fashion

In 1909, Gabrielle Coco Chanel was 26 years old and opened her own shop in Paris, France. She made dresses, tops, jeans etc. Once her shop had become famous, women no longer had to follow the requirements of wearing tight corset dresses; they were able to wear loose clothing that they were comfortable in.

## History of Modern Architecture

Modernism had entered popular culture by 1930. In the early 1900's there were only 2 architects. Modern ideas in art were starting to appear in commercials and logos. Edward Johnston had designed the famous London Underground logo in 1919, this being an early example of modernism, clear visual symbols and easily recognizable. After World War II, the modern artists from every cultural centre of Europe's former capital of the art world fled for America. New York City heralded the celebration of the new American abstract expressionism in the 1940's. This was the modern movement that had a combination of lessons learnt from Picasso, Fauvism, and Henri Matisse etc. This started a growing acceptance of the new architecture coming into play around the world. Instead of viewing buildings as a heavy feel, and business, the leading innovators of modern architecture were seeing it as a volume of space, light rooms, which is when glass came into being very popular, and architecture was now about simplicity and "form follows function" and contrast with the environment. Since World War II, modern architecture has admitted a certain amount of free play in buildings of various designs of flexibility, simple and clean. Architects wanted to create new, fresh ideas to get the whole war situation out of everyone's heads, to have everyone not reminded of what happened and it was kind of like an idea of everyone moving on.

2

## What is modern architecture?

The web definition for this is: Modern architecture is characterized by simplification of form and creation of ornament from the structure and theme of the building; involves a break from the past and uses recent technologies and new forms or new combinations of old forms. Modern architecture is about promoting simple designs, "less is more", yet sophisticated. Steel, iron, glass and concrete are the popular materials used to construct these modern designs. Most of the buildings made are usually long in width and rectangular shaped, with usual overhanging roofs and glass walls to show simplicity and sophistication, along with white walls to contrast with the environment, and the floor plans made to be functional and logical, spacious, flexible rooms that flow into another, a more relaxed living environment.

1

In 1930, Mies Van Der Rohe met with the New York architect Philip Johnson, who made his work become known in the United States. From 1930-33 he was the director of the Bauhaus school until it was shut down under pressure from the new Nazi government, he then moved to the USA. He then became the head of the architecture department at the Armour Institute of technology in Chicago from 1938 till 1958. During this time frame, he had become an American citizen and was professionally established. He had designed one of his most famous buildings called the Farnsworth House. He also designed and completed the Twin Towers in 1951, along with the Seagram Building in 1954.



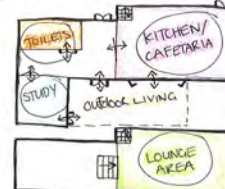
Ludwig Mies Van Der Rohe, a famous modern architect born in Aachen, Germany in 1886. In 1908, he began working for the architect Peter Behrens. Mies Van Der Rohe became a Director of the Bauhaus and his most famous statement was 'Less is more'. Because of his design of the German National Pavilion for 1929 Barcelona International Exhibition, one of his most famous buildings, his place in the history of garden design and landscape architecture came into play. He built his first house as an independent architect, a wooden house in eighteenth century style under the influence and pressure of English structural design.



Another famous house of Mies Van Der Rohe, the Farnsworth house, designed and built from 1946 to 1951.

# DESIGN DEVELOPMENT

## Design #1



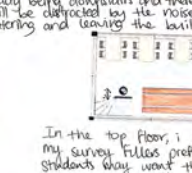
I gave the bathroom 5 toilets as these were the highest voted on my survey, no more, no less. Although I didn't follow through with my survey top vote for the bathrooms to have their own cubicles, top vote mirror etc because I thought that four sinks/basins would be their hands and they would just use the bathroom rooms. It has doors to go in and out of the bathroom rooms. bathroom making it still private to other building part especially as its high up. The design I chose to go through with was this design, because its the most conventional and efficient for students, especially to access these areas. Although I changed the study and lounge area because the students won't be as distracted upstairs, opposed to the study being downstairs and therefore students will be distracted by the noise of students entering and leaving the building.

## Design #2



Line Design #3 Design #11 study is downstairs as students due to the kitchen will get distracted from their study across the wall from entering and leaving the building. Although I thought that a sliding door this efficient as it is, once again, hygienic and also private to come whatever students are wanting to name. There are plenty of doors for many students coming in and out all the time, this increases indoor/outdoor flow. Very spacious, flexible rooms also increasing indoor/outdoor flow. There are 4 large couches with beanbags for the students to come and relax in study periods or indoor.

## Design #3



I have put big four tables outside on the deck as my survey informs the likes of sitting outside. These tables are placed efficiently as I don't want congestion of the common room to go/return to classes around school. I gave the study room 8 computers as a result of eleven people (highest) wanting 8 computers, no more, no less. They are all placed along the wall so there is no congestion among students in the study area.

In the top floor, I did a variety of small and large tables because students may want their own space or privacy to study. (study area) or table with a small group of friends opposed to many students sitting all together at the same table in the cafeteria. All my decision after yr13 students a choice between tables in each the cafeteria and the study.

3

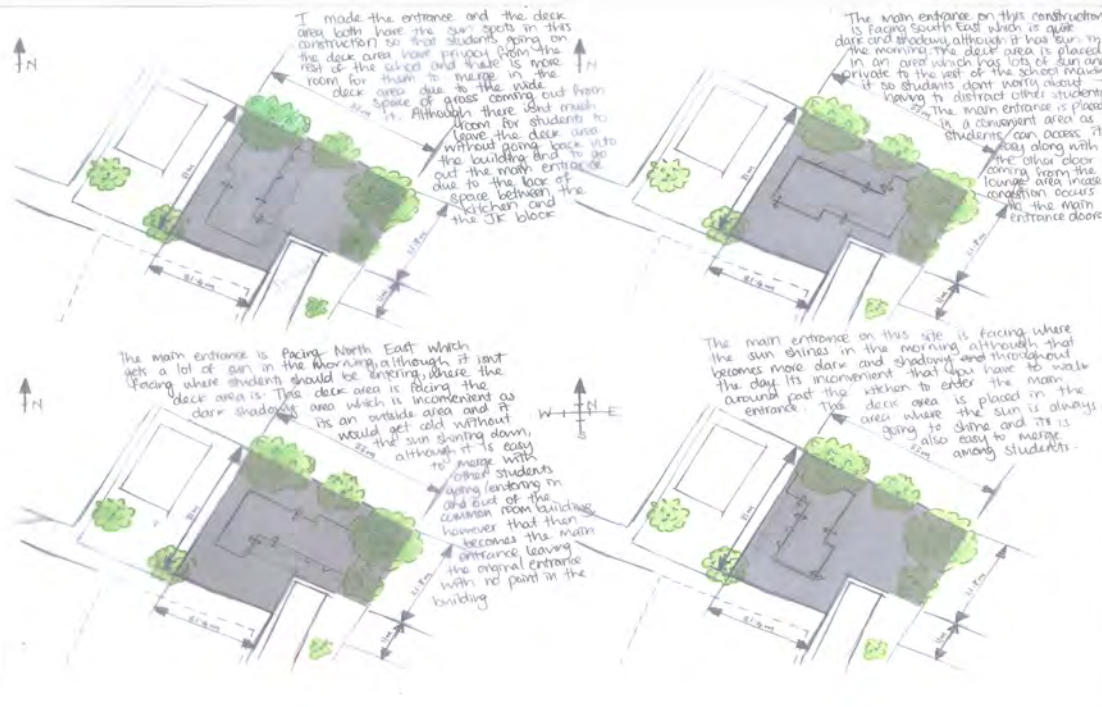


I got my design off this design in the picture as its really stood out to me as it contrasts well with the environment with the use of wood materials, the glass windows highlighting the idea of modernism.

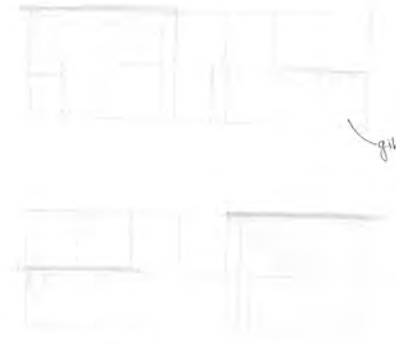


The overhanging roof influenced me to have one too but not as overhanging. The glass windows and doors were an influence for my design, as its a perfect example of modernism. Its rectangular, long shapes, simple yet elegant.

I didn't want the study and the lounge area on the same floor so didn't choose this design, although the kitchen next to cafeteria is beneficial as its easy to access - living room.

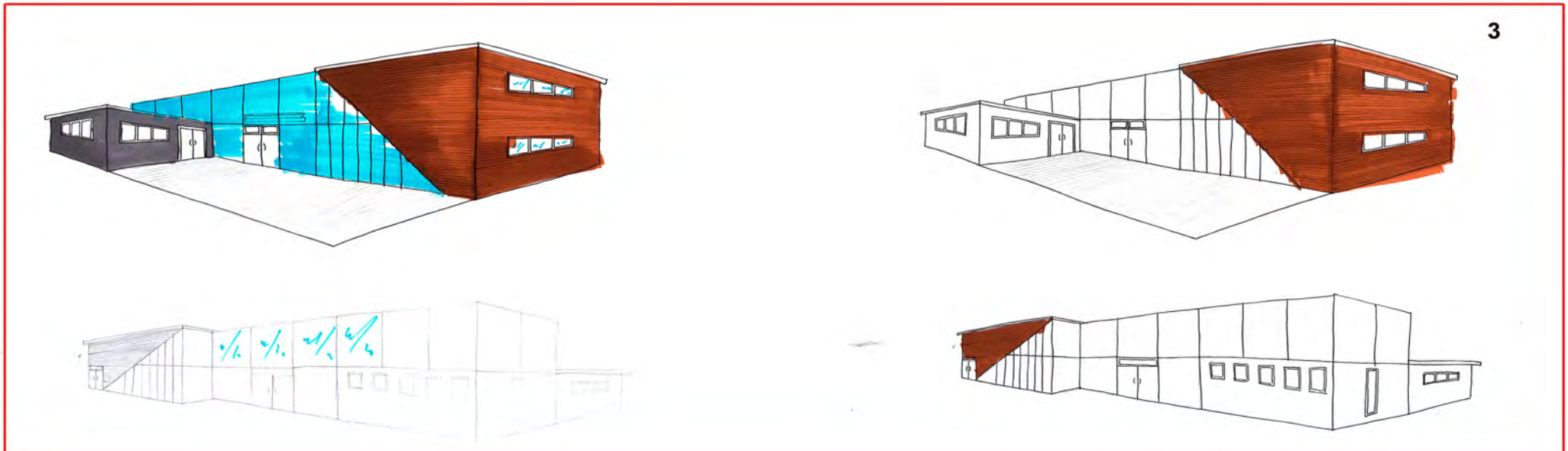
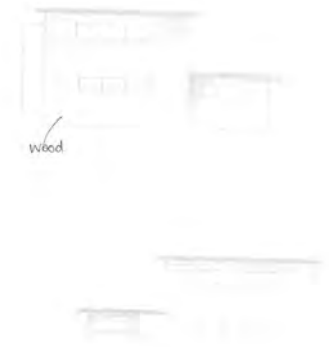


## MATERIALS



I have chosen **glass** as a main material simply because it gives an open look to the building and it reflects modernism which increases the use of light in architecture. Glass has been chosen also because it allows natural light into the building. Although in the summer, the glass could make the hall and cafeteria rooms quite hot and humid due to the sun directly shining through.

I have chosen **wood** as another main material because it reflects modernism as it creates a calm surrounding which is needed for students trying to study. It creates a soothing scene and creates a sense of balance as it is an environmentally friendly material creating the same feeling. It is sustainable and NZ wood is all grain and produced in NZ resulting with an eco-friendly material used in my building.





	Grade Boundary: High Not Achieved
6.	<p>For Achieved, the student needs to use the characteristics of a design movement or era to inform own design ideas.</p> <p>This involves:</p> <ul style="list-style-type: none"><li>• describing the way elements of design are used within the design movement or era</li><li>• describing social factors that influenced the design movement or era.</li></ul> <p>This student has provided some research into the modernist era, focusing on the architect I. M. Pei. The student has produced a chair design.</p> <p>The interlocking shapes (2) should link back to the design characteristics identified, which are mainly angular shaped forms.</p> <p>To reach Achieved, the student could enhance the description of the social factors, and the description of the way the elements of design are used to provide the depth expected. The focus should be expanded to look at the design era or movement in a broader sense. The reference to modernism (1) should be expanded to an era rather than a focus on one particular designer (I.M. Pei).</p>

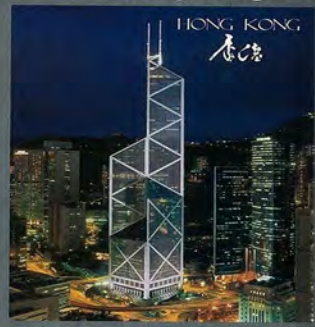


# I.M. Pei (Ieoh Ming Pei)

## Le Grand Louvre



## Bank of China, Hong Kong



Dallas City Hall and Hancock Tower



National Gallery West Building

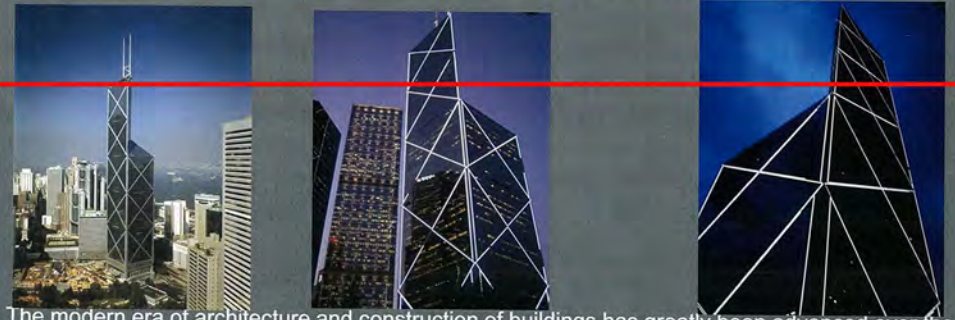
## Bank of China in Hong Kong

The bank of china in Hong Kong is a 3 dimensional shape with a structure that has it's supports of the outside of the building. This building as I.M Pei said it needed to reflect "the aspirations of the Chinese people". This structure is made up of 3 types of geometric shapes to give it its main structure, squares, equilateral triangles and right angle triangles. The design had troubles from the start. The location of where the site was to be was surrounded by tangled highways on 3 sides. Pei had trouble finding inspiration for this building but after a weekend to the family holiday he came up with the design with a couple of sticks. The design was both unique and was strong enough to follow the city's strict building regulations. **Also was out of the way from the aero space so then he could not be limited by height in his design.** Since the design was mostly made up from triangles (the worlds strongest shape) it is very structurally sound and has a very appealing image. The design falls into itself giving a more refined shape instead of the more traditional square or rectangular skyscraper. This design of a "visible truss" structure spreads the stress on the 4 base corners. This building also influences "Feng Shui" into it's design. **After the completion of the building the New York Times said "China Won't Ever Be the Same".** Another feature of this building that makes it aesthetically beautiful is the reflective glass as it reflects the city's light of the surrounding buildings giving it a radiant glow.



Describe the architect's era, style, philosophy and specific work. This should be illustrated with images, quotes and diagrams.

I.M. Pei was born 26 April 1917, in a small town called Canton in China but raised in Hong Kong and Shanghai. As a child he drew inspiration from the Shizilin Garden of Suzhou. At the age of 18 he travelled to America to study at the University of Pennsylvania but latter transferred to the Massachusetts Institute of Technology. After graduating he went to Harvard Graduate School of Design. As a designer he drew ideas from both western and traditional Chinese architecture. **He is from the modern architect era in which he uses modern building materials and technologies to make better buildings. This is also used in different ways like putting the main structure on the outside.(Bank of China in Hong Kong)**



The modern era of architecture and construction of buildings has greatly been advanced over the past decade. New building materials, new more advanced technology and the ability with these materials to go further and more "out-there" designs have made a huge leap in the industry of the architectural world.

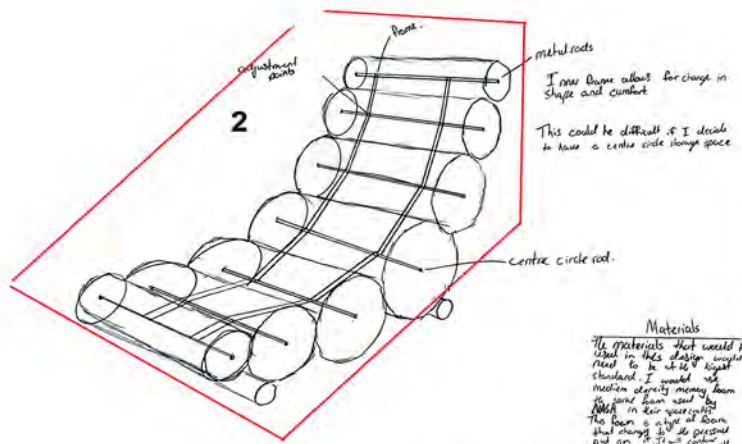
## Le Grand Louvre

The new Louvre in Paris holds over 35,000 historic paintings, sculptures, and artefacts. These include world famous paintings like the Mona Lisa which was painted by Leonardo Da Vinci in 1505 and has been insured for US\$645 million this design is a glass pyramid that also has a equal pyramid that mirrors it under ground. The Louvre is the national art museum in France. This structure was designed by I.M. Pei. This pyramid is made up of square planes of glass with a metal frame. The pyramid is surrounded by four triangular water fountains with three smaller glass pyramids surrounding those. Surrounding the courtyard of the main pyramid is the older original buildings. These older styled buildings contrast nicely between the modern era pyramid and the older 12<sup>th</sup> century building. I believe that I.M. Pei has done this to show us that we never should forget the past but let it guide us to the future.



"The history of Paris was embedded in the stones of the Louvre."

### DEVELOPMENT



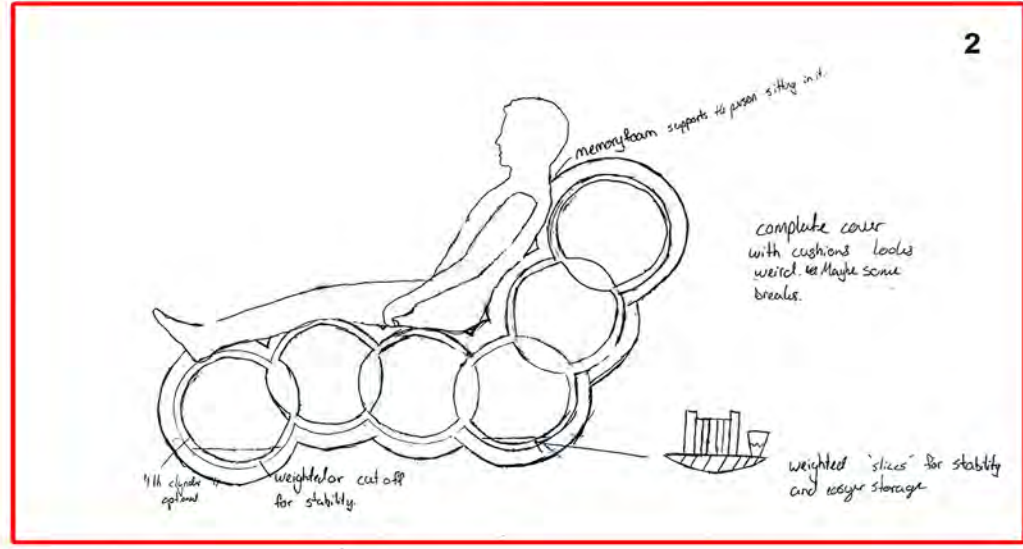
I now have a lot for change in shape and comfort  
 This could be difficult if I decide to have a centre circle storage space

Width of chair  
 The width of the chair can make the most of the comfort. If you have a chair that can only fit half your body on it, it wouldn't be very comfortable. You also need even space on each side of the chair.

Materials  
 The materials that would be used in this design would need to be at least 100kg weight standard. I would use medium density memory foam. The foam is a type of foam that changes its pressure and can be used in many ways. It is used in many ways and will change back to its original shape making it suitable to be distributed over time.

The main thing would need to be made out of steel rods or strong aluminum with the mechanism that will be used.

### Ergonomic



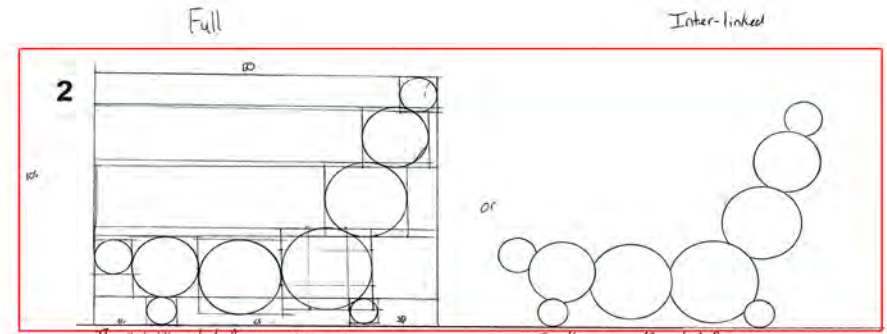
memory foam support to person sitting in it.

complete cover with cushions looks weird. Maybe some breaks.



weighted 'slices' for stability and easier storage

### DEVELOPMENT



The most likely steel frame would be visible in this type of structure

In this way the steel frame will be concealed inside the cylinders also the other holes could be holes to apply adjusting mechanism

