CHARACTERISTICS

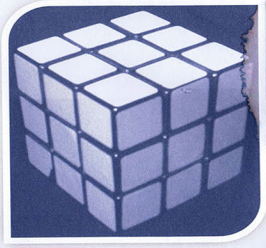
2

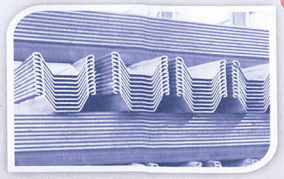
GLASS:

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 hiding 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 minimalistic 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.

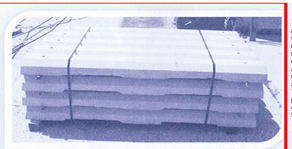




STEEL:

Steel has strongly influenced this design movement. Steel brings to aspects to the table, strength and appearance.
Steel is stronger than most over 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. This can allow the architect to incorporate into his design, features which would usually need to 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 spent in 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:
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- 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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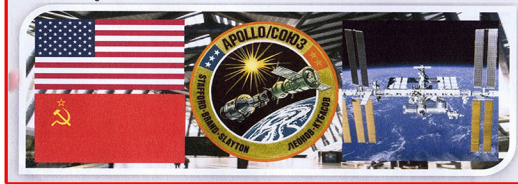
MOVEMENT INFLUENCES

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 shut 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



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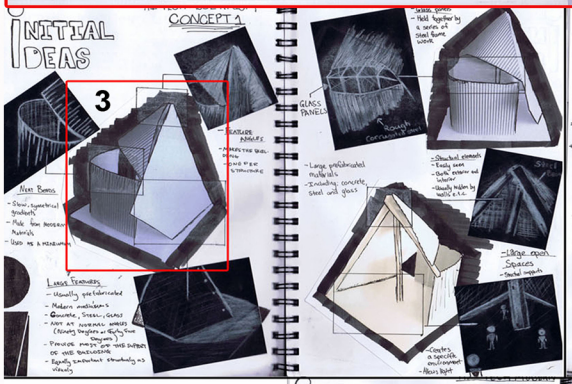
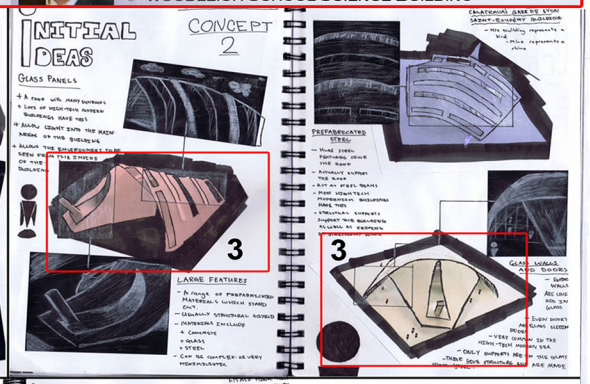
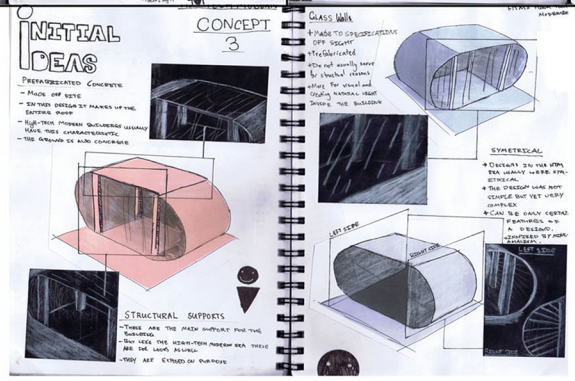
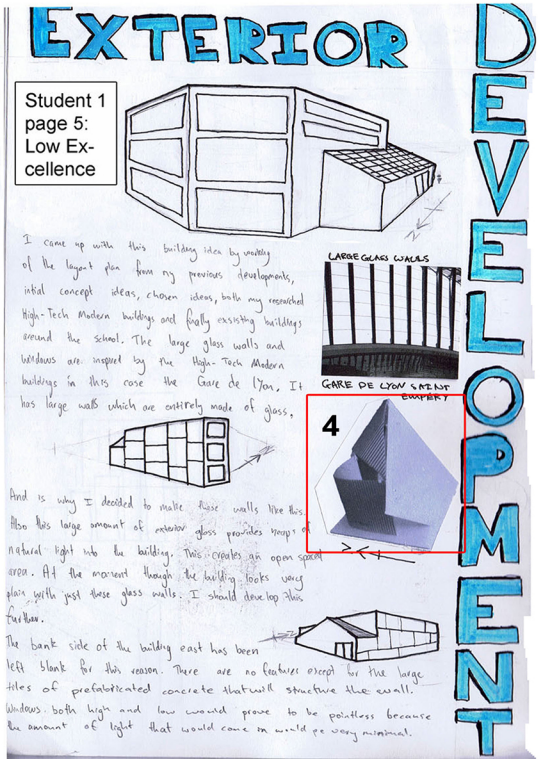
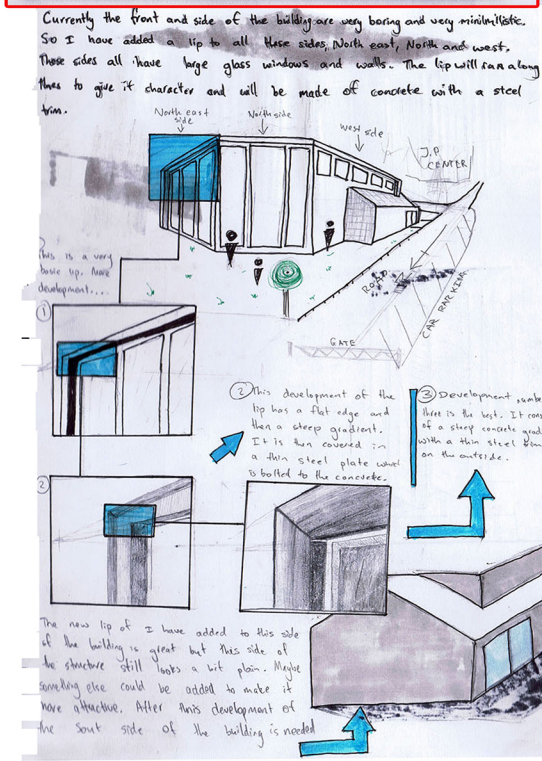




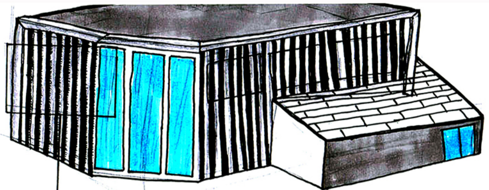


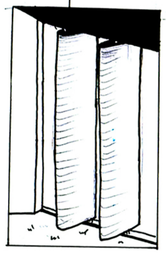




Student 1 Page 2: Low Excellence

NZQA Intended for teacher use only



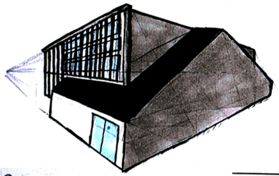


+ LARGE metal blinds cover the two glass walls and windows. These are actually structual beams to strengthen the outside frame of the building. They also are a visual element and are made from steel. They provide a reasonable amount of shade for the occupants of the building as well as … . The length is the whole side from top to bottom and prevent the art inside to become faded from the sun.

METAL BLINDS

GARE DE LYON SAINTEXUPÉ

This is a quick sketch of the building before the blinds are added to the walls and windows. At the moment it looks very plain and boring. Hopefully adding these blinds with it more character and make it look more like a High-Tech modern era building. Because It has started to look like a very minimalistic building.

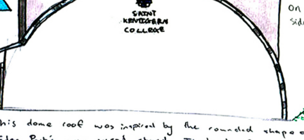


… metals blinds attached looks much more interesting the the one before. These add character to the whole design and makes it more like a high Tech modern building. This is because of two factors. One being the use of steel parts for architectual support and for the visual effects aswell. The second point being that it was inspired by the GARE DE LYON which also uses the same concept on the out side of its windows. Lastly this will make it fit … with other neighboring buildings.

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

Steel structure of the building extended past the buildings exterior wall.

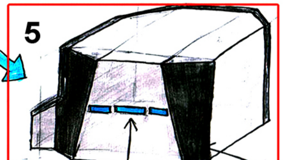
DOME ROOF



Steep bank on the east side....

+ This dome roof was inspired by the rounded shape of Eden Park's new west stand. Instead of being a circle wall I have 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 style roof does not really fit with the rest of the structure maybe I could mix it with the previous design.

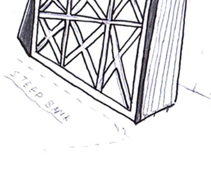
S.K.C. Logo could be added here....



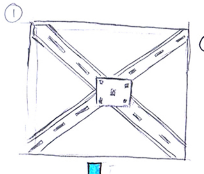
Exterior windows for interior natural lighting

LARGE PREFABRICATED CONCRETE SLABS

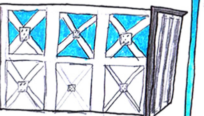
+ My new development looks much more moder than the dome roof model. It also keeps the feel that it is big inside aswell as outside. It consists of three huge pieces of prefabricated concrete. The largest one is centered in the middle with the two other ones at acute angles on both sides.

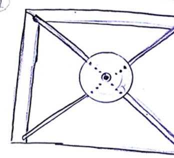


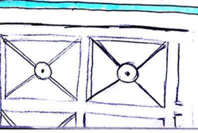
+ The west wall of the gallary was previously just a plain wall made of concrete. I am now developing this by putting in structual supports that are usually not seen in other eras apart from High-Tech Modern. They will be inserted into cavities in the concrete wall. My next task is to develop these further. Maybe a high window could be inserted.



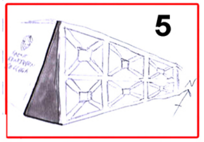
(1) Steel guiders will be placed diagonally in each of the six boxes. They will then be bolted to a square steel plate. This will provide a great deal of structual support as well as adding visually. These will be symetrically done throughout each square. Also the top three could back on to a window. This design was used in the Gare de lyon.



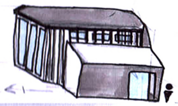




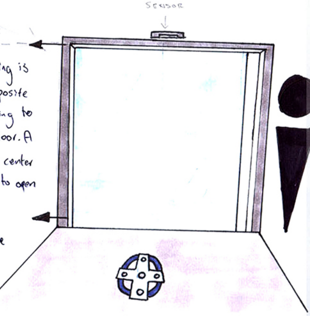
This development involves a circular steel plate disc that bolts together to steel poles together. It provides structual enhancement with a nice visual appearance. The circular element of the disc and poles is inspired by Eden Park. It may be a bit to circular for my building.



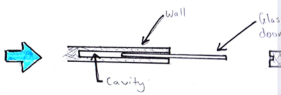
+ I have decided to go with the first development. The second one involved to many sphereical shapes and doesn't fit in with the overall image of my gallary. Development one is much more appropiate because it is neat angles like the rest of the structure and involves nice straight shapes. Also High-Tech Modern buildings usually are made with these neat angles and straight lines.

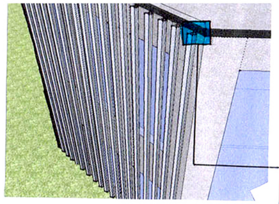


The main entery of the building is located on the western side opposite the car park. The door is going to be a automatic glass sliding door. A sensor will be placed in the center of the top to indicate when to open and close.

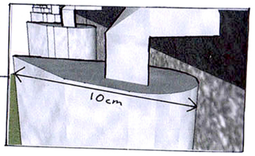


But there is a problem They were going to be two glass panels that slide away from one another, but due to the lack of wall space on the right hand size it had to be turned into a single panel which slides to the left when it opens. It does this by a cavity in the wall.





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



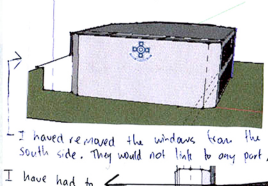
+ The metal blinds will be aproximately 10cm long with spaces of 20cm between each individual one. This will be beneficial for both the wind and sun which could effect the building.

+ Sun

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

+ WIND

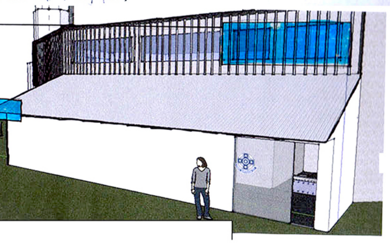
The blinds should reduce the amount of weathering of the building. This will be reduced by the blinds. The wind is heavy because it is funnelled through the estre to the north of the building.

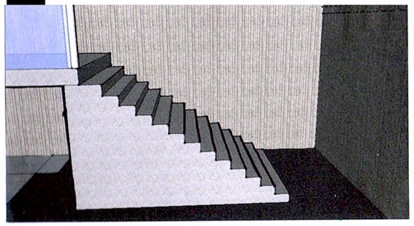


I haved removed the windows from the south side. They would not link to any part.

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 booring before so I added on eve for function and to spice it up a bit.

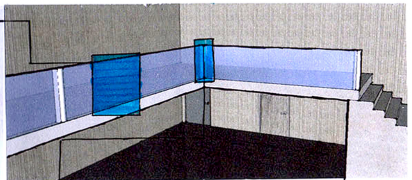




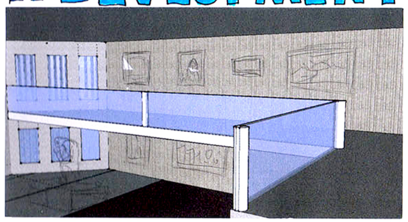
+ I scratched the single coloumn stair idea. It would have been very impratical. So I have gone with the traditional stairs idea, but added a High-Tech modern twist. It will be entirely made of smooth concrete.

INTERIOR DEVLOPMENT

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 for breaking. Maybe 1.5cm.



These support coloums are what will be supporting the glass balcony. The will be made of hollow steel tubing. They will be placed at regular intervals for maxiumum strength.



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