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Submitted Portfolio Exemplar

Level 3 Design and Visual Communication

Achievement Standard 91627

Initiate design ideas through exploration

(Product)

Achievement

TOTAL



ASSESSOR'S USE ONLY

Brief & User

Inspiration:



User:

The user of this design/product is going to be the current Graphics teacher - Mrs G - at school. Mrs G has her own classroom and moves around her space a lot, however she does not really have a desk to use for her own that is easy to access.

This design would serve as both desk and storage space at the 'front' of the classroom.

Mrs G wants a product in which she can have a small workbench, for use of her 13" macbook pro and an A3 size of paper. The design is preferably going to be at standing height of Mrs G so she can use to product easily.

The design would also include some storage space that doesn't make her space look cluttered and messy. And that storage space is for stationary, personal items, and spare resources for her classes.



Key Points To Consider:

Mrs G has specified that she needs to have a flat surface for her computer to rest on. This is a non-negotiable aspect for the design. It also has to fit into a specified location in the classroom (this means that there is a limit on the size and shape of the design).

The design also has to be easily accessible and not be in the way of the flow of people.

Some key points that can be considered are:

- Usable at standing height (maybe it is adjustable so can be used at about waist height).
- A seat so you can use the design while sitting down.
- Storage that doesn't make the classroom or the design look cluttered.
- Movable, incase it is in the way for something.
- Flat surface that is about A3 (referring to paper) in size.
- A holder for any drinks so they are not taking up space on the flat surface.
- Stationary holder.
- Strategically placed so it isn't affected by the environmental conditions of the classroom (rm 11).
- Not to have a negative effect on the people flow of the classroom.

This design can also have wheels or it could be fixed onto the wall.

Context

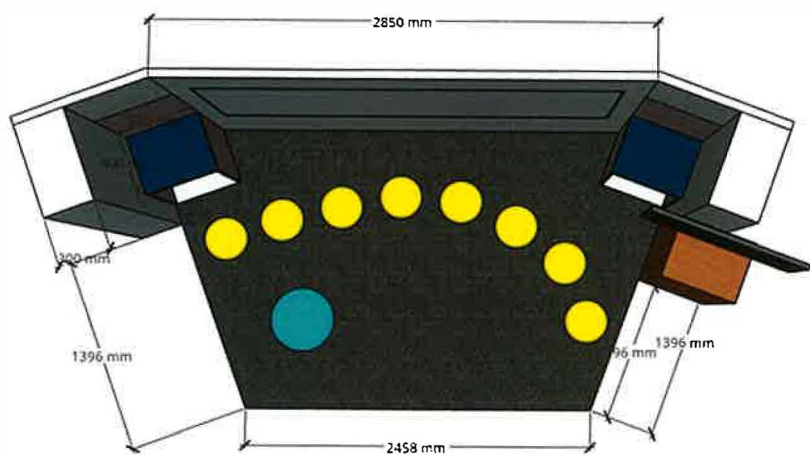
Existing Space



The blue tape on the floor is the space that the design has to fit into. This space already has got two pink shelves fitted and the whiteboard is mounted on the wall.



The picture above shows the viewpoint from the 'front' of the classroom (where the whiteboard is located). In this space Mrs G can clearly see everyone in the classroom. The diagram below is a sketchup of the space where the design has to go. In the diagram there is measurements of the space as well as 2 different coloured dots. The yellow dots show where it is common for students to walk around as they go to get rulers and the drawing tables. The blue dot shows the location in which Mrs G usually stands when talking to the class.

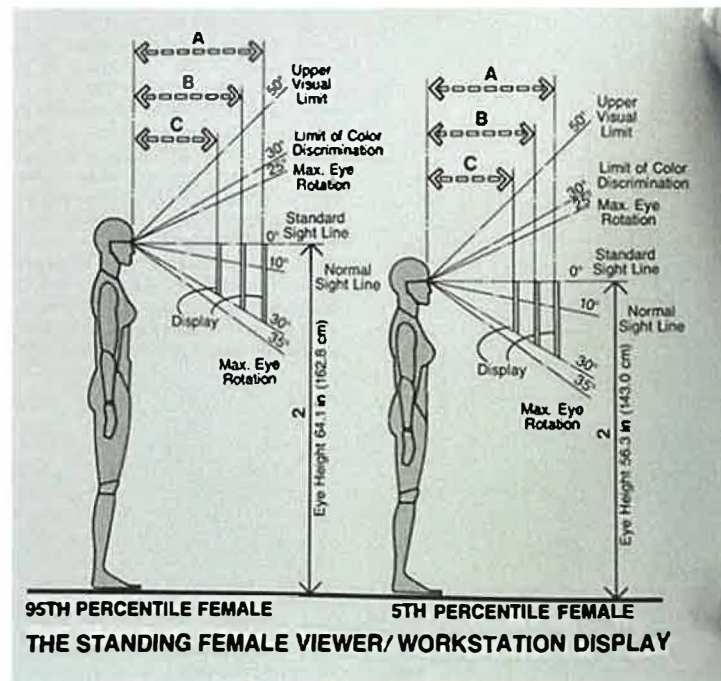
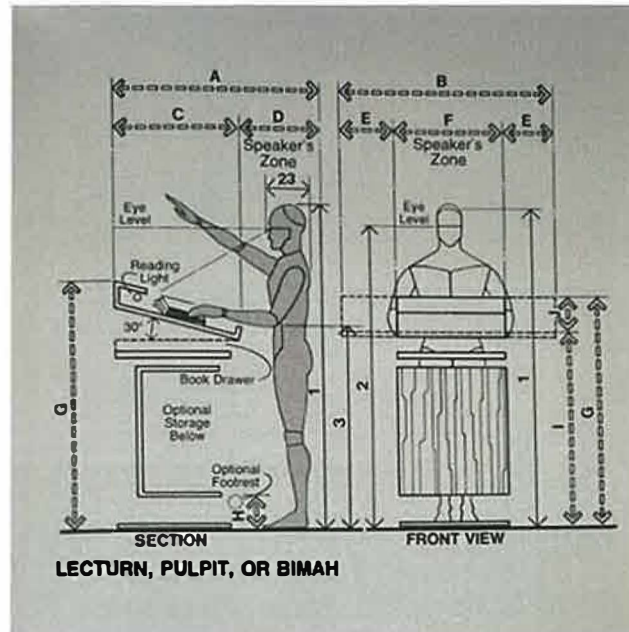


Environmental Considerations



Of the sides that can be seen in the photo (to the left) each of them have windows which all allow sunlight into the room. The window that is directly across from the space is towards the East and allows the early morning sunlight into the room. The window that is on the Northern side of the classroom allows in the afternoon sunlight. The photo below is showing the afternoon sunlight at 3:00pm May 2022. This photo is also showing the air conditioner which will blow some air in the space.

Human Factors



Existing Furniture

In this space there is a whiteboard which is mounted to the wall. There are also two shelving units on each side of the brick columns, they are mainly pink and it has a navy blue bench. This shelving unit holds the drawing boards on the bottom half of it. The top half is full of stationary and cleaning equipment. There is a photo of these shelving units to the right of this text.



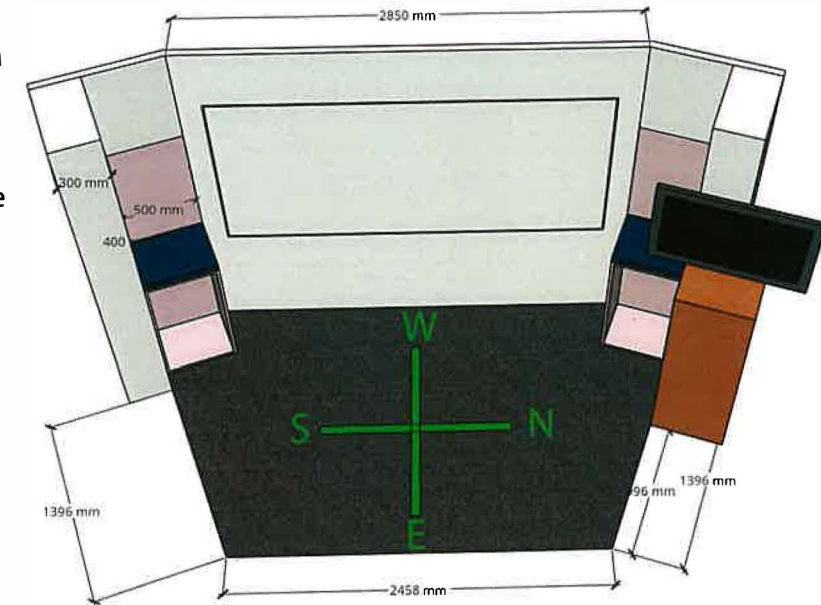
Existing Colours



The main colours that make up rm 11 are a light navy blue, a muted pink, the darker grey is used for the cork boards along the walls. The brown to the side is similar to the wood colour that is in the room.

Compass

The diagram to the right is showing the directions (in bright green) the room is facing. When a person is looking to the opposite side of the room from the whiteboard they are facing East. Mrs G wants the final design to be able to fit into this space and be less affected by the sunlight that comes into the room from the Eastern windows. This is because when she currently sits at the 'front' of the classroom in the morning before 9am, she is looking directly into the sunlight and she cannot see very well.



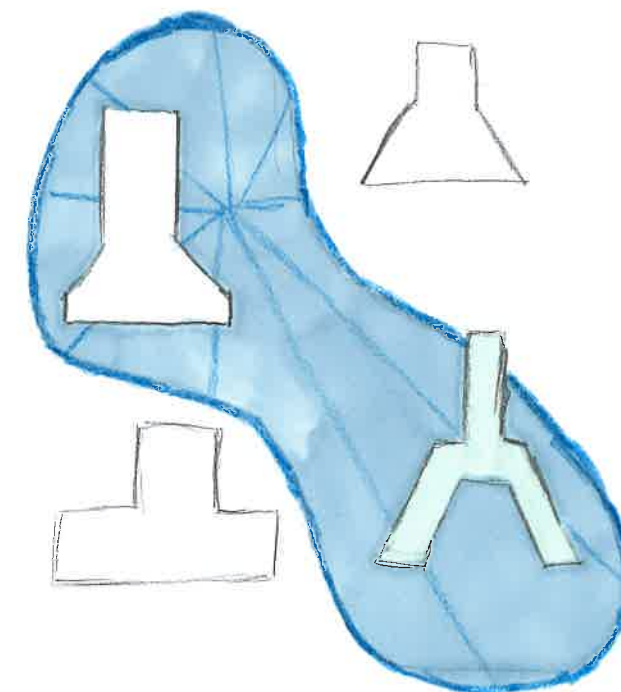
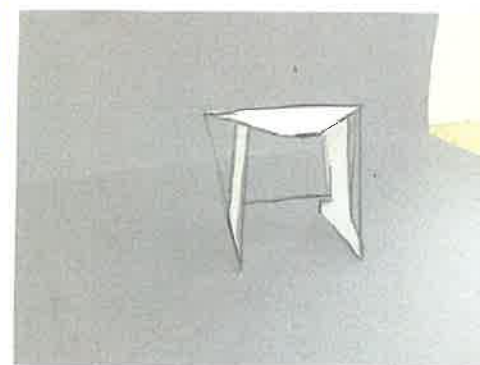
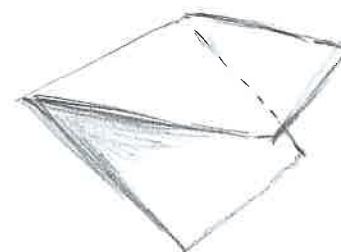
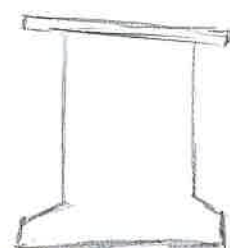
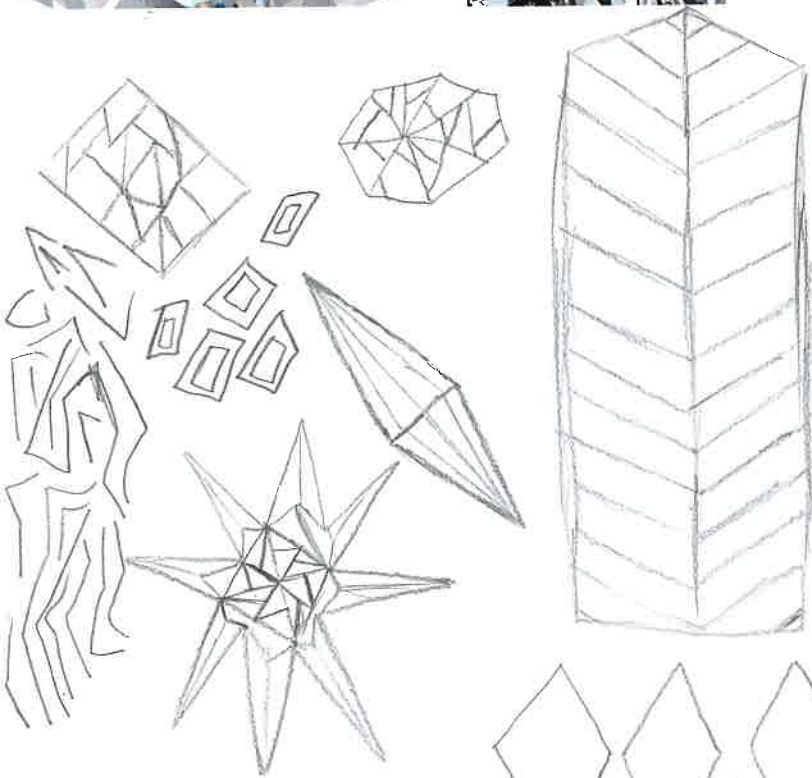
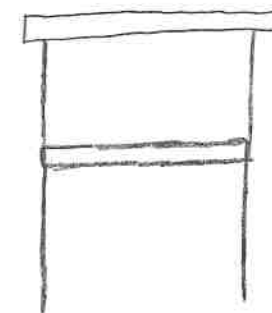
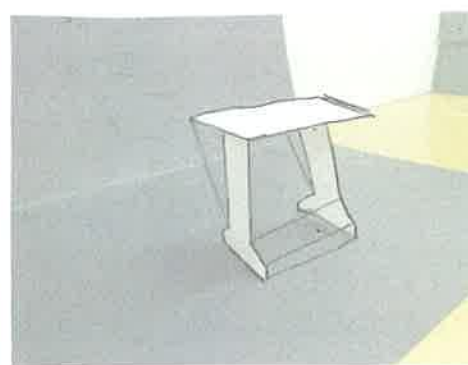
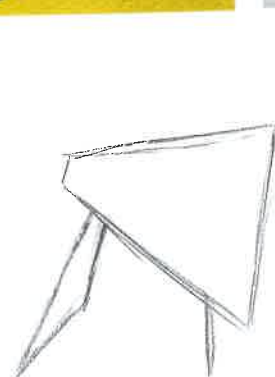
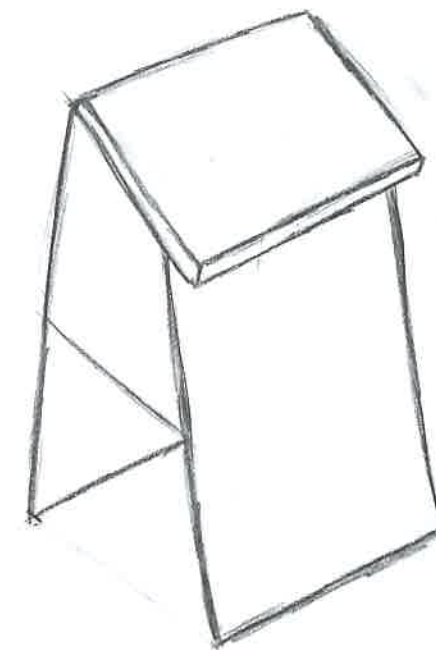
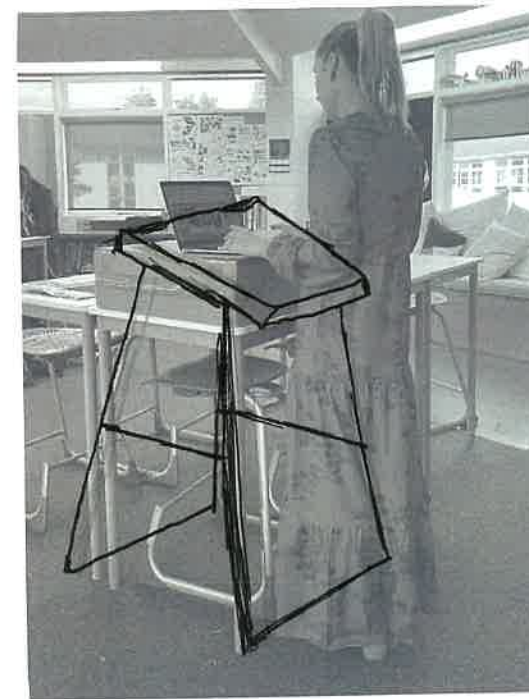
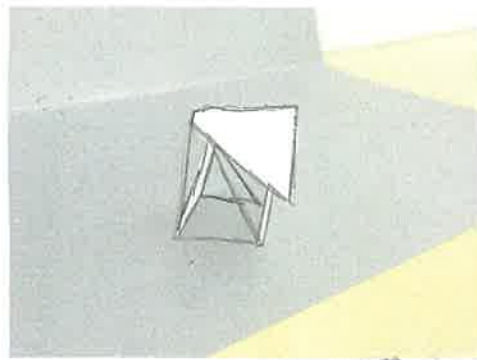
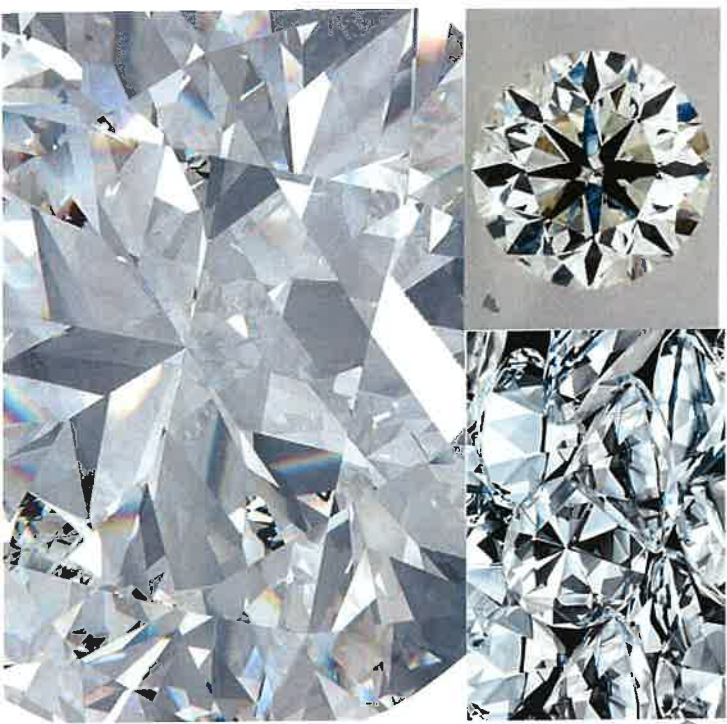
+VE Points

- The space that this design is going to go into has been researched clearly.

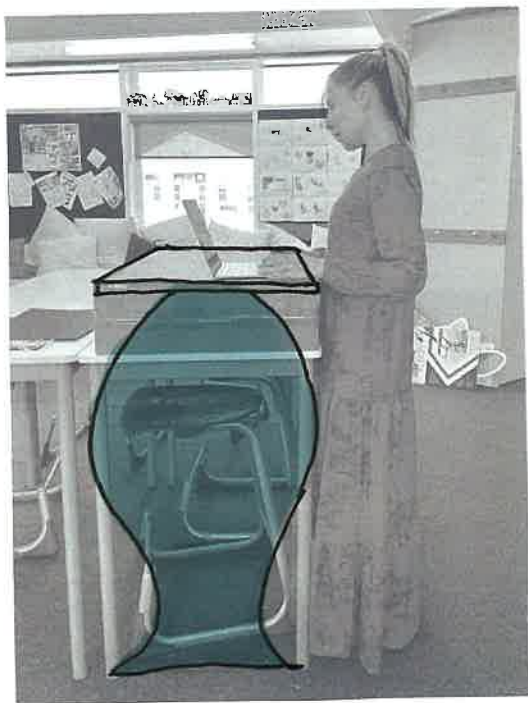
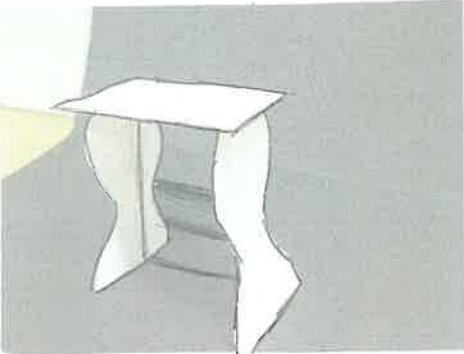
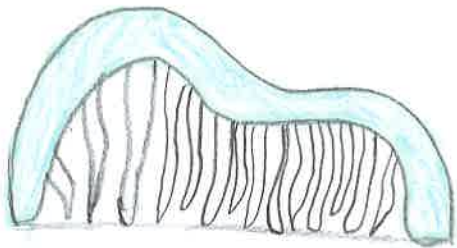
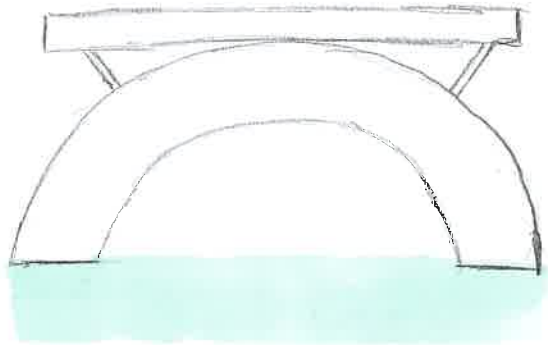
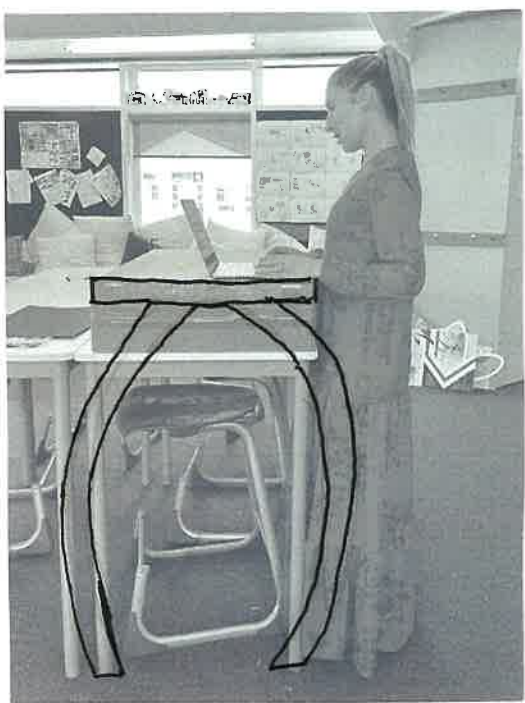
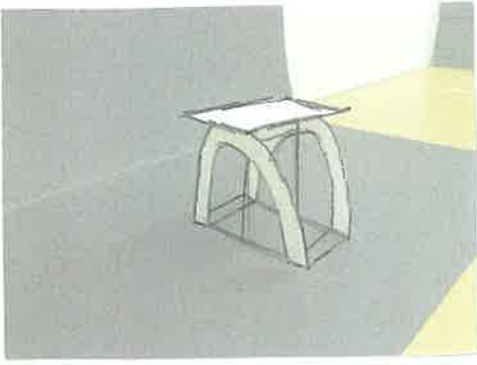
-VE Points

- There isn't enough research done on anthropometric data.

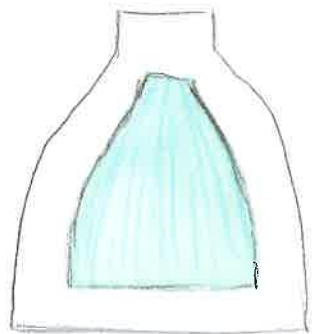
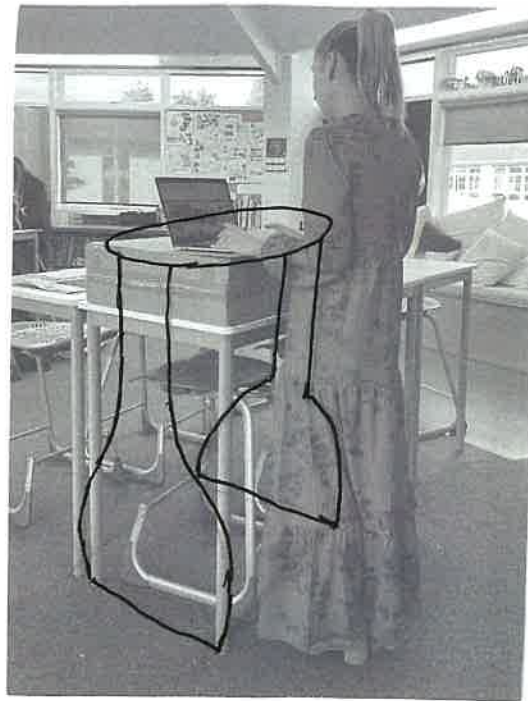
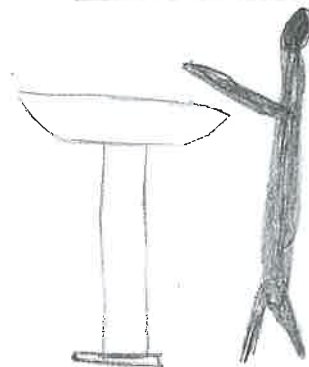
Ideation



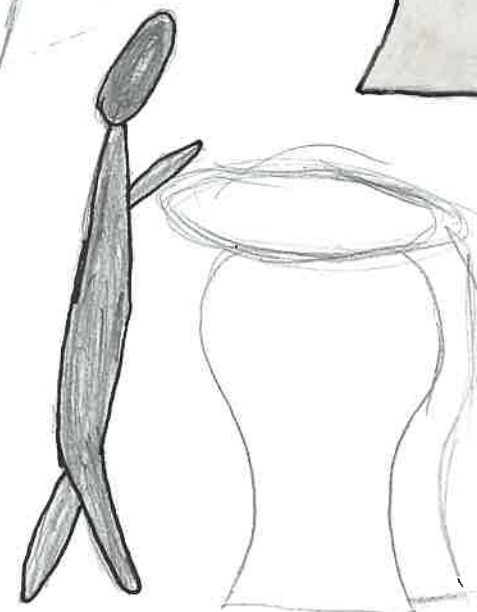
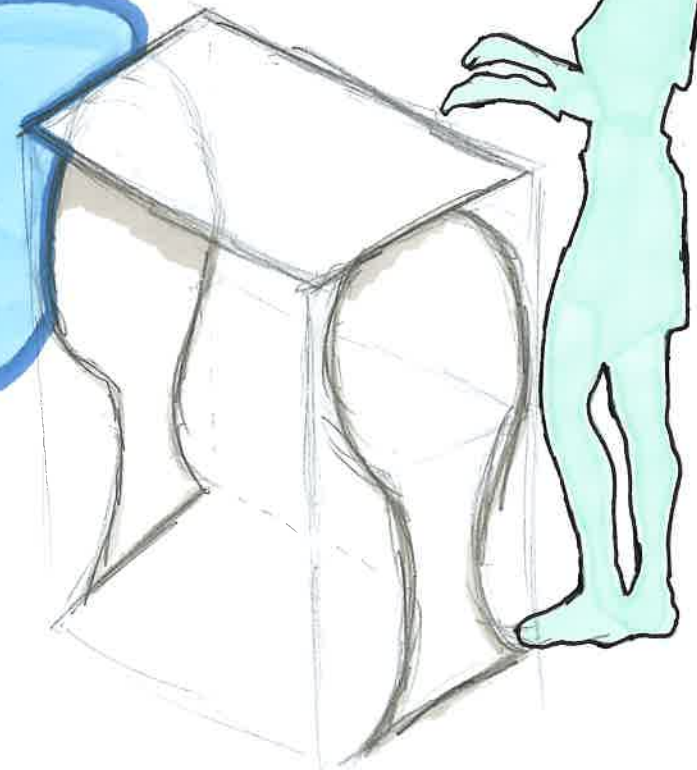
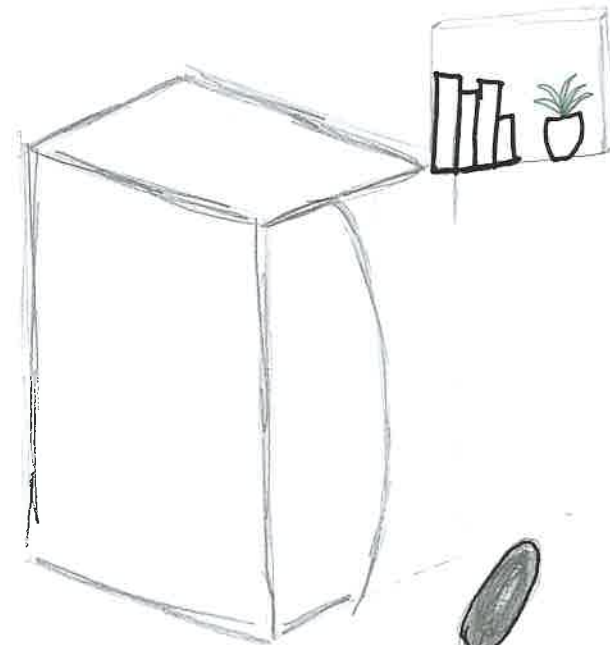
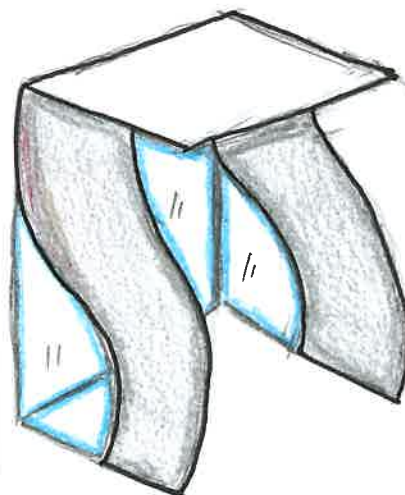
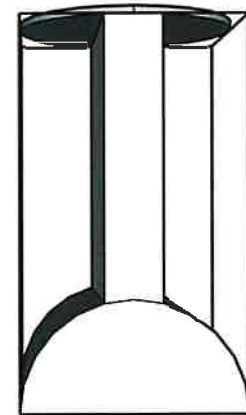
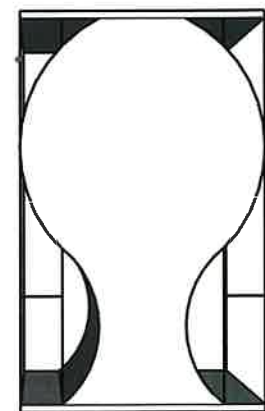
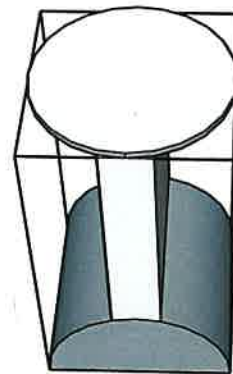
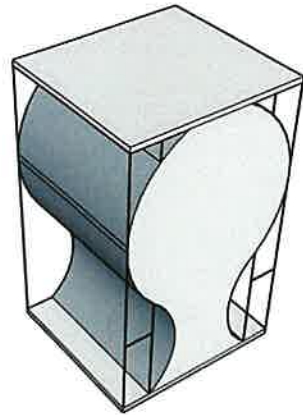
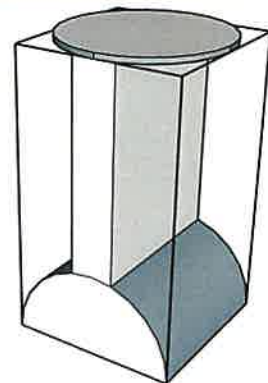
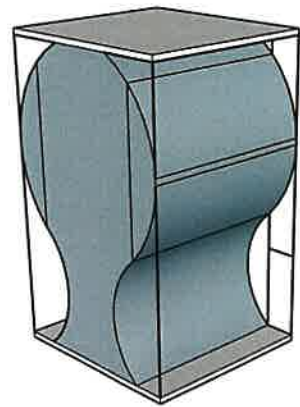
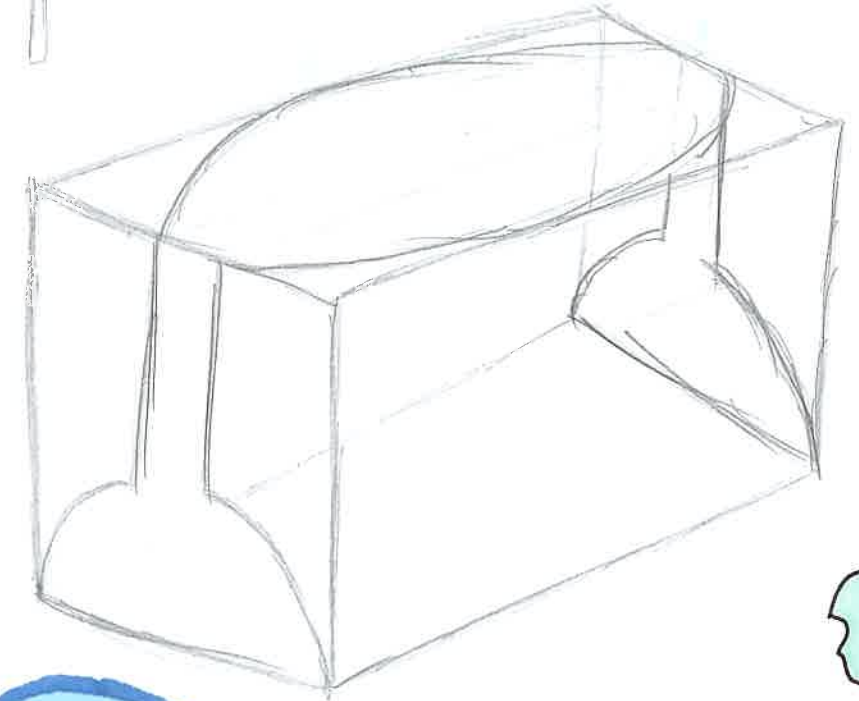
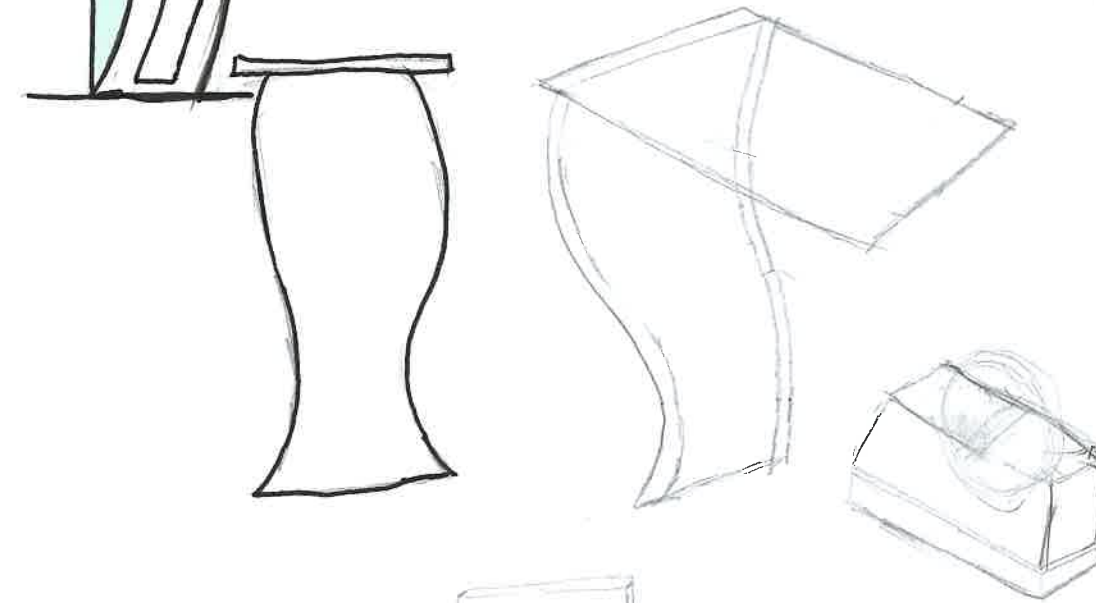
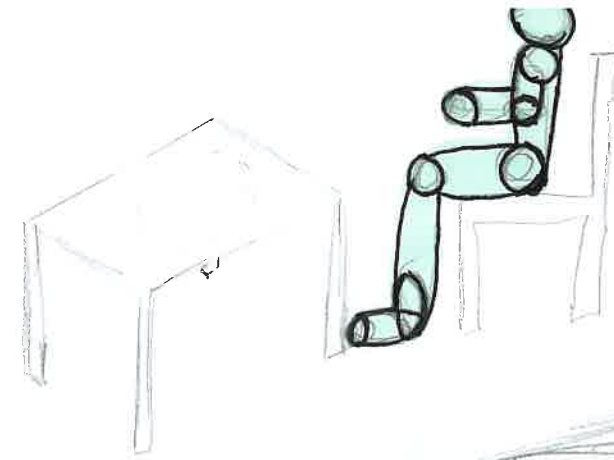
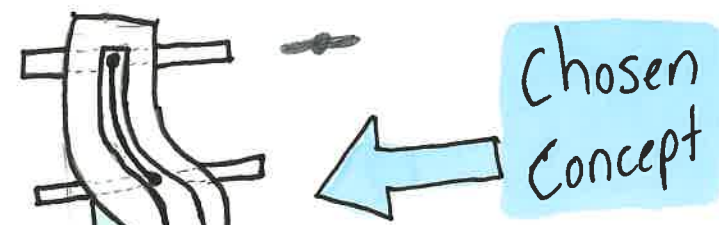
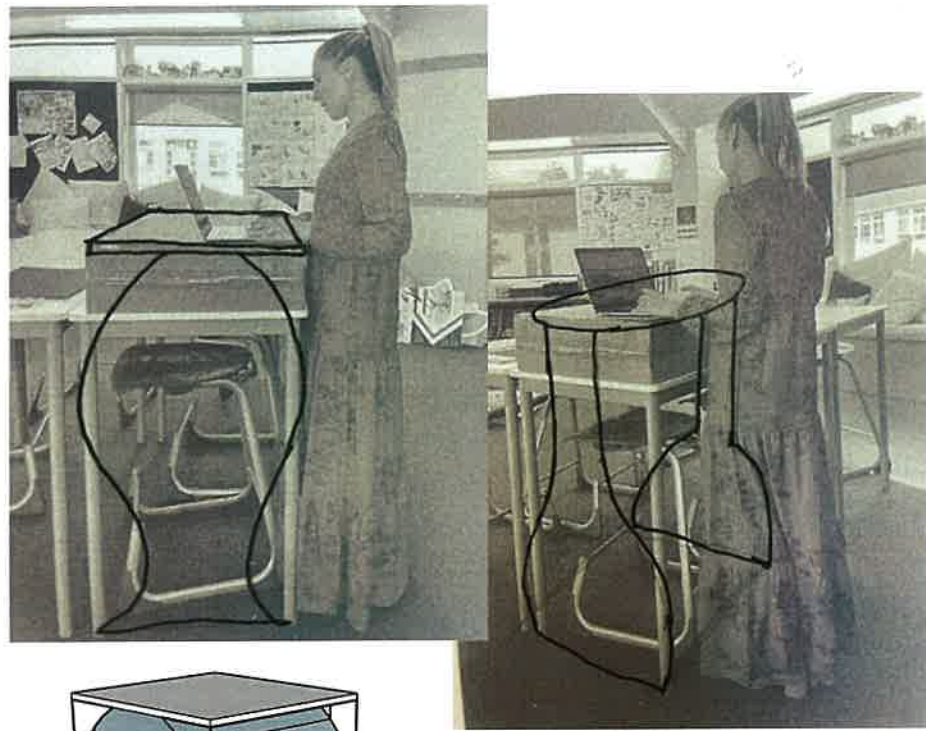
Ideation



Chosen Idea

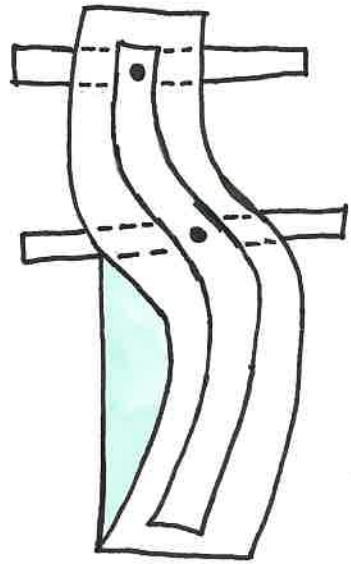


Concepts



Development

The Idea I am choosing is:



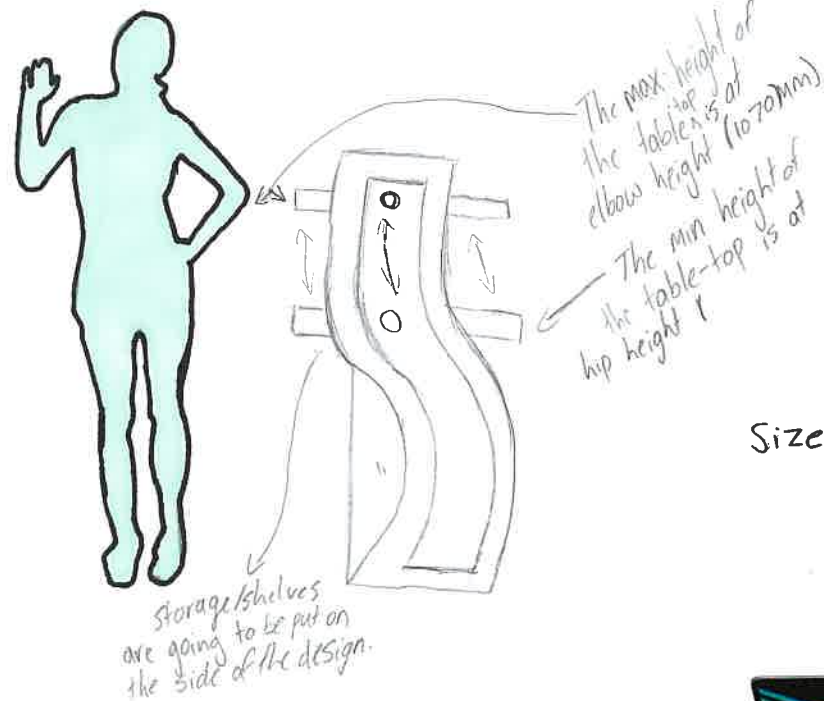
+ve Points

- ★ adjustable so can be used at sitting height or standing
- ★ has an interesting shape
- ★ A large enough desk space

-ve Points

- ★ Currently has no storage space
- ★ Doesn't have included seating

Key considerations for my design at this point:



Size information [ergonomic & anthropometric]

The height of my desk is going to be 1030mm. The width of the base is 630mm x 540mm. The widest part of the desk is 663mm.

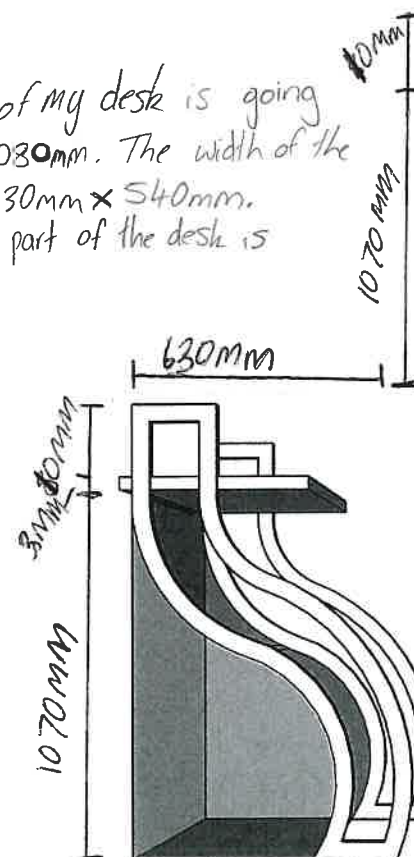
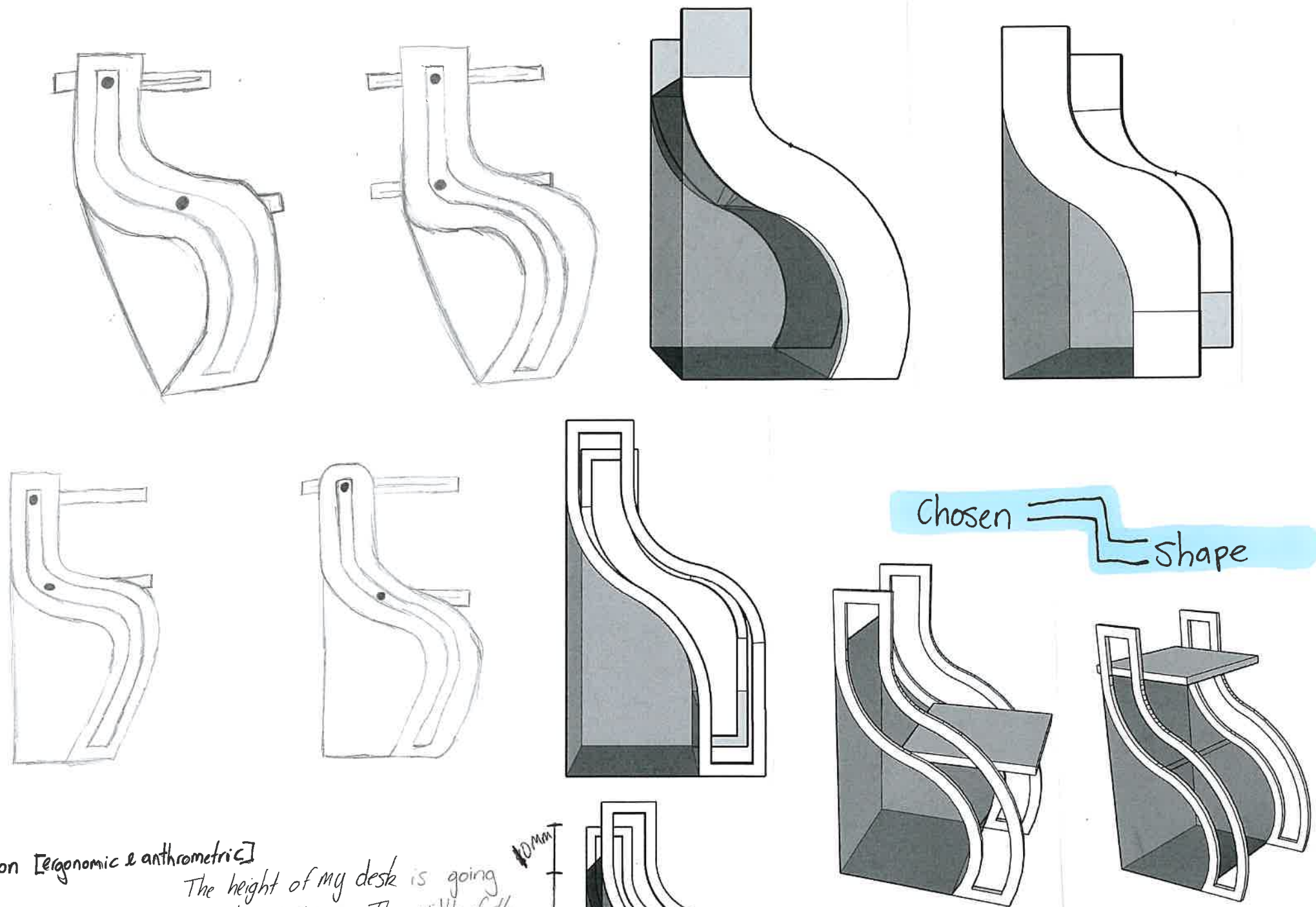
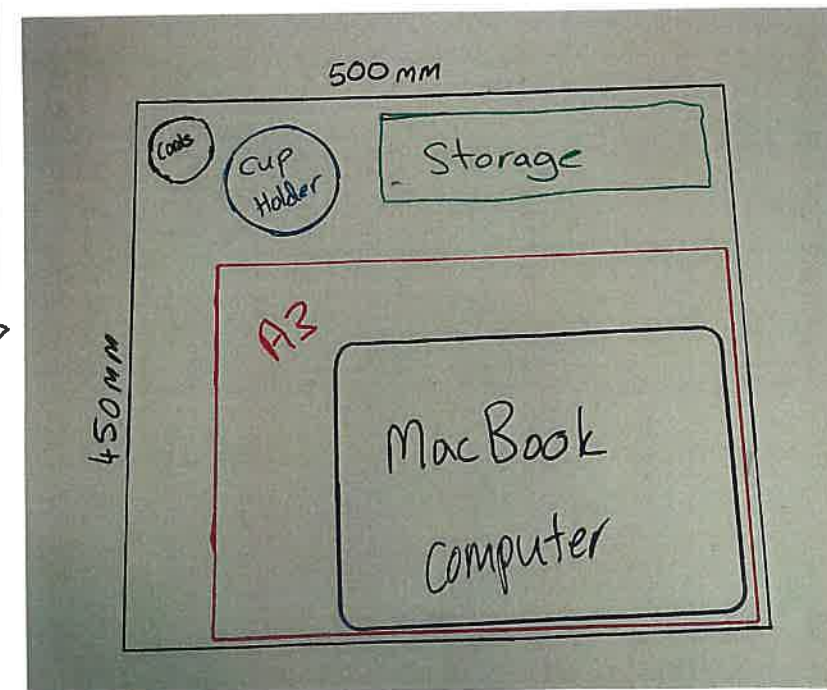


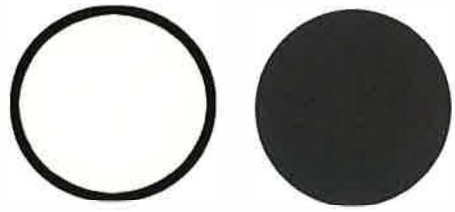
Table top size →

- Cup holder = 90mm (d)
- Cord = 50mm (d)
- Storage dip = 15mm
- Storage width = 80mm
- Storage length = 320mm



Development

Colour Scheme



Snowdrift

Storm

The colour scheme for this desk is going to be made up of two main colours. Snowdrift (for the laminated table top) and Storm (for the frame of the desk). These colours were selected because the colours that are in the existing space include shades of grey and white, this means that this desk will fit with the space.

Materials

Table Top and Frames

Low Pressure Laminate:

Low pressure laminate is a colour board on a medium density fibreboard (MDF) substrate. This is what is currently on the tables in the graphics classroom, and it is easy to clean and can be drawn on if necessary.

Solid Plastic:

Solid plastic would be that the table top and sides of the desk would have a large weight, this could make it difficult to move around the space. Solid plastic would also last for a longer period of time.

Oak Wood:

Oak wood table tops would be sturdy and the materials for it would be relatively easy to get. Oak wood would last a relatively long time.

Back and Storage

Glass:

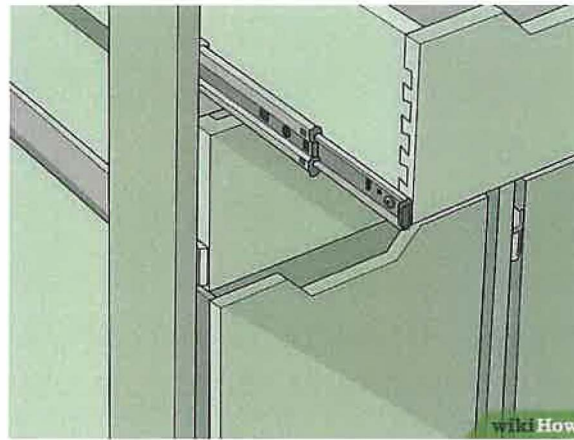
For the back and storage part of the desk, I want it to be clear so glass is one of the options I can go with in order to achieve this. However glass is easy to shatter and with it being around younger people, this could be a negative thing.

Plastic:

The plastic that would be used for this would be clear and it would have to be very thick so it didn't bend or snap once too much weight has been added to it.

Acrylic:

Acrylic is a strong material that can be clear. It would have a longer life span than glass or plastic and is harder to break.



The picture above is of a drawer slide. The reason that I have added this to my construction part is because this is a similar type mechanism to the one that moves the table top forward and backward. The reason for that is so that if Mrs Gray wants to stand further away from the base of the desk then she can.

Chosen Materials

The material I have chosen to use for my desk's table top and side frames is Low Pressure Laminate. This is because it is long lasting and has the ability to be easily cleaned. The colour I want this to be is Storm as it will go with the carpet and the already existing chairs.

For my storage and back of my desk I have chosen to use acrylic as it is a strong material that can hold a good amount of weight. This material was also chosen because it can be clear which is what I want.



Construction



The picture above is of clear acrylic screws. These screws would connect the shelves to the clear back of the design.

The reason I would use these is so that my shelves can have an added strength and so that they are not connected by silver screws which would throw off the whole clear back idea.

The only downside to using these is that they are not a metal and probably not as strong.



These bolts will be used on my design in order to adjust the height of the table top. These bolts will allow the user -Mrs Gray- to adjust the top to the height she wants. However the maximum height is 1070mm and the minimum height is 500mm.

These bolts will have to be tightened as much as they can in order for it to stay stable. This is probably the only downside to having bolts.

Positive Points

- My design is able to reach the height needed for Mrs G to use the table top comfortably while standing up.
- My design has accessible storage space both for bigger items and for smaller items that could fit into the storage on the table top.
- The colours of my design will look good in the space, as it will go with the existing colour scheme.
- The height of my desk can be changed manually so that it fits the preference of the user of the desk.

Negative Points

- The only way to privately store an item would be to keep it in your bag or on your body as the design storage space has clear walls. This is so that things can be easily found.
- The desk is probably not going to be the easiest to move as the materials used -when put together- will have a large weight.
- This design does not come with a chair for when people want to sit and use the desk. Although this allows the user to choose their own chair for their comfort.

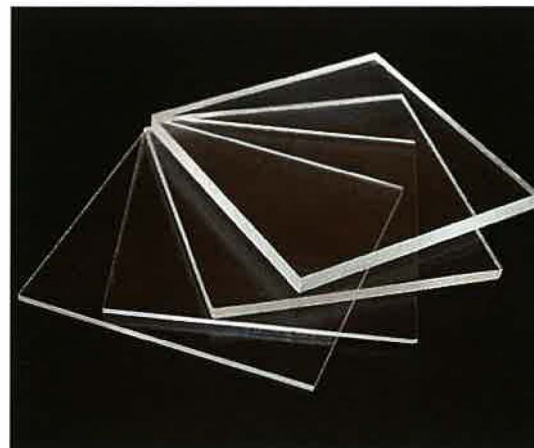
Key Points to Consider

The idea for this design was for it to look natural when it would be placed into the environment, and in order for this to happen the shape of the design had to be more curved than straight and it had to have colours that made it look natural.

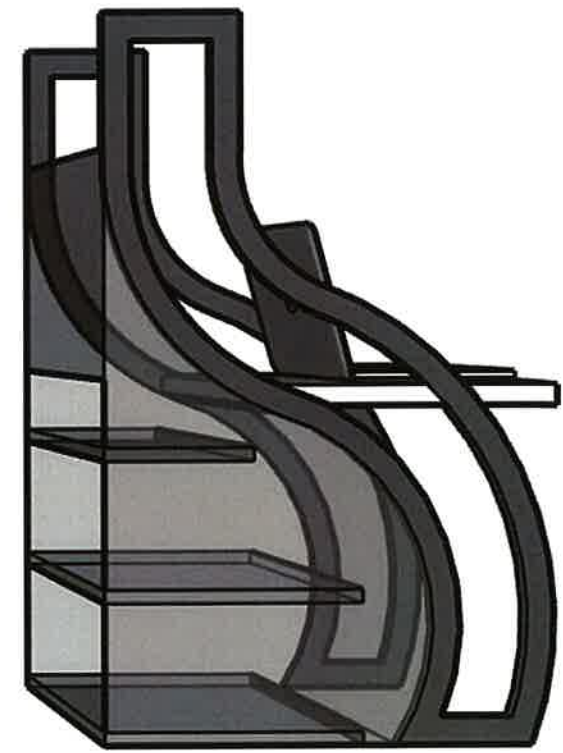
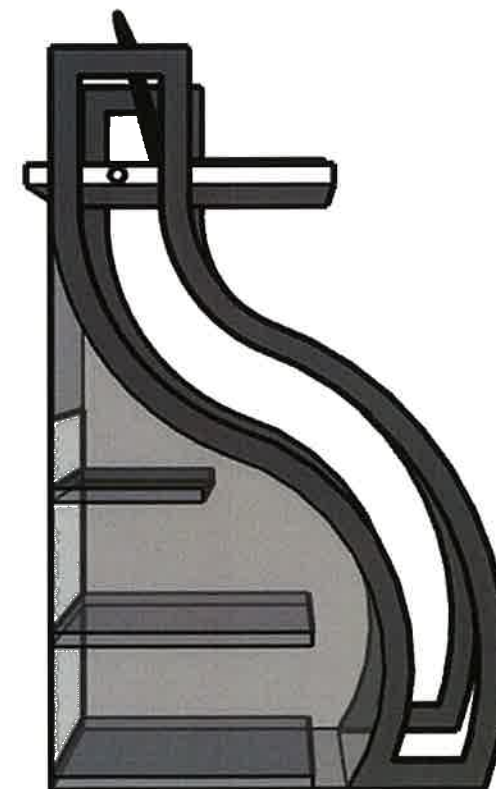
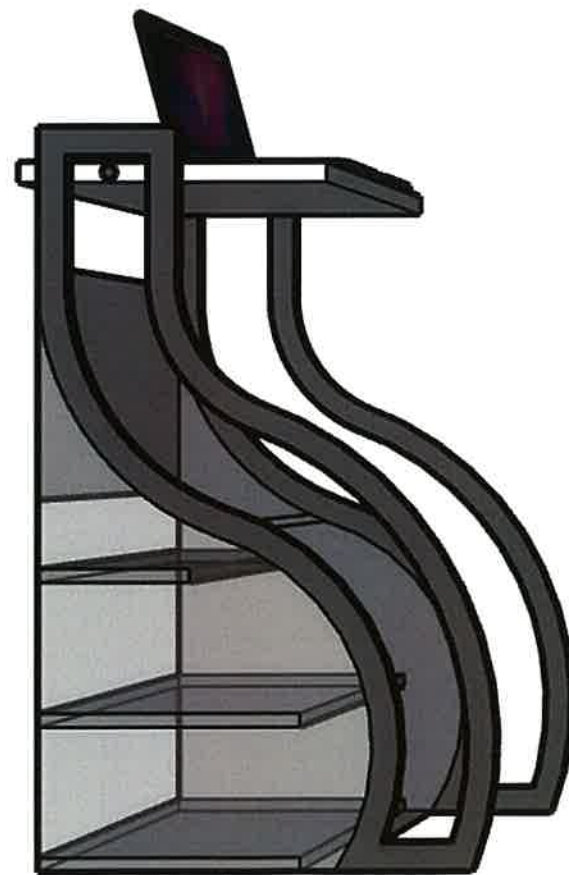
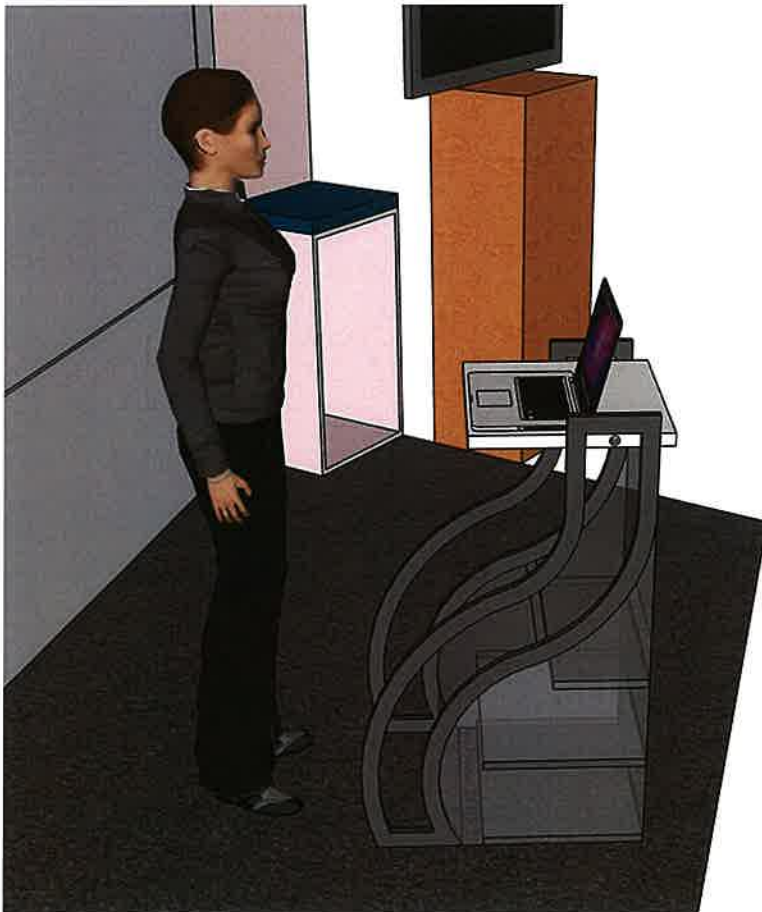
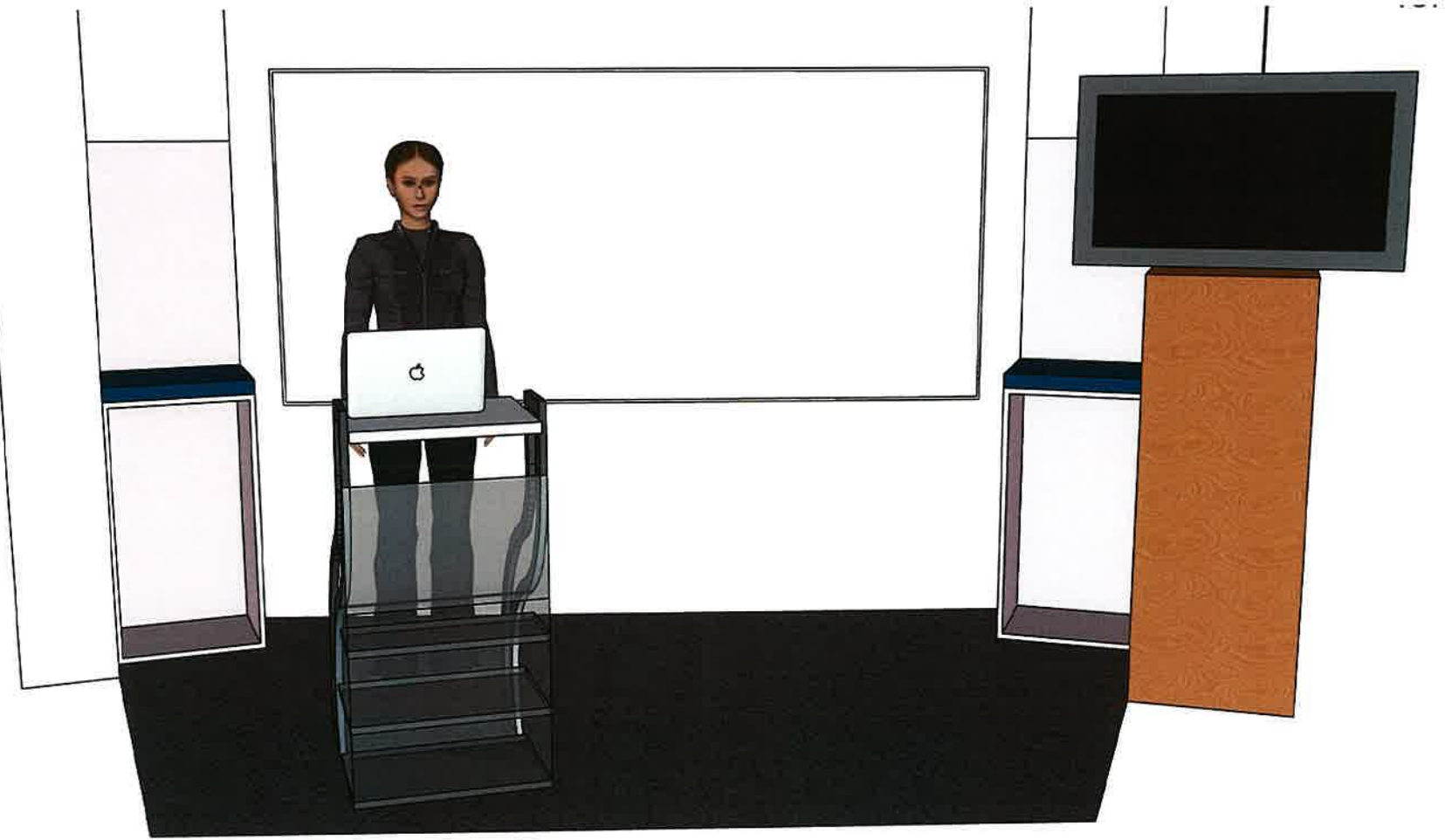
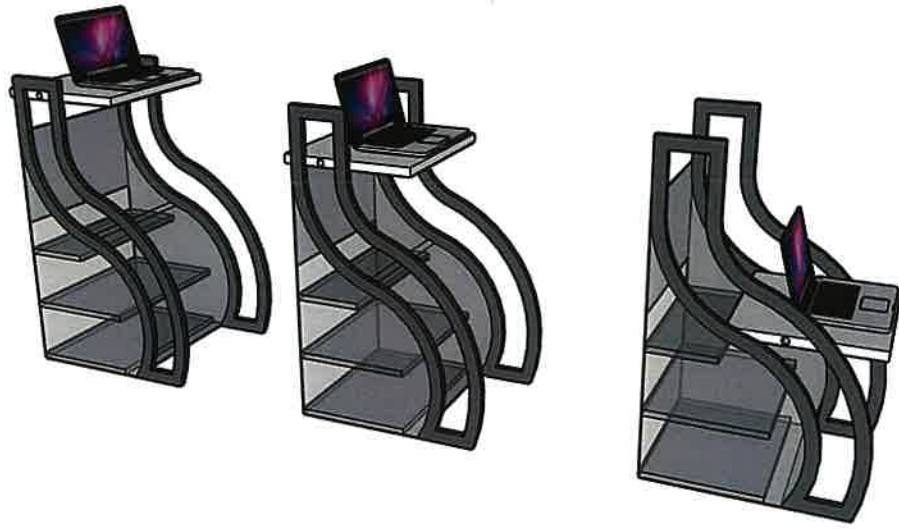
The movement of both the height of the table top and how far close or far away it is from the body of the person using it allow different people to use it without difficulty.

This can also make the people flow in the area it is going to be less affected by its location.

Other materials and colours could be used for this design, but I believe a material that isn't going to break easily and is going to last for a longer period of time is the best thing to go with.



Final Design



Achievement (Product) Exemplar 2022

Subject	Design and Visual Communication	Standard	91627	Total score	A
Grade score	Annotation				
A	<p>This submission begins by exploring the context and user before exploring starting points (diamonds and mushrooms) using visual communication strategies to generate starting ideas. The candidate visually interrogates and re-generates their ideas and 3D forms by using various visual communication modes that show clear functional and aesthetic design qualities. The candidate shows consideration to the user interaction and environment (context) throughout the submission, but the design ideas are not re-interpreted in a purposeful way to reach Merit.</p> <p>This submission is an Achievement.</p>				