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Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 3 Design and Visual Communication 2024

91627 Initiate design ideas through exploration

Achievement

TOTAL 03

BREIF

What I'm designing: is an office chair that looks more into the comfort of the act of sitting down, many people find comfort in different positions when trying to do work. me personally will end up more comfortable on the floor than in my chair at my desk. designing a chair that fits every person's preferences with comfort is my goal as well as looking into the different injuries and conditions that the human body can go through.

this will be an office/work chair that covers the general comfort of a chair you will be sitting in for long periods of time. Alongside comfort this chair will look into the day to day issues that the elderly have with movement and ability, as well as people with injuries and conditions like (back problems or arthritis).

opportunities and constraints

With the design of an office chair we have the opportunity to look into how the human body sits and or feels comfortable. this can be different for everyone meaning we have the opportunity to supply people who don't love the neutral sitting position of a chair with alternatives to their liking.

The constraints to a project like this will fall under costs. costs of selling and costs of manufacturing, to cut these down and keep to a buyer friendly budget, and stick to specifications and design points will be difficult.



specifications

style:

will be interchangeable to suit buyers' preferences.

ages:

will be safe for young kids and easy to use of the elderly.

disabilities:

tends to the comfort of life long injury.

support:

adjustable to the specifications of the buyer.

sustainable:

eco friendly and ergonomic to manufacture.

financial:

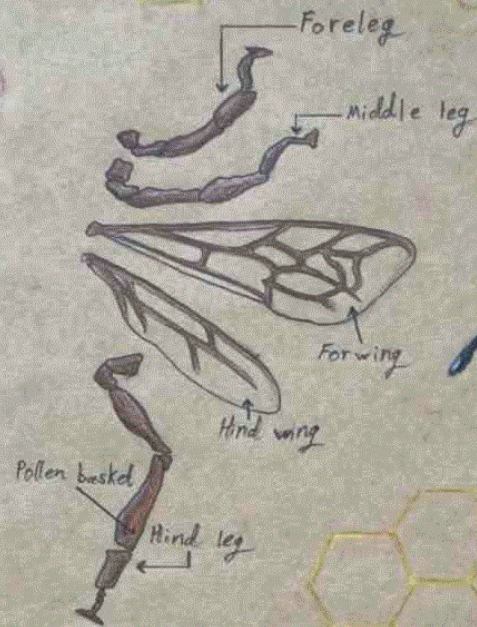
add ons and customisations for this chair will be optional so that you can fit it to your budget.

Functionality:

with the addition of extra accessories to this office chair it will become the talk of the house with the ability to suit all different people and the way you would prefer to sit and do your work comfortably.

comfort:

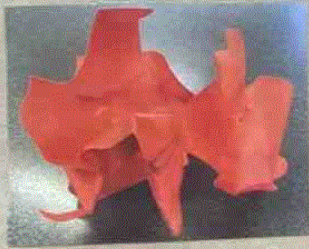
this office chair will come with adjustability to suit all consumers, components that will mould to your body and the way you sit, as well as moving with you as you adjust/ move around while seated giving all round comfort and stability.



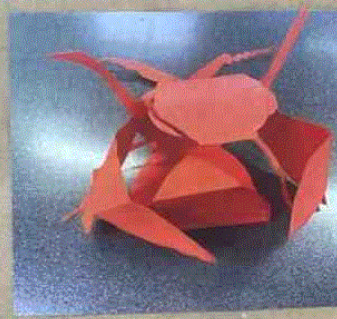
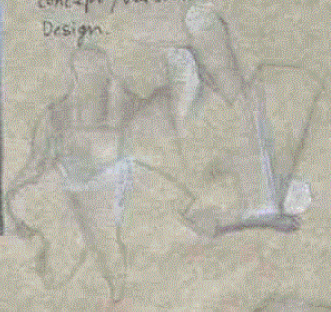
Bees have 5 eyes total when you look on the top of a bees head there are 3 small black dots, these are eyes that detect light (not shapes) this is so they can detect predators from above. whereas the 2 big eyes are called compound eyes made up of lots of tiny lenses, these are to detect shapes.

The honey combs hexagon shape is proven to be the strongest shape when it comes to structural integrity, as well as the hexagon being the most space efficient shape for design and construction.





concept / versatile
Design.



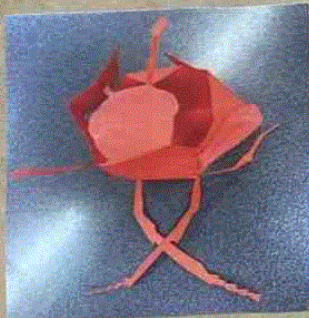
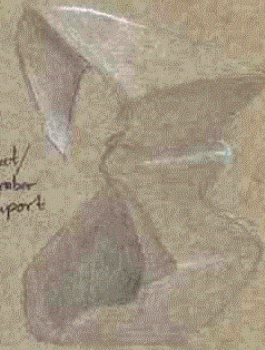
wings



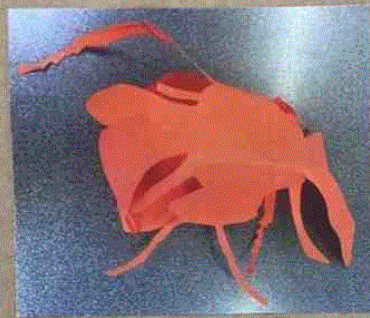
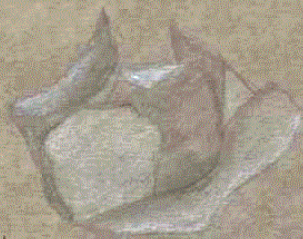
unique structure



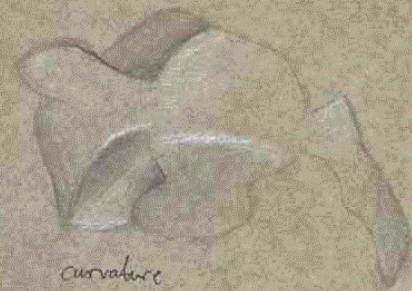
Seat/
lumber
Support

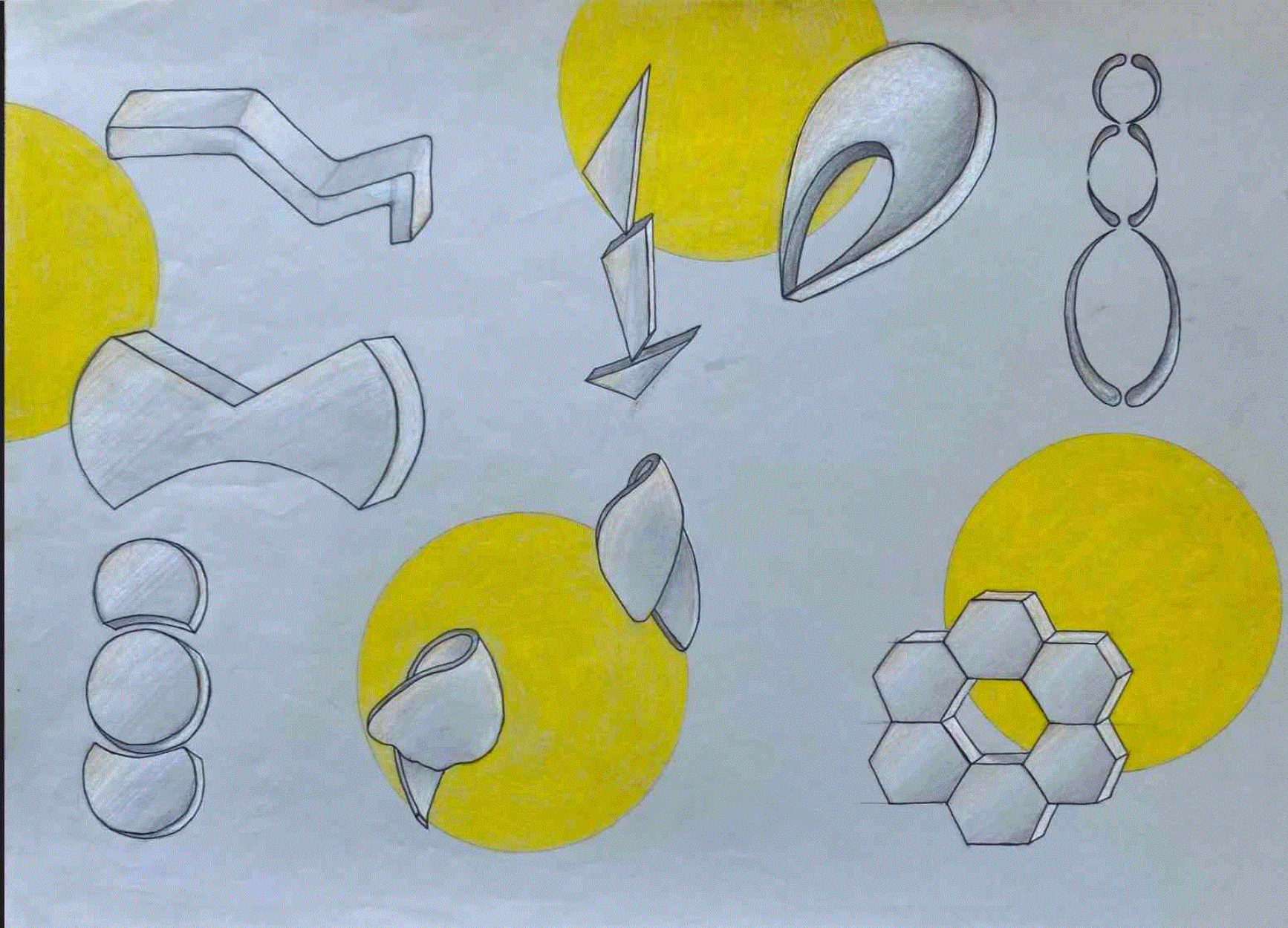


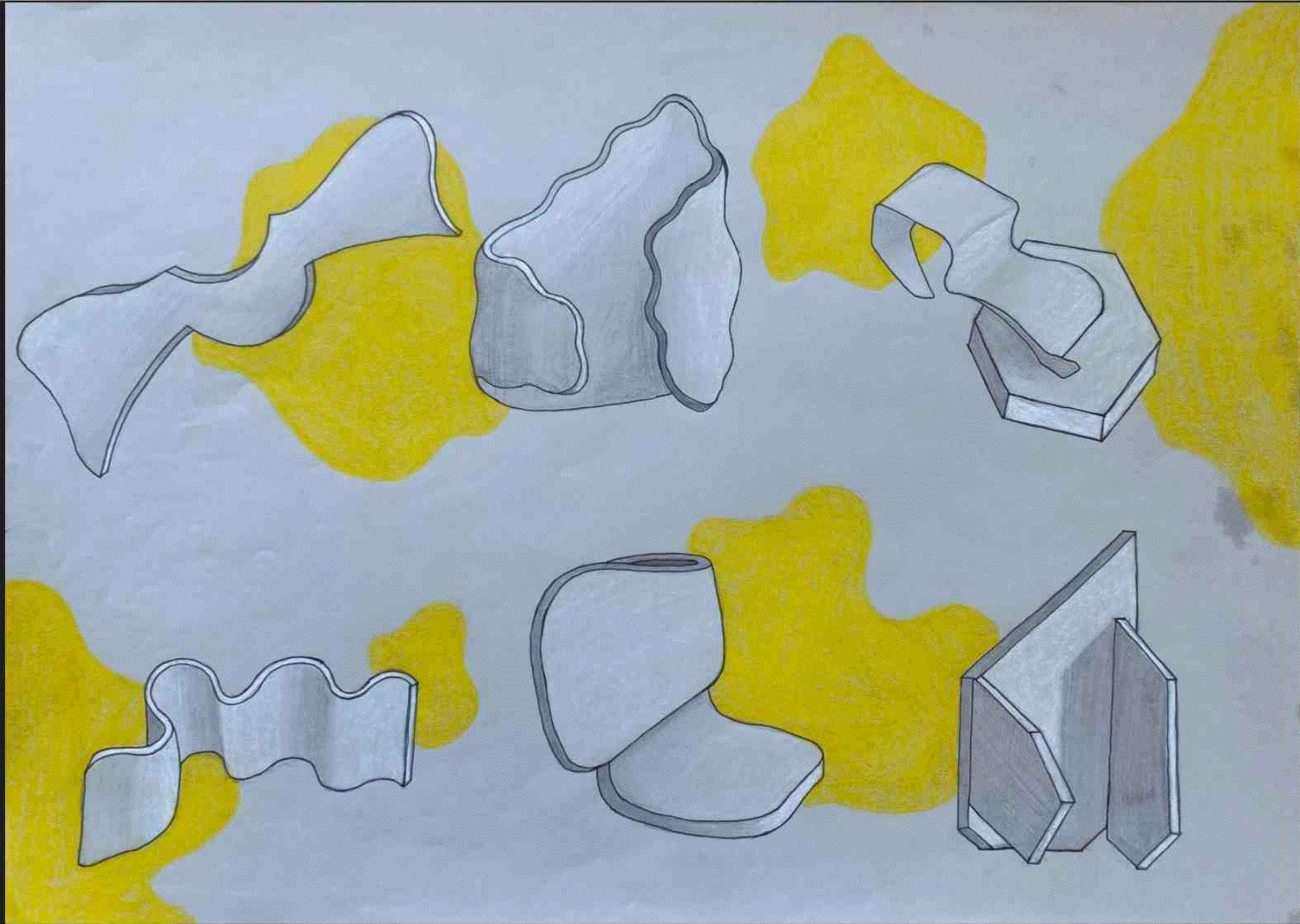
connections
of each section

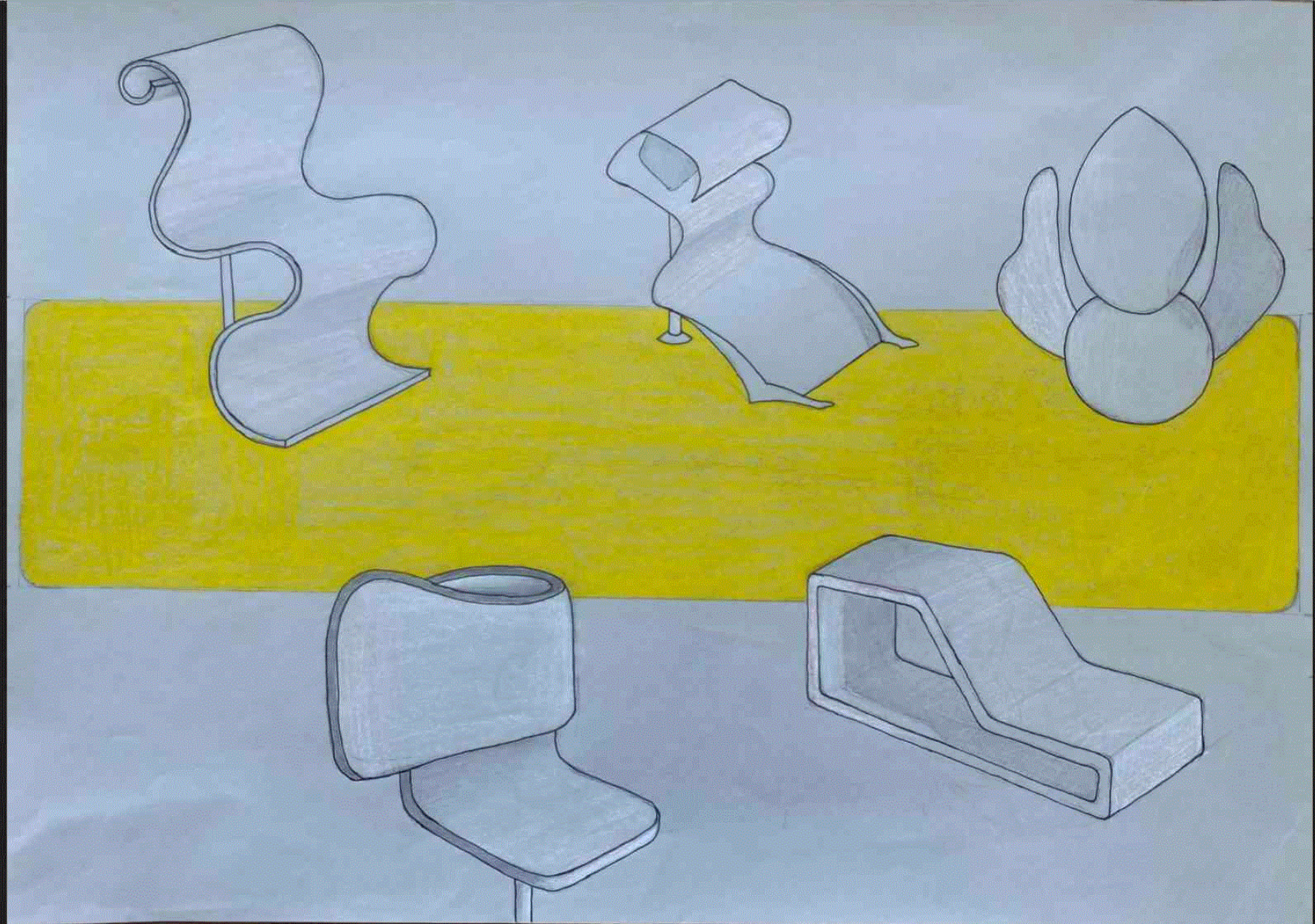


curvature

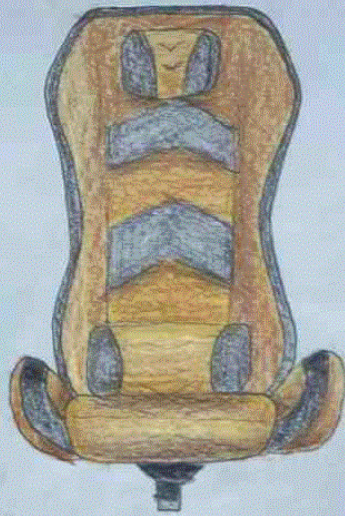








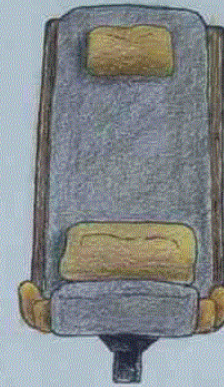
CONCEPTS



Top is too wide

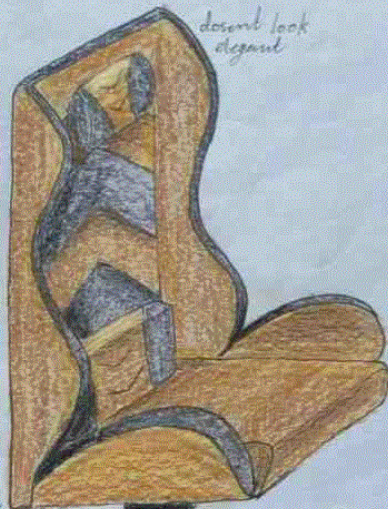


Better to create an ergonomic aspect to the human body



difficult to shape/alter ergonomically

too straight, no shape for



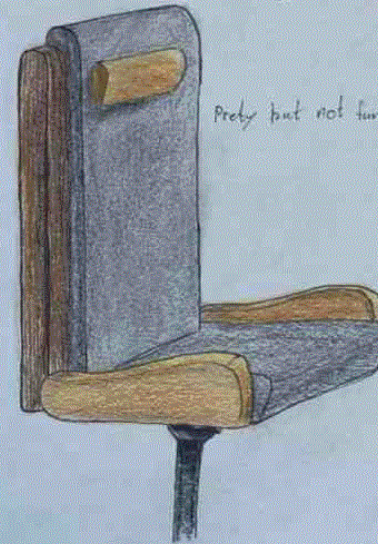
doesn't look elegant

difficult movement
(top back/mid bottom)



always has room for improvement - movement and add-ons

easier for movement (top over bottom)

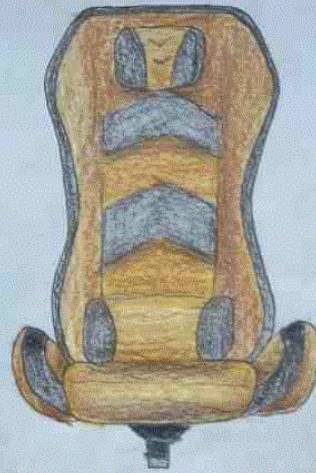


Pretty but not functional

Concept

- To draw from inspiration off of the shapes of the
- Starting shapes for chairs and designing the add ons for the chair and how they will fit into the design.

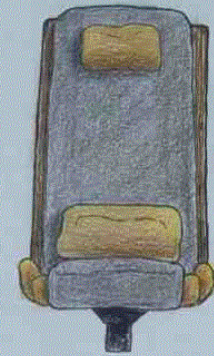
CONCEPTS



Top is to wide

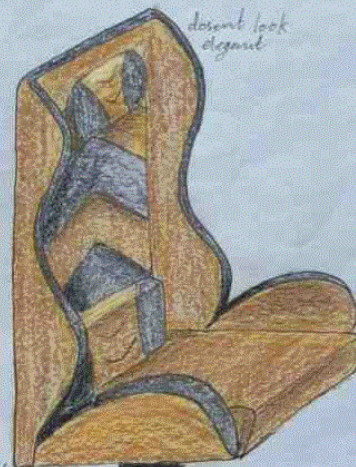


Better to create an ergonomic aspect to the human body



difficult to shape/alter ergonomically

to straight, no shape for



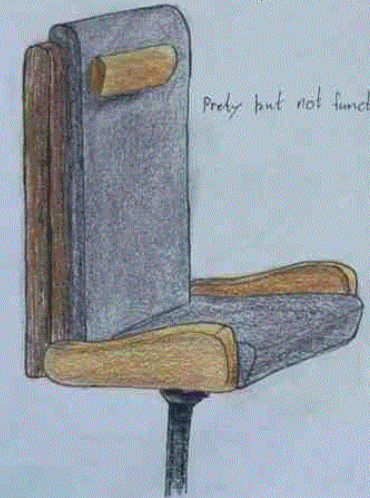
doesn't look elegant

difficult movement (top thick/under bottom)



always have room for improvement - movement and add-ons

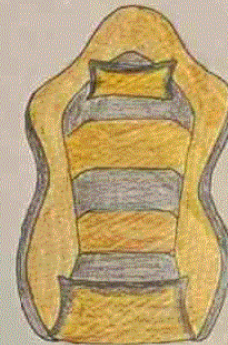
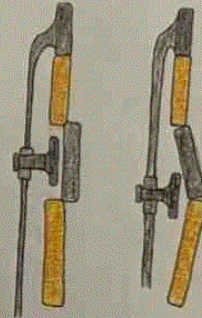
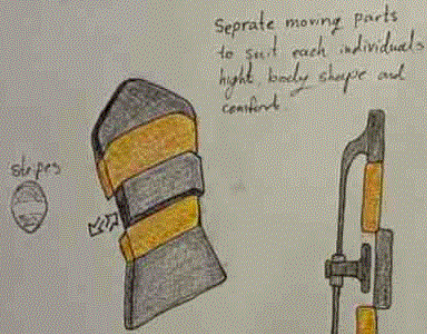
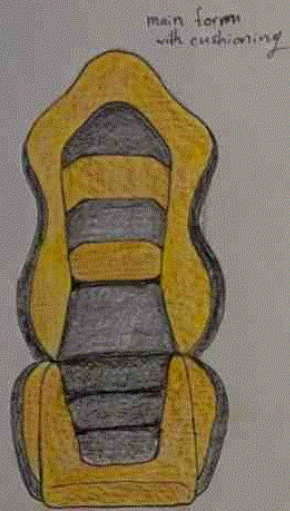
easier for movement (top over bottom)



Pretty but not functional

Concept #1

LUMBAR SUPPORT



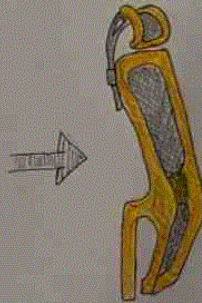
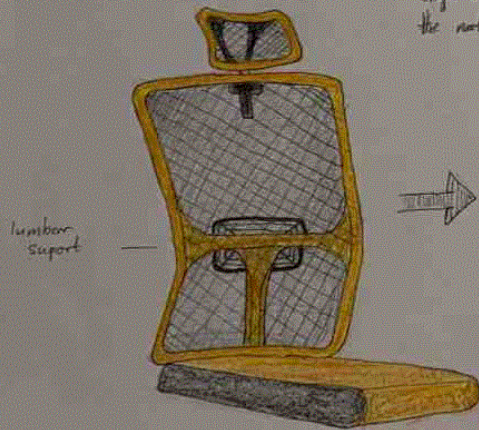
pillows - to hold
comfort and extra lumbar
support



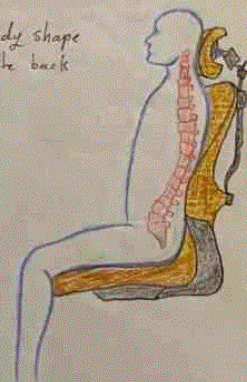
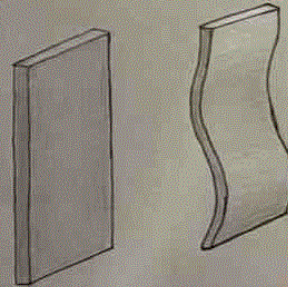
Just like the unique shape of
the anatomy of the bee, the
shape of this design will fit to
the natural nature of the human anatomy

Ergonomic S-shaped Design

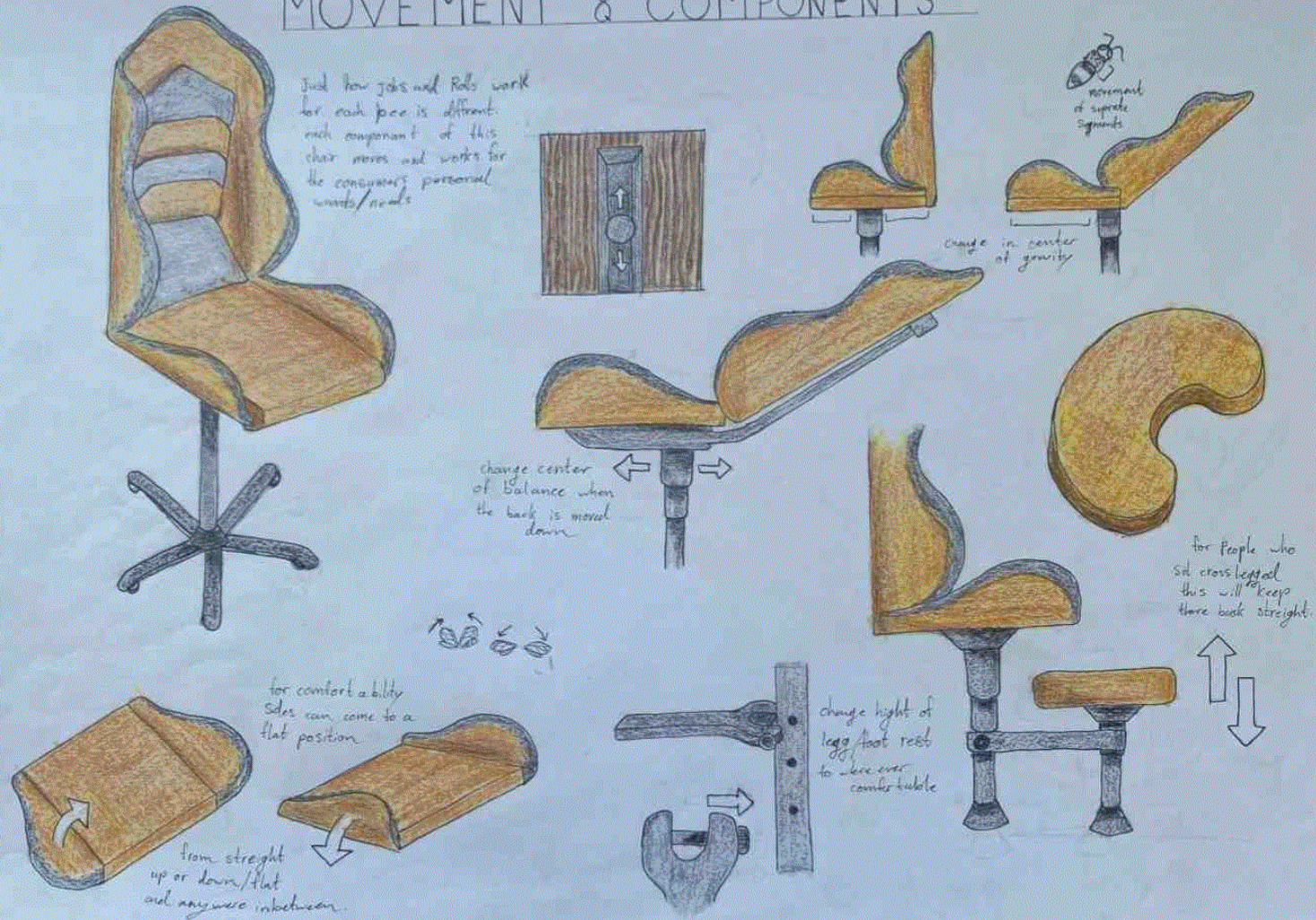
Fits to the body shape
and supports the back
and neck.



Bend in lower
back fits to
body form



MOVEMENT & COMPONENTS



Concept #1

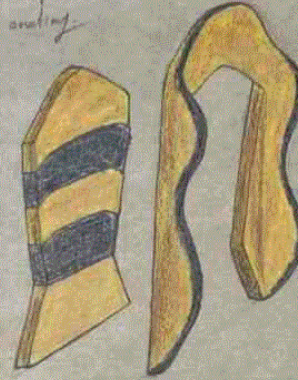
CONCEPT



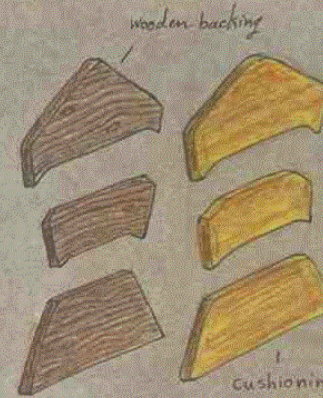
Removable cushioning



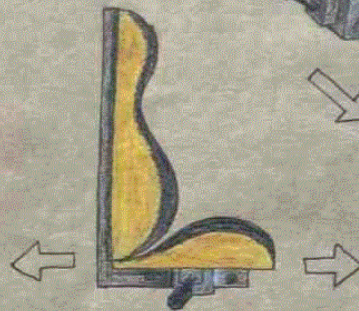
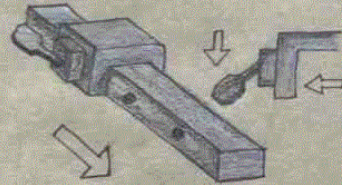
diapers & bees
swallowing



Efficient use of
space and movement
by using shapes that fit
and work together well.

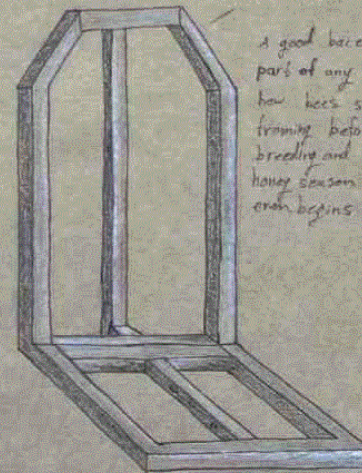


Cushioning

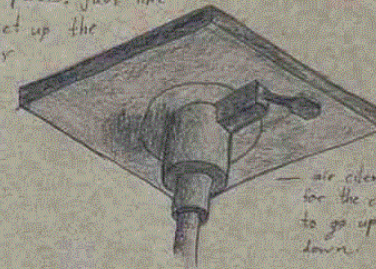


Seat can move back and
forward for comfort with
longer or shorter legs.

inner frame



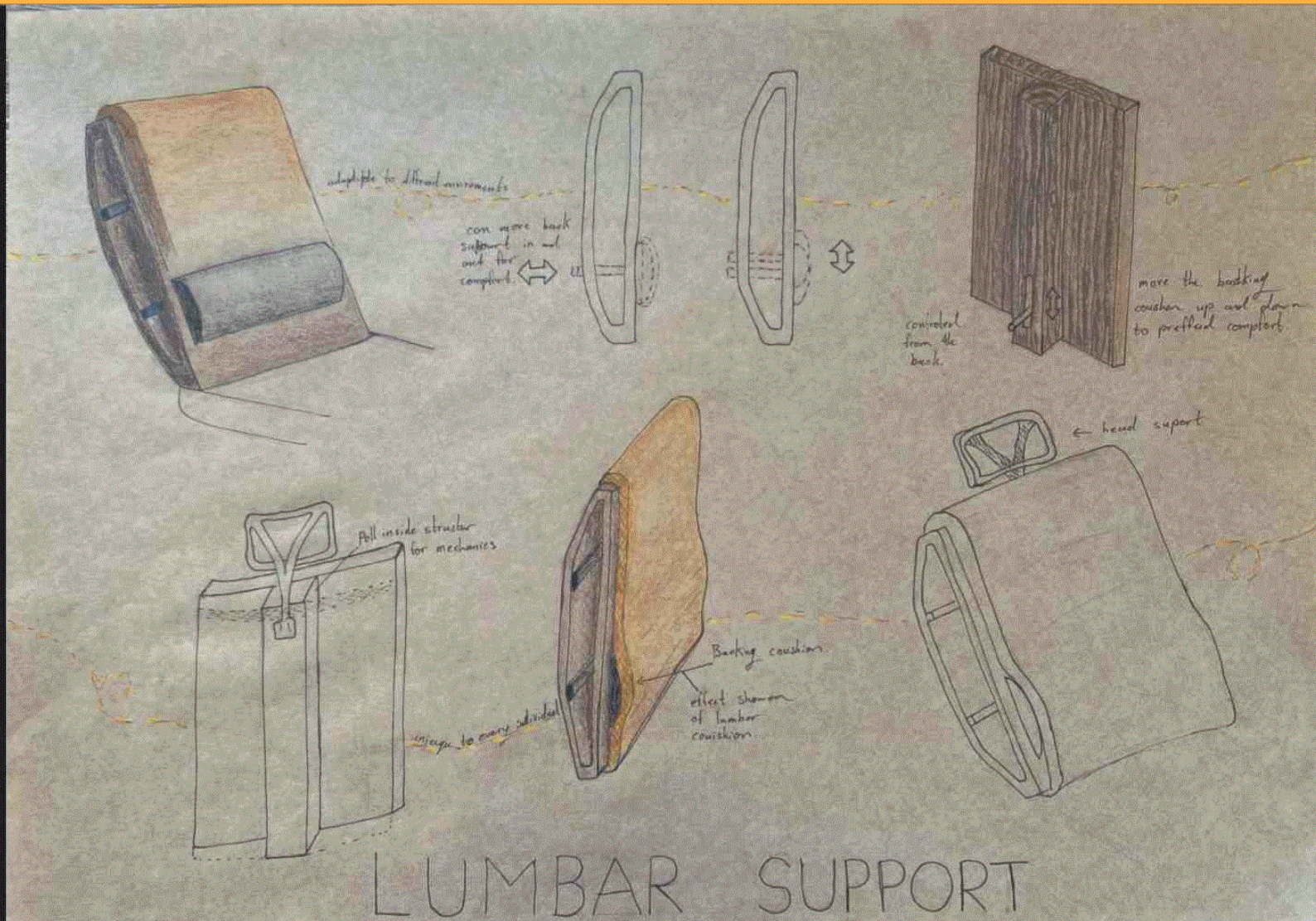
A good base is the most important
part of any poses. Just like
how bees set up the
framing before
breeding and
honey season
even begins.



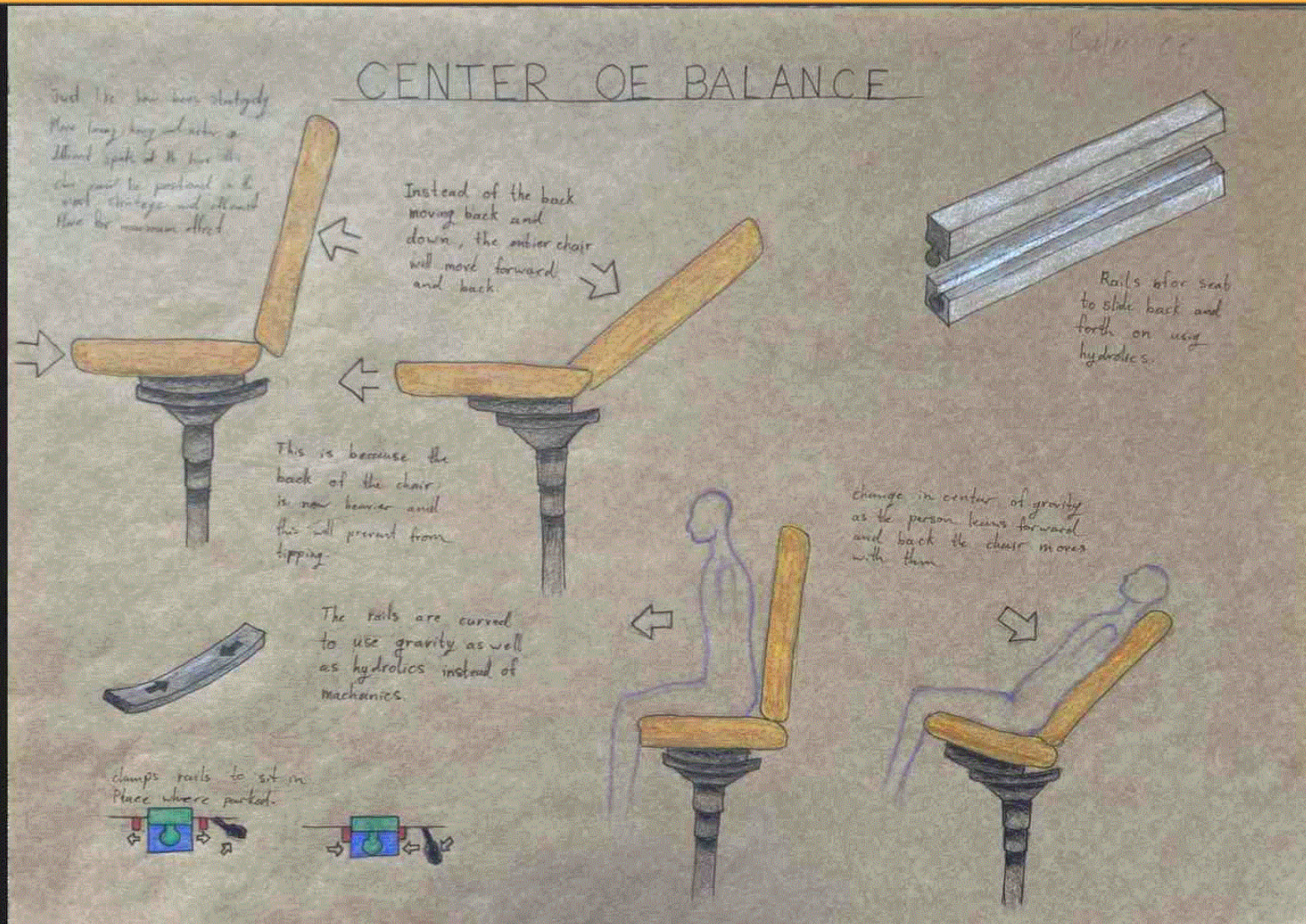
air cylinder
for the chair
to go up and
down.

STRUCTURE

Concept #2

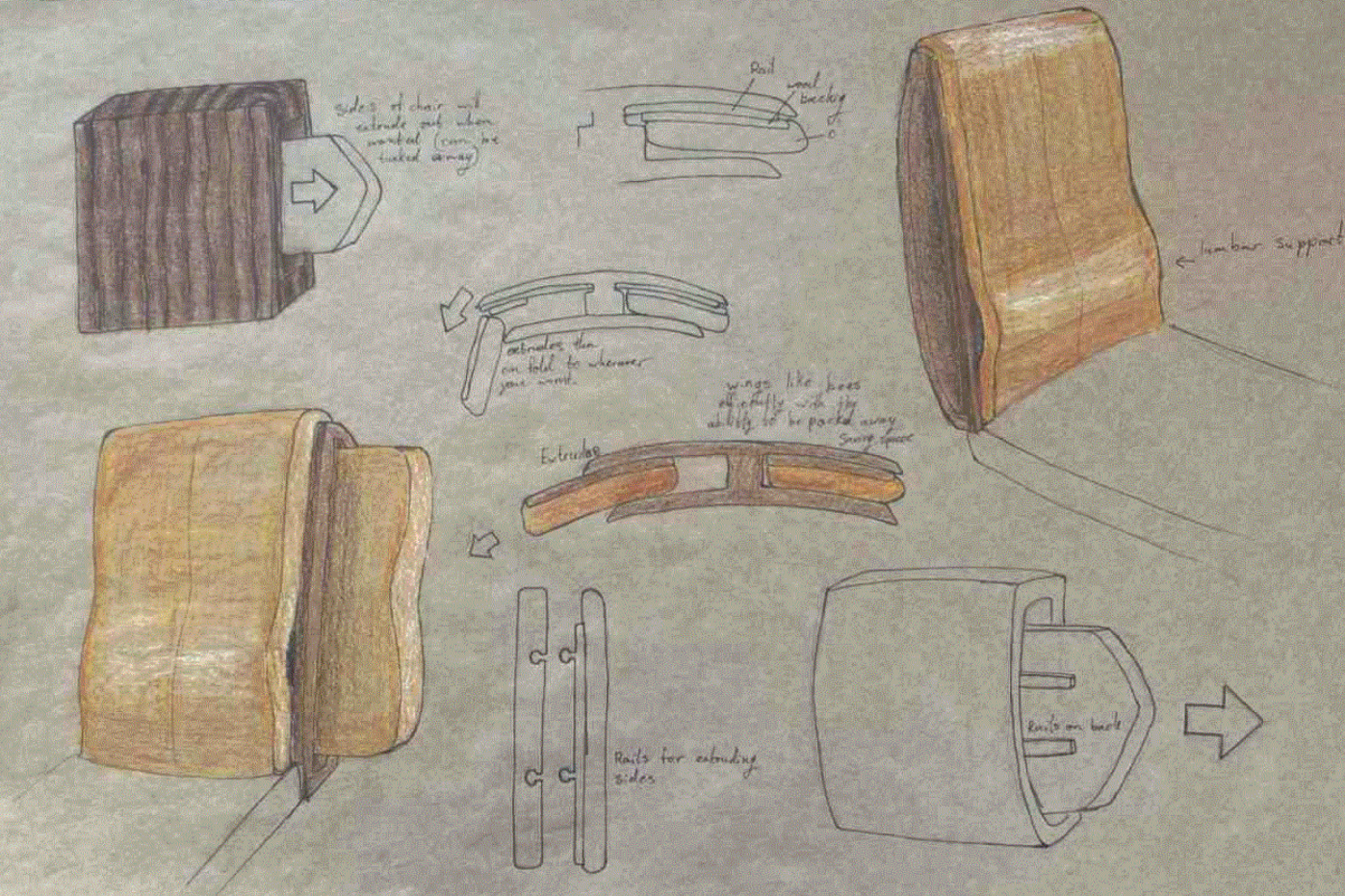


Concept #2

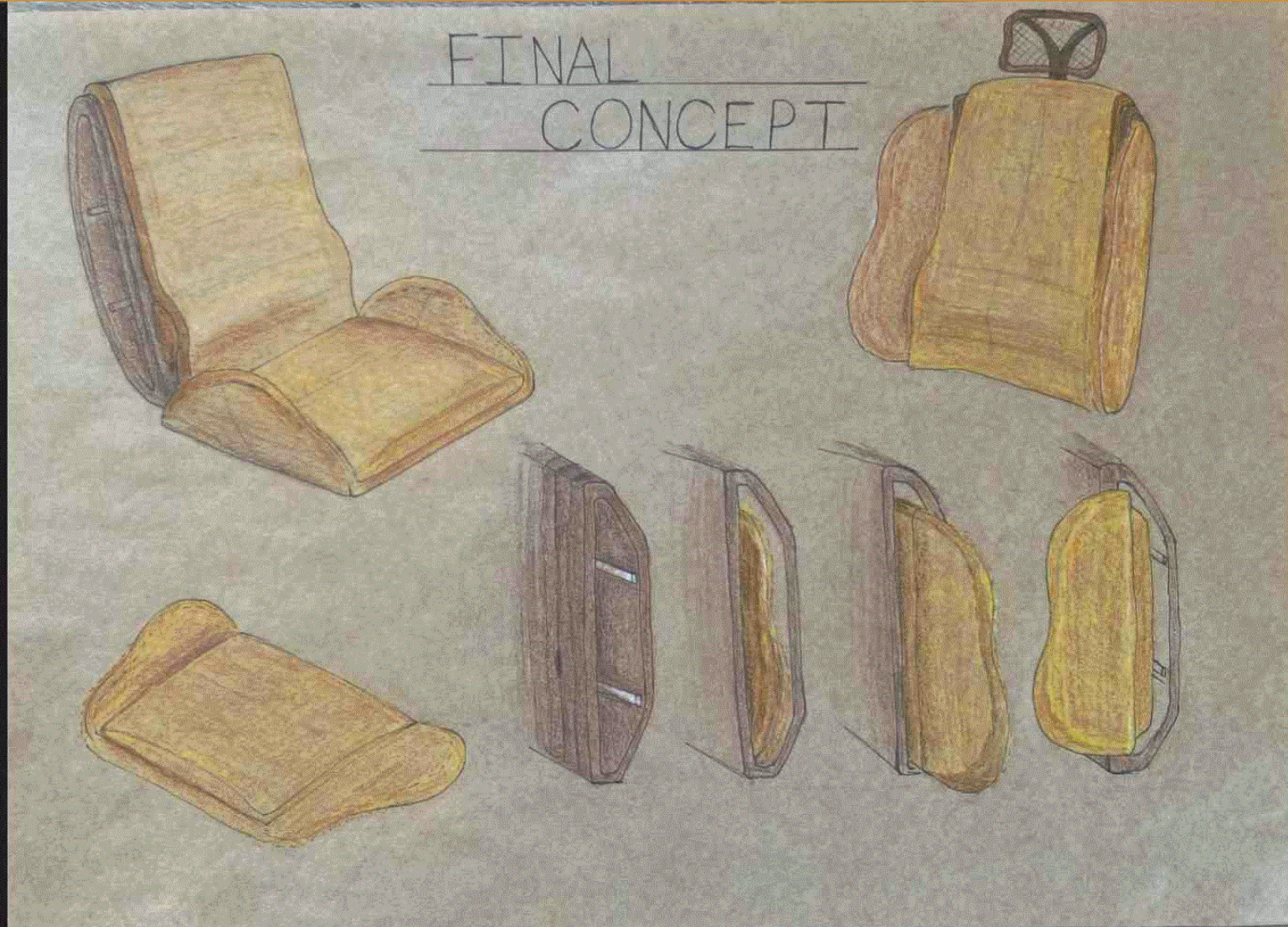


Concept #3

DEVELOPMENT



Final concept



Ergonomics

- Building this chair to the shape and movement of the human body
- Add ons to the chair will enable people who like to sit different the ability to sit how they like.
- To meet ergonomic standards there will be many aspects to comfort and support.

Lumbar support

The support your body needs when sitting down for long periods of time is crucial to your long term health and wellbeing.

The research into lumbar support and the overall structure your needs has been integrated into this chair, as well as features to suit your needs personally. each body being unique this chair can alter to each feature you need, still keeping your health in line.

Center of balance

With development of the chair the back of the chair is much heavier than before.

The center of balance is something to be altered as the back is laid down. There are examples of this in the following pages.

Lumbar & back support

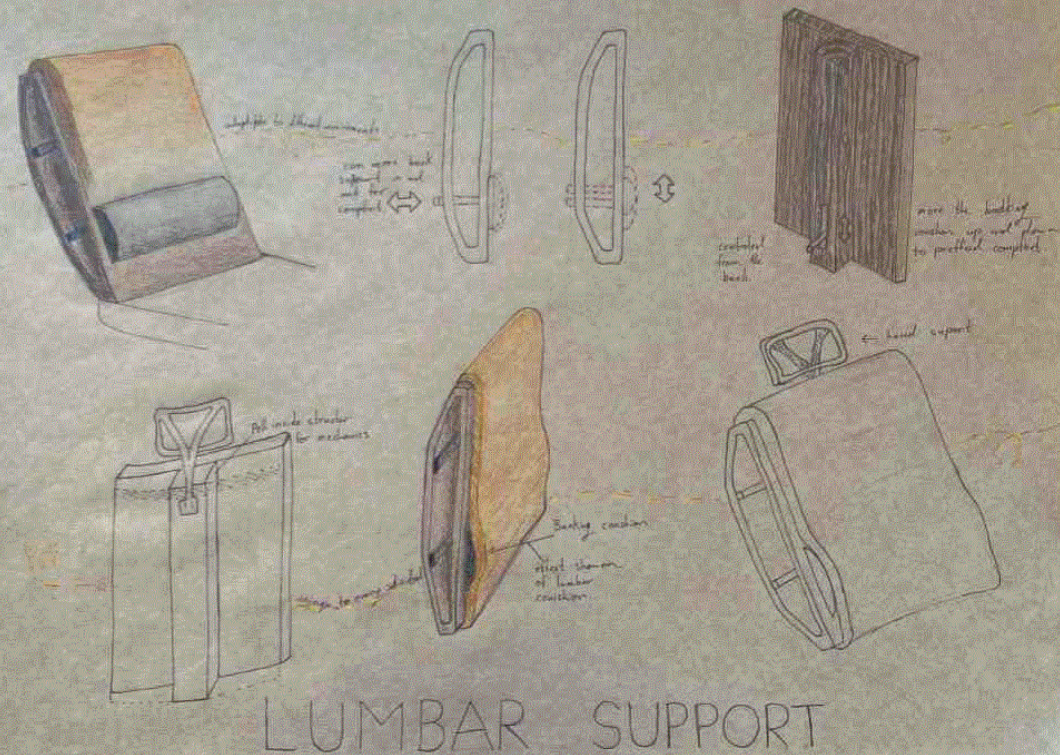
Concept #1

LUMBAR SUPPORT



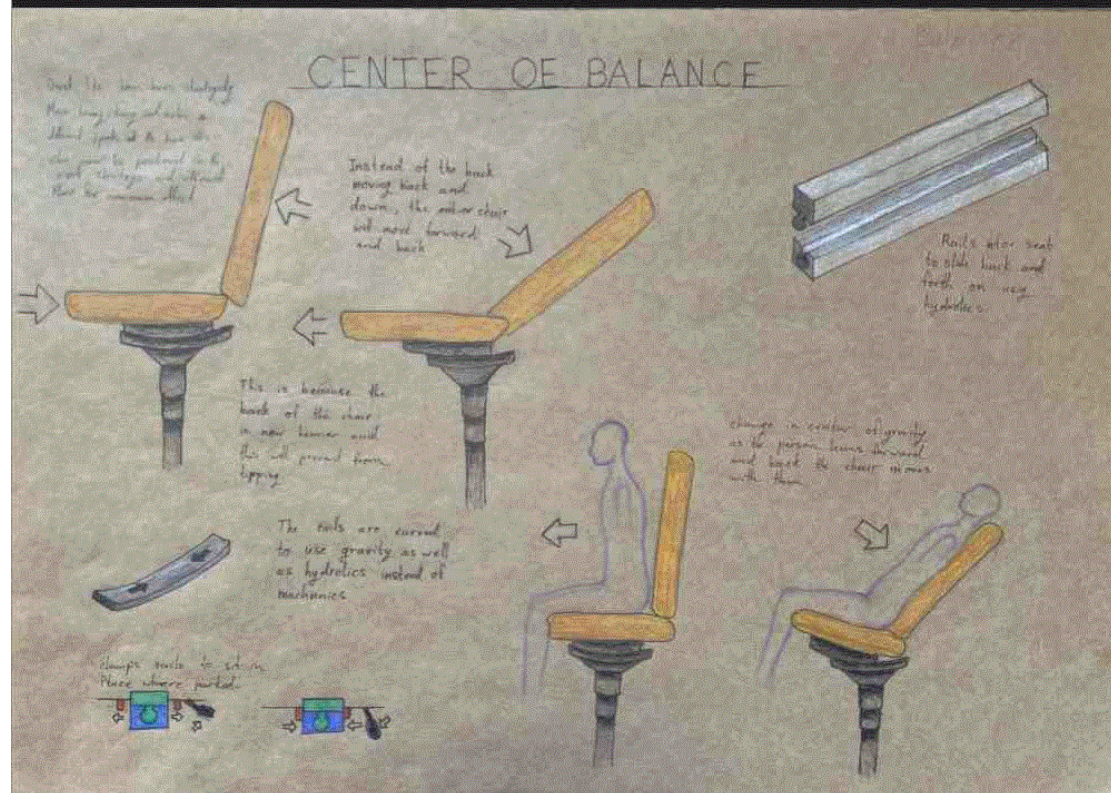
Concept #2 (development)

LUMBAR SUPPORT

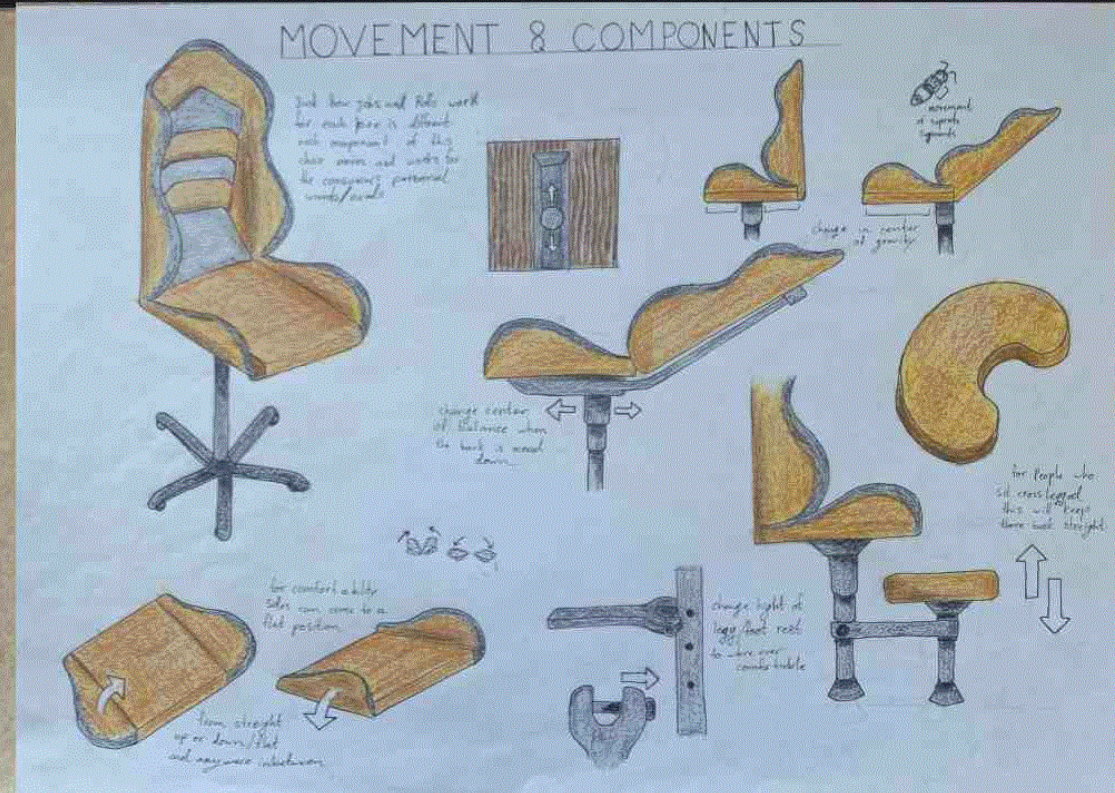


Center of balance

Concept #1



Concept #2 (development)



Structure

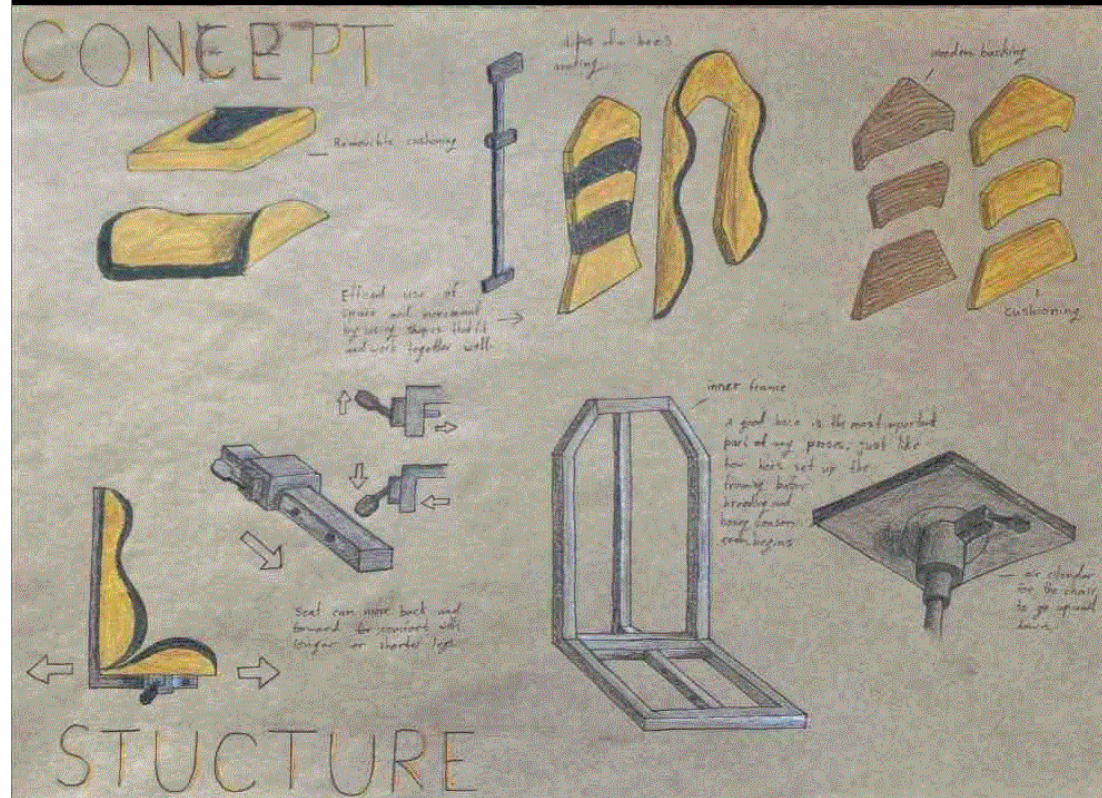
- These pages will show the basic structure of this chair and the additional development of such.
- Frame work, movement, adjustable components.

Main Structure

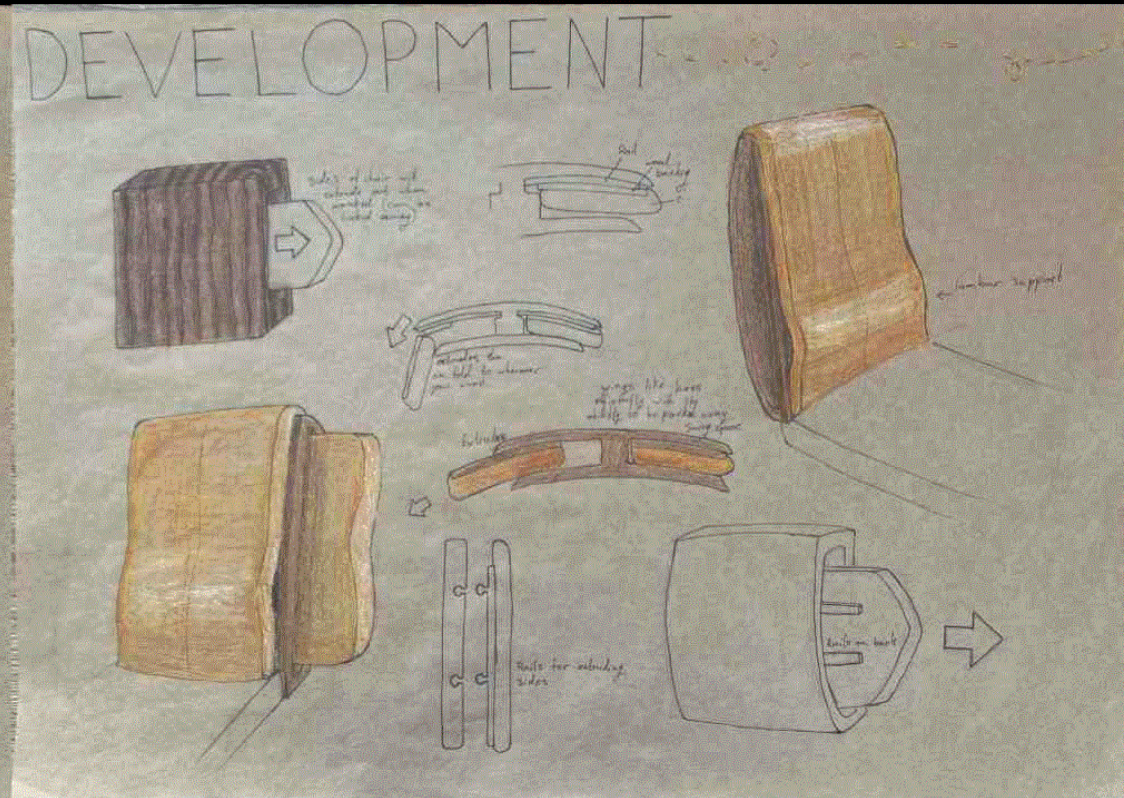
Base structure of any construction is the make or break of its ability to do what is intended. The structure of this chair is an important factor of the aesthetic (how it looks in your home), and how you feel sitting in it. This structure and setup creates a feel good, adjustable and comfortable experience for anyone. This construction has given me the ability to have additional parts or moving components that make day to day work just that little bit better. The development into the structure of this design plays into the comfort of the elderly or injured as well as extra comfort into everyday workers.

Structure

Concept #1



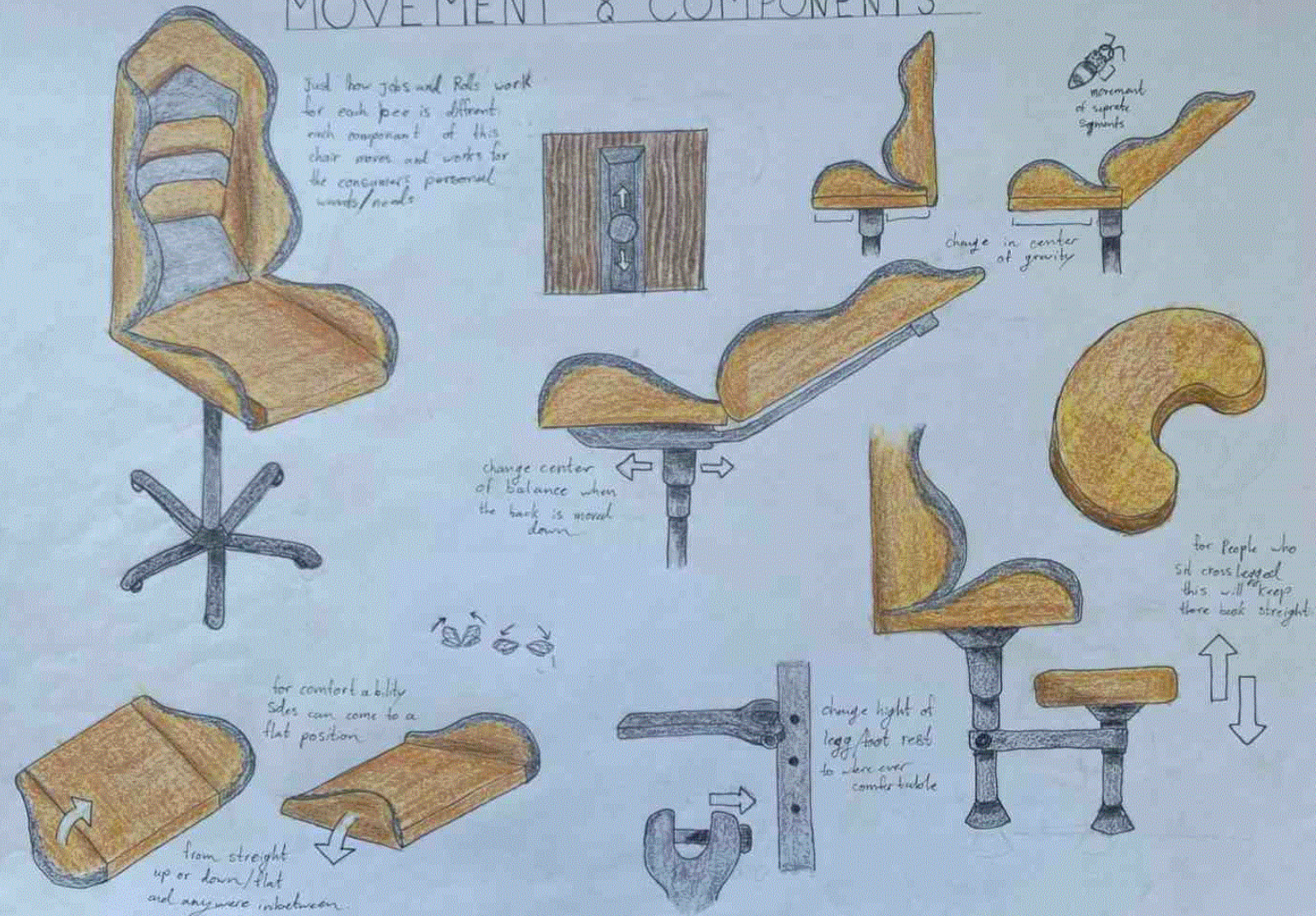
Concept #2 (development)



Additional components

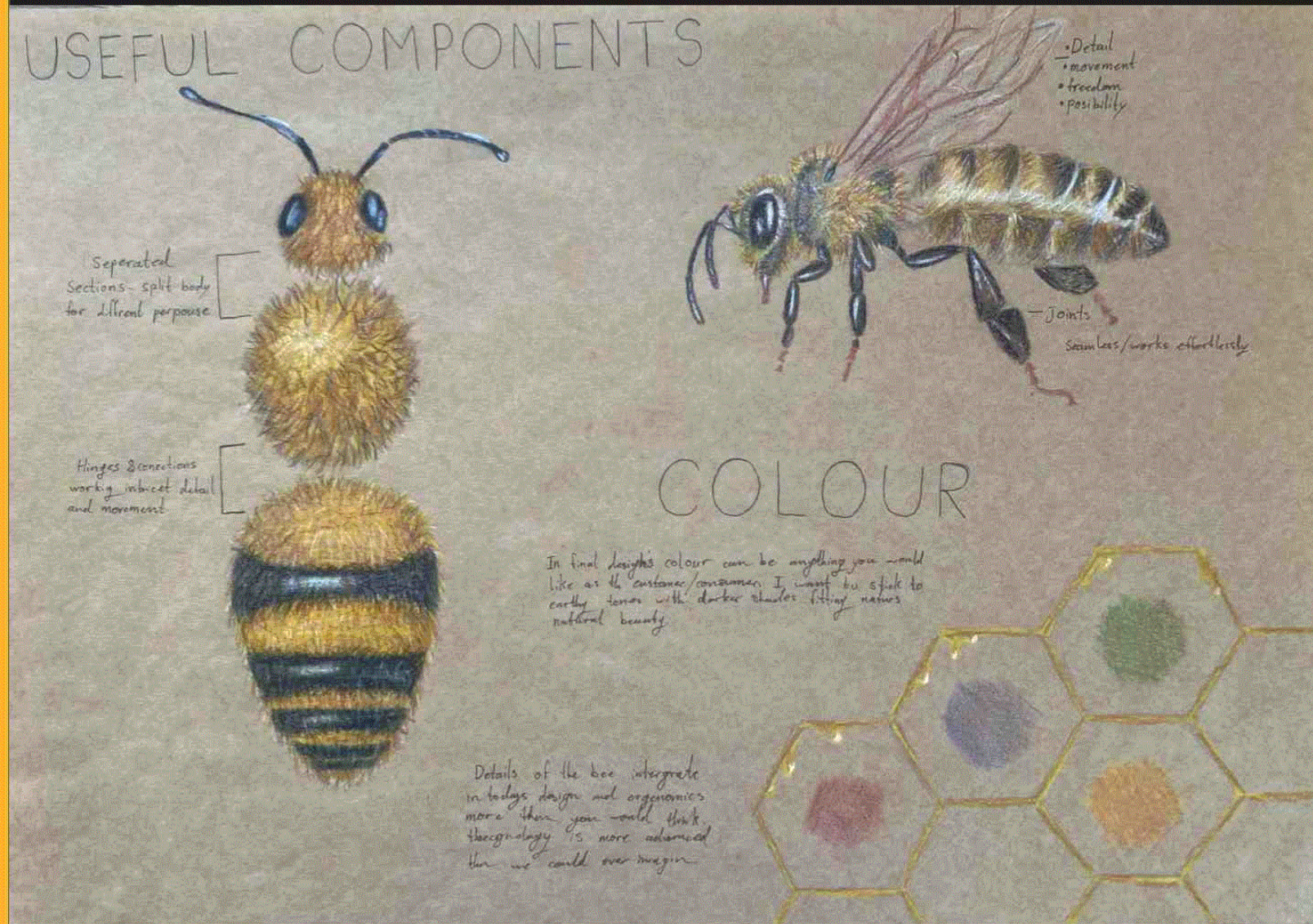
- Alongside thoughtful design and a realistic office chair there will be add ons that can be purchased separately.
- These will be extra foot/leg rests, different styles of optional headrests and seat cushioning all to suit the preference of the customer.

MOVEMENT & COMPONENTS



Colors

- Creating color customisable to the customers preferences
- Color will be the final design aspect a customers process of purchase, giving them the ability to make there purchase match the aesthetics of there home.



Sustainability

- Making sure materials and structure are reliable and looking into how they will hold up over time to make sure the product will last the customer the expense.
- Looking at future generations and the product growing and keeping in time with the customer as they grow.

Minimal waist

- Looking into the recycling and production of product making sure the emission into the environment has minimal effect.
- Construction creates a chair that will last a lifetime and when it needs to be thrown then some parts can be reused.

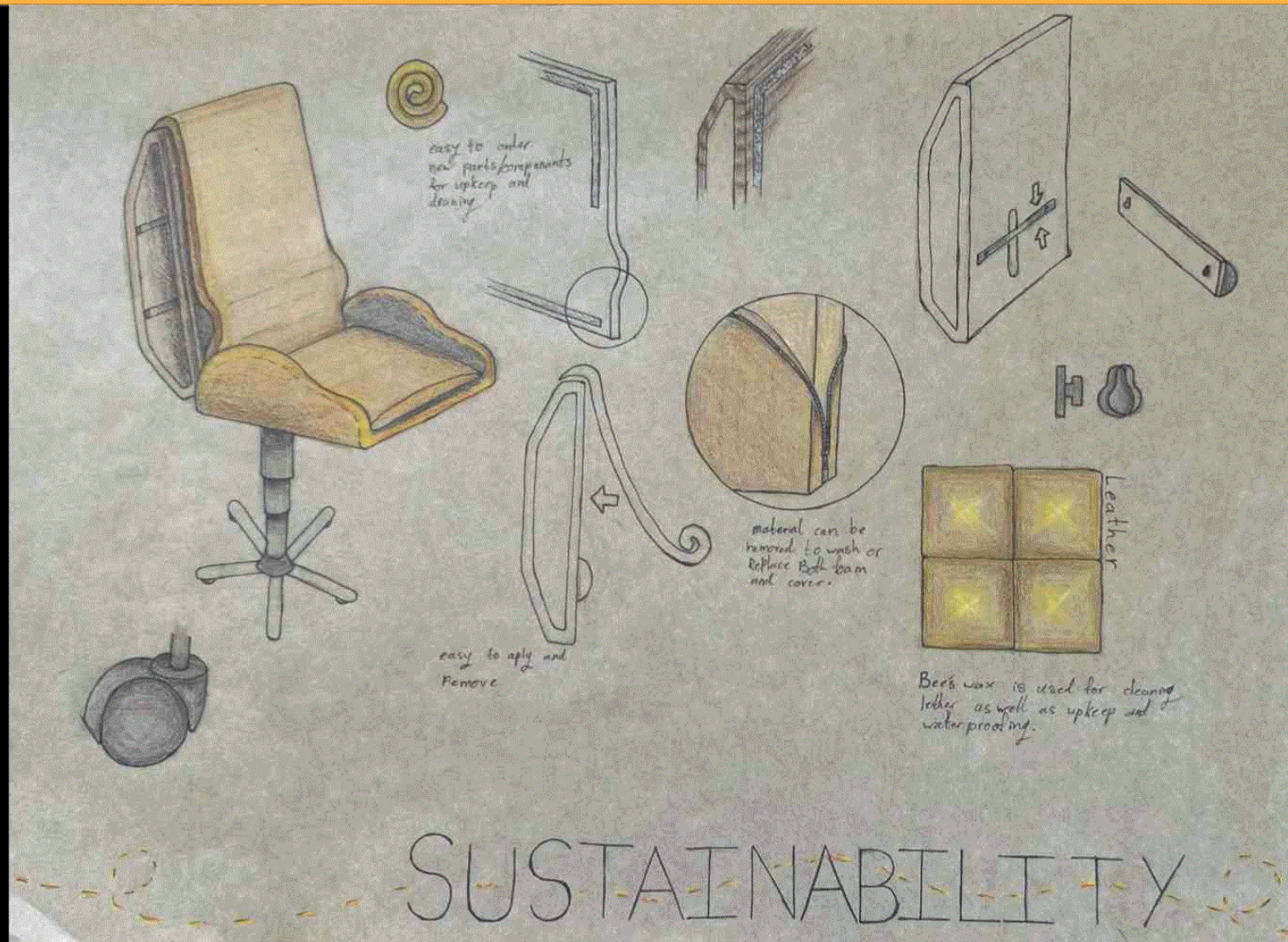
Environmental impact

- Along with minimal waste the research that will go into this design will ensure the environmental impact will be at its lowest.
- This design will look at the office chair not as a short term profit but as a long term solution.

Upkeep and cleaning

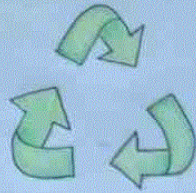
- Designing the chair so that keeping it clean is easy so leather or detachable parts to clean on their own.
- To have replaceable components of the chair means the base structure will out live the buyer and when components wear out replacements will be easy to add.

Minimal waste, cleaning and upkeep



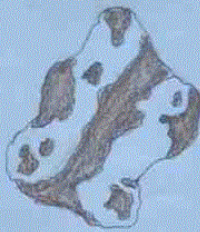
Environmental impact

ENVIRONMENT



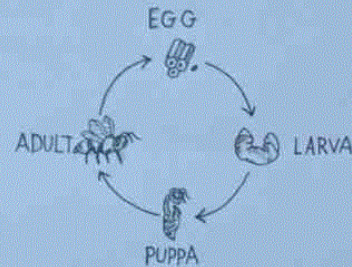
PLASTIC

using Recycled plastic will allow us to recycle it again at the end of its life.

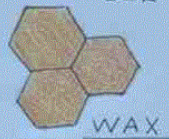


LEATHER

sustainable and ethically sourced through proven humane farms. As well as vegan options using mushroom or cork leather.



BEE LIFE CYCLE

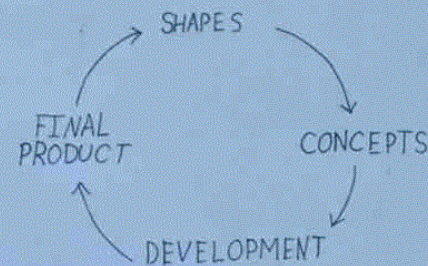
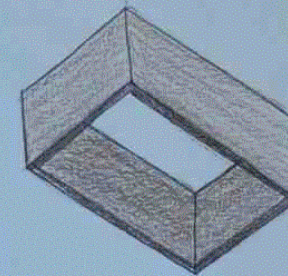


WAX

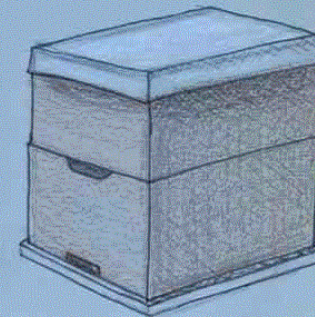
by using wax in the final finish of the design of the chair creates connections to the work bees do, strengthening the material as well as helping with up keeps.

WOOD

Sustainably sourced and treated for a longer life span. At the end of the chairs life the wood will be recycled.
- cut down into smaller parts to be used for bee box frames.
- or dipped then molded into boxes or other products.

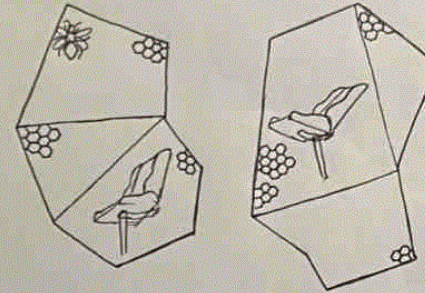
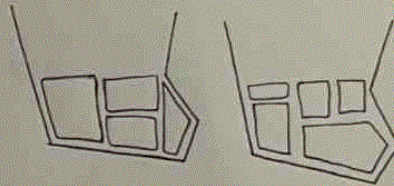
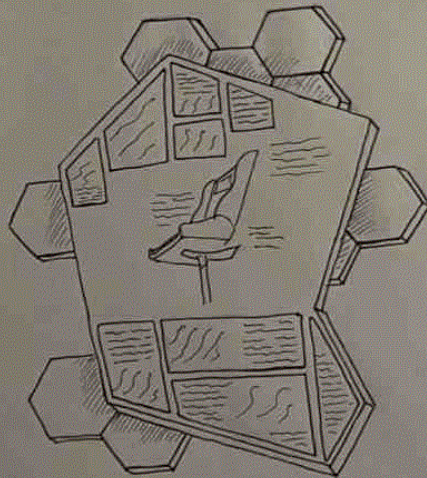
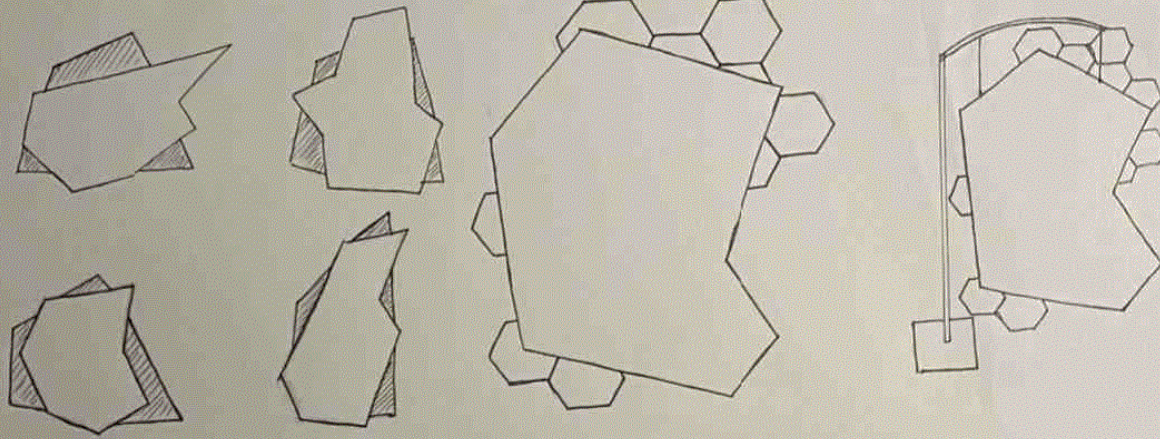


DESIGN PROCESS



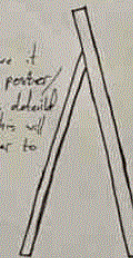


Hanging poster

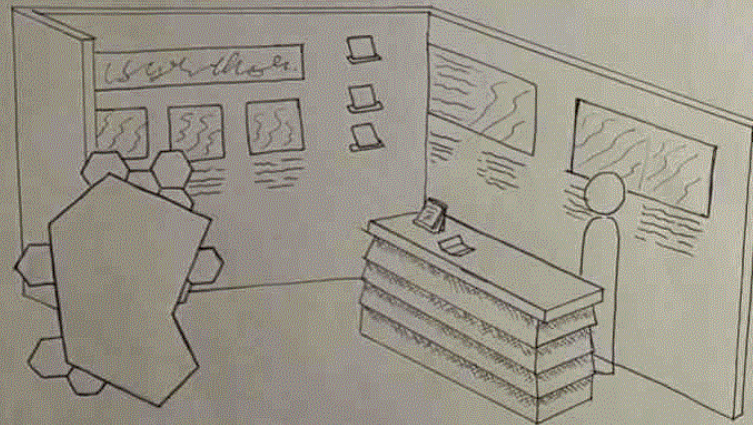


OFFICE
CHAIR

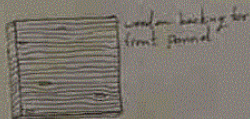
I want to have it
as a leaning poster/
Banner as its detail
and hence this will
also be easier to
set up.



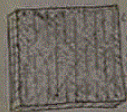
presentation



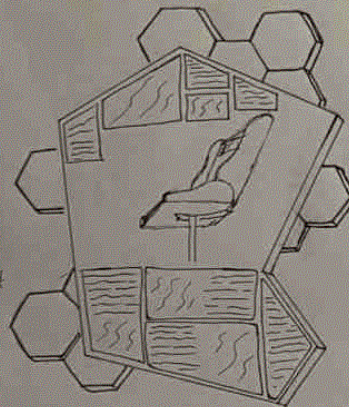
Displays with pamphlets to hand out and small information and photos on the walls of the stall.



wooden backing for front panel



card board for displays to make posters easier to assemble and change



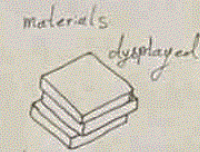
Poster will be set up outside the stall to get the attention of passers by



information pamphlet to hand out or take home



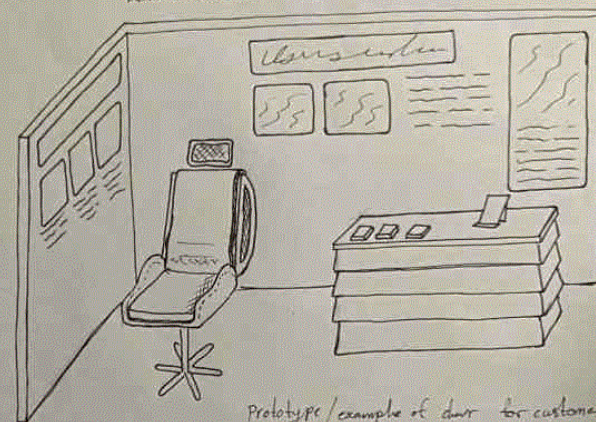
Pamphlets to hand out



materials displayed

materials of chair's components in blocks to be on display including colors available

information and examples of materials, functions, etc



Prototype/example of chair for customers to try out

Final presentation



Achievement

Subject: Design and Visual Communication

Standard: 91627

Total score: 03

Grade score	Marker commentary
A3	This submission is assessed at Achievement. It includes a good interrogation and regeneration of starting point, that has led to clearly derived design ideas. However, there is minimal progression of this theme beyond the initial ideas, so does not demonstrate purposeful reinterpretation or an “emerging train of thought” to be awarded a higher grade.