

SHAELYN LEUNG
ALL THINGS DESIGN

PORTFOLIO 2021

SHAELYN LEUNG

CONTACT

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shaelynleung.com

SKILLS

Model Making

Design Research

Concept Ideation

Solidworks

Adobe Creative SUite

Woodworking and Hand Tools

WORK EXPERIENCE

The Central Group

Assembly Designer

Feb 2021 - Present

Creating assembly instruction manuals for retail displays using ArtiosCAD, Solidworks, Adobe Illustrator/Photoshop.

3D modeling and rendering of retail display concepts in Solidworks using Photoview 360.

Umbra

Model Maker

Aug 2020 - Feb 2021

Assist the Design Team with problem solving and physical prototyping

Finished and Sanded 3-D printed models for Design Proposals

Help prepare features and displays for Tradeshow and Showroom

Assistant Model Maker

Sept 2019 - Aug 2020

Design Workshop Intern

June 2019 - Sept 2019

Sheridan College

Studio Monitor/Solidworks Tutor

Oct 2018 - Apr 2020

Guide students through tools and features of the program

Assist students with models through different tools and techniques

EDUCATION

Offsite

12 Week Design Development Course

2021

Sheridan College

Bachelors of Craft and Design (Industrial Design) with Honors

2016 - 2020

The State University of New York

Certificate in Creativity and Creative Problem Solving

2017 - 2020

AWARDS & ACHIEVEMENTS

Global Design Graduate Show by ARTSTHREAD

First Place in Furniture

Oct 2020

The nu kid highchair was voted by judges as the winner of the Furniture Design category.

PROJECTS

For more projects visit my website at shaelynleung.com



NU KID



BIND



FLOAT

NU KID

A transformative Highchair.

Capstone Project

2020



DESIGN BRIEF

Can a baby furniture solution support Millennials having kids and reassure their values?

To design a modular highchair that reflects Millennial values and increases the longevity of the product life cycle through all its functions.

Modular
Affordable
Safety-Driven
Ease of use

PROBLEM: MILLENNIALS GROWING THEIR FAMILY

Young Millennial Families

Millennials will be the majority of those choosing to have kids or not for the next two decades.

Millennials are residing in the smaller spaces because of affordability issues, societal inequality, limited options, necessity, and other problems.

They are cautious of what they buy and how it impacts the environment.

Current Housing Situation:

- Small Condos (1-2 Bedrooms)
- Kitchen and Living room are one
- Islands are used for dining



The limited housing market

Toronto's housing market currently is made up of "Condos [which] account for 81.5%" [Toronto Housing Market Analysis, 2019]



Struggle to gain financial stability

It is taking millennials more time to achieve financial stability.



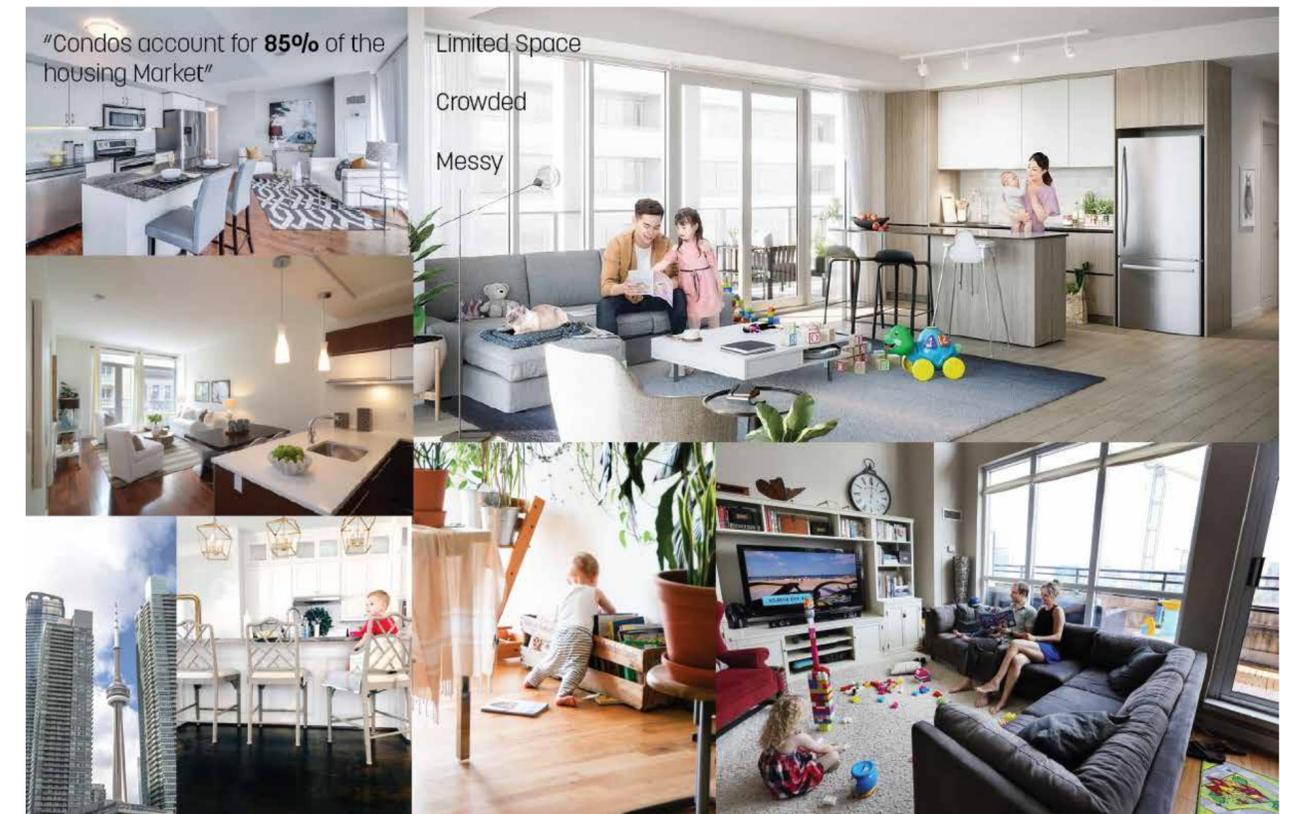
Limited to small spaces

Due to the growing population and limited space to grow, Toronto is forced to expand upwards through multiple level Condos. Toronto consists of "41 per cent have two or more bedrooms"(McGillivray, 2017).



Kids are expensive

The average yearly price to raise a kid is "13,366" (Global news, 2017), which adds up to roughly \$240,588 over 18 years.



PROBLEM: EXISTING HIGHCHAIRS

Baby Highchairs typically last 2-3 years with a family max. After their necessities have been met with the highchair and their baby grows out of it, the user usually gets rid of it by throwing it away or giving it away.

IKEA ANTILOP Highchair



Specs:

\$19.99

Footprint: 22" x 24 ^{3/8}"

Max Load: 33lbs

6 months - 2 years

Problems:

Hard to remove food tray from highchair

Limited functions.

Insights:

Easy to disassembly and assembly to travel with to restaurants, etc.

Easy to clean, affordable, Safe

Lots of Mom's are hacking it to customize it through painting it or laminating it with designs.

Stokke Tripp Trapp Chair



Specs:

\$429.00

19 ^{1/4}" x 18"

Max Load: 300lbs

0 to 36 months (with buying the attachments.)

Problems:

Have to buy extra parts to become the highchair.

What to do with the baby attachments when done being used.

Wood makes its hard to clean and stains easily.

Insights:

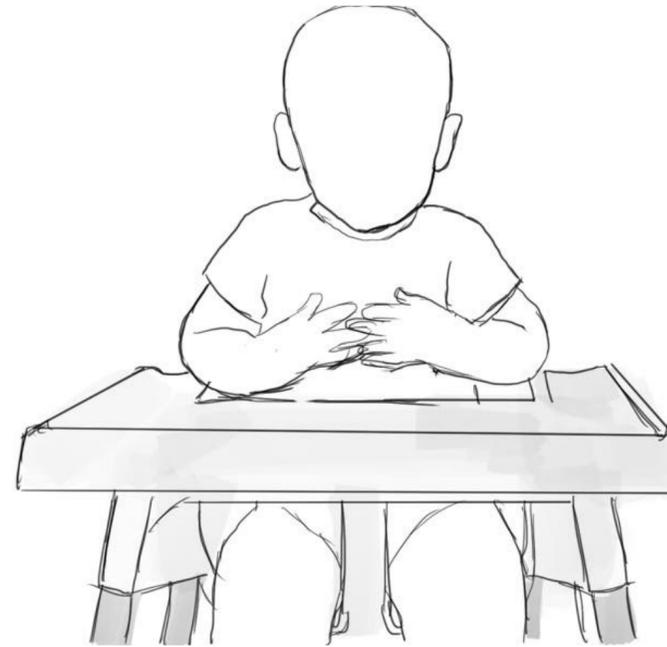
Grows with no age limit Becomes an adult chair.

Chair is easy to set up to the dining table.

TYPICAL HIGHCHAIR LIFECYCLE

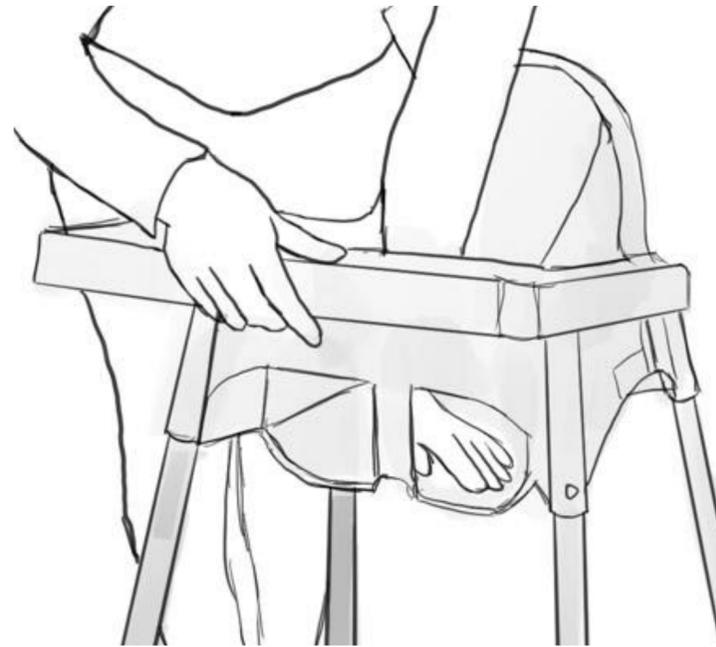


Assemble Chair



Store it away

Buy the Chair from Retailer



Use Chair 1-2 years

Throw it away



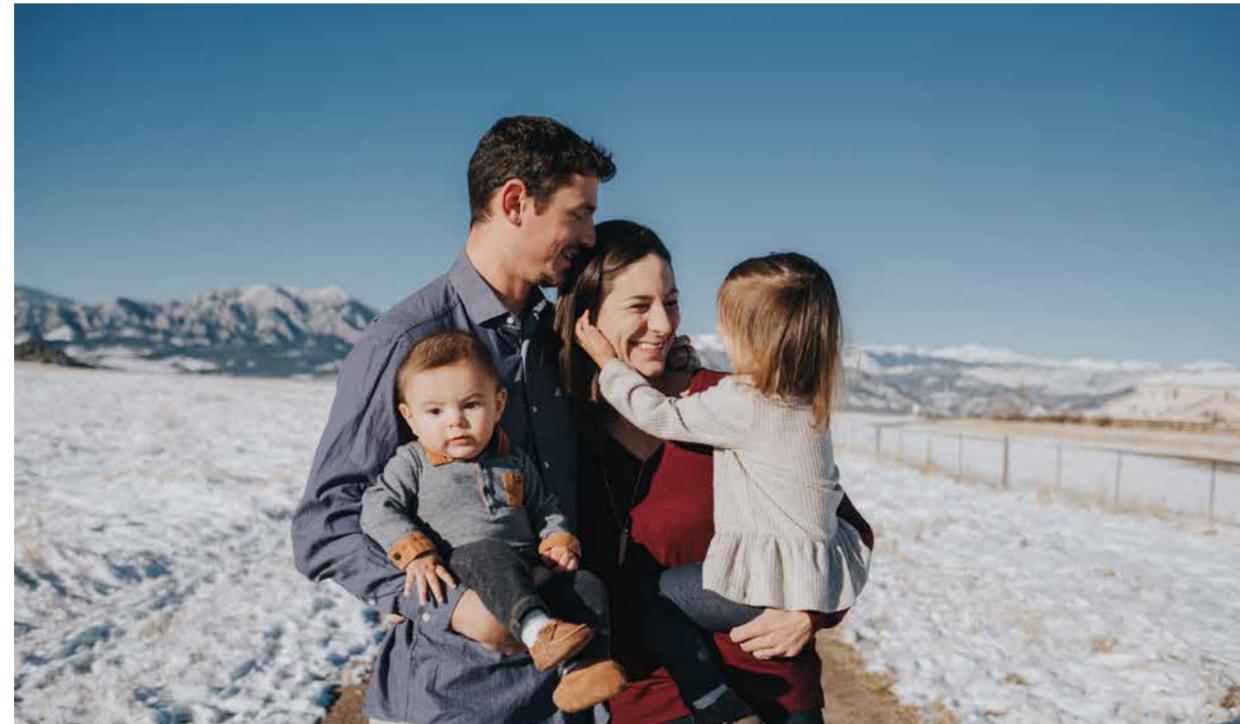
TARGET MARKET

Young Millennial Families

Millennials will be the majority of those choosing to have kids or not for the next two decades.

Millennials are residing in the smaller spaces because of affordability issues, societal inequality, limited options, necessity, and other problems.

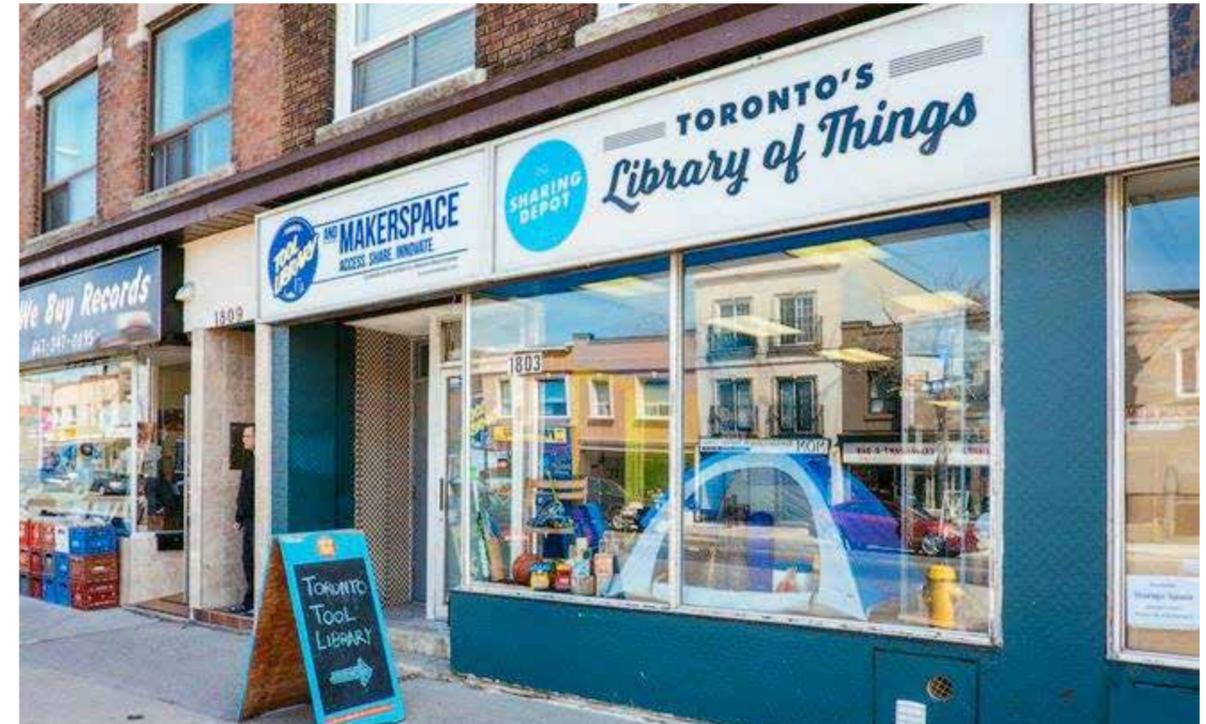
They are cautious of what they buy and how it impacts the environment.



Sharing Economy in Toronto

The sharing economy is built on the idea of collaborative consumption. This system creates a way to use a product when it is not in use and extend its value to the user and owner of the product.

People use the sharing economy because of its ideology and for its environmental awareness it brings, "such as sustainability and green consumption, [which supports their] reputation and economic concern." (Hamari, Juho, et al, 2015).



DESIGN CRITERIA

After interviewing millennials and specialists, these are the requirements that they look for in a highchair or an innovation that can occur in a highchair.



Cleanliness of the chair

Materials should be easy to clean
Can be industrially sanitized?



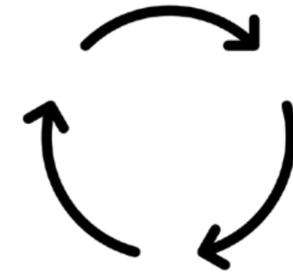
Cost

The product should be affordable.



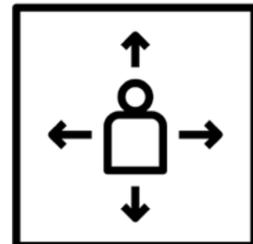
Safety

Should follow all specifications and laws required.



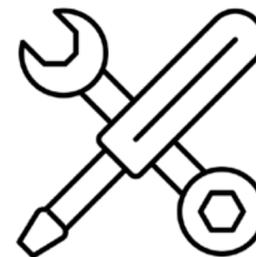
Increasing the Product Lifecycle

Components should be easily fixable to extend the life.



Adaptability

Be able to adapt to different spaces and uses within a smaller space.



Ease of use

The highchair require no extra effort when being used daily.

Should be easy to assemble.

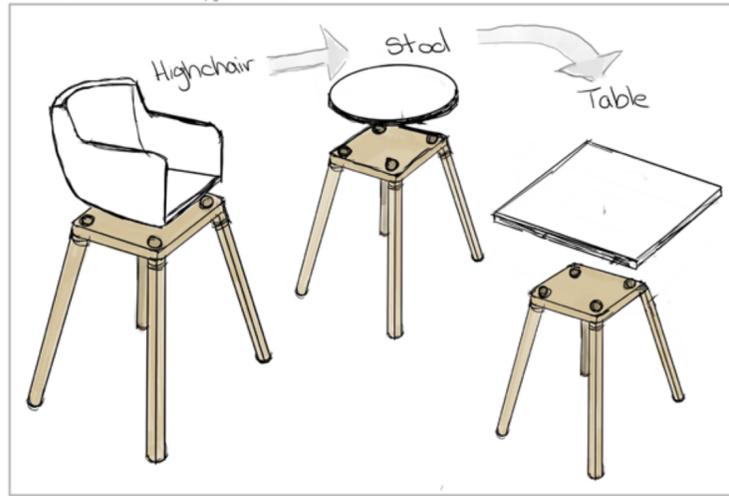


Quality

Millennials prefer to buy high-quality products to ensure it will last.

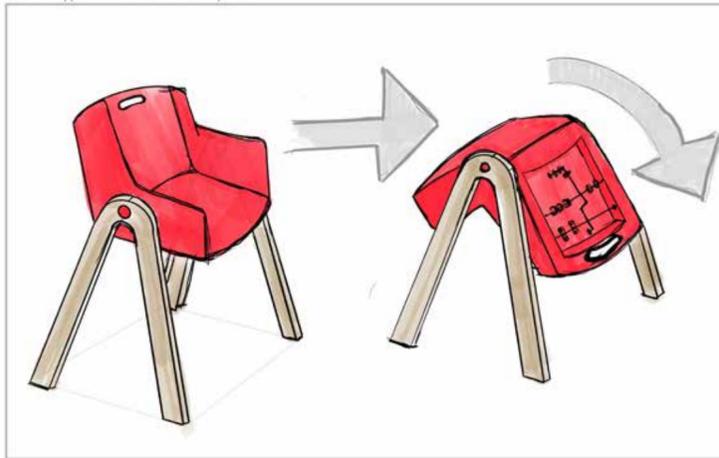
01 Multi-Use Base

The base can be used after the baby grows out of it



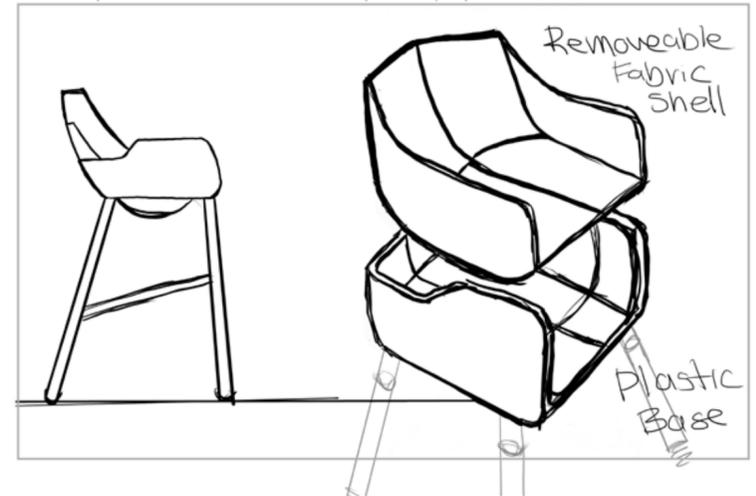
02 Flip

Chair is flipped. The back has an activity board



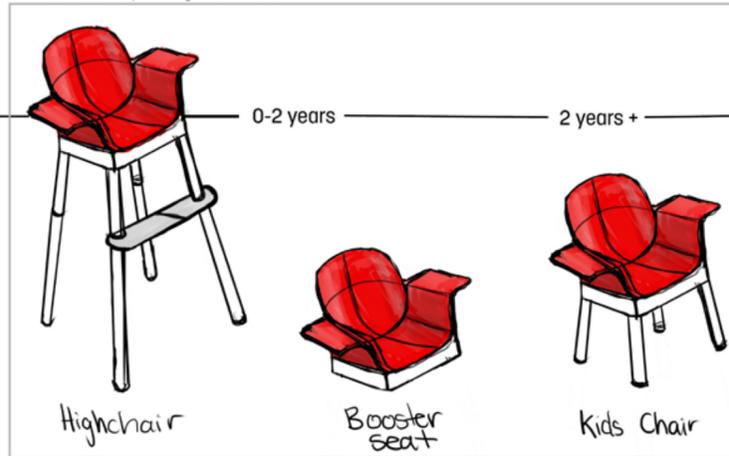
03 Fabric

Chair is mainly made out of Fabric that sits in a Base. Makes it easy to clean frequently



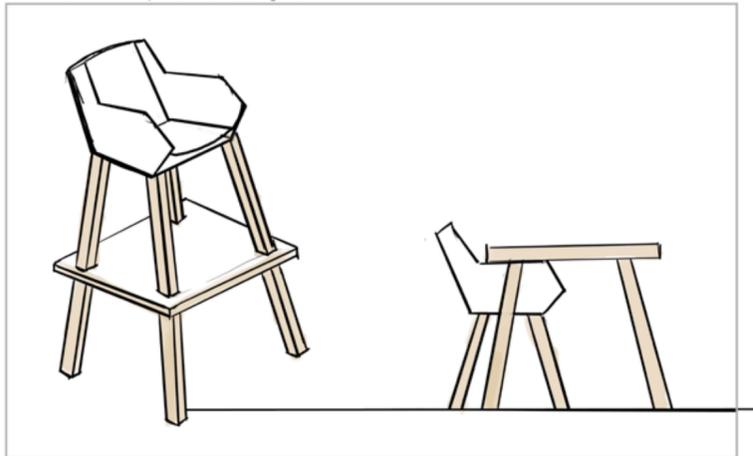
04 Grow with Me

Chair extends its life by becoming a kids chair after



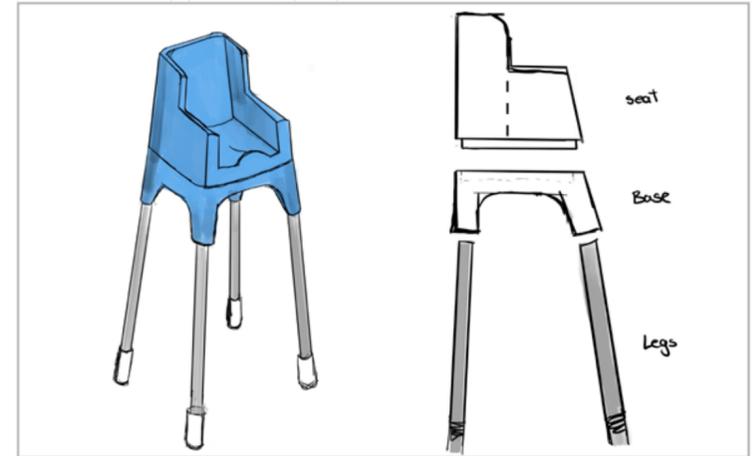
05 Stack

A kids chair stacked on top of a table to make a highchair



06 Multiple Parts

Chair is mad eout of of multiple parts to be able to repair the part that is broken



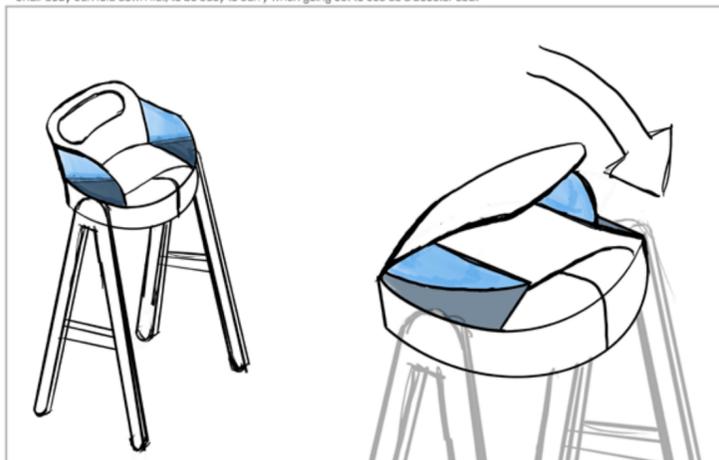
07 Chair to Floor Seat

Adding more function to chair by becoming a floorseat for the baby to play in



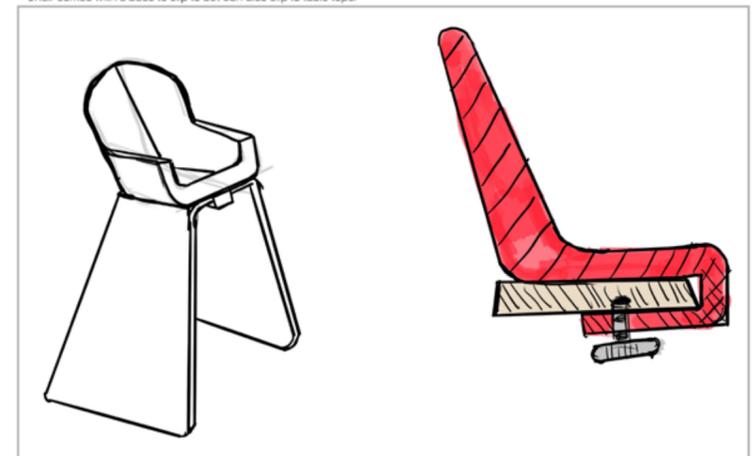
08 Fold

Chair body can fold down flat, to be easy to carry when going out to use as a booster seat



09 Clip On

Chair comes with a base to clip to but can also clip to table tops



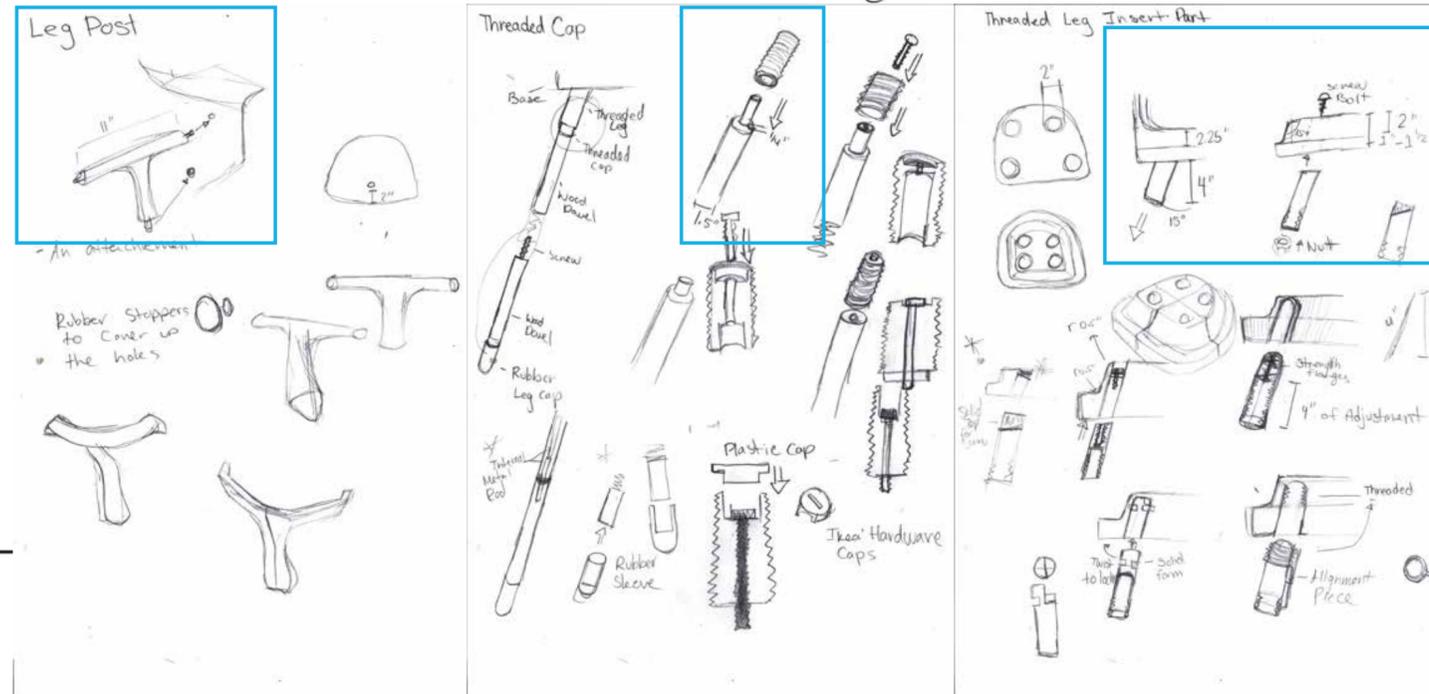
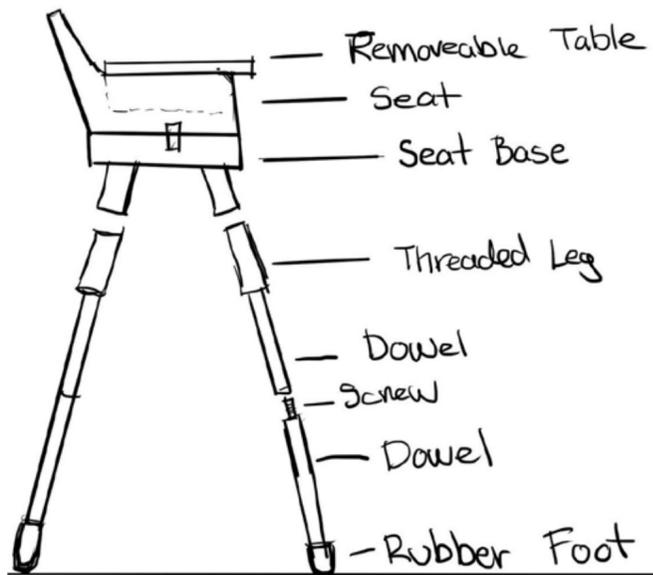
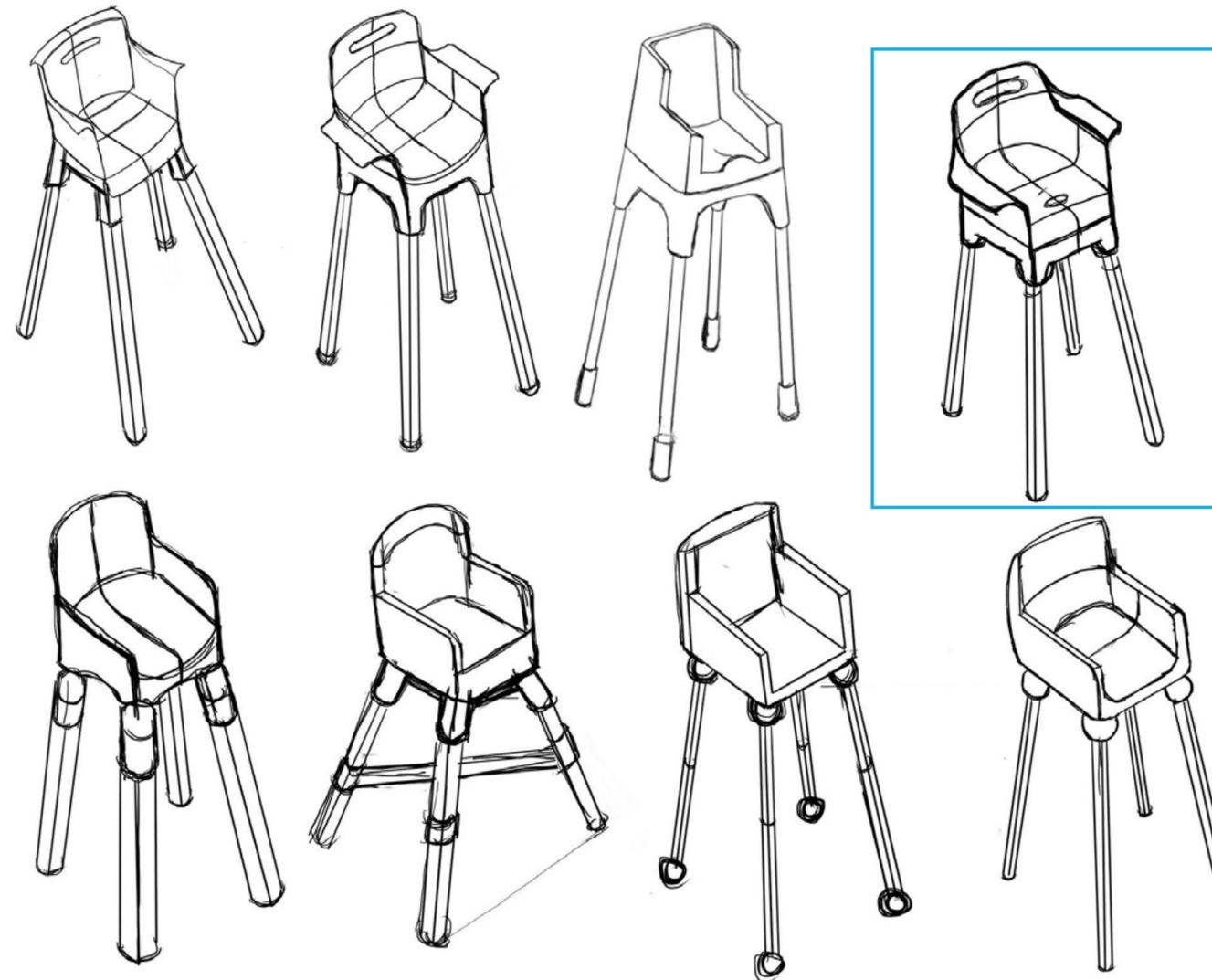
DEVELOPMENT/TESTING

Combined the two concepts of "Grow with me" and "Multiple parts".

Defined what are the parts required for a highchair.

Ideated different forms and then 3-D printed them to better understand the form and how it will work.

Tested out different shapes for the base to make it seem less bulky.



INTRODUCING NU KID

The nu kid highchair is a **modular modern highchair** that emphasizes on safety and functionality. The highchair is made up of many components to create customization and make it easy to repair to **extend its product lifecycle**. The highchair is adaptable to many different spaces and tables through its wide height adjust-ability and other uses.

The highchair focuses on Millennials having kids and addresses their values. This product will be integrated into the up and growing **Toronto Sharing Economy** to encourage second hand use of this highchair to create longevity in a product that typically lasts 3 years.



a transformative
highchair.



COMPONENTS



This highchair is made out of multiple components to make it easy to replace parts when damaged. It also allows for customization in colours and materials for the user.

MATERIALS AND COLOURS



HOW IT WORKS

Booster Seat & Floor Seat



Seat comes off the base by unlocking the seat from underneath the base.

User can then use it as a chair booster seat or on the floor.



Child Chair



Wood legs can be threaded in half to create shorter legs for the child chair.

Rubber grip cap can be taken off of other leg and put on the short leg with the threaded cap.



Passing the Chair on

post.

Use the highchair until a max of 2-5 years.

Use the nu kid social media platform to post your highchair up for sale.

clean.

Clean Seat and Base in dishwasher or by hand.

Wash fabric in laundry machine.

Thoroughly sanitize the highchair.

repair. replace. fix.

Fix any components with new parts that can be ordered.

Replace those broken or worn down parts.

Refinish the wood legs with mineral spirits

package.

Repackage all components into the box that the nu kid highchair came in.

share.

Meet with the next family.

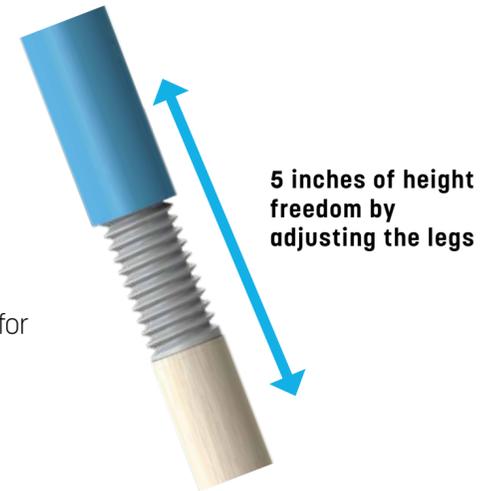
Pass on the highchair.

DETAILS

01 Height Adjustability

The threaded leg caps allows for 5 inches of adjust-ability to different table heights.

This allows for a more comfortable feeding height for the parents.



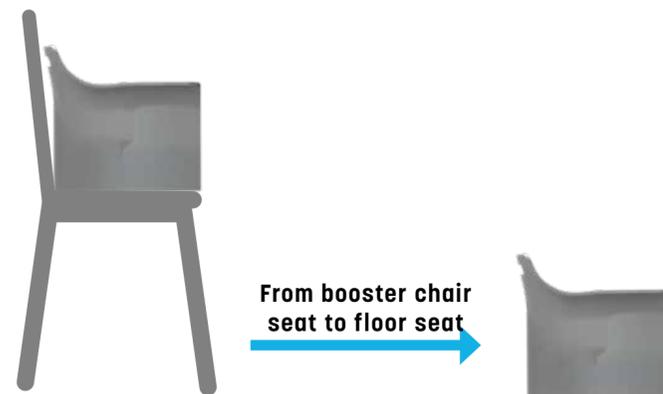
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Space Adaptability

Adaptable to many table heights.

The chair can be used in many different situations to benefit the kids development.

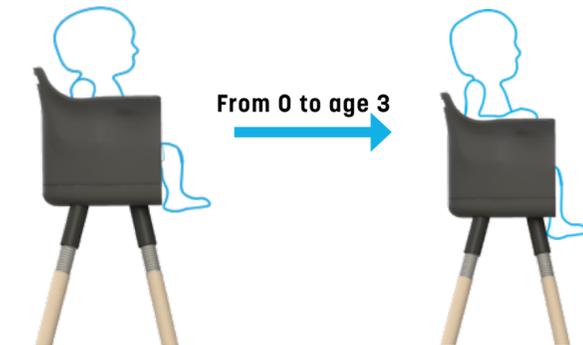


03 Longevity

The highchair should be used for a maximum of 3 years.

The modular design makes it easy and comfortable to pass on to another family to reuse to raise their kid.

This can be passed on until the chair is unfixable.



04 Multiple Parts

Creates an easily customizable and completely re-parable highchair.

Reduces the amount of highchairs being dumped.

Creates a new product for the next family when parts are damaged.

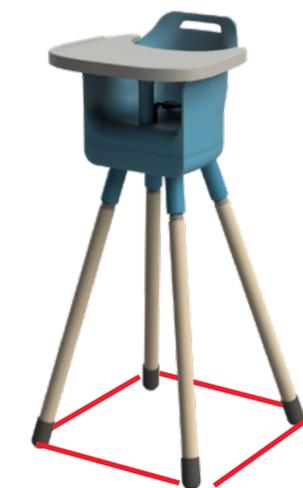


05 Small Footprint

Makes it versatile and adaptable to small spaces.

Highchair is still stable due to the angles.

Rubber feet provides grip to keep the chair from sliding.





BIND (WIP)

A Modular Wallet

Design Project for Offsite

2021



DESIGN BRIEF

How might we make a wallet that's less bulky, but just as functional?

Design a Modular wallet that provides the user a customizable wallet for daily use and for special occasions.

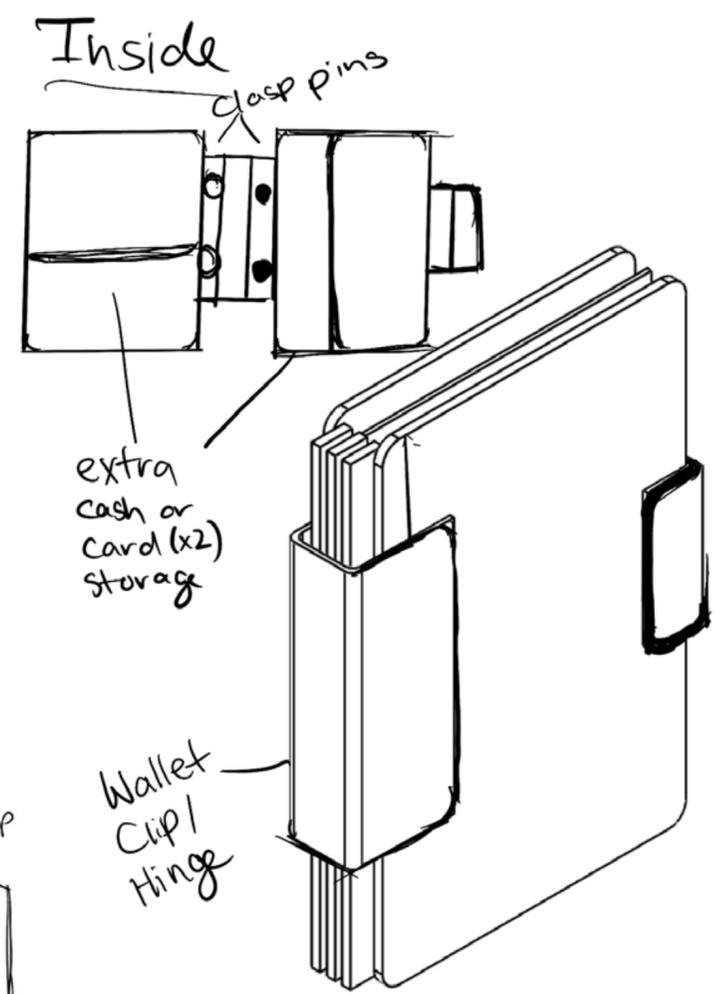
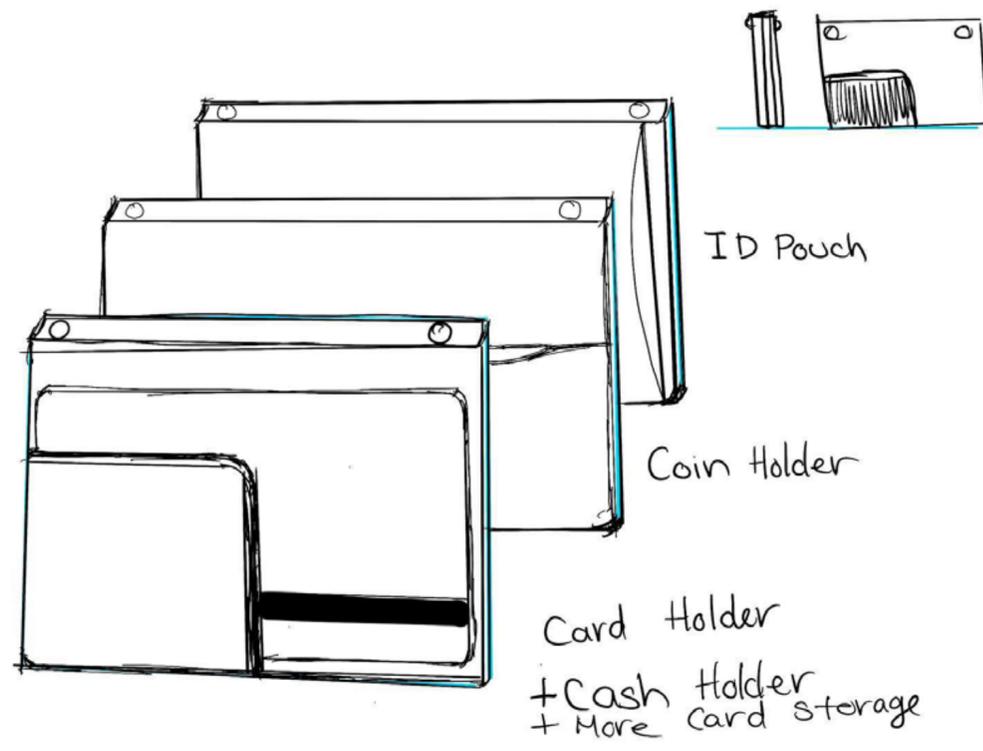
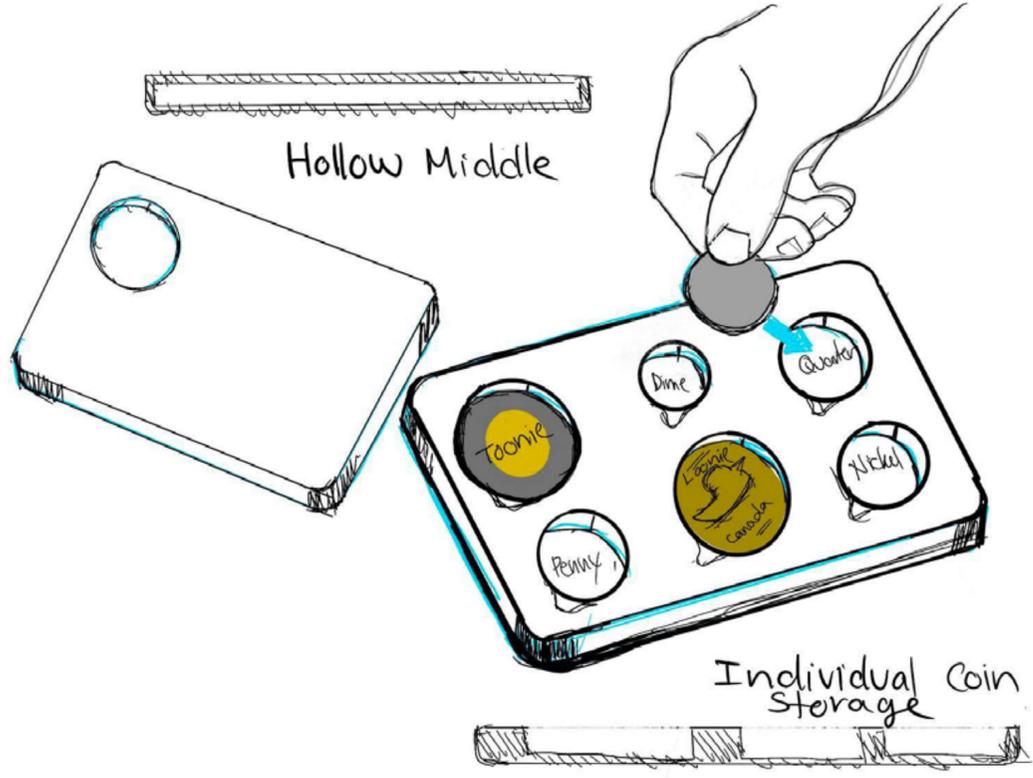
**Durable
Compact
Lightweight
Ease of Use**

PROBLEM WITH WALLETS

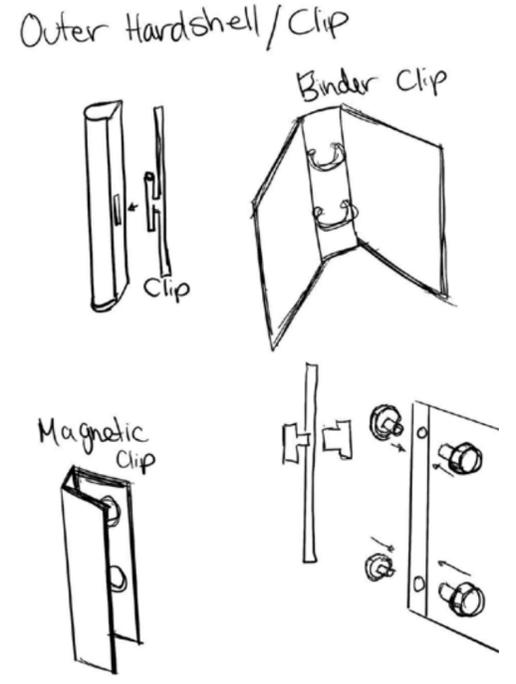
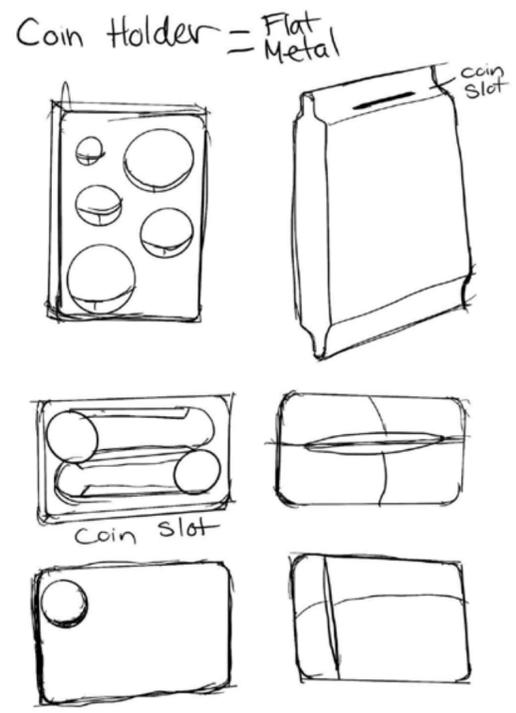
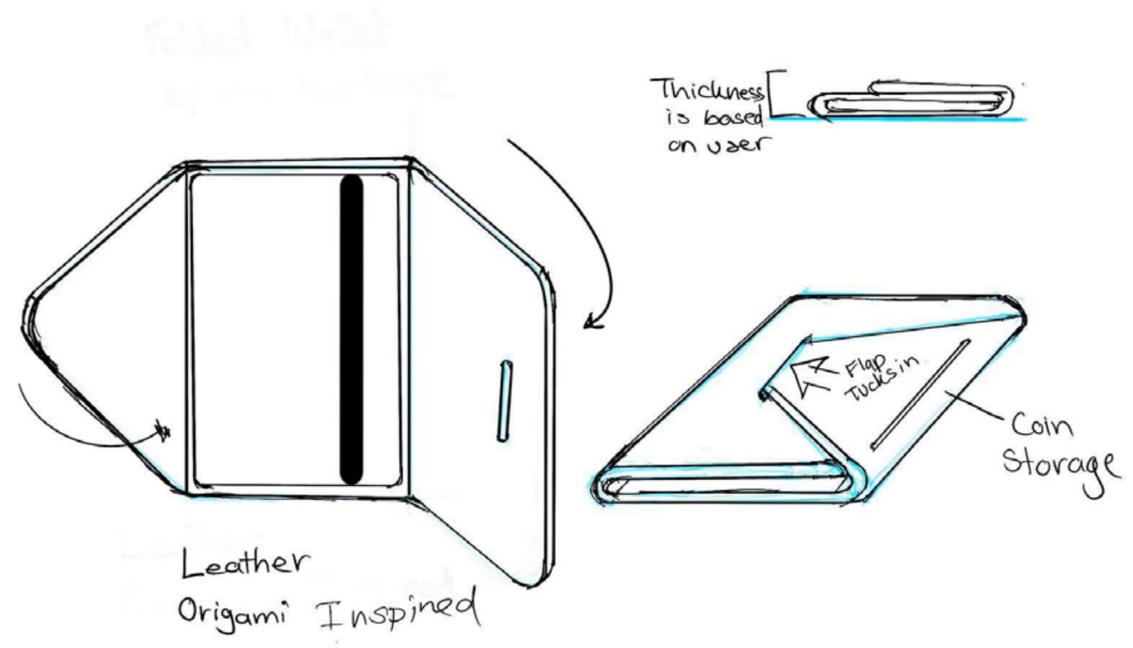
- Bulky
- Lacks specific storage
- No Coin storage
- Material Wears down easily
- Wallet don't fit in pockets
- Need more than one (cardholder, coin purse)



IDEATION



- Inserts
- Card holder x6
 - Coin Holder
 - ID Holder (Double sided?)
 - Cash Holder
- keeps the wallet together



Dimensions

*Based on Muji Cardholder

- holds 10 cards
- B cash (4 bills)

Materials

Metal & Leather

SOLUTION

A customizable wallet system for the everyday use.

Hard Case



Has extra pockets for cash and cards

The Binder ring holds all the inserts required by the user

Leather, Metal, Fabric

Cardholder



Holds up to 4 cards per pocket

Can have multiple holders dependent on users day

Leather

Coin Holder

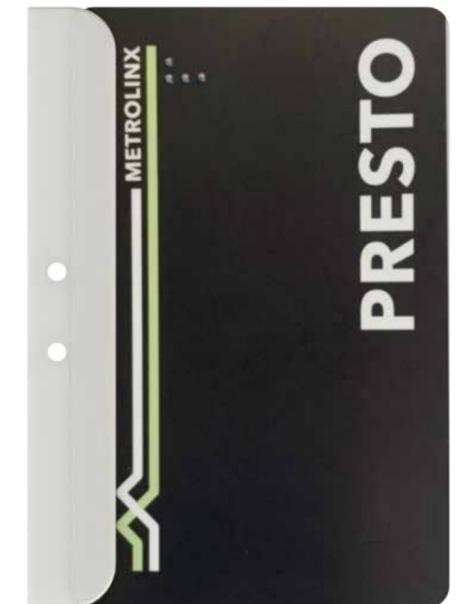


Holds 3 coins per slot

Springloaded to keep coins tight to prevent it from falling out

Metal

ID/Transit Pass Clip



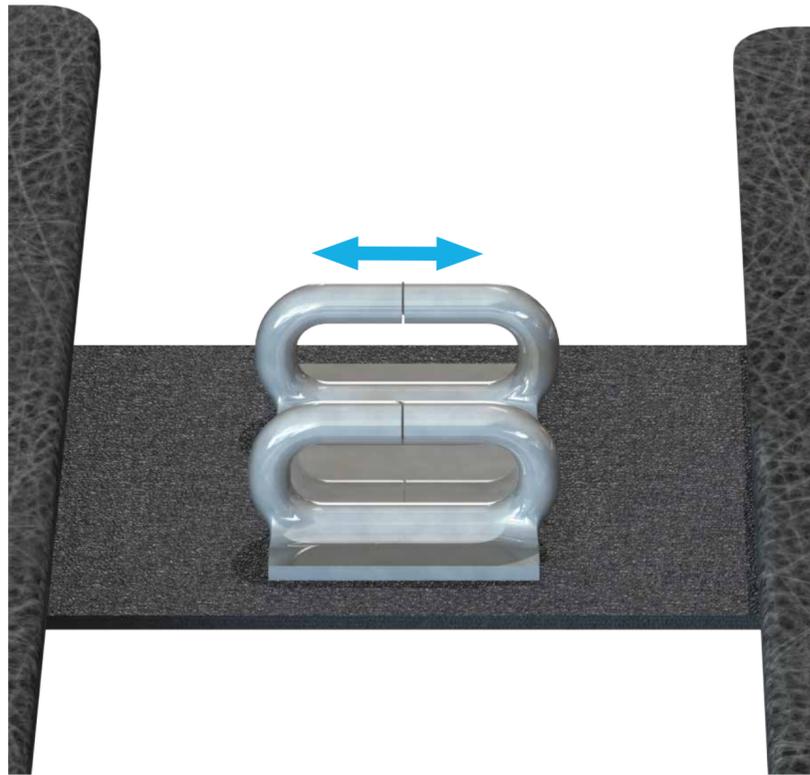
Has a built in retractable lanyard to allow easy access without having to take out the card from the case

Metal

FINAL DESIGN



DETAILS



Metal Binder Clip allows for customizeability of inserts



Wallet is a max of 1/2" in thickness



User pushes down the coin and slides it out of the slot when needed



FLOAT

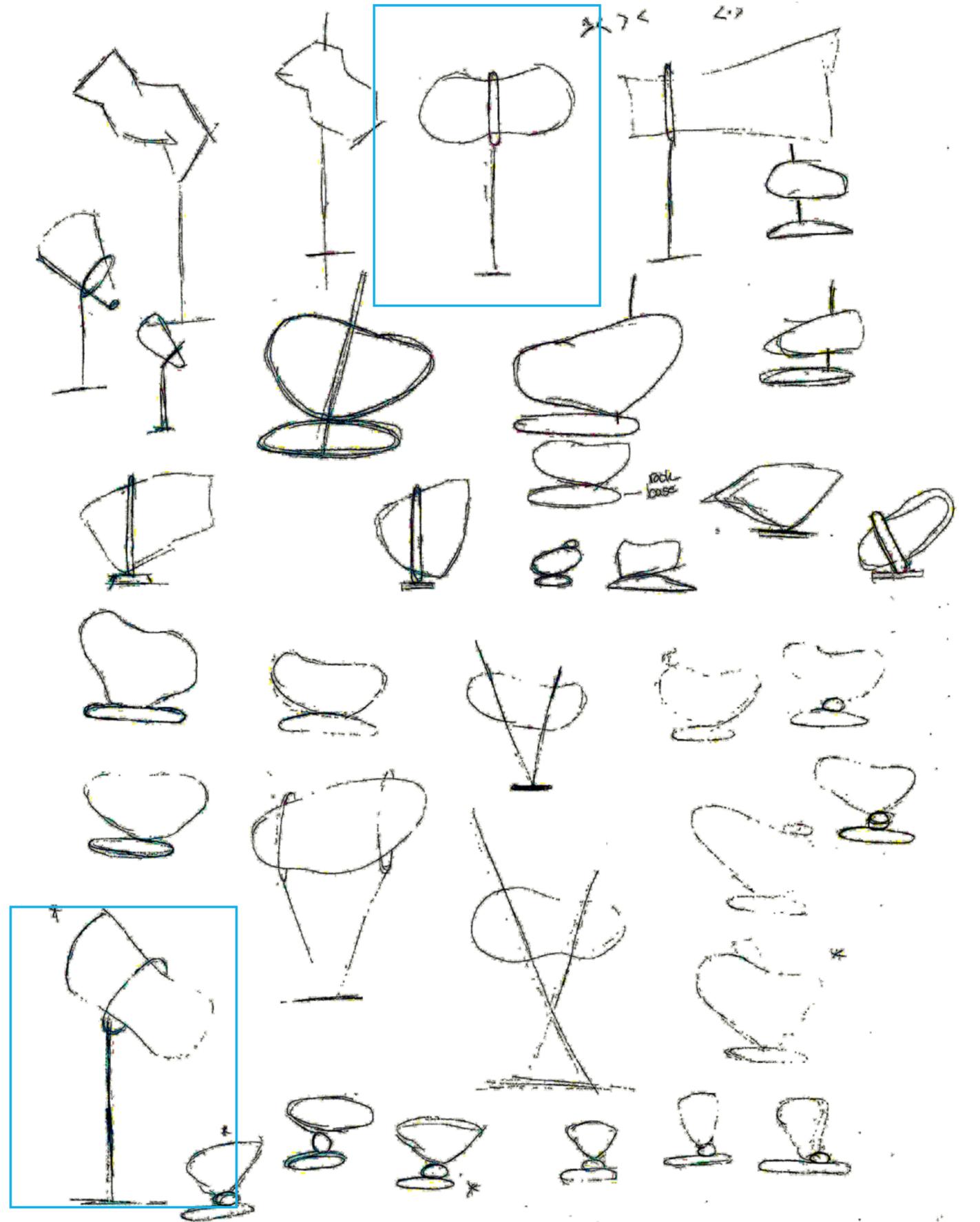
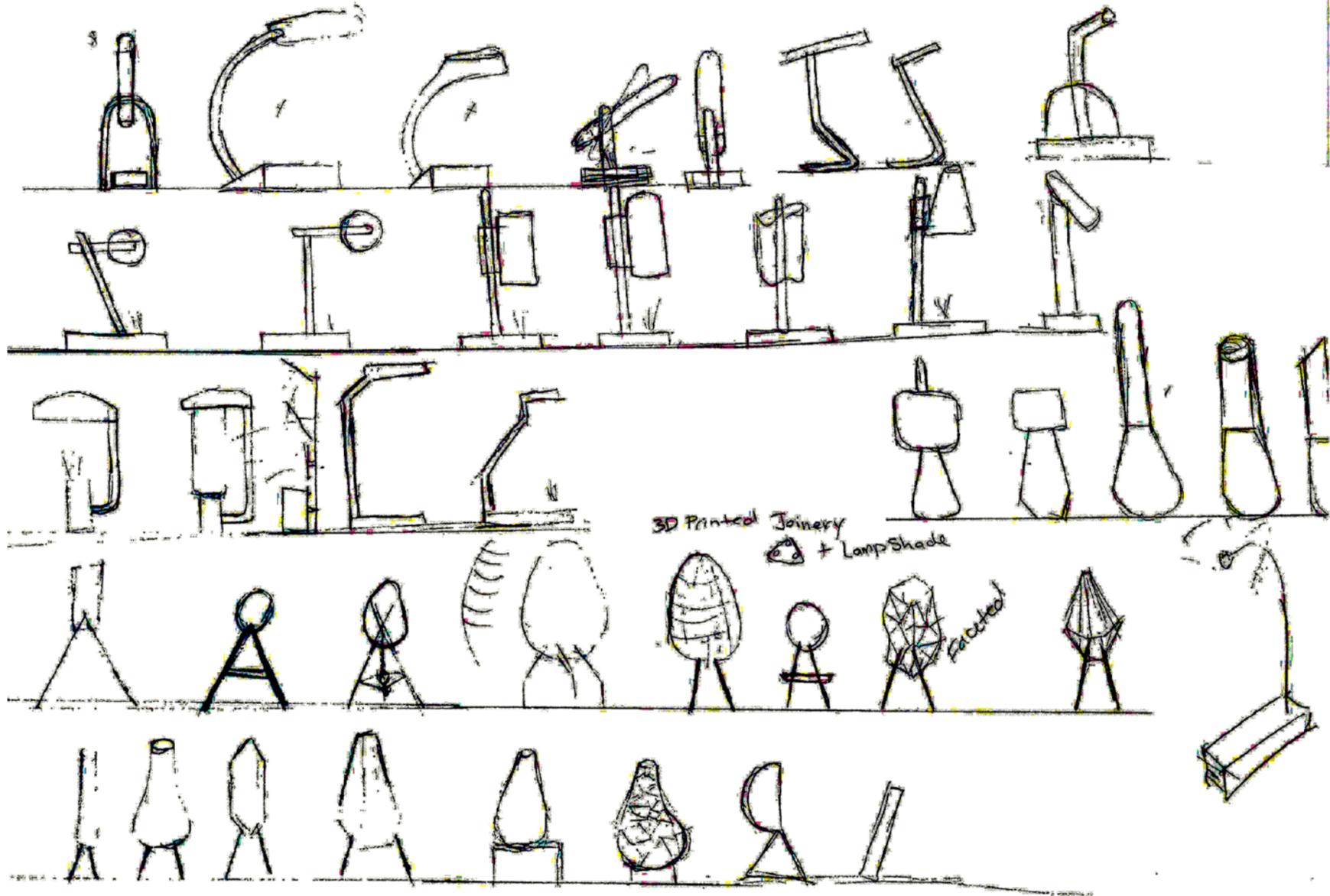
An Explorative 3-D printed Light

Design Project for Sheridan College

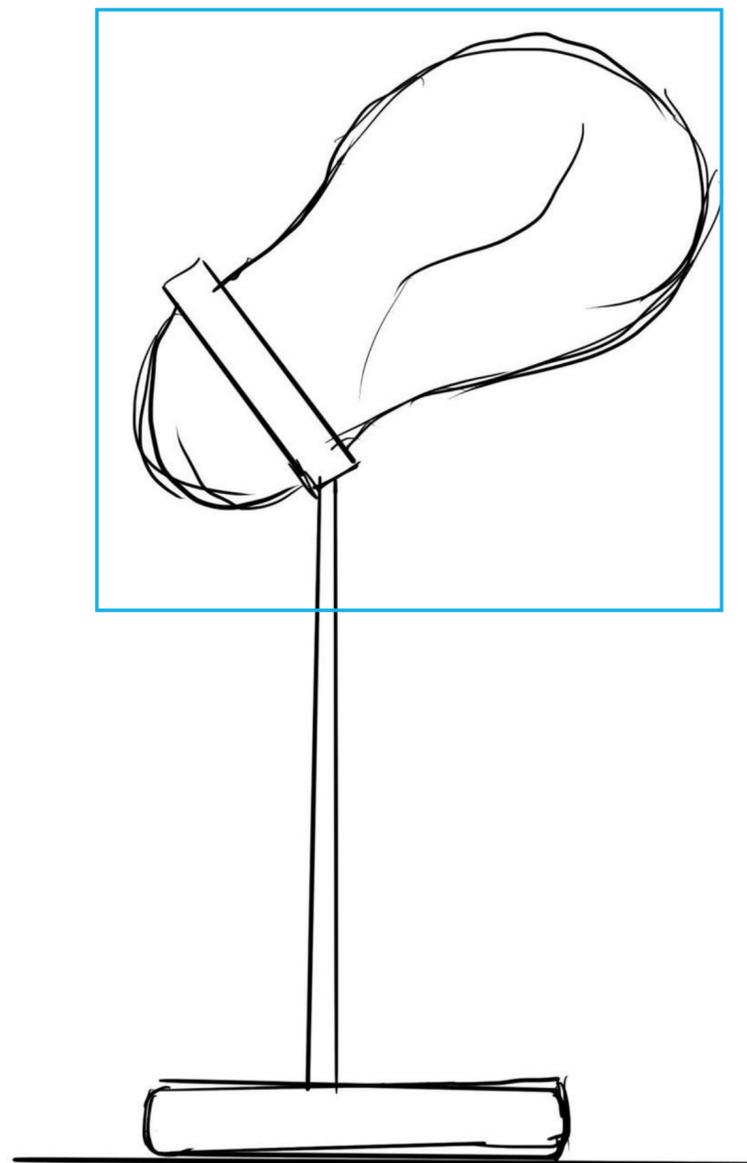
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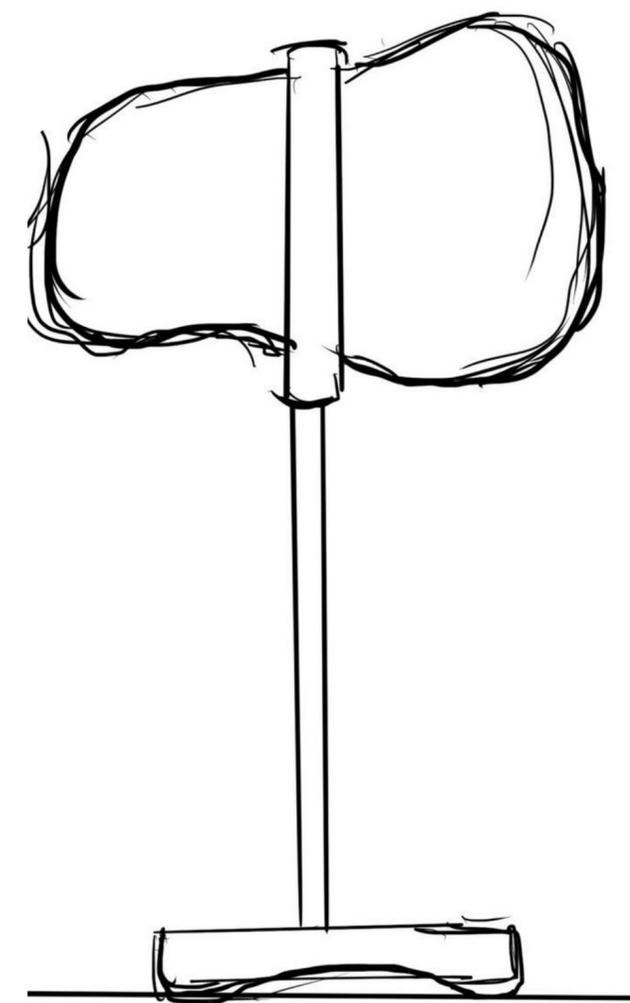
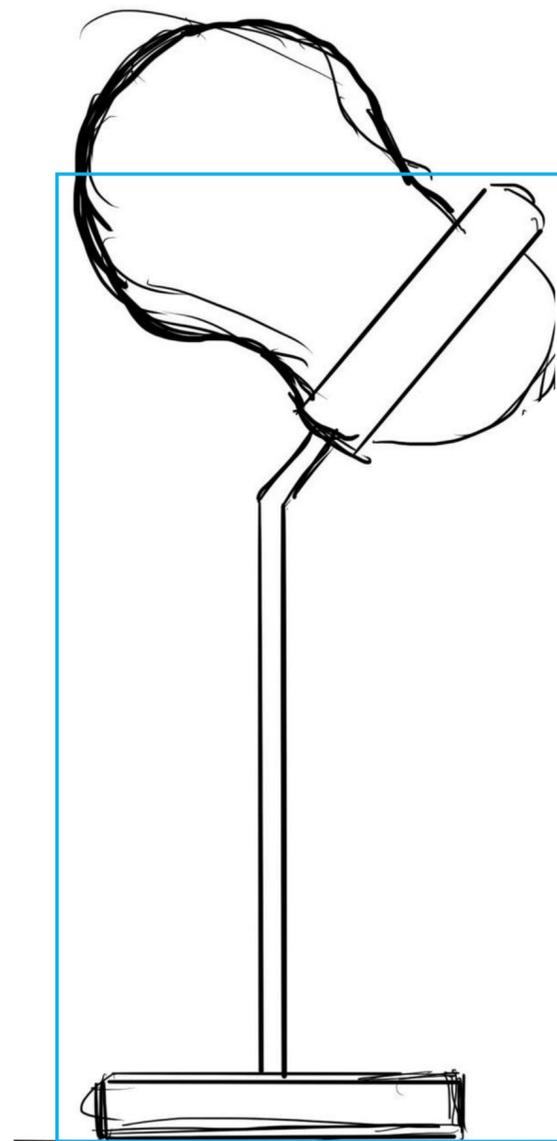
IDEATION



FINAL DESIGN



+



TESTING/PROTOTYPING



Testing out different wall thicknesses and how it reacts with light. Tested here is $1/16''$, $1/32''$, $1/8''$ and $1/4''$.



Trying to print the top with no support, which causes these lines that are hard to sand. Looking for a smooth print that requires no post work.



Testing out how the pieces go together with the light source.

INTRODUCING FLOAT





THANK YOU!