

The background features a light blue field with several large, stylized, pink shapes outlined in thick black. These shapes include a large '1' in the top left, a large '0' in the top right, a large '2' in the bottom left, and a large '6' in the bottom right. A thick yellow horizontal bar spans across the middle of the page, and a vertical yellow bar runs down the right side, intersecting the horizontal one.

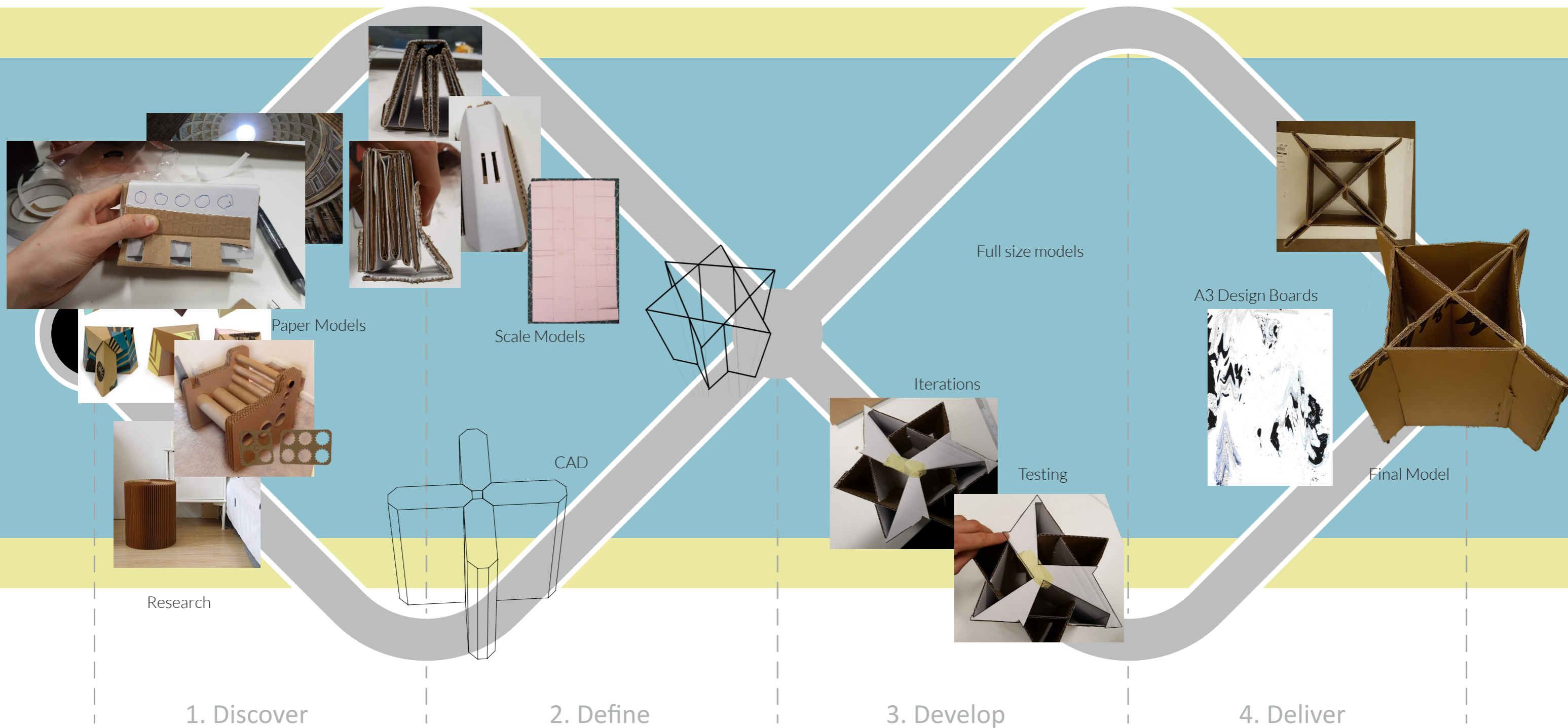
PRINCIPLES OF DESIGN

Project 2 - DESP1026 Principles of Design

P17160722 - Haven Carty

Planning For Project 2

Complete with activities/tools that you can use throughout the process to deliver the project.



Product Design Specification

Client Company: User:

Brief description of product to be designed

Disposable/recyclable cardboard structure. To be sat/stood on when viewing a performance at a festival.

Customer/s – What are their needs?

Recyclable, Durable, Ethical, Short Product Lifespan

Quantity, Expected production volumes ?

not specified

Styling – How will the product look, what are the products influences?

Environmentally Ethically Motivated Users.

Competition – What are the current brands (if any) occupying this market space?

Google Cardboard, Slotle Cardboard Stool, Paperpod, cArtu Stool, iaja.

Environment – Where does the product need to work?

In a Wet/Muddy Festival, to be used by intoxicated individuals

Product Cost – what will the market stand against what you intend to offer

Low product cost

Assembly – On a scale of 1-5 (5 being very important) how important is the Design For Manufacture?

Designing for cardboard

Materials – What materials might be suitable? Will the product need to be robust or have a disposable feel?

Recyclable materials, mainly card

Ergonomics – How will the product be used and by whom? How flexible will the design need to be to cater for its target audience?

Collapsible to be used by young drunk festival go-ers.

Product disposal and Sustainability – How will you take back the product at end of life, can parts be reused or recycled, perhaps upcycled?

Disposable after one weekend of use, maximum 6 day use.

Product Dimensions – Are there constraints on product size?

400mm^3, minimum height 400mm

Features – What features will the product have?

I am planning on including a beer carrier in the design.

Performance – How will it perform and how will you measure success?

The user should be able to use the product as a platform to stand on during acts. While standing on the chair, the user may begin to dance

Quality, Standards and Specifications – What are the minimum standards or specifications for this product?

Durable, reliable in possible wet and muddy conditions.

What more do we need to know to successfully execute the design of a new product?

Product Design Brief

Signed:Designer

SignedClient

Assumptions and Observations



After visiting a festival, my assumptions and observations for problems to solve are as follows.

Pain Points

- Not being able to see the stage
- Carrying food and drink to and from the tent
- Not knowing lyrics
- Not knowing artists
- Planning what stages to go to at what times
- Parking

User Research

raised platform



recycled chair

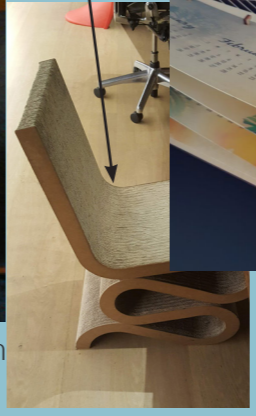


form to elegant for card



collapsible mechanism

shape/form



pantheon



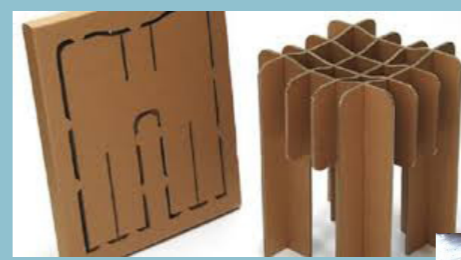
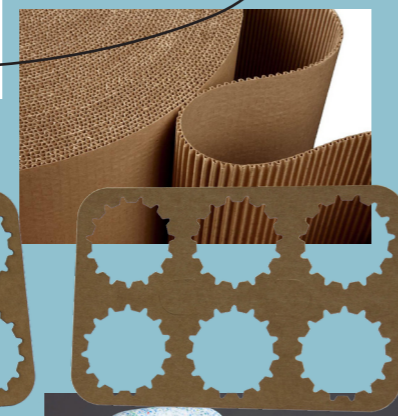
printing on card



hexagon design



graphics



bottle carrier



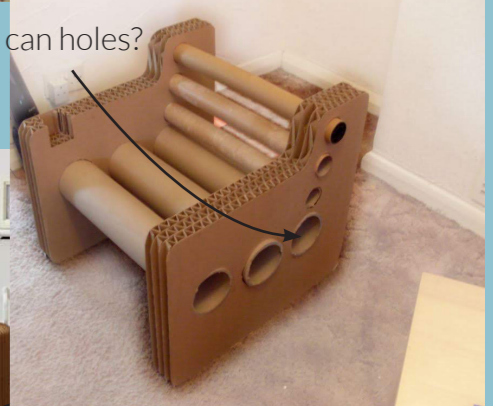
stool designs



folding mechanism



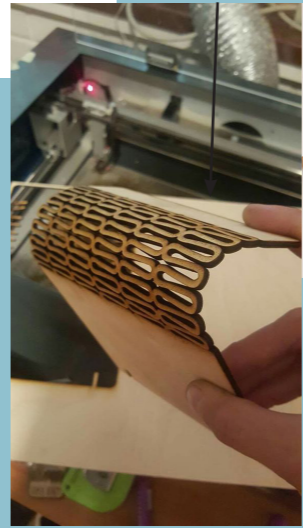
beer can holes?



cutout graphics



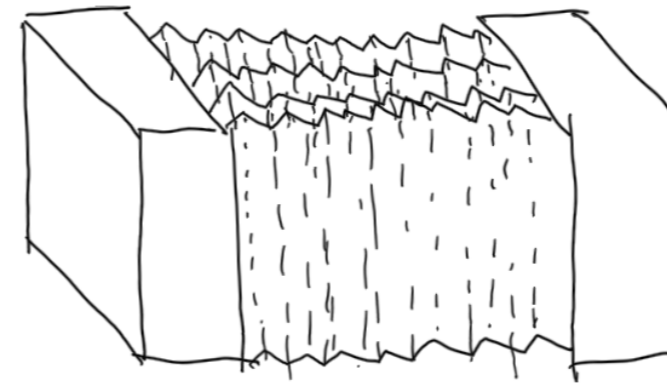
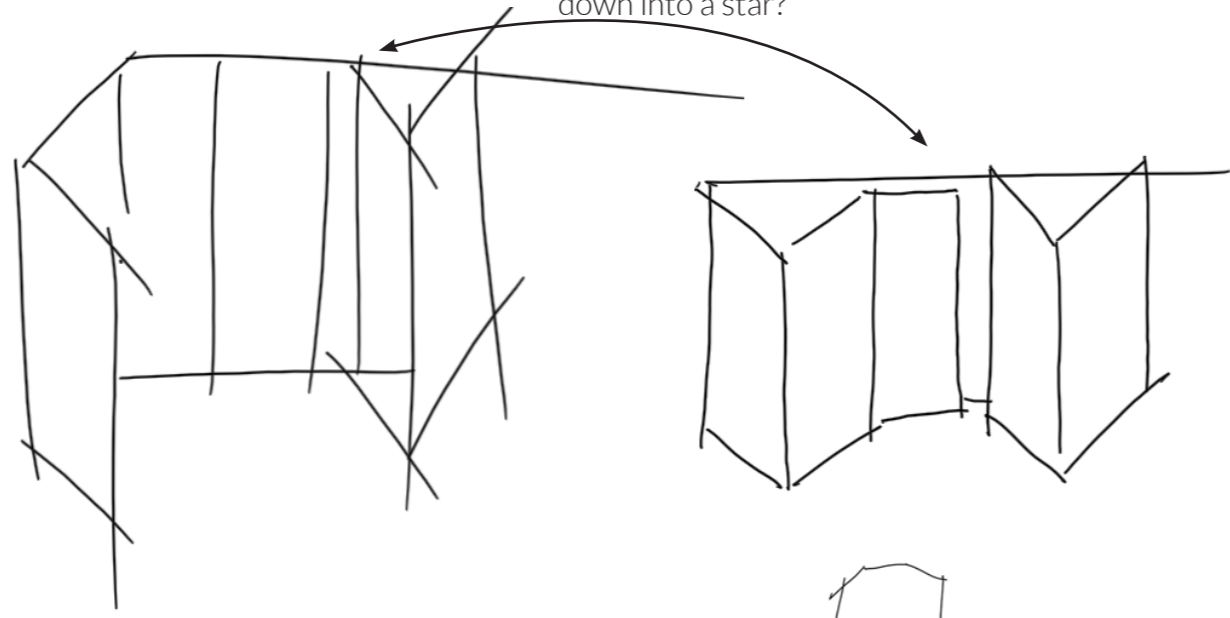
stool design



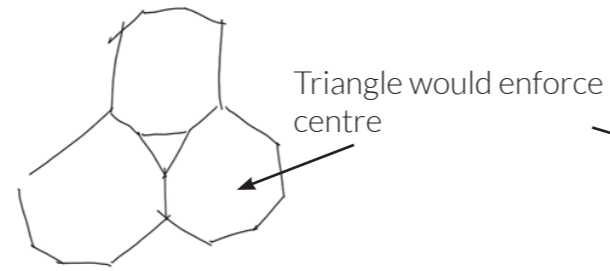
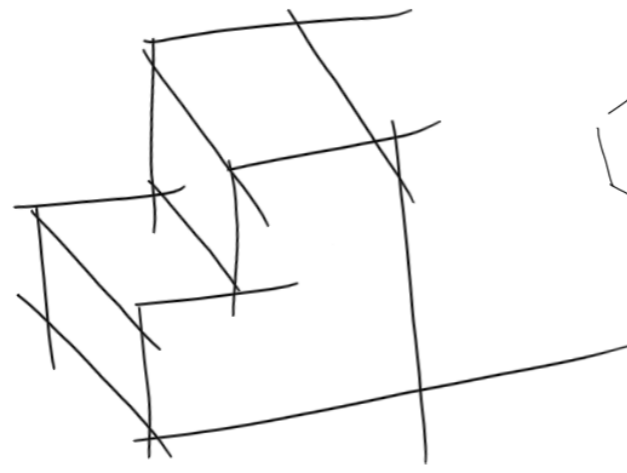
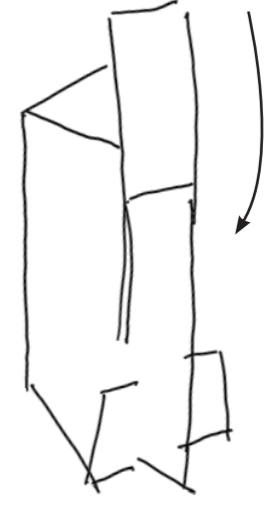
collapse to a book



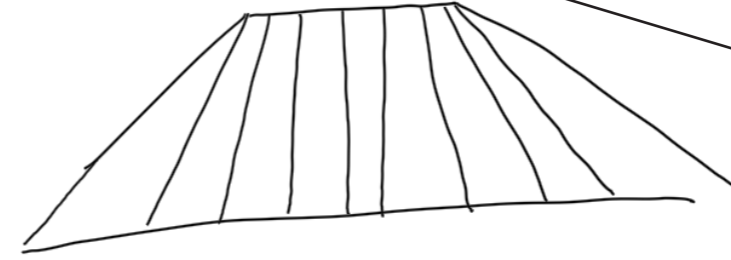
Is it possible to make two triangles that fold and slot down into a star?



Reinforce Triangles with folded sides

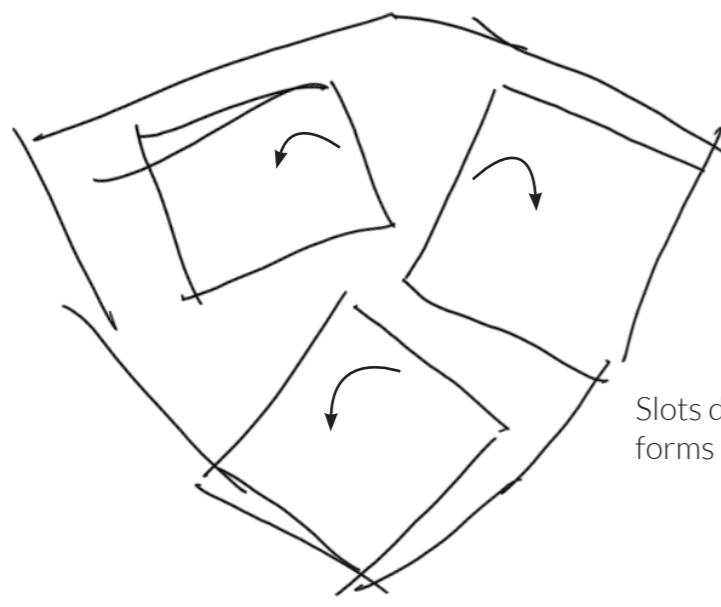
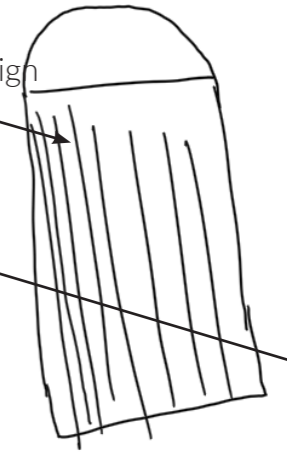


Triangle would enforce centre

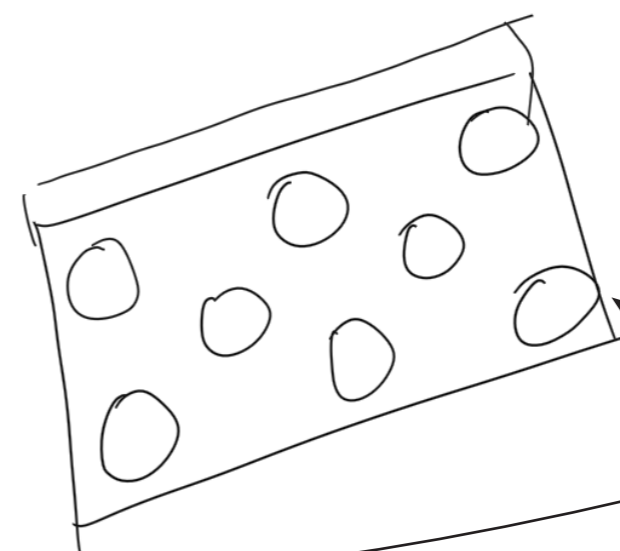
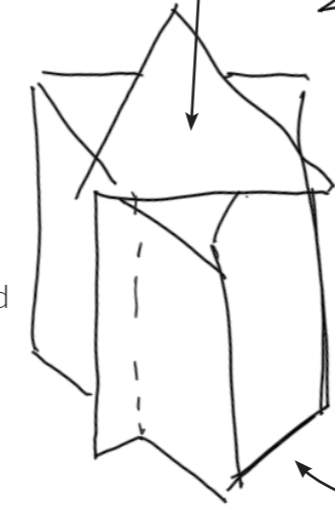


top pattern design

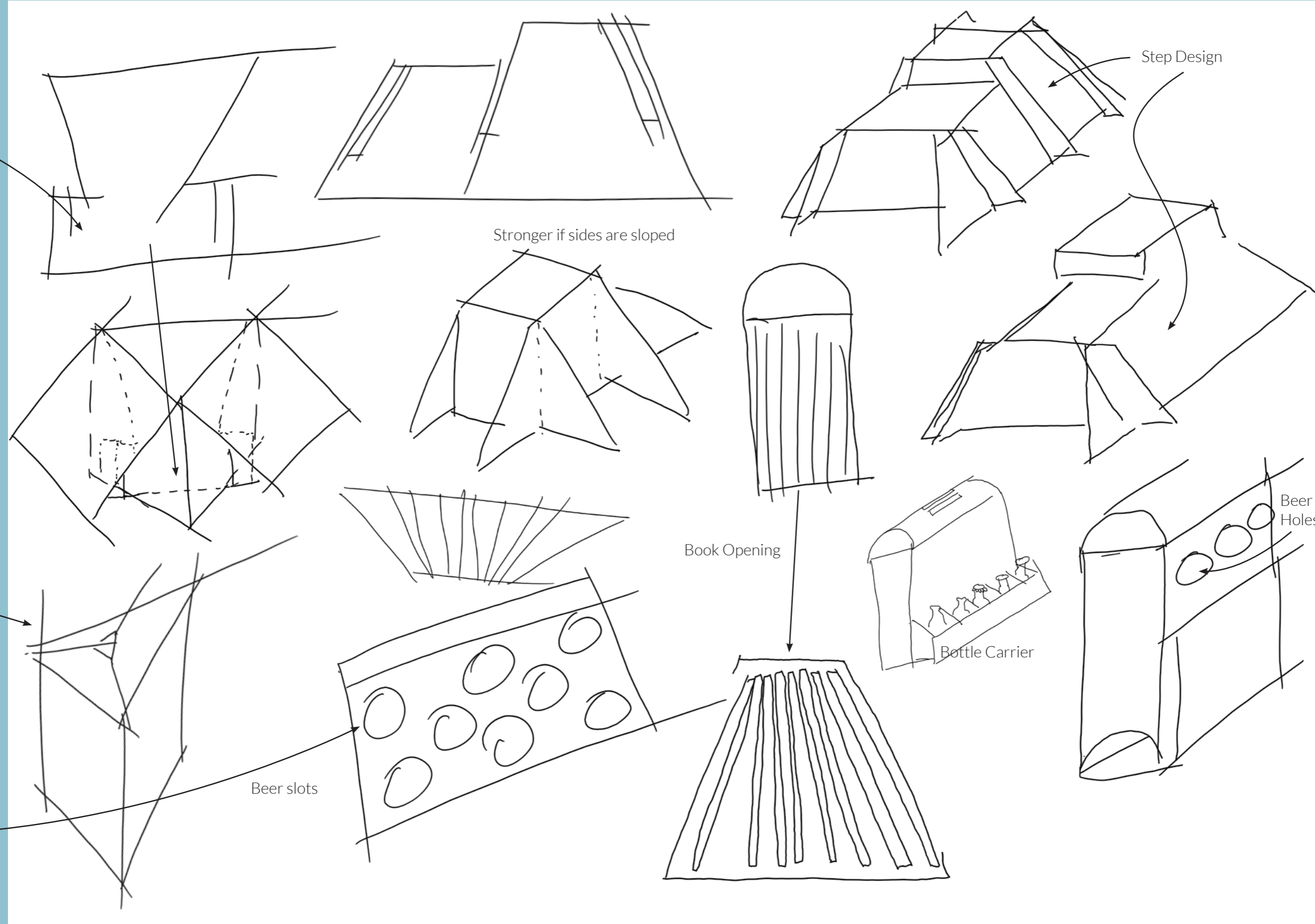
Fold out book design



Slots down and forms top



Star Design = Maximised triangles



Step Design

Stronger if sides are sloped

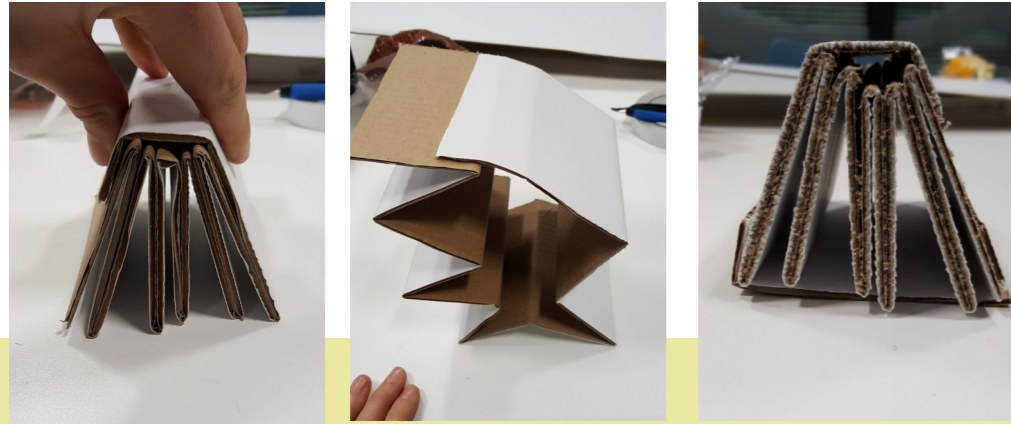
Book Opening

Bottle Carrier

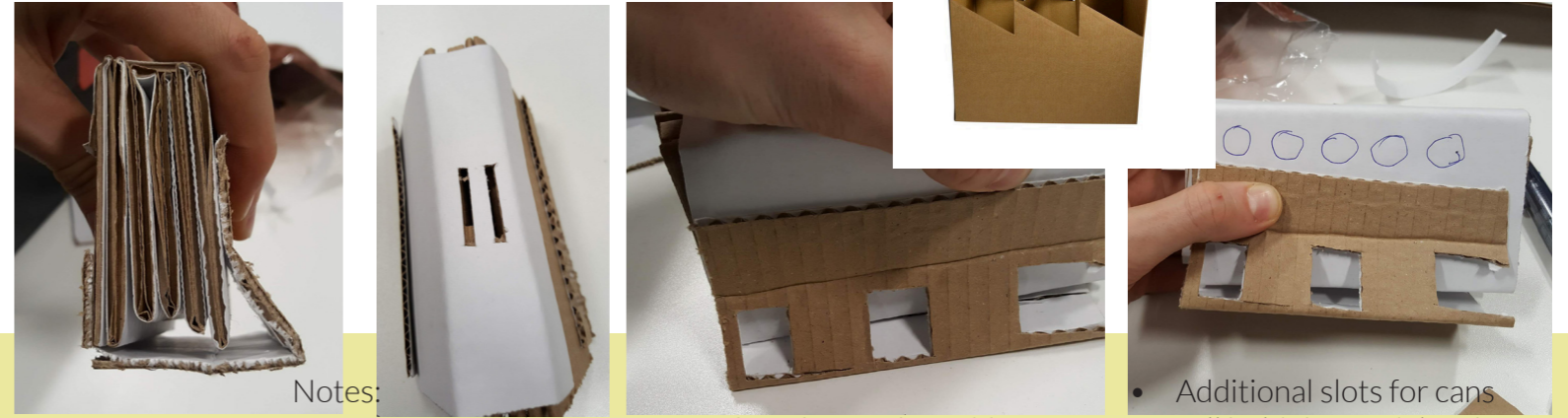
Beer can
Holes

Beer slots

Initial Design

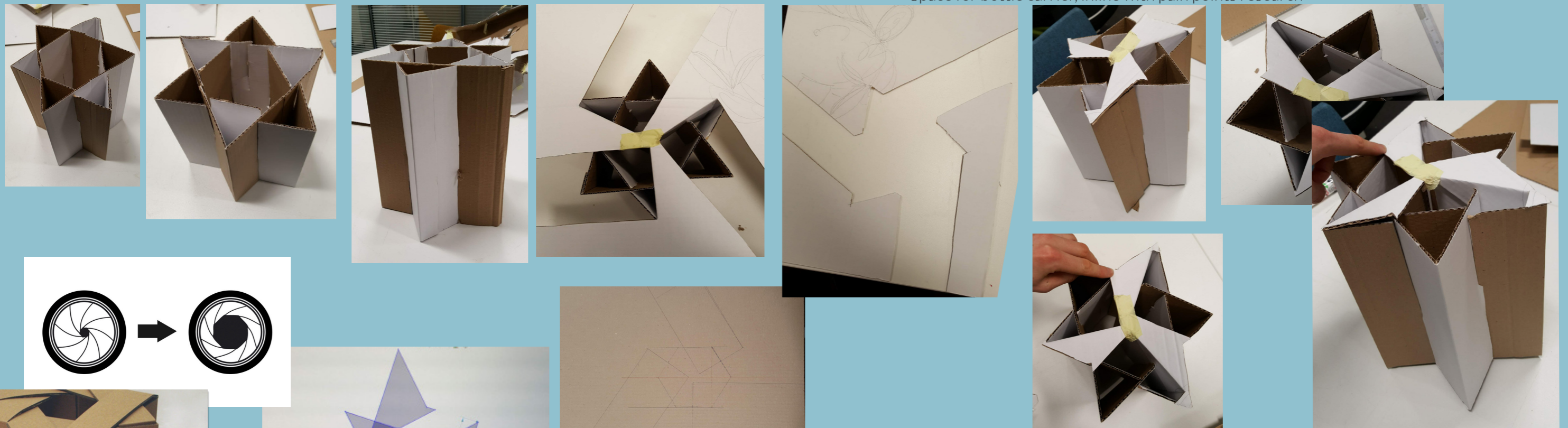


- Notes:
- Needs base to hold form together

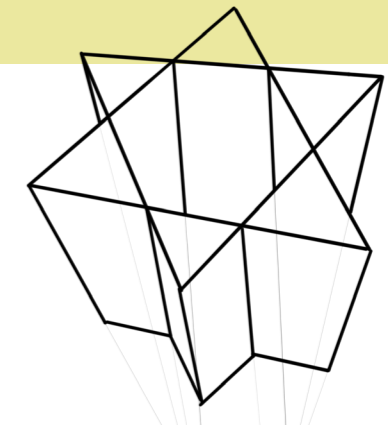
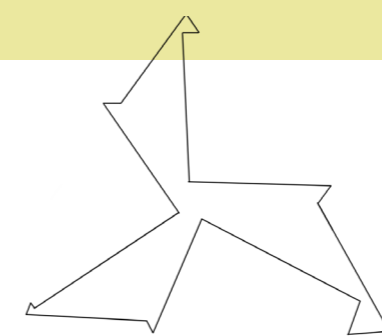
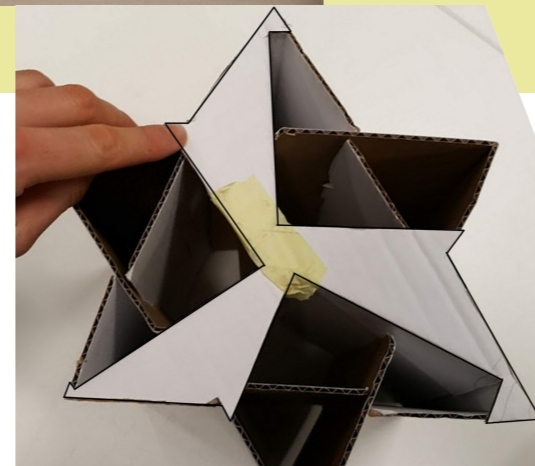


- Notes:
- Extra space when compressed can be used to add handle in top,
 - Space for bottle carrier, inline with pain points research

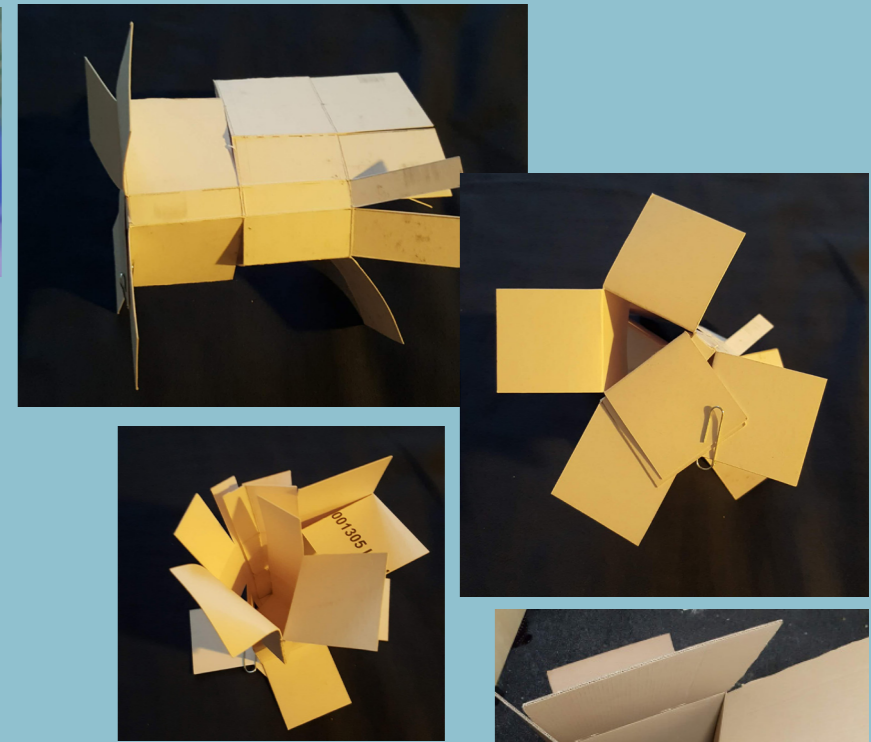
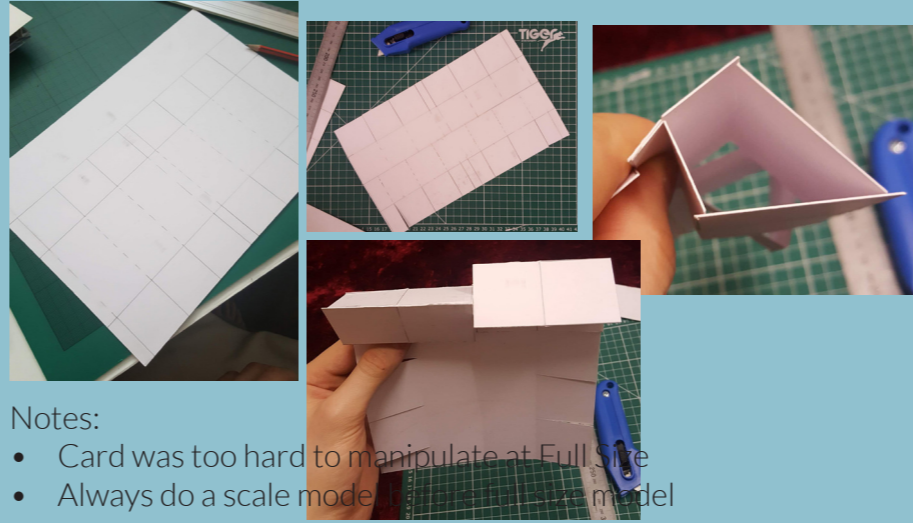
Star Design



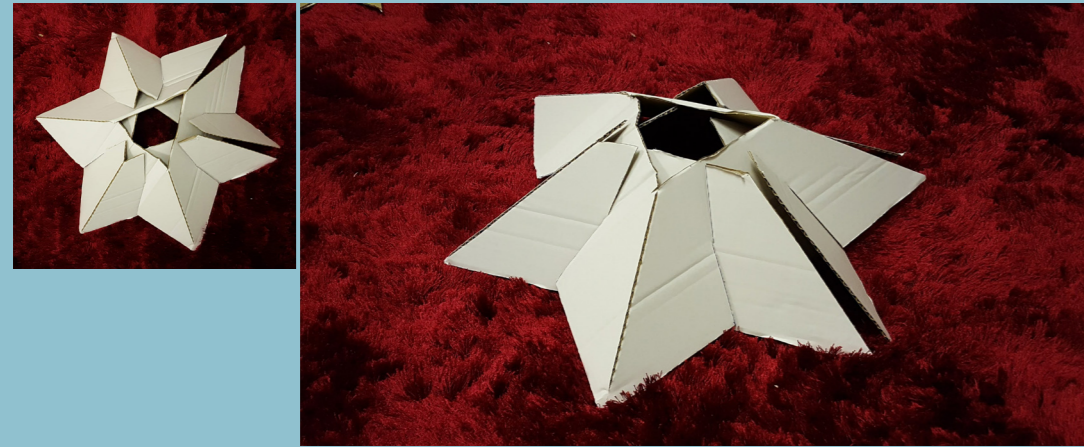
Aperture design



Full Size Star Model with slot mechanism



Star Design Progress



- Notes:
- After the initial star design, I found the Trapezoid shape is stronger than a square
 - Sloped edges are much sturdier than a perpendicular cube.
 - Too difficult to slot together
 - NET will be more complex if slope is less
 - Current design limits top too much

Step Design

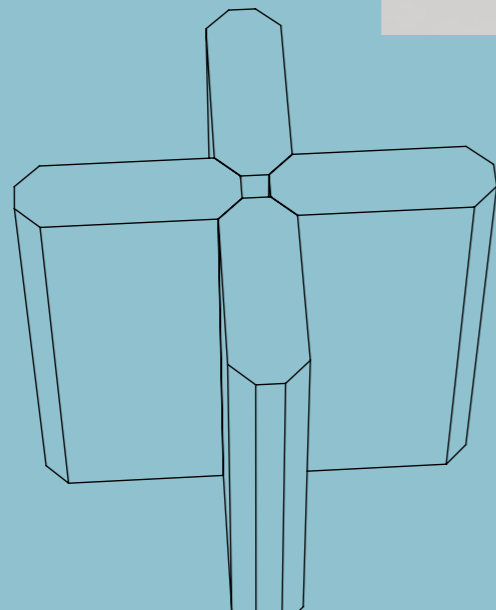
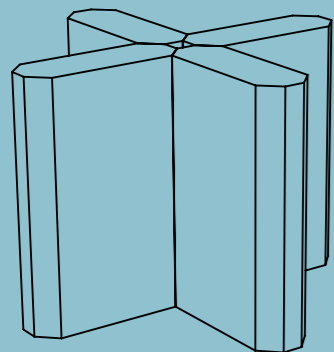
- Notes:
- Using the sloped edged from star.



- Notes:
- Limits size of top too much, not comfortable to stand on
 - Charity branding of Stand Up To Cancer would work nicely with this design



CAD Mok-ups of Cross Design Design



- Notes:
- Not easily flat packable

Full Size Models



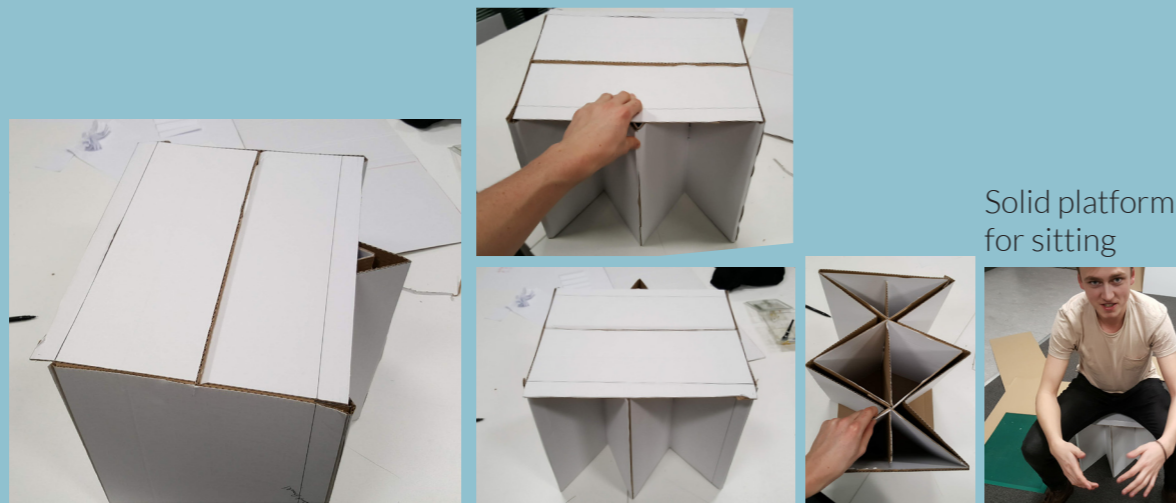
Extra support by folding top



Slots are not doing their job to support structure



FAILED Standing test



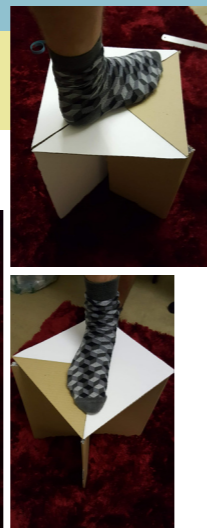
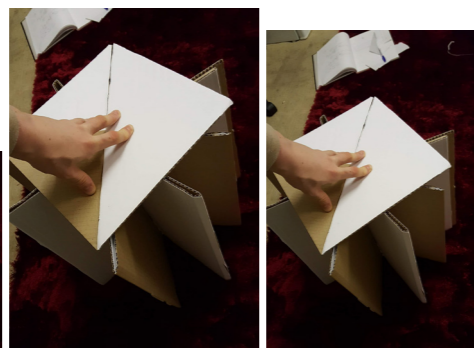
Solid platform for sitting



FAILED Components not strong enough. try double wall.

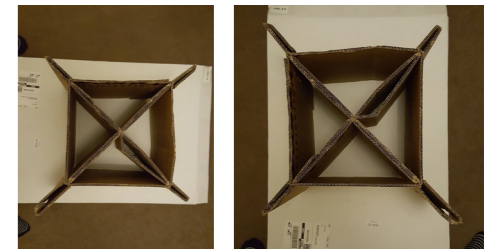


one side to stand on, one to sit on



FAILED

Lack of support from spiraling in on itself



FESTIVAL PLATFORM



Sit

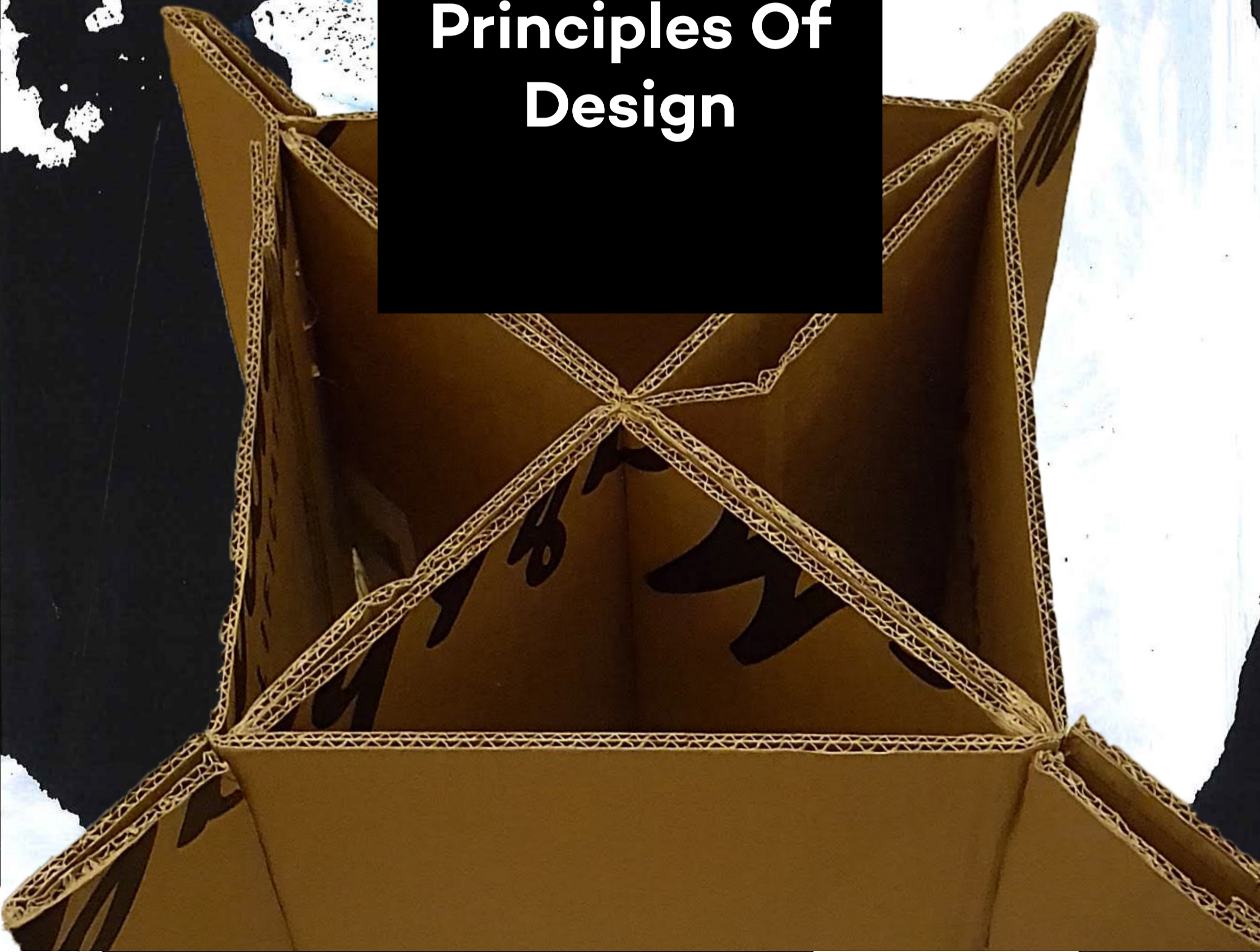


or
Stand!

Handle

Carries 6
Beers

Principles Of
Design



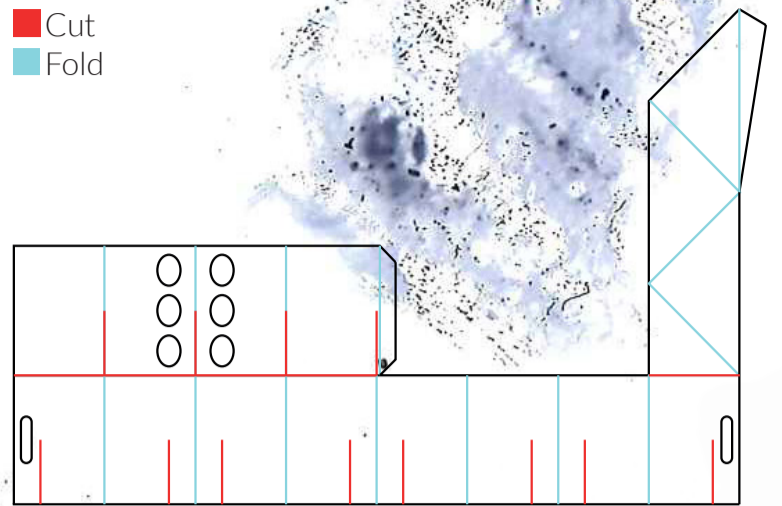
Technical



One top for sitting, another for standing. Keep the mud on your boots!

Manufacture Net

■ Cut
■ Fold



SEE THE STAGE

Principles Of Design

Portable Design:
Dimension
40 x 40 x 40 (cm)

Holds 6 Beers

Sturdy Platform

Detachable & Reversible Top

