ORLIN

A modern bar stool constructed with traditional joining methods and influenced by designs of the early 20th century.

Orlin was conceived while partaking in an independent study aimed in teaching and exploring traditional wood joining techniques and steam bending.

PROBLEM STATEMENT I

The impetus of the project was to learn traditional joining techniques as well as steam bending, a process of weakening, stretching and reforming wood. Looking at the work of the Thonet brothers and design of the early 20th century the techniques were coalesced into a modern bar stool that lends tribute to designers of the past and the tools they used to design beautiful and curvaceous forms.

RESEARCH

a. Steam bending process.

soak | steam | bend | clamp | dry

steam bending is seen as a sustainable practice because it uses minimal amounts of energy in the process and creates little waste relative to alternative methods.

b. Form mold construction
build a structure that the wood can be bent around. Provide places for the wood to be clamped against the mold

c. Wood most conducive to steam bending

birch, ash, oak, elm, cherry

DESIGN goal

Design a bar stool using traditional joining methods and steam bending.

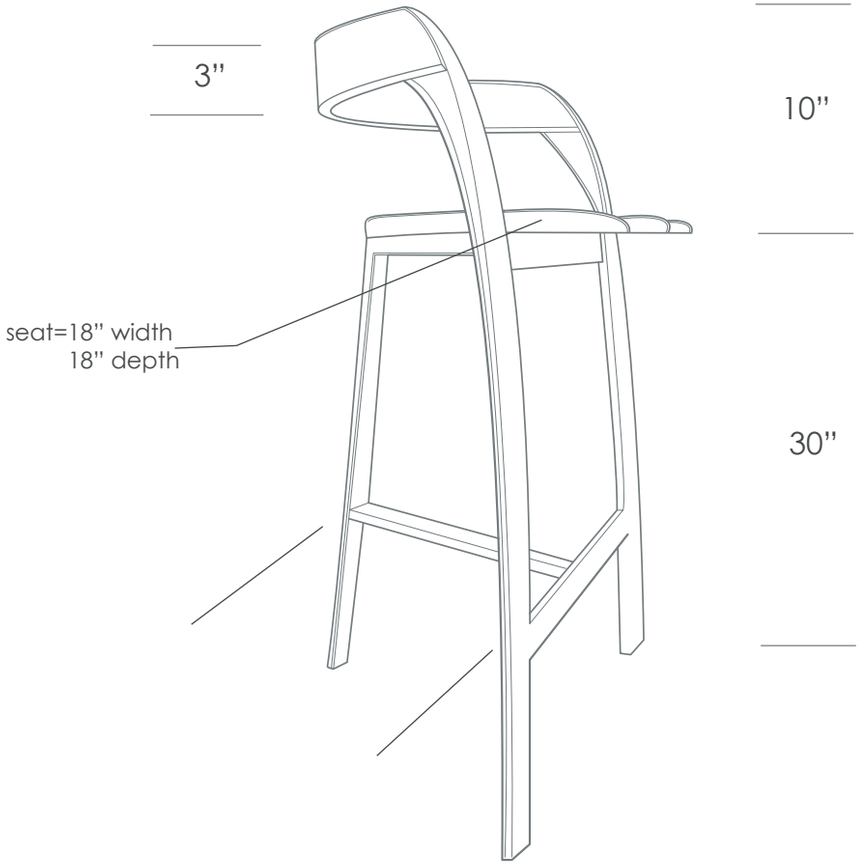
INSPIRATION





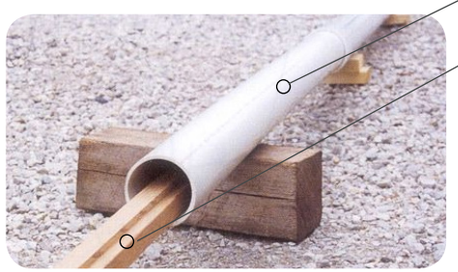

IDEATION

CONCEPT

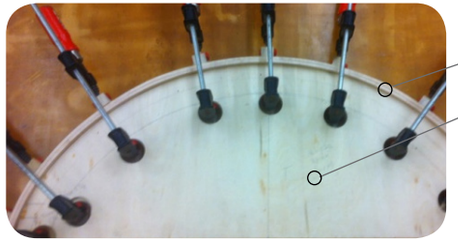


PROTOTYPING

WALNUT | MAHOGANY

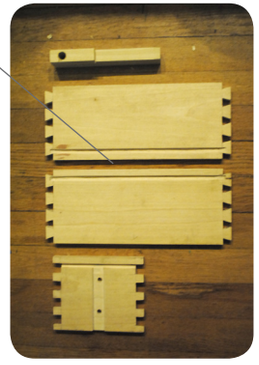


placing wood in a steam tube re-introduces moisture to the wood, allowing it to be re-shaped



clamping steamed wood to a form helps the wood dry to it’s new shape

practicing joining techniques



PROTOTYPE

Γ

2

mortise and tenon joints

A

lap joint connects the back leg to the seat

A

back rest was steam bent and clamped to a form to achieve the curve

A

walnut seat, carved using an angle grinder and wood demon grinding wheel

PROTOTYPE USER TESTING





CONCLUSION I

The seat was relatively stable but would need a few more iterations to achieve more structural integrity

manufacturing the stool would be expensive because of the laborious hand work required. The design would need revised in order to be cost effective to reproduce

PONGO

(**orangutan** | classified in the species ponginae)

Inspired by the biology of the orangutan, Pongo, a seasonal affective disorder light combines interactive features with a full spectrum 5000k led light.

PROBLEM STATEMENT I

Find an animal or animals at the Atlanta zoo to observe. Study and analyze that animal and its unique characteristics. Use the characteristics as inspiration for a lighting design .

RESEARCH I

BIO-INSPIRED DESIGN

Find inspiration in the actions, behaviors, and functions of a biological organismz

INSPIRATION |

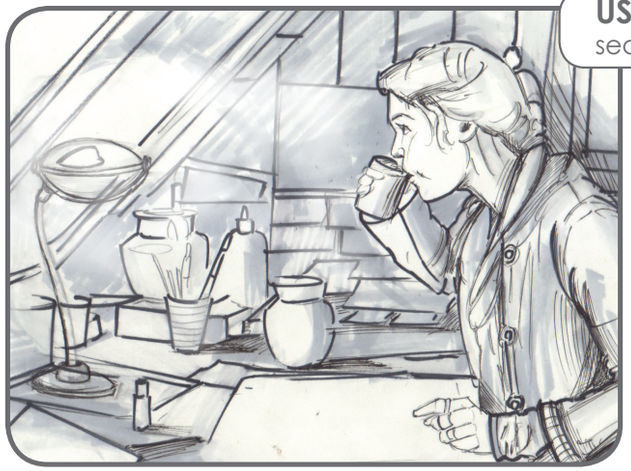
Borneo/Sumatran Orangutan

Orangutan in Malay is **"person of the forest"**

1.Close relatives of humans
2.Highly intelligent
3.Spend 90% of their lives in trees
4.More solitary than other apes
5.Red hair camouflages the orangutan against the foliage of the jungle
6.The color and shape of the eyelid, when closed, displays the age of the orangutan and darken with age
7. The cornea is brown to protect the eye from UV rays

HOW CAN THE FEATURES OF THE ORANGUTAN BE CONVEYED IN A LIGHT?

- human like form
- changes based on time of day
- possibly a pendant light
- protective layer or shade
- natural earthy coloring
- eyelid shape
- lonely solitude



USER | person with seasonal affective disorder

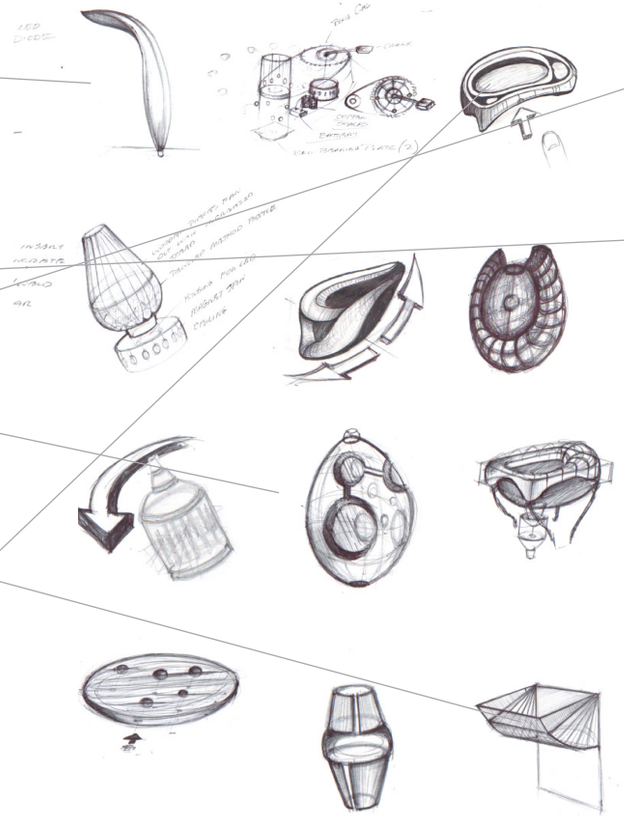
SAD (seasonal affective disorder)is a form of depression that occurs, most commonly when sunlight is limited because of geographic location and or season. Light therapy, light that uses more lumens than a standard incandescent light, may be used as an effective treatment

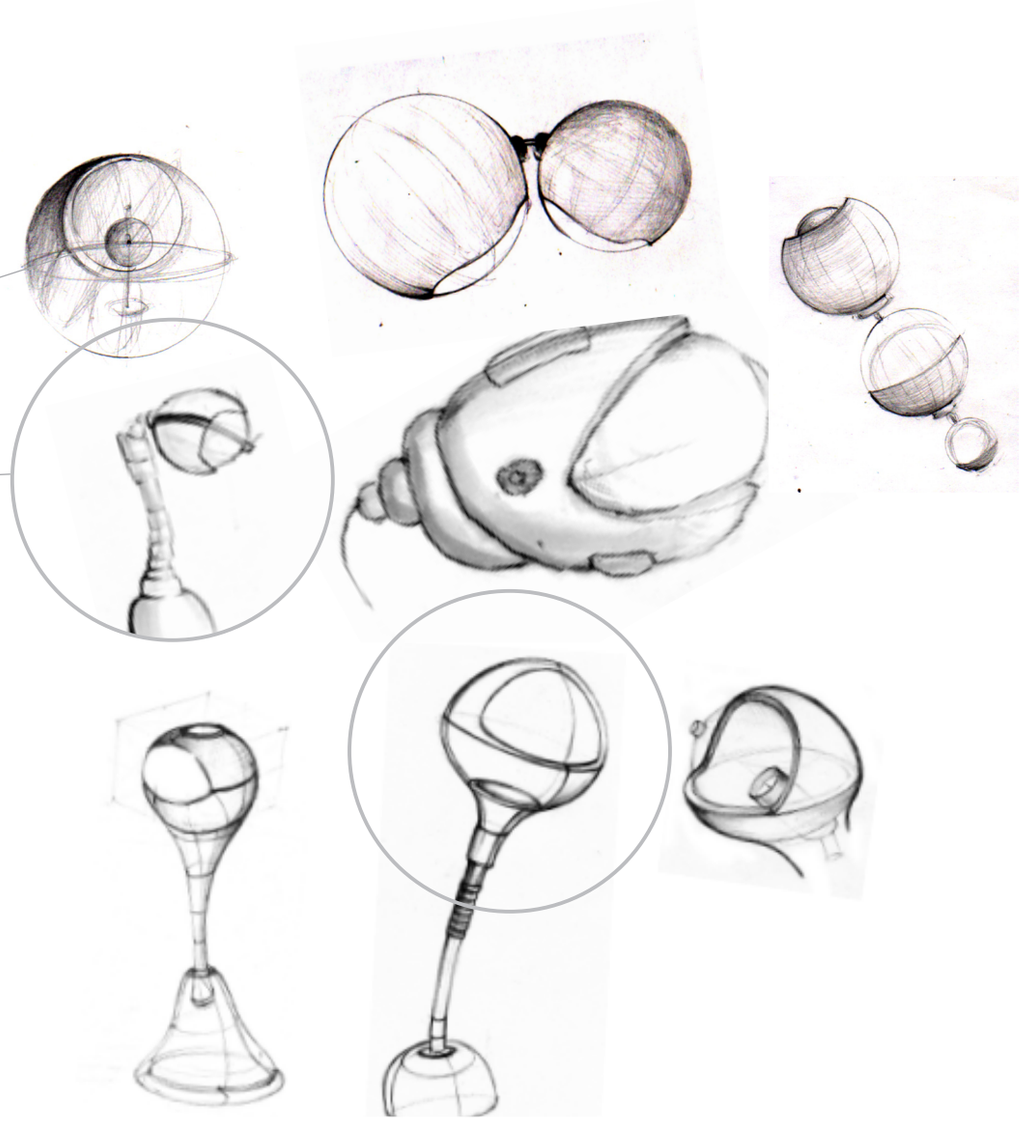
DESIGN GOAL I

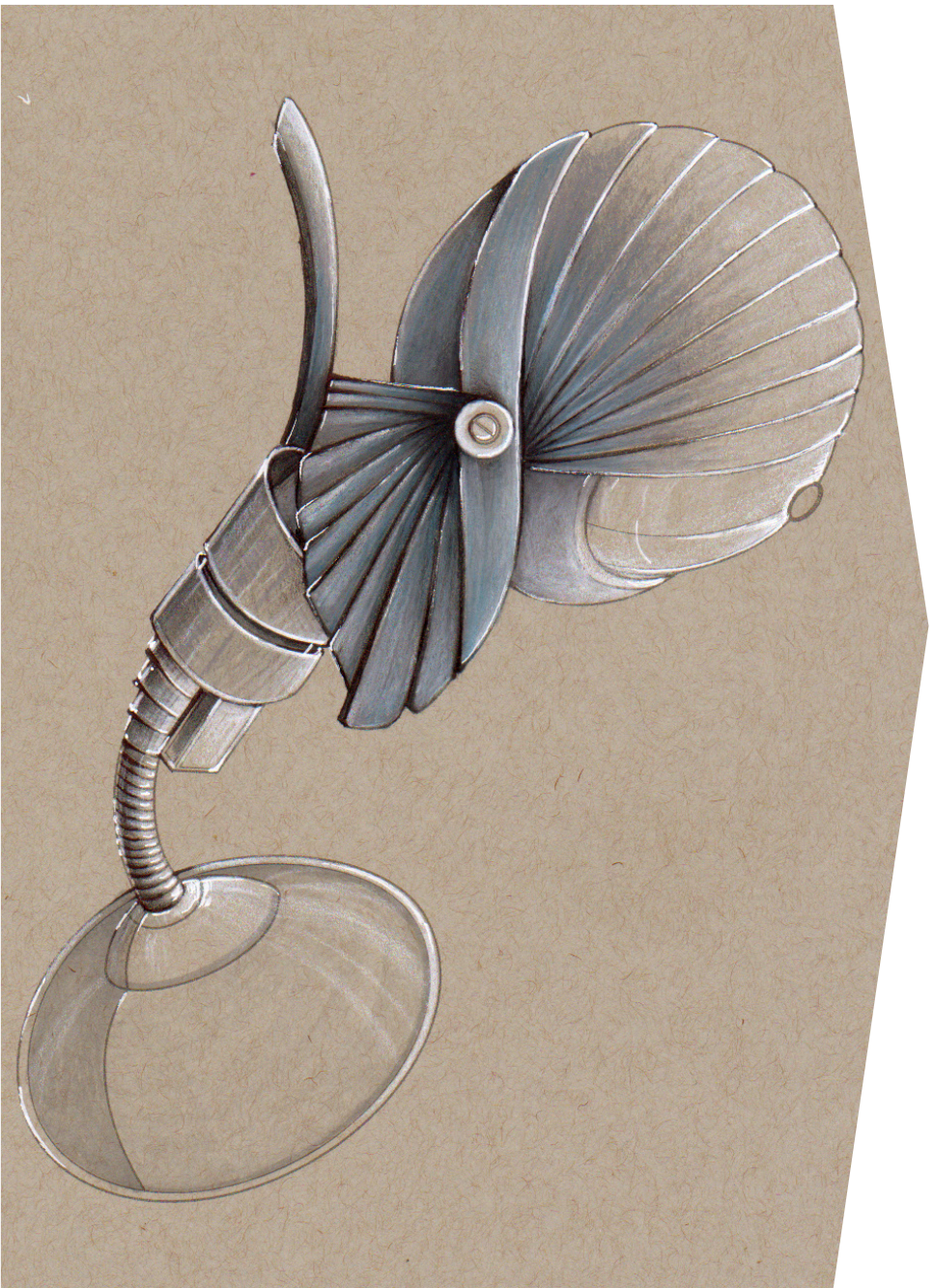
Design a seasonal affective disorder light that calls reference to the human form and responds to human interaction

INSPIRATION

IDEATION

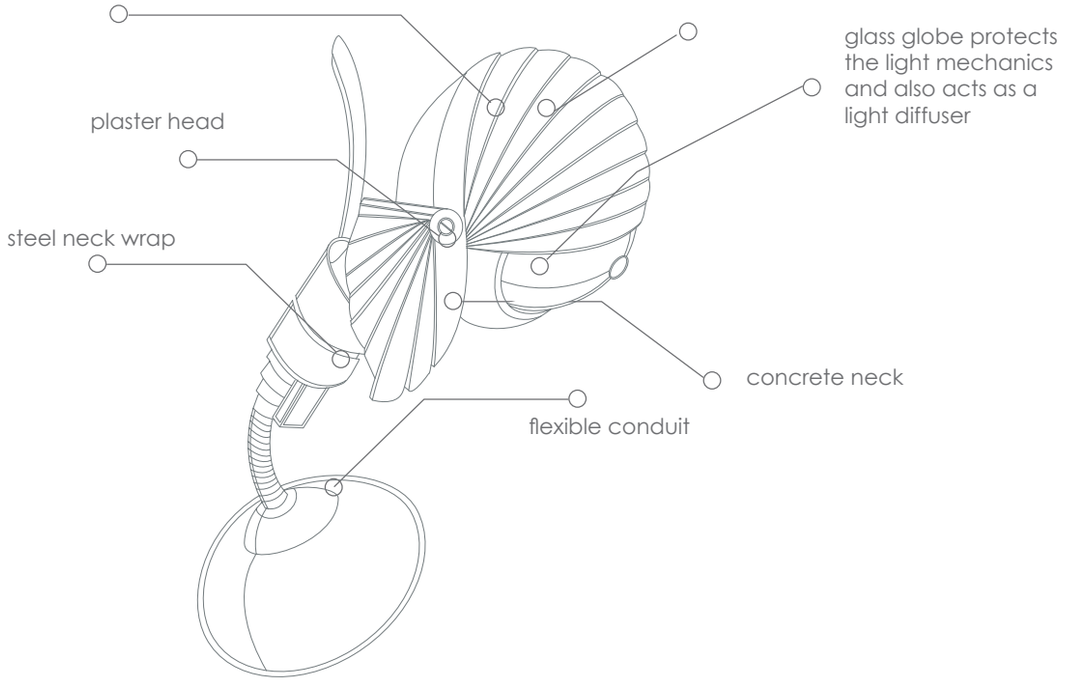




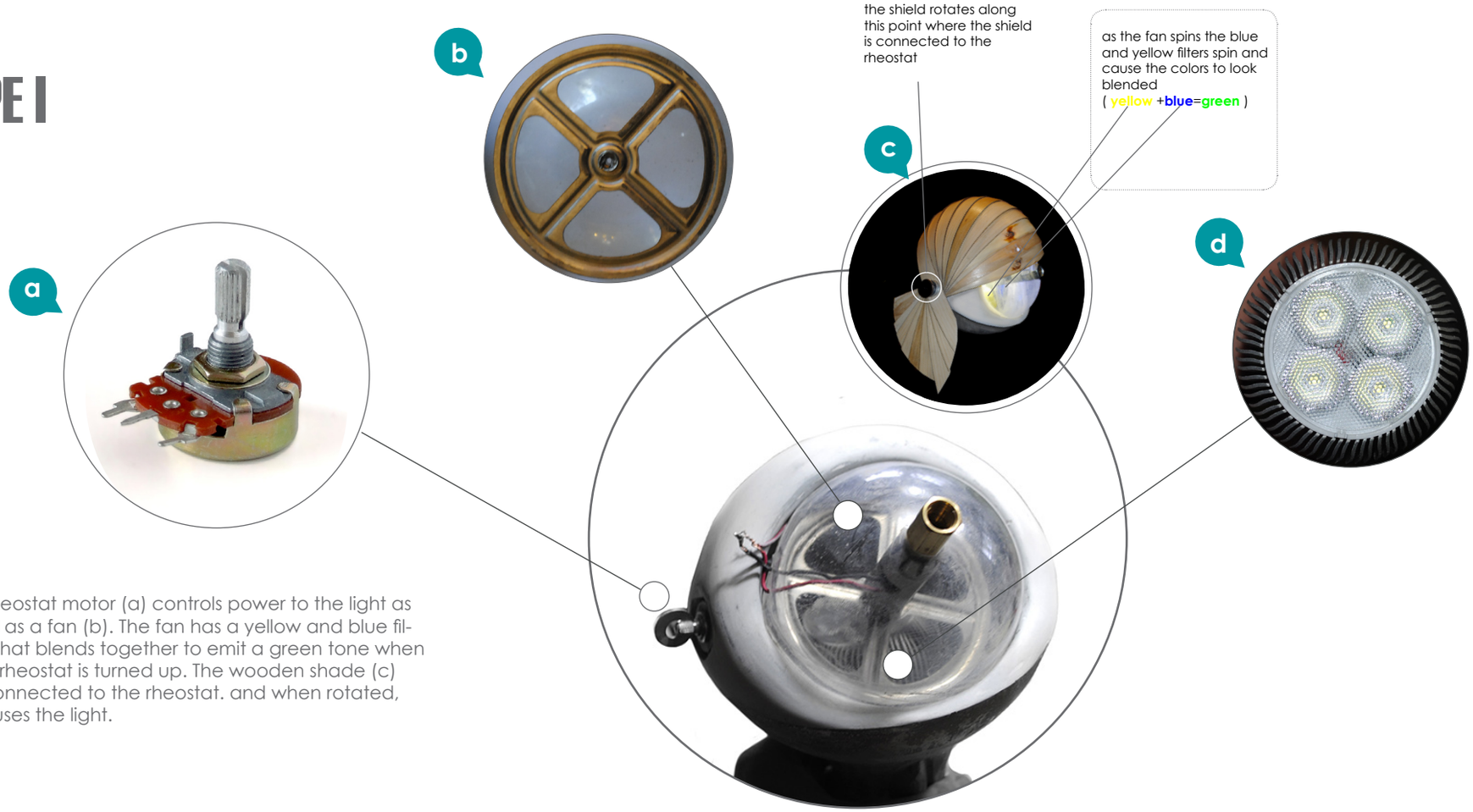


CONCEPT

laminated pine veneer is used to create shade that will diffuse the light when desired



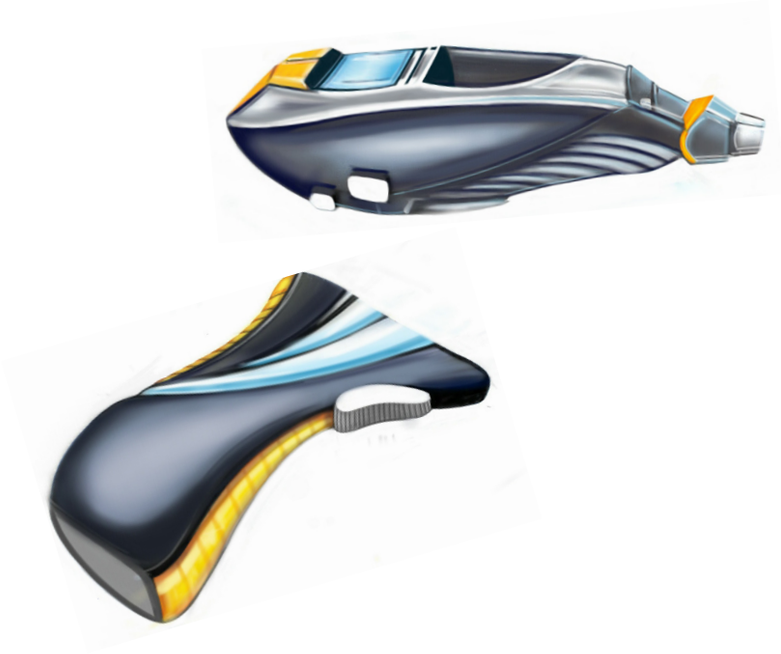
PROTOTYPE I



A rheostat motor (a) controls power to the light as well as a fan (b). The fan has a yellow and blue filter that blends together to emit a green tone when the rheostat is turned up. The wooden shade (c) is connected to the rheostat. and when rotated, diffuses the light.

CENTIPEDE

combining the utility and function of a high torque power drill and a detail dremel into a multi-use shop tool.



PROBLEM STATEMENT I

Optimize an existing or design a new hand held device that fulfills a specific need or gap in the marketplace .

RESEARCH

con: no color variation.
poor mapping.

pro: rotating head

pro: hook at top for hanging
while not in use

con: color mapping is monotone
pro: storage hook on the back

con: they seem to
be using the same
horrible chuck as dremel

pro: multiple head attachments

pro: good contrast in
color for mapping
con: the chuck and drill
head seem large for the
overall size

pro: nice ergonomic flow

con:right angle limits use
color and mapping in general
seems washed out

DESIGN goal

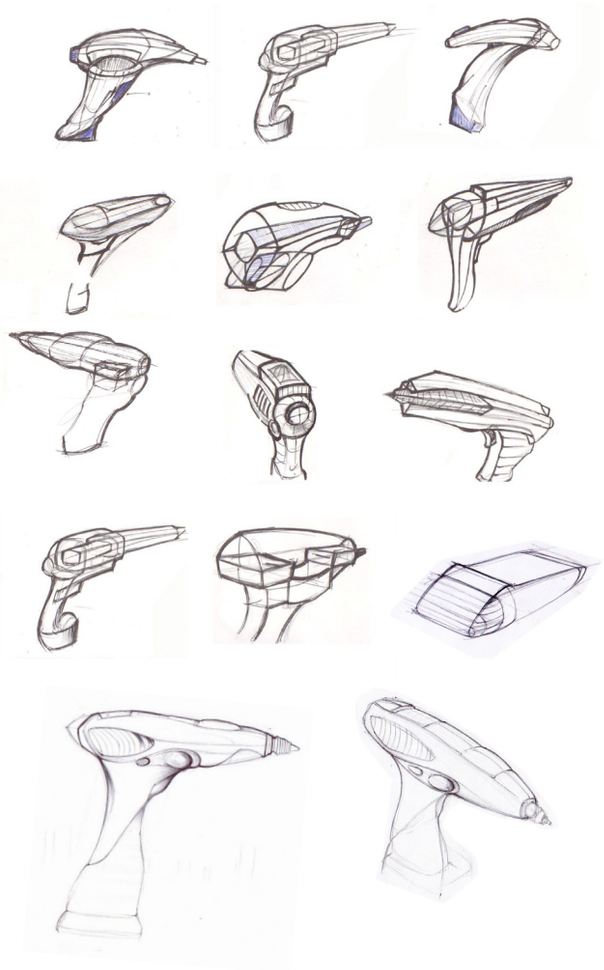
Design a hand held de-
vice that encompasses
the usability and functions
of a high torque drill and a
rotary detailing tool.

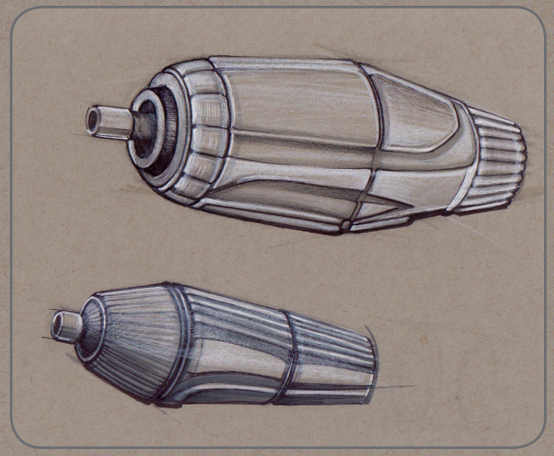
HAND DRILL

two speeds
forward reverse toggle button
trigger
battery

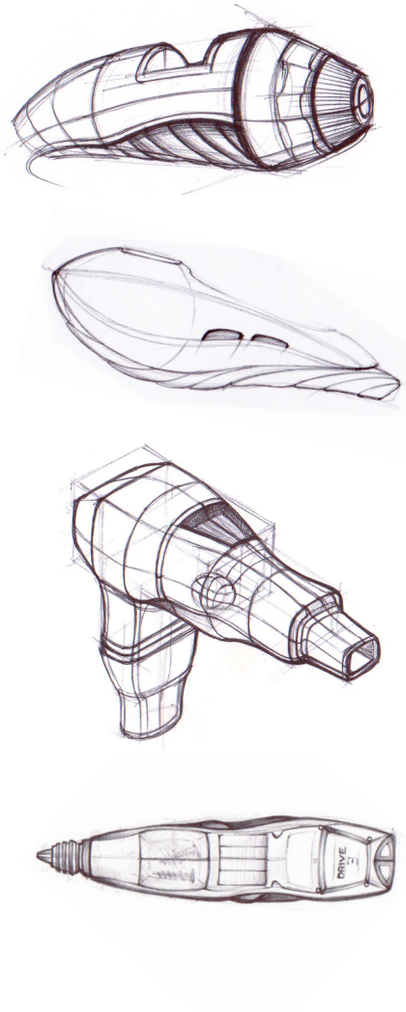
DREMEL

IDEATION

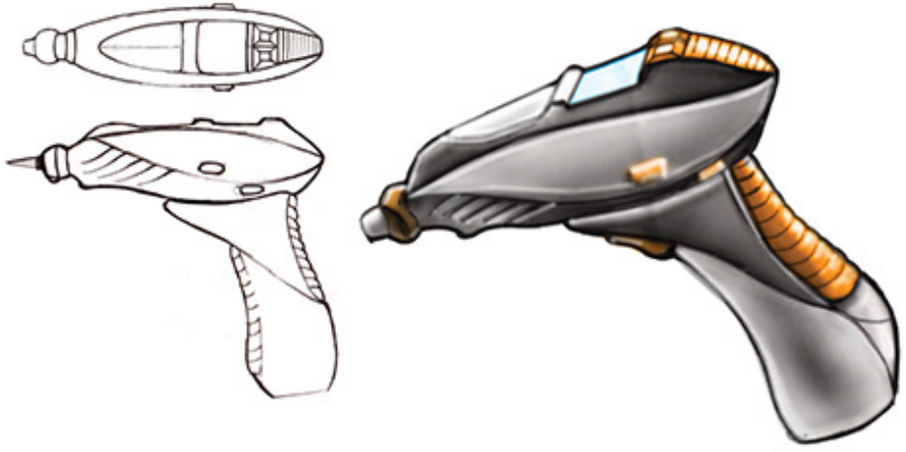


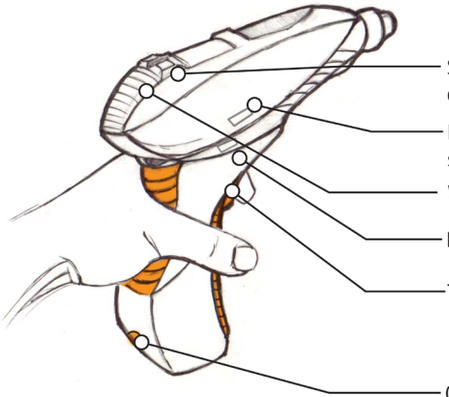


2IN1

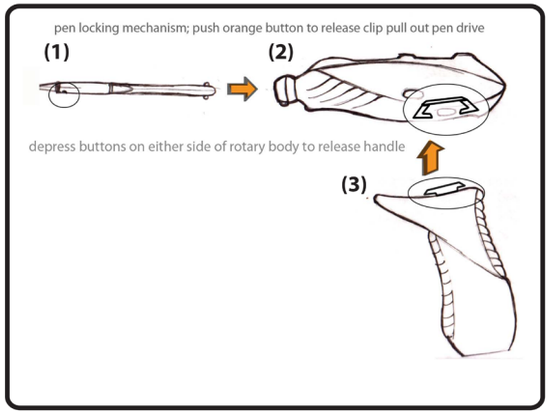


CONCEPT

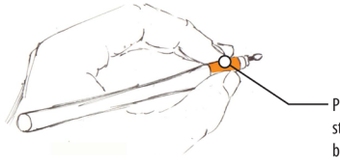




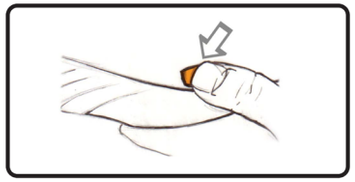
A



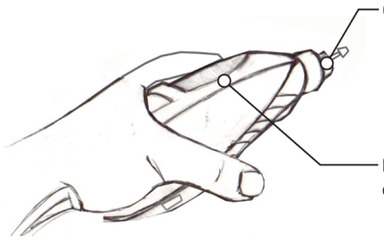
Breakdown of tool assembly: 1) Pen tool, for precision detail work. Contains small battery and compact, high speed motor 2) Main tool assembly, for coarser finishing work and some drilling, driving. Houses main motor and a larger battery 3) Handle assembly. Contains extra battery which boosts overall power of fully assembled tool and makes high torque drilling operations possible



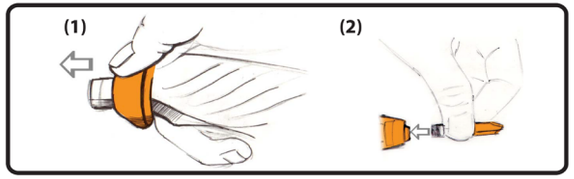
D



Forward / reverse toggle - depress button with desired direction indicated to switch between forward and reverse

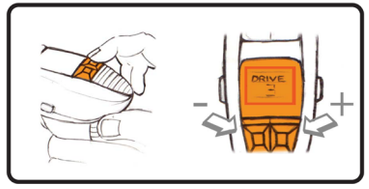


B



Bit release: 1) Pull back on collar, 2) release bit from chuck

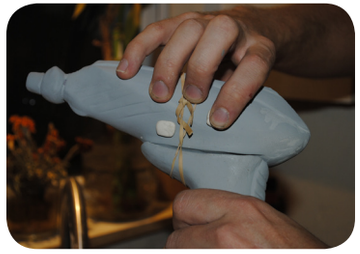
C



Speed selection: Use plus and minus buttons to increase or decrease speed and relative torque

PROTOTYPE




BOWL NOODLE I

making noodle bowls safer for children

PROBLEM STATEMENT

Take an existing brand of noodle bowl and re-design the product to make using the bowl safer for children while also updating the packaging design and graphics to stay relevant with the current brand language.

RESEARCH

Children are burned by noodle bowls every day.

Third degree burns often result in hospitalization and are the result of spills and handling the hot surface of the bowl.

THIRD DEGREE BURNS.

REACHING. SPILLING.

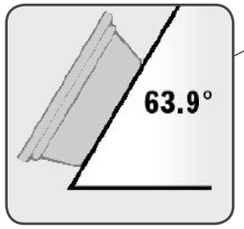
stability is a major concern with noodle bowls. Bowls often are easy to tip and the hot surface of the container makes handling cumbersome and unsafe.

With bright graphics and a purchase point of around a dollar, Bowl Noodle appeals to someone looking for a quick meal at low cost!

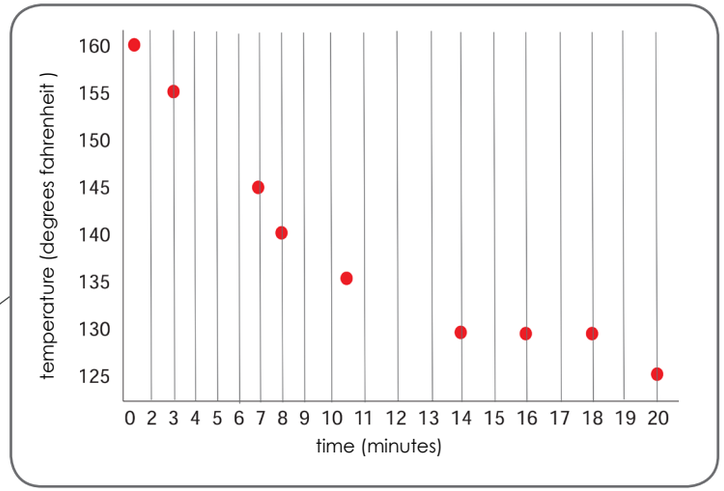
RESEARCH | benchmarking

PART LIST |

A. Plastic bowl (polypropolene)
B. Heavy stock packaging
C. Foil seal
D. Spice packet
E. Dried noodles



1. Low material cost allows for the product to be sold at a nominal price.
2. Bowl surface retains too much heat
3. No protection to the user when the seal of the bowl is opened.
4. Bright colors are appealing to a wide audience
5. The bowl has a tipping point of 63.9 degrees
6. After following the directions and heating the bowl for 3 minutes in the microwave the contents are 160 degrees and unsafe to consume. After twenty minutes, the contents are still an alarming 125 degrees and are still unsafe



RESEARCH I brand

Evaluation of current package branding in the Bowl Noodle line of products

H(3)= heavy weight, M(2)=medium weight, L(1)= light weight

dominant flavor image	M simple	M	H simple	H simple/fun
% of food item shown	M	M	H	L
food on package	M savory/inviting	M fresh/flavorful	H savory/inviting	L understated/floating
title backdrop	H clean	H clean	H clean	L clean
shiny packaging	M	M	M	H
logo justification	C	C	C	C
graphic backdrop	L clean	L clean	L clean	L clean/basic
dominant color	warm	healthy	light/healthy	cool/refreshing
BN font size	H	M	H	H

DESIGN goal

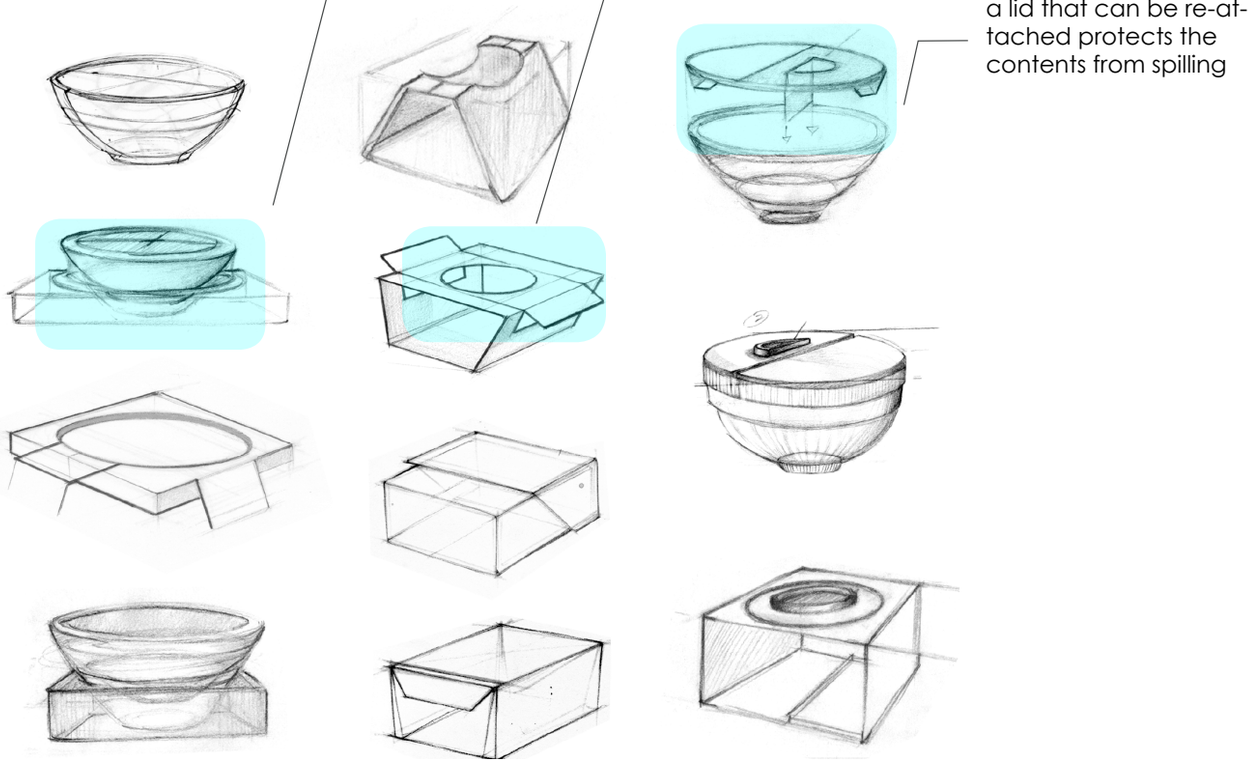
Develop a cost effective solution that makes the Bowl Noodle product safer for the consumer, uses existing packaging materials and stays within the existing design brand.

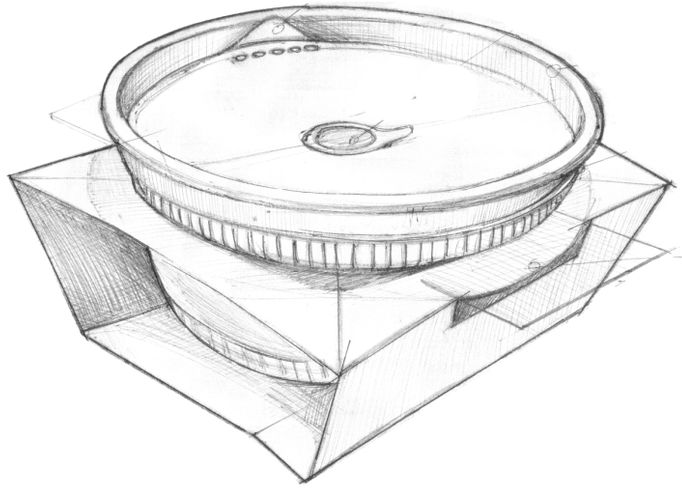
IDEATION

nesting the bowl inside the packaging increases stability

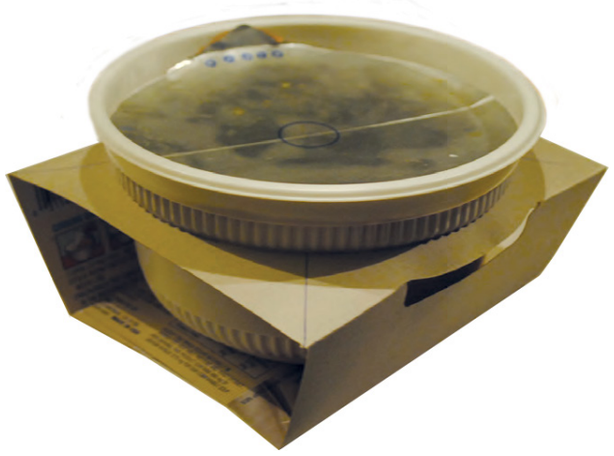
attaching handles keeps hands away from hot contents

a lid that can be re-attached protects the contents from spilling



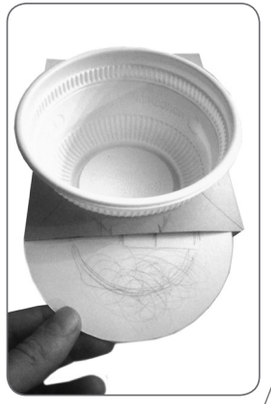


IDEATION I models

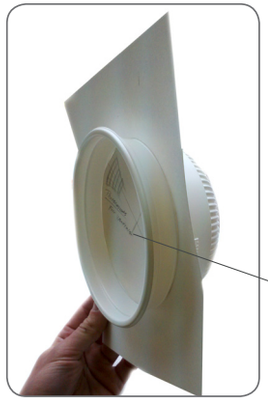


Materials from the existing packaging were used to model the concept

The **packaging cost** is actually r**educed** in this concept by using the packaging materials as a support for the bowl



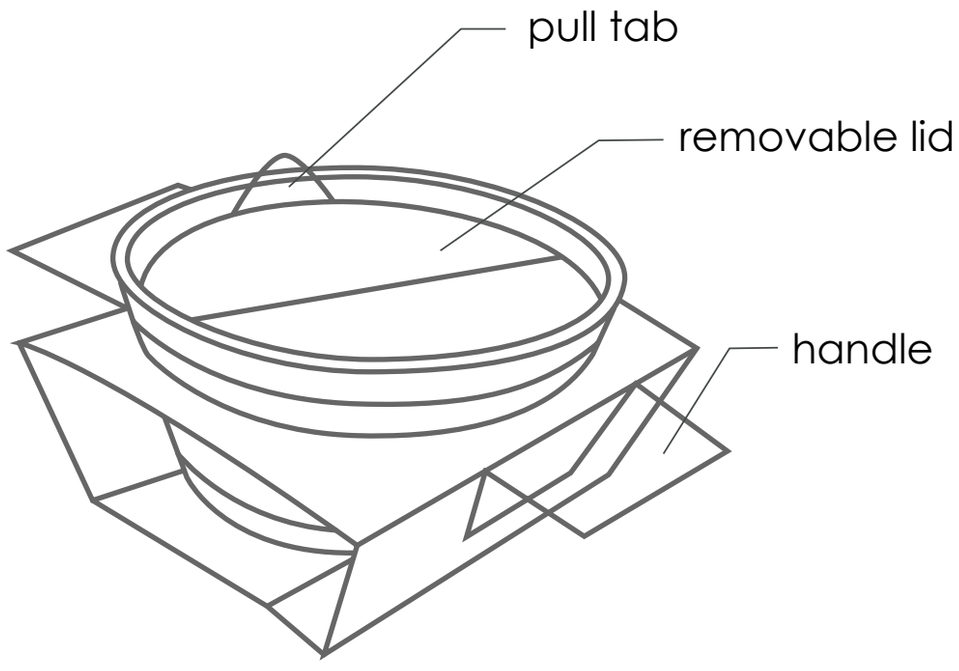
Handles prevent the user from ever having to touch the bowl



Attaching a full sheet of card stock to the model affords the bowl handles to be evaluated in various positions

One change allows for the lid to be re-attached via a snap fit detail in the bowl.

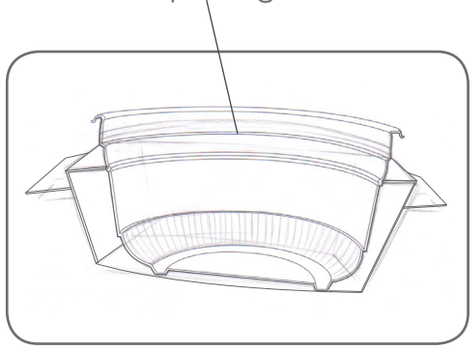
CONCEPT



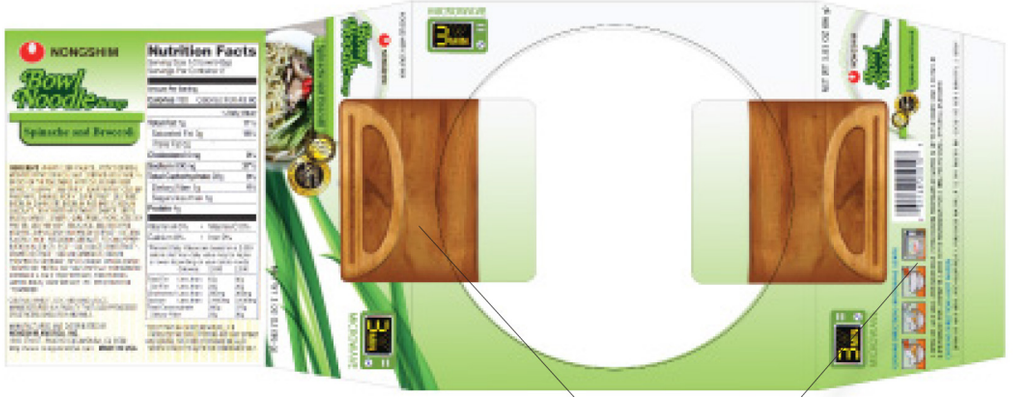
Handles are made by perforating the sides of the existing packaging. This uses existing material and preserves a low cost price point

By nesting the bowl inside the packaging, the bowl becomes more stable and again utilizes the existing packing

The addition of one detail in the bowl profile allows for the lid to be snap fit back into the bowl when transporting



FINAL prototype




1
NONGSHIM
Bowl Noodle Soup
Beef and Corn Flavor


2

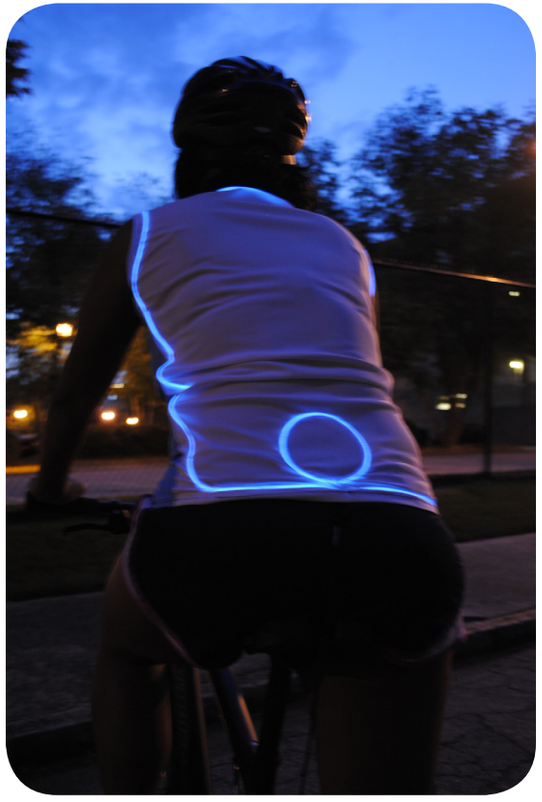

3


4
NONGSHIM
Bowl Noodle Soup


5


6


CYCEL
MAKING NIGHT CYCLING SAFER



PROBLEM STATEMENT

Current bike lights do not make cyclists clearly visible, increasing the likelihood of collisions at night.

RESEARCH

A

B

circle symbolizes wheel and high-lights center of mass

C

lights the front and rear with small cover-age

"Blinkie" (B) lights only convey a warning to oncoming traffic that something on the road is present yet gives no reference to mass. In order to see a biker while riding and know that it's a biker, there need s to be mass reference light much like lights that exist on an automobile.

WIDTH OF MASS

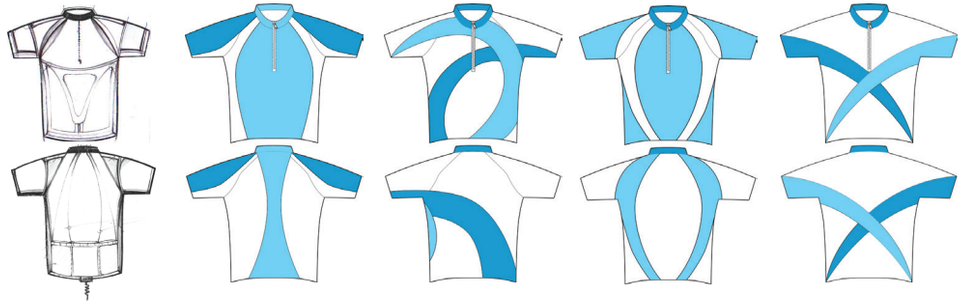
why are lights on a bike so small and weak and a car's lights are so big and strong?

1. A car has a powerful energy source.
2. Cyclists want light weight equipment on their bike, not a heavy battery.

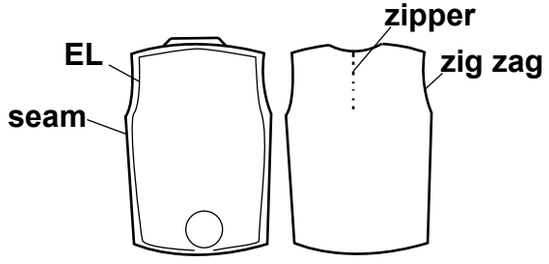
SOLUTION | harness the energy produced while cycling

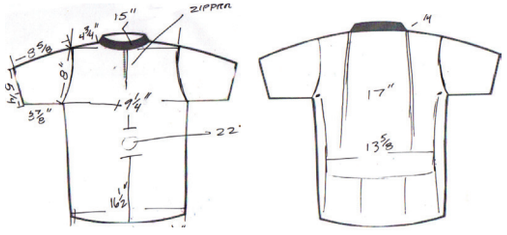
JERSEY

IDEATION

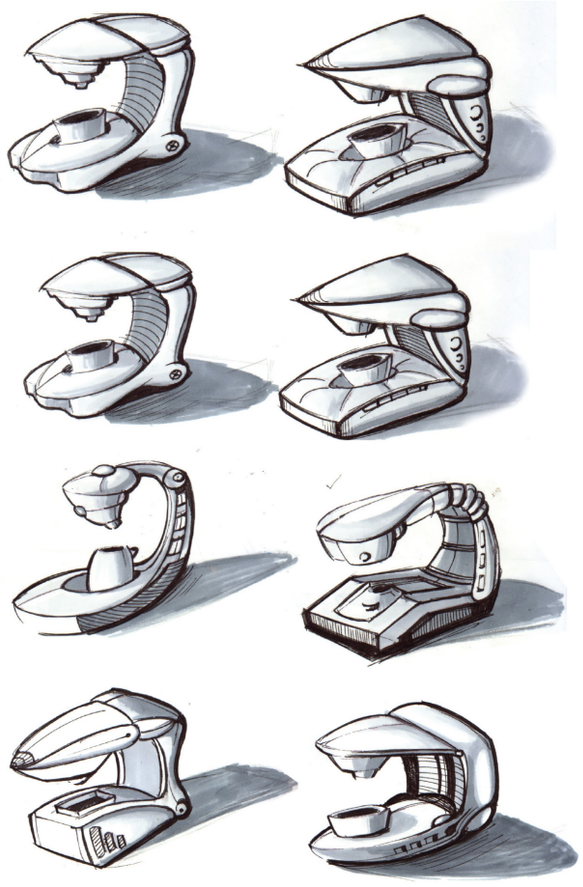


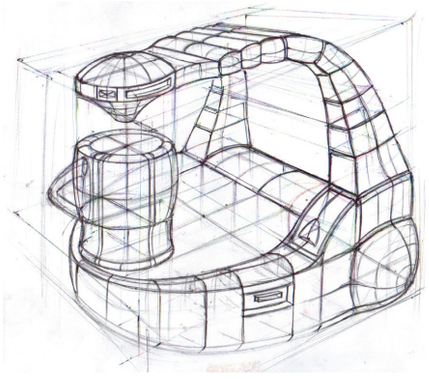
CONCEPT

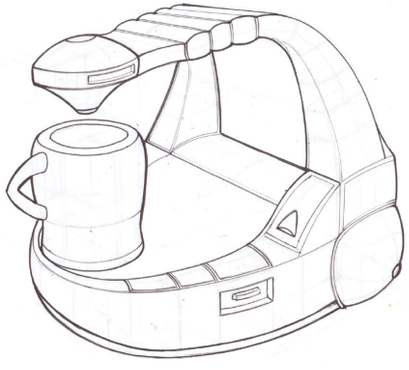




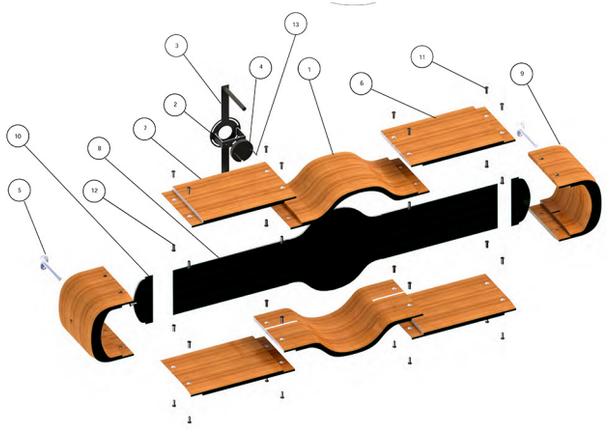
PROTOTYPE







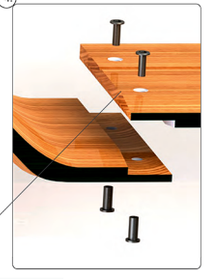
QUICK PEEKS I



glass (2.) slides into grooved channel (1.) providing an aligned fit

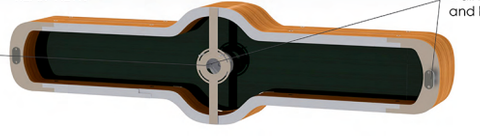
1.4 Watts /
120V Super Bright LED /
Equivalent to a 10W Halogen
Color Temp 5000K

3. bolts mount pieces together and sit flush with surface

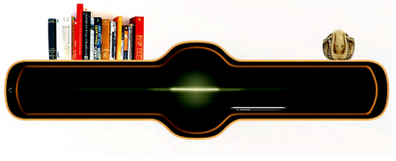


4. insert fasteners connect panels for easy modular assembly

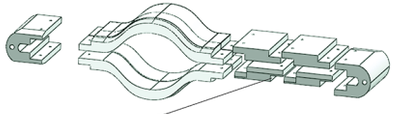
REAR VIEW:



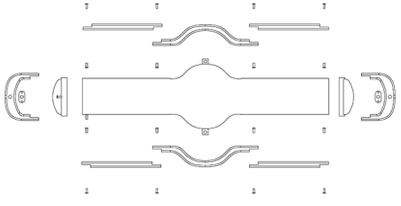
wall mounting brackets and hardware

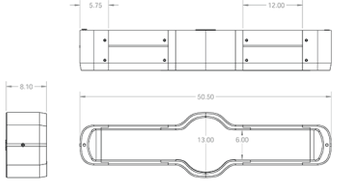


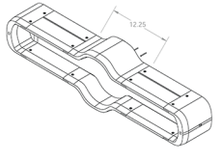
Extra shelving comes in handy when used bedside or in the living room.

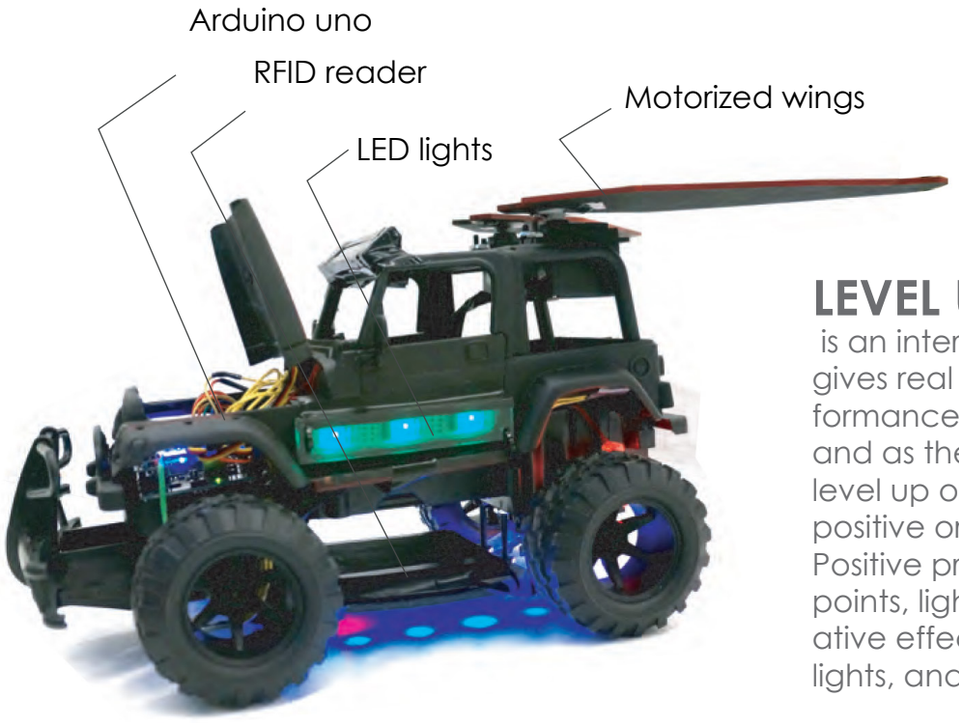


insert panels can be added to lengthen shelf







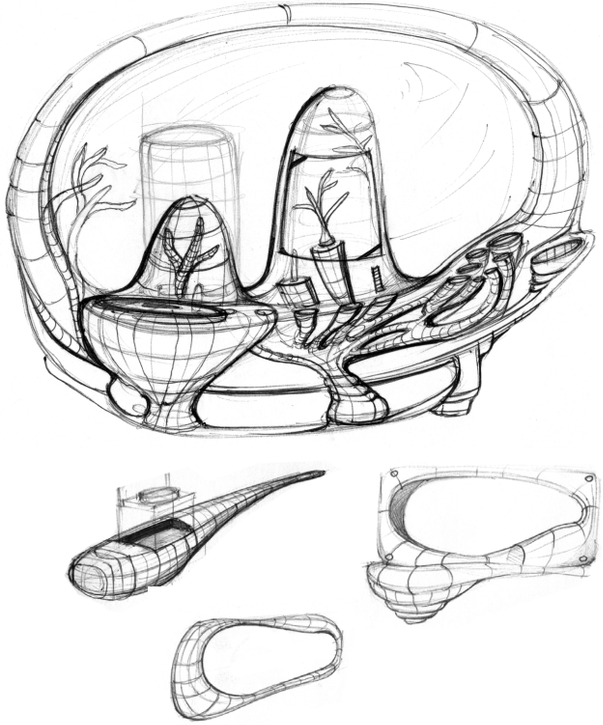


LEVEL UP

is an interactive remote control vehicle that gives real time feedback based on driving performance. Players place rfid tags along a track and as the car drives over them, the car will level up or down based on the programmed positive or negative programming of the tags. Positive programmed tags, increase speed, points, light intensity, and wing expansion. Negative effects are a decrease in score, dimming lights, and a reduction in speed.

CORAL

The installation was created to educate the public about coral through an interactive sculptural art piece.



Donation sculpture
as coins are dropped into the slots of the coral sculpture, sensors trigger twinkling leds