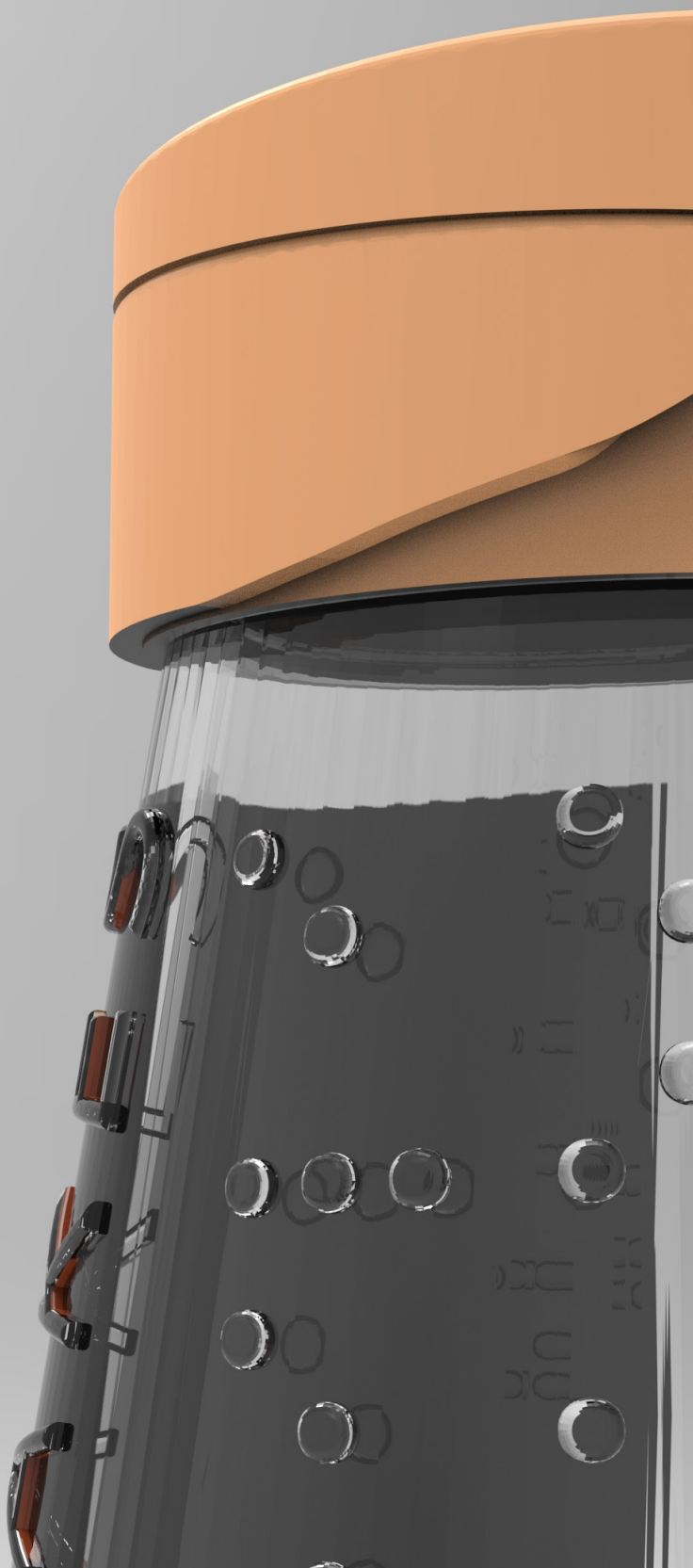
IRIS
SPICES

By Kimberly DeSantis



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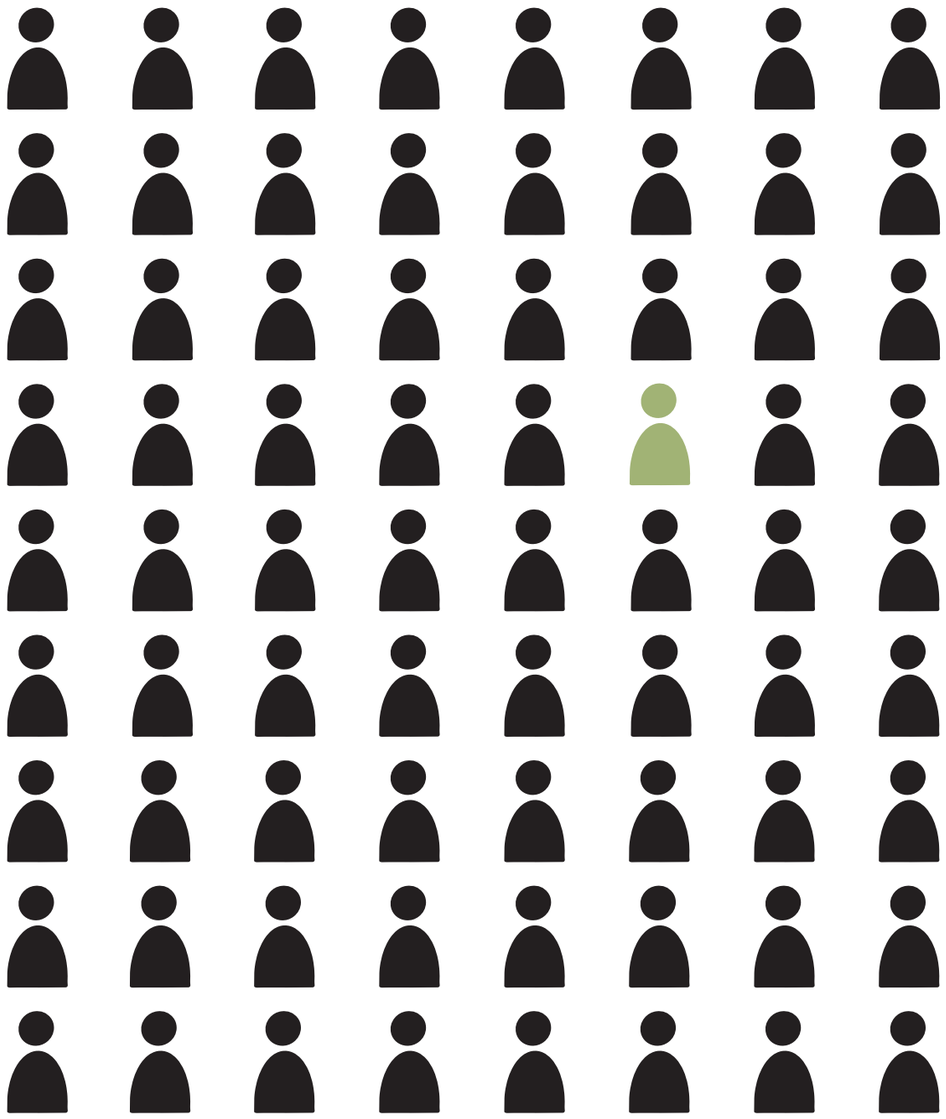
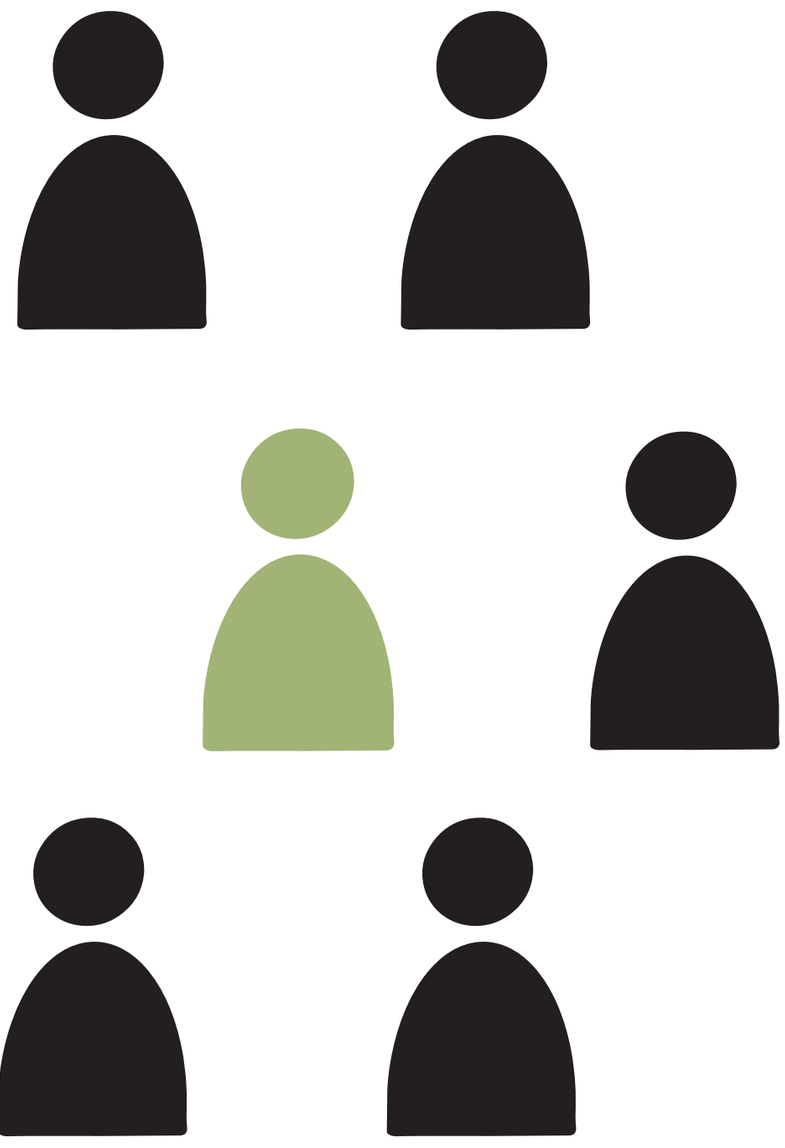
Design Theory



Around 1/48 people in the United States
Experience vision loss

With 1/7 people experiencing
vision loss being blind



Universal Design

The concept of designing for the few with the most drastic problem will also benefit the general population that requires a more general solution.

Most common example is the ergonomic grip of hand held potato peelers

Social Model of Disability

The social model of diability argues that disability is caused by barriers in society. Such as, enviornment, peoples attitudes and organizations.

According to this definition it expands the userbase of products aimed at the disabled community as disability can be caused by situations both permanent and temporary.

Permanent

Permanent disabilities fall into 2 catagories: Born and Aquired

Born
People who are born disabled due to genetics or other factors
Ex: Born without an arm

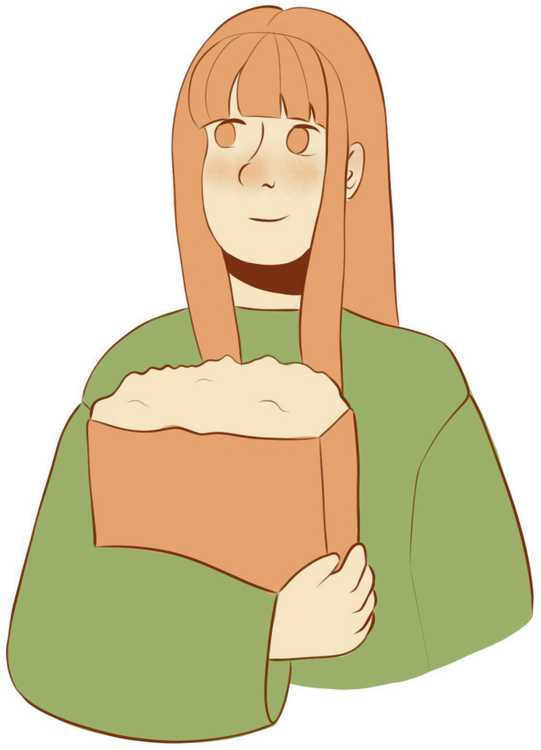
Aquired
People who aquire a disability later in life due to an injury or disease
Ex: Losing an arm

Temporary

Temporary disabilities have 2 main catagories:
Injury and Situational

Injury
People who are temporarily disabled due to injury, and require accomodations for a period of time
Ex: Broken arm

Situational
People who are temporarily disabled due to a situation and benefit from enviornmental accomodations put in place for the permanently disabled
Ex: Carrying Groceries



USER MOLECULES

USER	**Blind**, varies in ability but generally can distinguish high contrast	**Low vision**, has some sight but it is highly reduced	**20/20 vision**, or vision impaired with correctional lenses
PROBLEM	Struggles to identify containers due to **lack of tactile labeling** and **identical forms** across product lines	Stuggles to identify containers due to **low contrast** labelling, **small fonts** and unavailability of tactile labels	Unable to find containers fast due to overcrowding in cabinets and **non-visable labels**
SOLUTION	Create a **tactile non-braille reliant system** for organization with unique shapes and textures	Create **higher contrast** through color and texture to assist with organization and identification.	Create an **identification system** that does not rely on side visability of containers

JOINT SOLUTION

Create a **tactile identification system** that does not rely on 2D graphic space for identification and organization

GOODWILL VISION ENTERPRISES

Goodwill Vision Enterprises is a subset of Goodwill that focuses on vision services in the fingerlake region

They provide occupational therapy, helping people navigate daily life and spaces without vision.

A variety of people use their services, from younger children to older adults who lost vision later in life, with most recieving occupational therapy being over 50.

Goodwill Vision Enterprises: User Research

Management Techniques

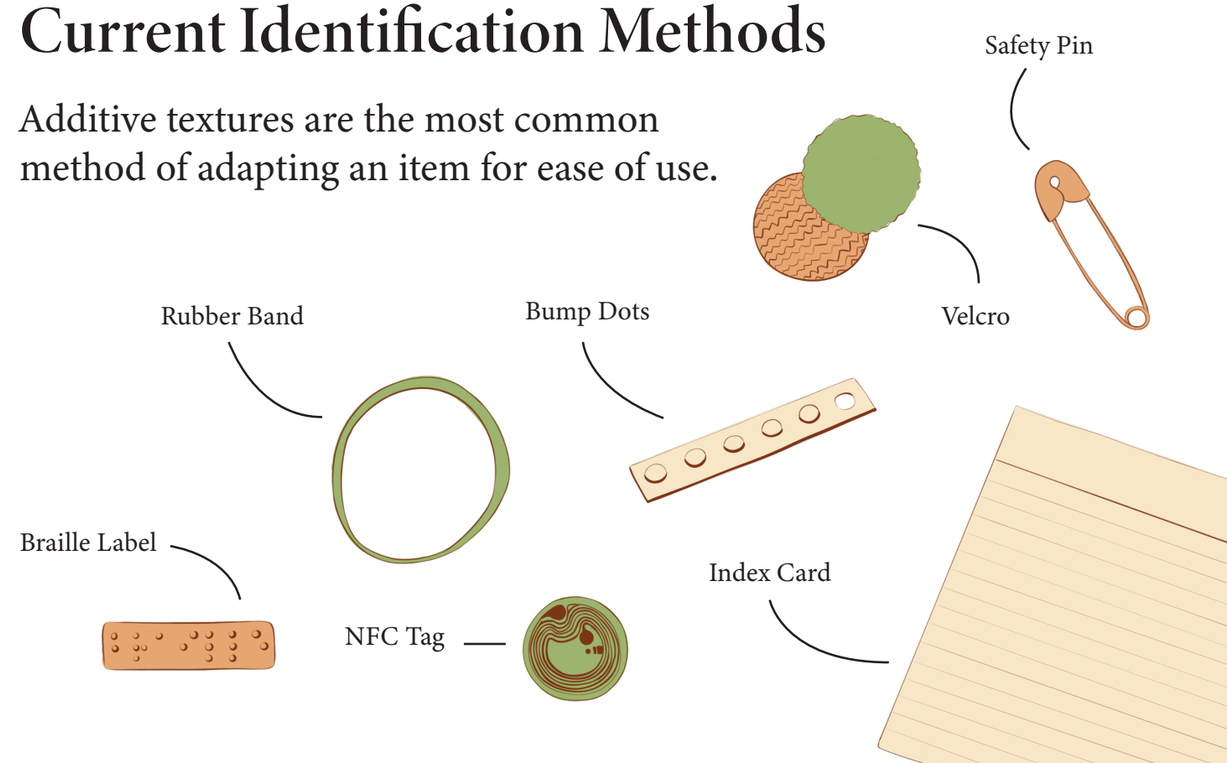
Consistency is key. Keeping things in the same place allows for ease of use and less confusion. This creates a strict organization system relying on memorization which can be disrupted if something is misplaced.

Stress Areas

Mental strain is caused by memorization. This is further exacerbated when living with sighted people, as they move objects from their designated spots.

Current Identification Methods

Additive textures are the most common method of adapting an item for ease of use.



Problem Statement

Investigating spice packaging allowing for ease of navigation and identification through form and materials for people with low vision and blindness

Interaction Testing

Additive Lines

How do you start to create an identification system using form placement of pre-existing spice bottles?

Texture Association

What textures do people associate with different spice catagories and why are they associated?

Tray Table

How do you create an external form based system to allow for consistent placement of bottles?

Additive Lines

How do you start to create an identification system using placement and simple forms on pre-existing spice bottles?

The test required a blind folded individual to memorize a bottle and then find it again out of a lineup

Questions

How simple can I make a tactile system?

How does line placement affect identification?

Findings

People could easily identify the bottles

While bottles were identifiable, they didn't have an association with specific spices - how do you create that association?

Could lines represent broader catagories and not individual spices?

Texture Association

What textures do people associate with different spice catagories and why are they associated?

The test required blindfolded individuals to place textures in 3 piles: powders, leave and miscellaneous

Textures

Dots

Feels similar to sandpaper

Lines

Sandpaper

Reminds me of my cat

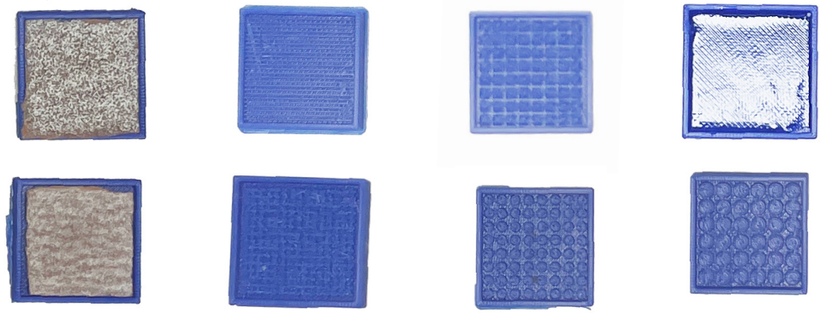
Clear

Triangle

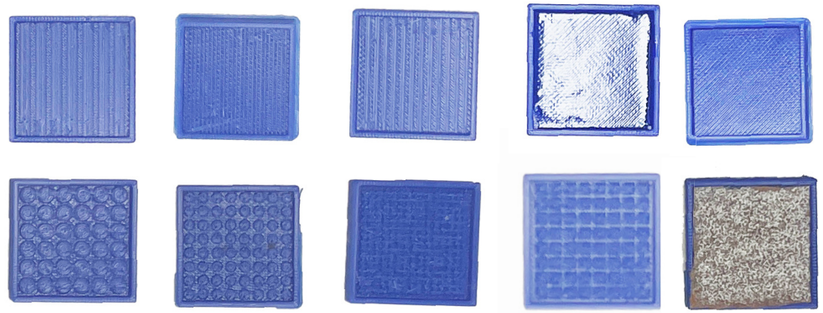
“Kinda hurts, therfore Spicy?”

Catagories

Powders



Leaves



Miscellaneous

Tray Table

How do you create an external form based system to allow for consistent placement of bottles?

This test required blindfolded individuals to place the correct shaped bottle in the right spot

Questions

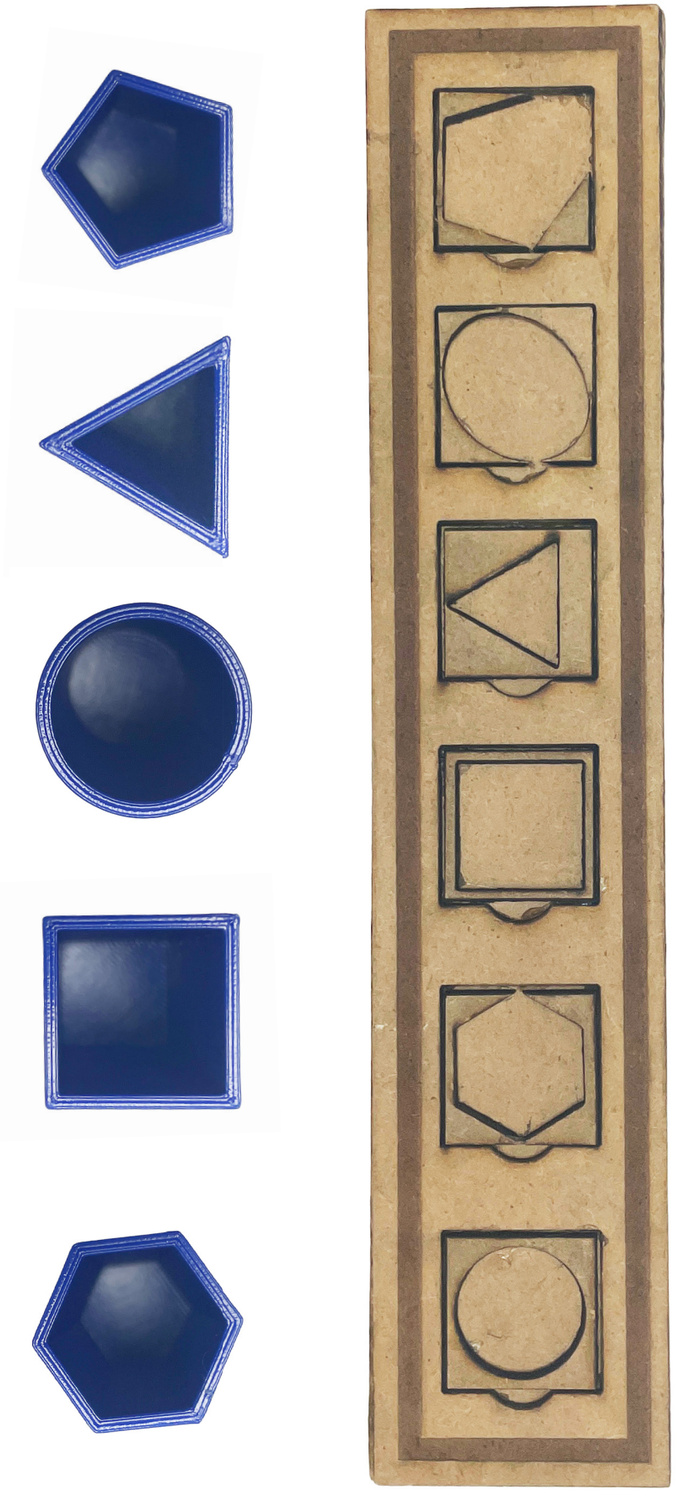
How do I create an intuitive external system?

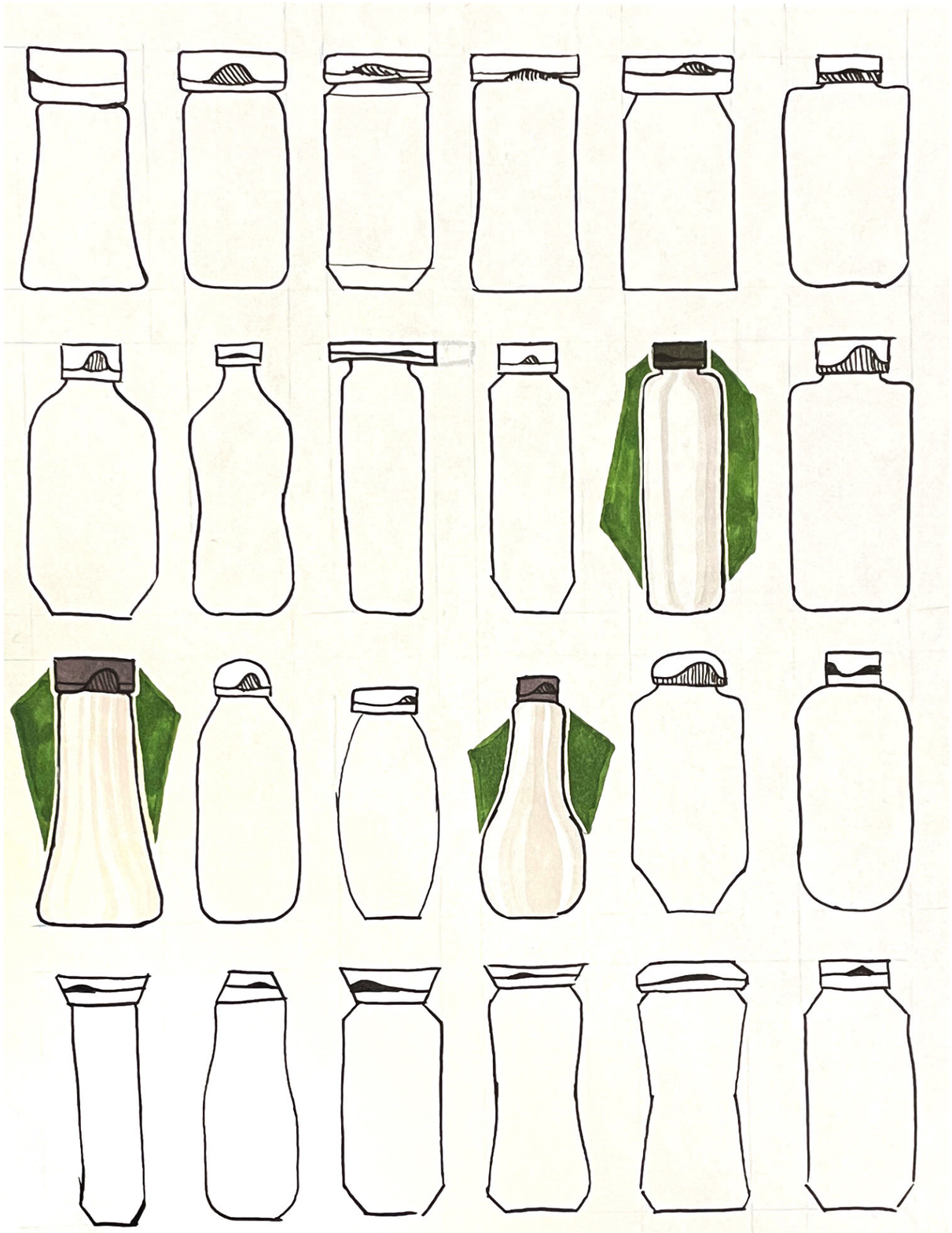
What shape gets mistaken for each other

Findings

Tray was incredibly difficult to use, bottles kept getting knocked over out of place

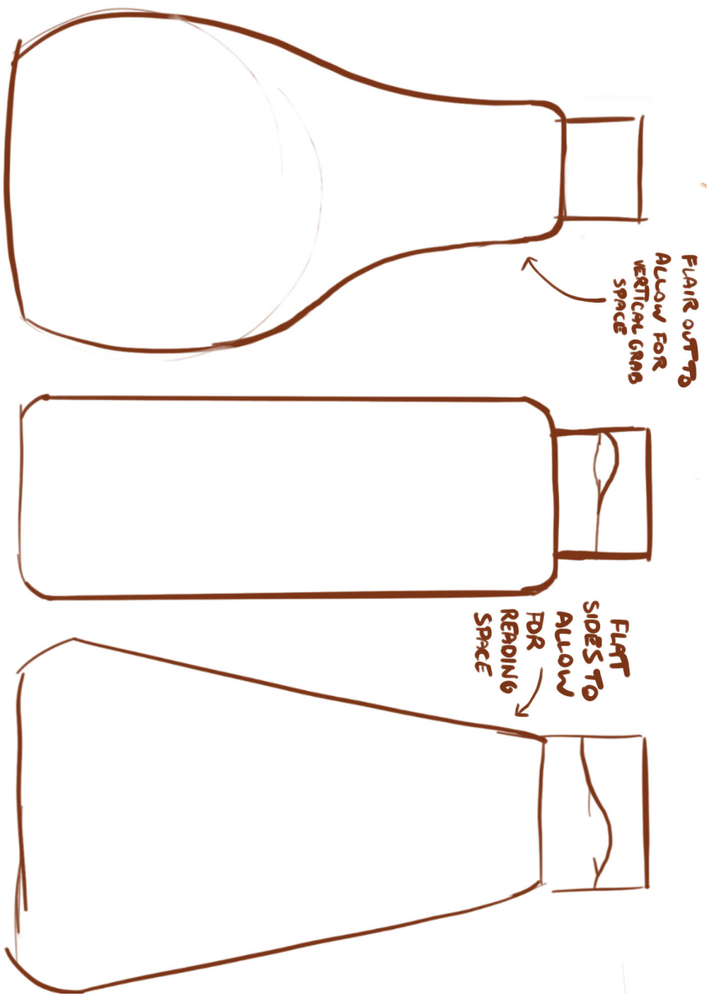
non-intuitive to use





Concept Development

IDEATION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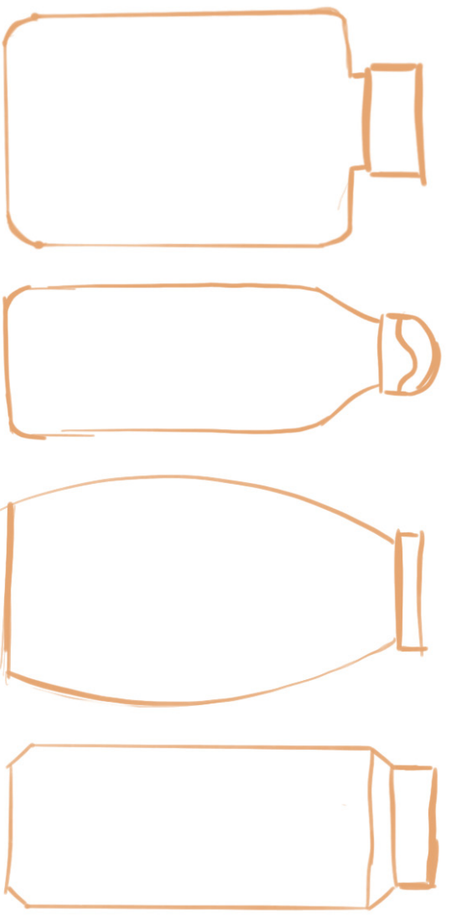
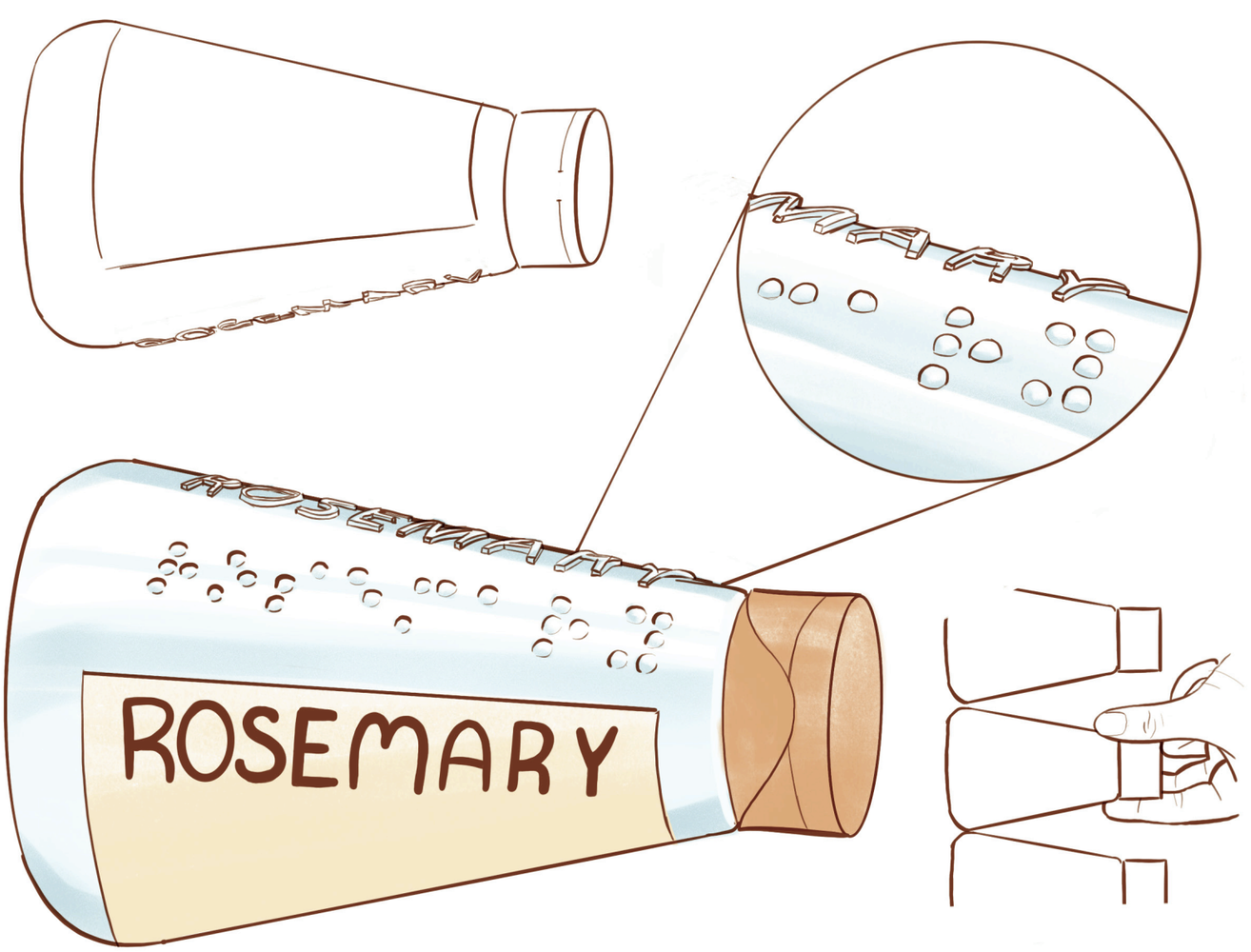



ROSEMARY

INITIAL PROTOTYPES

1st print

- Assess Scale
- Finalize lid tolerances

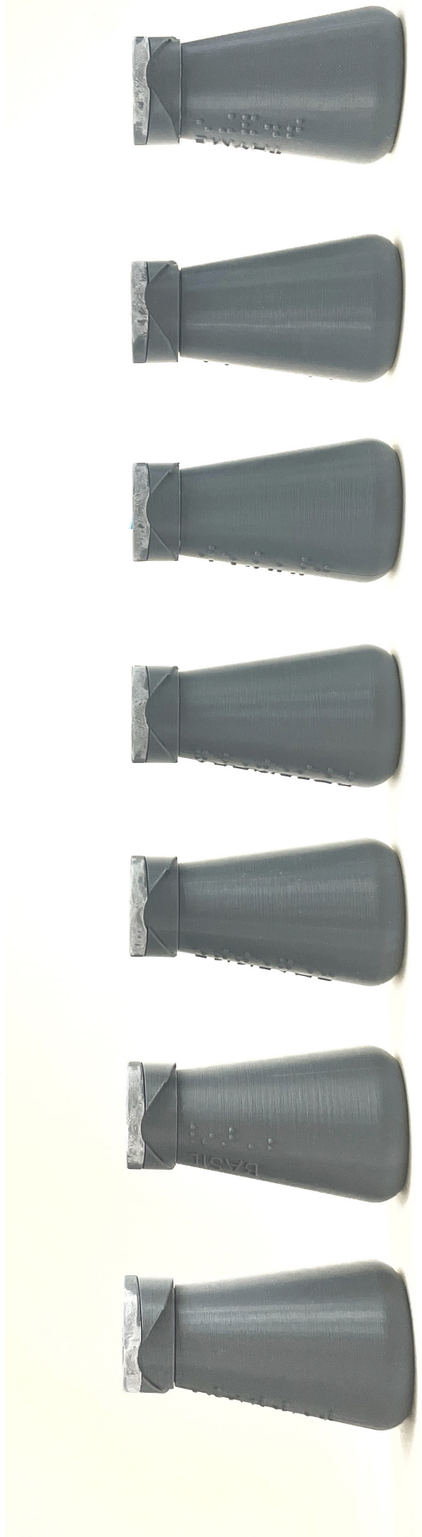
Text and Lid Creation

- Apply text and assess scale
- Separate lid into pieces to allow for hinge

Kerning and Lid Development

- Align kerning of braille and raised letters
- Slope lid for easier removal and add texture

FINAL PROTOTYPES



Textured lid

PLA 3D printing

SLA Resin Print
Raised Large Print
Standardized Braille

Final Design

BRANDING

IRIS SPICES

Minion Variable Concept

Subtitle - 36 pt Semibold

Body - 18 pt Regular

Light Beige
#: f5e7ca
R: 245
G: 231
B: 202

Autumn Orange
#: dda97a
R: 221
G: 169
B: 122

Leafy Green
#: a1b375
R: 161
G: 179
B: 117

Deep Brown
#: 733a1f
R: 115
G: 58
B: 31

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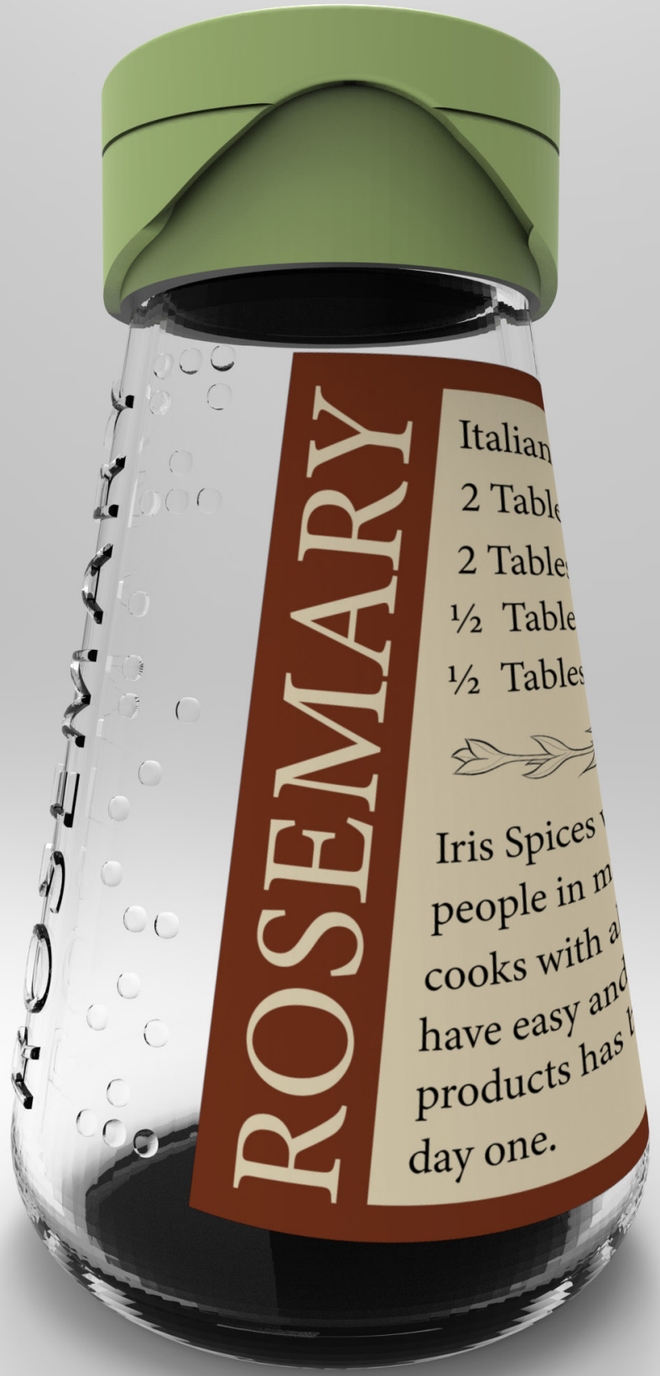
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CHILI FLAKES
BASIL
CAYENNE
ROSEMARY
PAPRIKA
THYME

About the Designer

Kimberly DeSantis

Kimberlydesantisdesign.com

I am an idustrial designer focused on user research to create a seamless user experience for a variety of ability levels and consumer types. This is done through research of textures and material to optimize user interface.

Outside of product development, I enjoy reading, puzzles and illustration with them often blending into each other. Overall I like making things and learning new ways to do so.

Special Thanks

Special thanks to everyone who has helped and supported me throughout this project including family, friends and professors

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