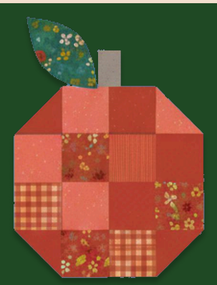
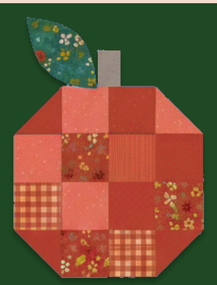


PROTOTYPING



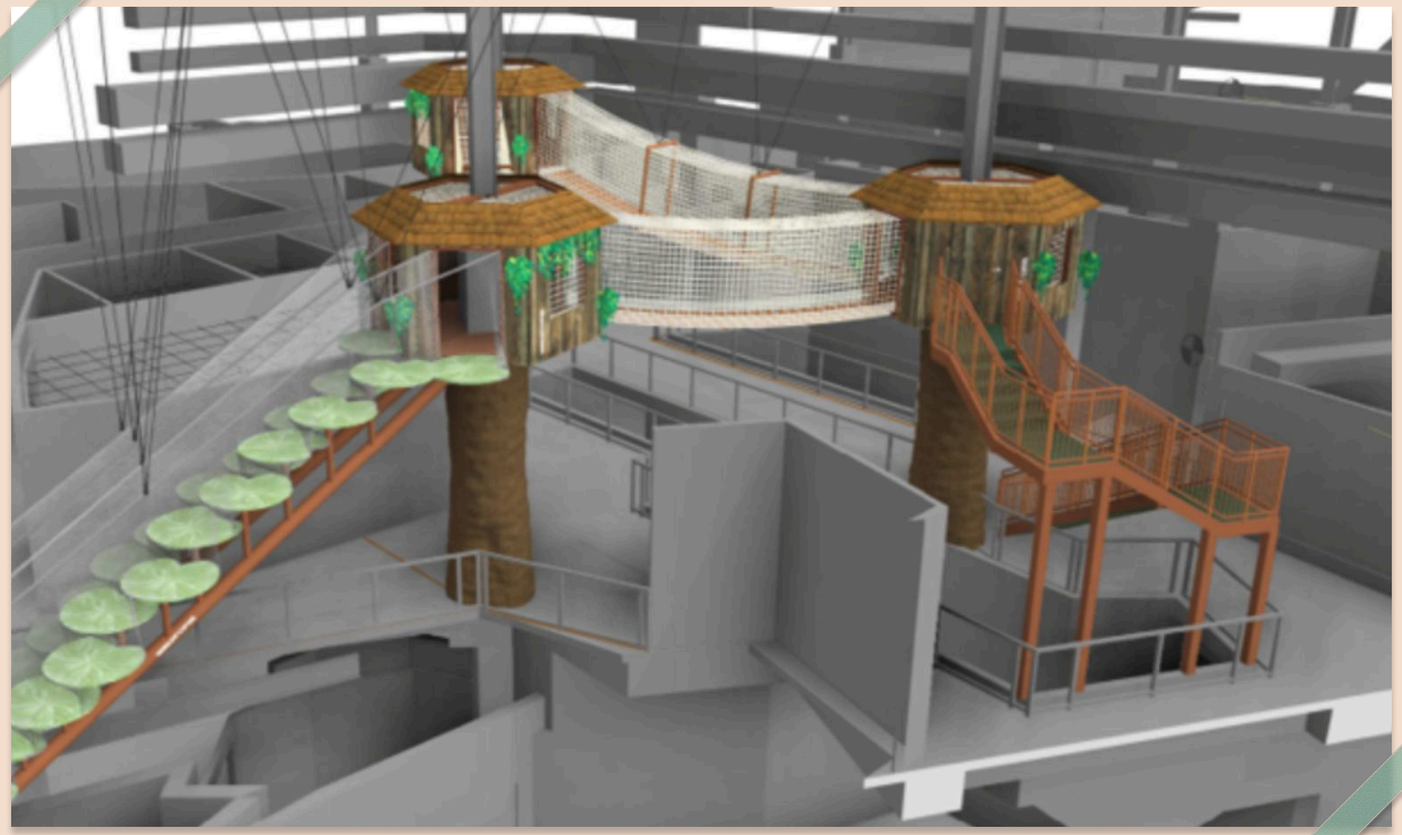
Prototyping
Fruit Buttons

Nghia (Johnny) Nguyen
Kernell Snow

FRUIT BUTTONS

INTRODUCTION

Canopy Walk



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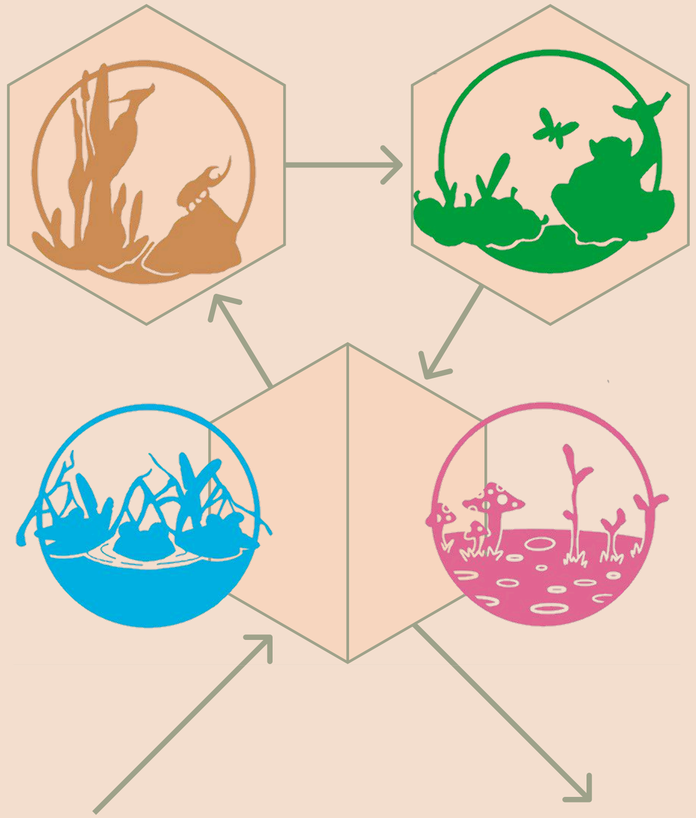
USER FLOW

Story



2) A child examines and explores how different animals use trees as homes.

3) A child helps animals eat, store, and find food.

1A) A child gives tree water, and they grow taller and stronger.

1B) A child explores the circle of life, decomposition. and seeds.

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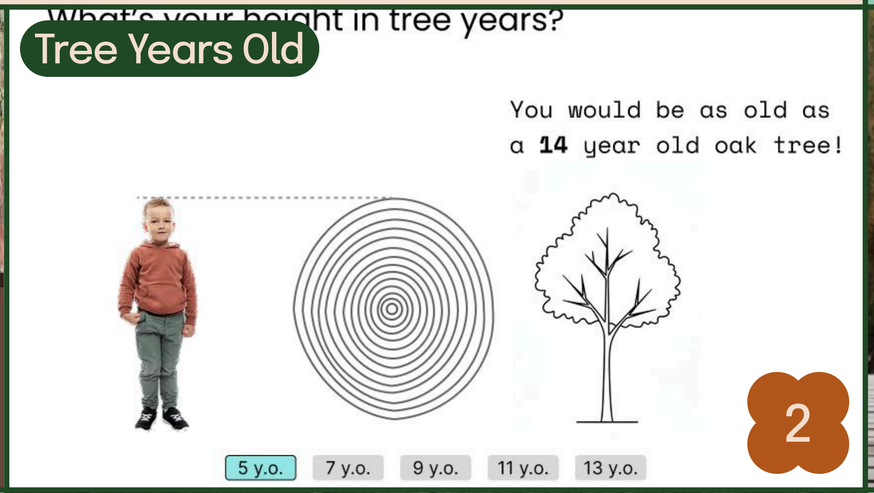
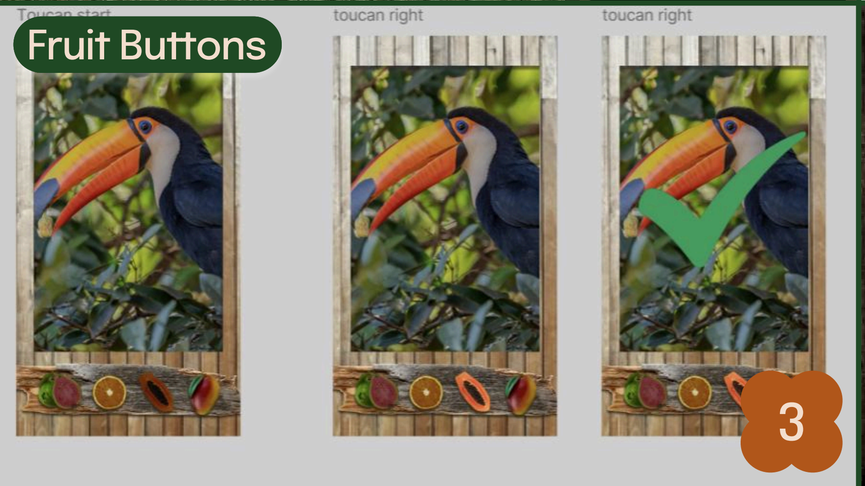
PROTOTYPES

Lily Pad Hopscotch
1A

Tree Trunk Skylines
2


Tree Years Old
What's your height in tree years?
You would be as old as
a 14 year old oak tree!
5 y.o.
7 y.o.
9 y.o.
11 y.o.
13 y.o.
2

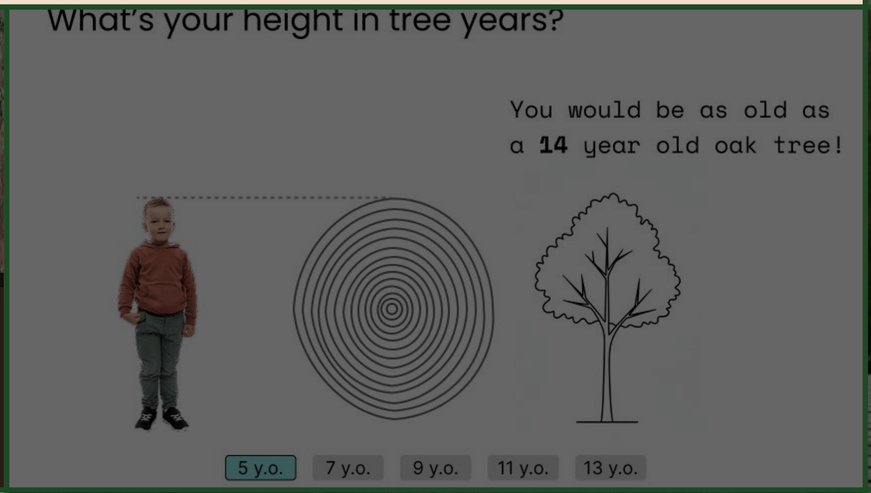
Treehopper Telephone
2
1?
3?


Fruit Buttons
toucan right
toucan right
3

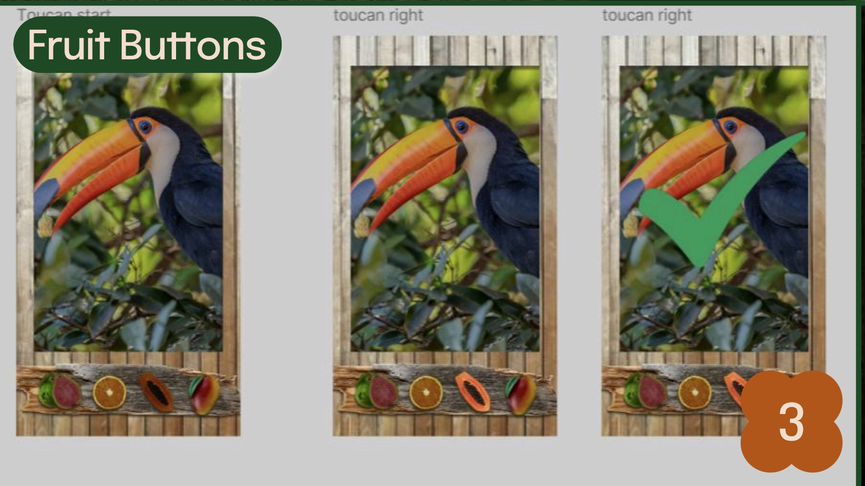
Soil Wall
Explore the Soil
Can you find
these items?
1B

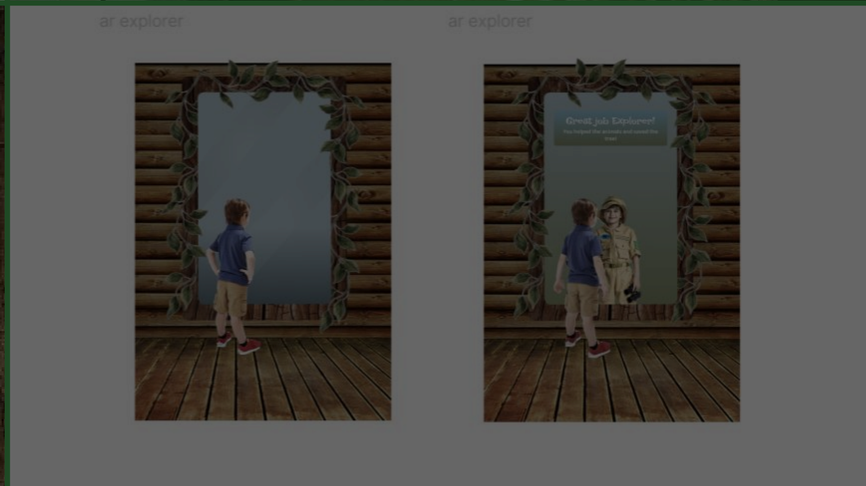
AR Explorer
ar explorer
Great job Explorer!
1B

PROTOTYPES

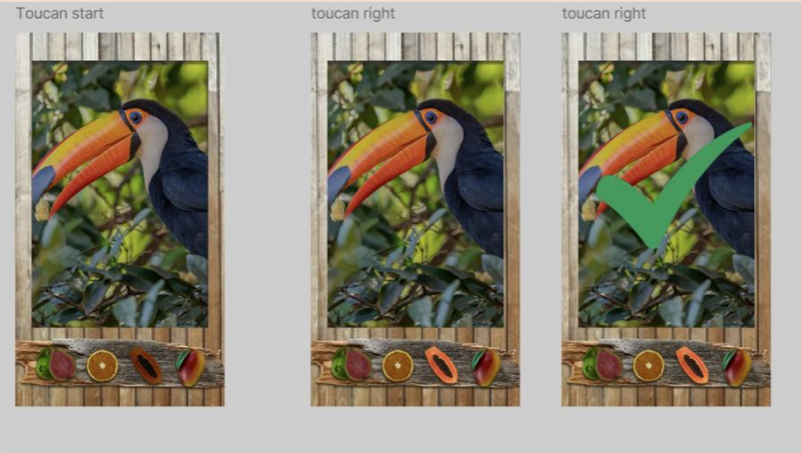


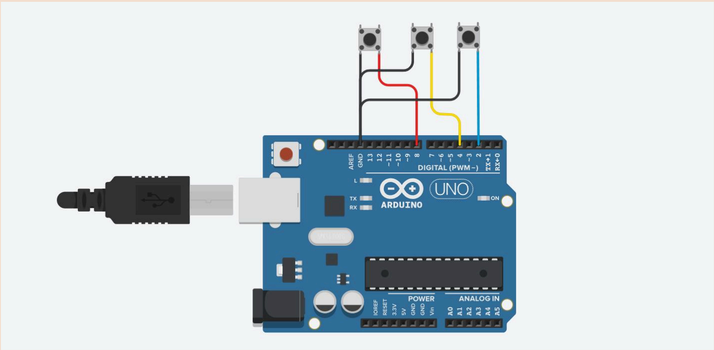
Fruit Buttons





OVERVIEW





Components: Arduino, Wires, Buttons, Laptop + Processing

Animal is displayed → User guesses which fruit →
Displays video if the user is right || Displays that the user is wrong

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UTILITY

Prior Research

Elements of a home (9)

Pet or animals (7)

Nature (6)

Video games, TV, other entertainment (5)

Food (4)

Colorful (2)

Elements of learning (2)

Pros

- **Highly tactile**: mixes tactility with a digital interface.
- **Fast feedback**: children are able to know if they are correct or incorrect easily.
- **Easily scalable** with multimodal sensory inputs and outputs.
- **Easily adaptable** to multiple regions, animals, and different fruits.
- **Entertaining** and **educational**.
- **Fast experience**: leads to less congestion.

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DEMO

NEXT STEPS

- **Integrate** Arduino, Processing, and physical components.
- **Aesthetics:** iterate Processing UI, paint and decorate objects.
- **Consider** adding extra sensory outputs such as a vibration motor.
- **Evaluate** our design with experts and users.