octobud

Problem Statement

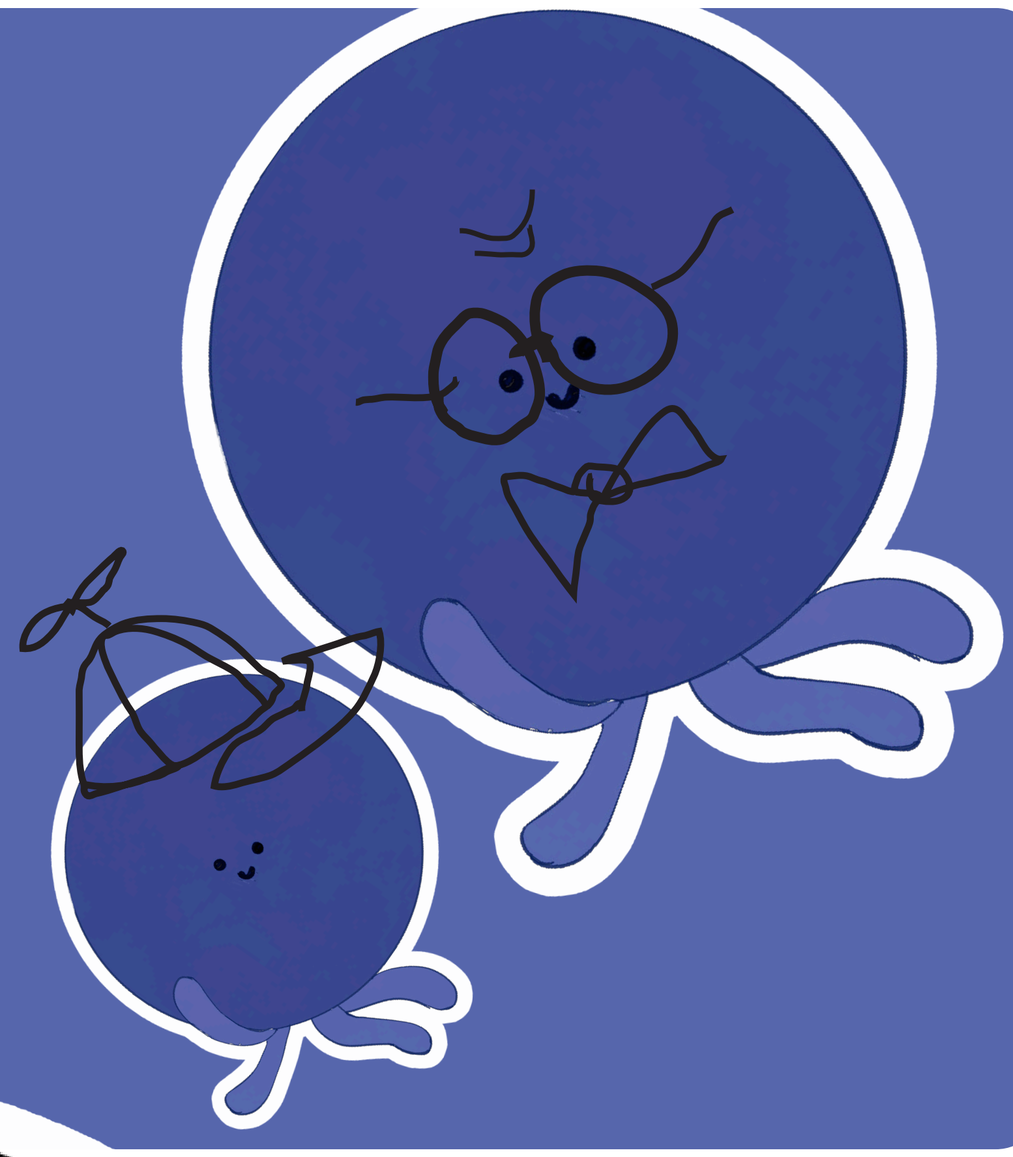
An interactive learning device that allows students a gamified and flexible learning system using a code-and-scanner system, where each code has a unique visual and/or auditory output that allows for more creative and flexible learning styles.

What is octobud?

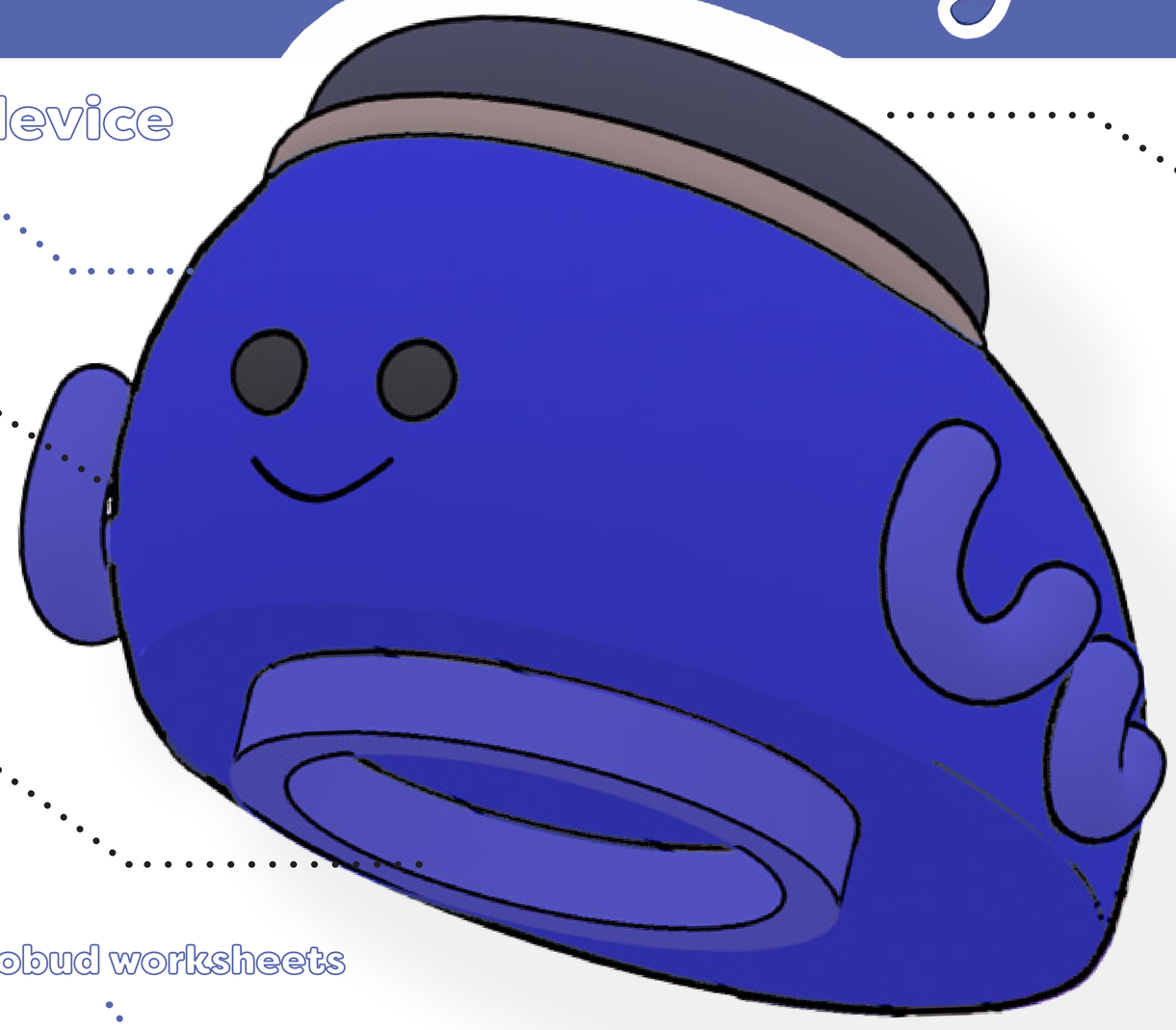
Based on our group research, which examined learning results on a digital platform, we found that learning apps on devices like iPads do not provide enough stimulation for a child and are filled with distractions that discourage proper learning.
What did engage kids in learning was open-ended, not being restrained to a rules-heavy system. Kids also learned better when learning was gamified, viewing it as a game rather than doing a task. The octobud caters towards children would have to be an open-ended experience, but still be easy to pick up, as well as inexpensive, enough to place in a learning environment for teachers.

Primary Users:
Children ages 5-10 who would use the octobud to learn.

Secondary Users:
Teachers of the children using the octobud to assign work.



octobud device



A Familar Shape

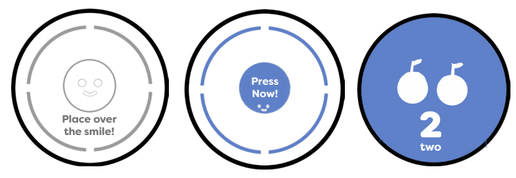
The form of the octobud mimics the button placement and overall shape of a mouse. This metaphor allows the user to easily know how to hold and use the correct input modality (pressing the large button in the centre), as well as being ergonomic for the long term usage.

Camera Sensor

The octobud comes with a camera sensor on the bottom, allowing for easy alignments with the button screen on top and a convient rubber outline for more stability and to allow to user to line up with the code better.

Just One Button (*that's it!*)

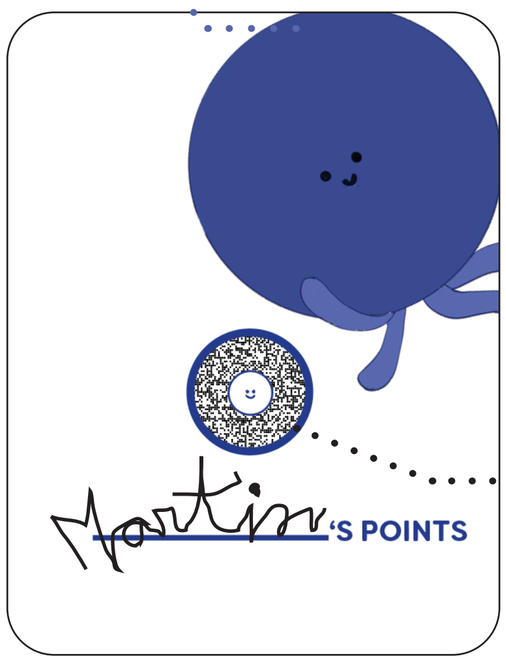
The octobud device only one has one input system to interact with, the large button to scan and display the material from the octobud codes. This is to ensure ease of use for the children using it. By only having one major input modality, there exist less user error or confusion, making the learning experience go over smoothly rather than memorizing a new piece of technology.



Simple Screen System

The octobud device serves both as an input and output device,using simple instructions and visuals to help the child to line up the code with the device's camera scanner, and changed visuals to indicate when to press the button.

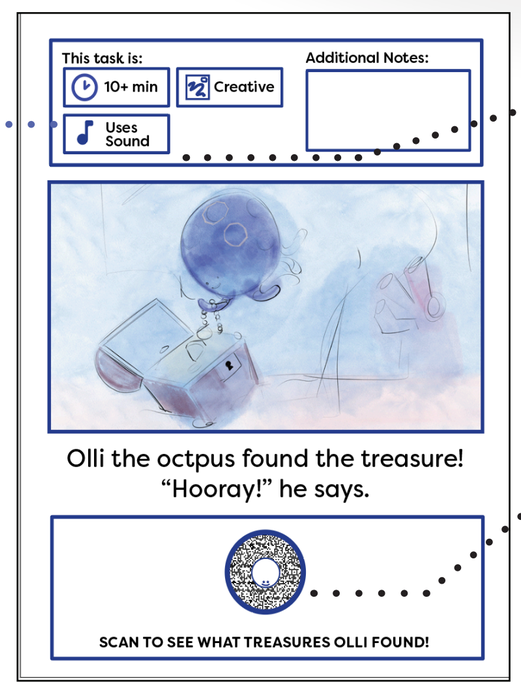
points card



Point Tracking System

The octobud device comes with a card system that each student must scan after to keep track of their work, allowing multiple students to use the same octobud while keeping track of their work abilities. At the end of the day, a PDF of all the students' totals are sent to the teacher's email with basic stats, allowing teachers to track the learning pace of the students, and basic stats, like how long they took on a task or their final scores.

octobud worksheets



Icon System

Each learning sheet comes with a simple icon system that teachers can refer to when giving their students a lesson plan, creating an easy way to organize and develop an appropriate lesson plan for their class. There also exists a section for any personal notes section for any further analysis on their end.

One Scan, Infinite Possibilities

The powerhouse of the octobud comes in the octobud code system. The code system allows for the octobud system to be incredibly flexible, allowing teachers of the students to find learning material suitable for them. The code system can also be reprinted, making it a cost-effective teaching tool for multiple students.

Interactions

Input:
Align the smile on the octobud device with the smile octobud code

Output:
The device changes from a grey scan icon to a blue button saying "Press now!"

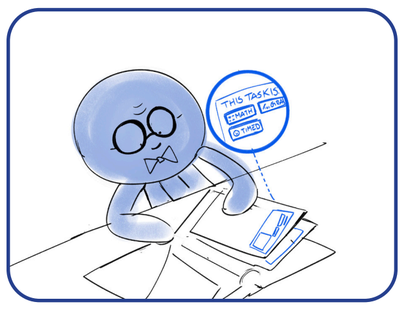
Input:
The user presses the blue button over the code

Output:
The blue button then expands across the screen, filling the screen before showing the respective module

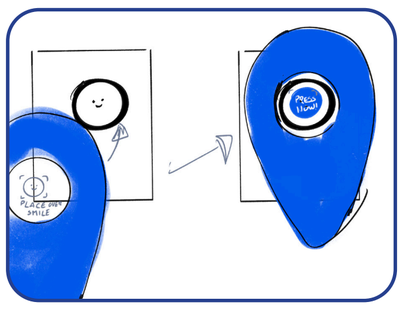
Input:
The user scans their points card at the end of the day

Output:
Their total points are shown on the screen,while also sending the results into a PDF for the teacher

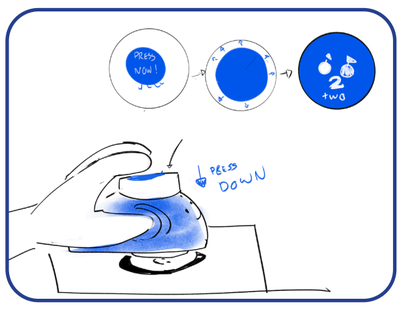
Storyboard



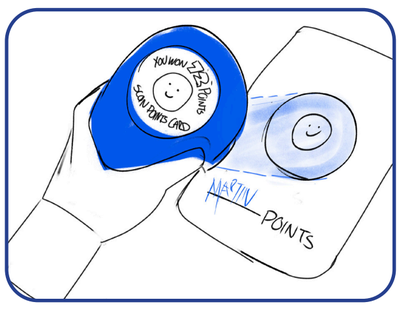
The teacher goes through the octobud sheets, for an appropriate lesson using the icon system as a guide for what type of lesson they want to assign.



To activate the octobud, the child lines up ocotobud scanner with the code, using the smile to line it up properly. When lined up, the screen changes to a blue button,which signals to press on it to activate the module for that code.



After pressing the button, the screen then transitions to the given module based on what the task is for.



At the end of the class, the student scans their points cards to track their progress, also showing how many points they earned for that day

At the end of the day, a PDF is sent to the teacher with the results of the octbuds points cars, ranging from how many tasks they complete, time took, and average grade.