

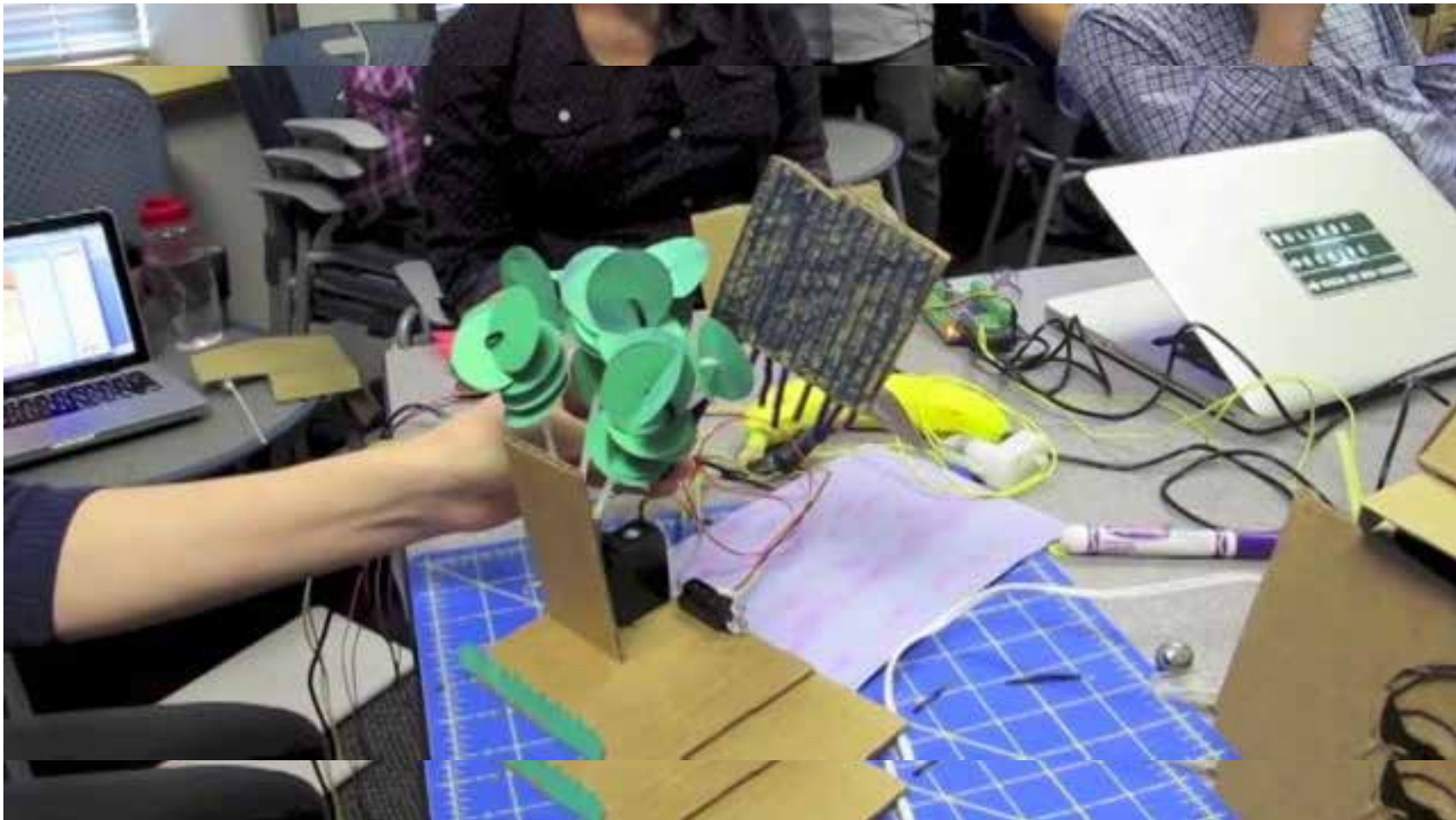


DESIGNED BY  
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DESIGNED FOR  
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Literary Arts Boom

## What is LAB

Literary Arts Boom is a non-profit organization that help improve literacy in youth through creative writing workshops with a science twist.



## Project Scope

An interactive experience that involves words and images to engage youth to write, ideally with some mad science quirk to it.



## **Ethnographic Findings**

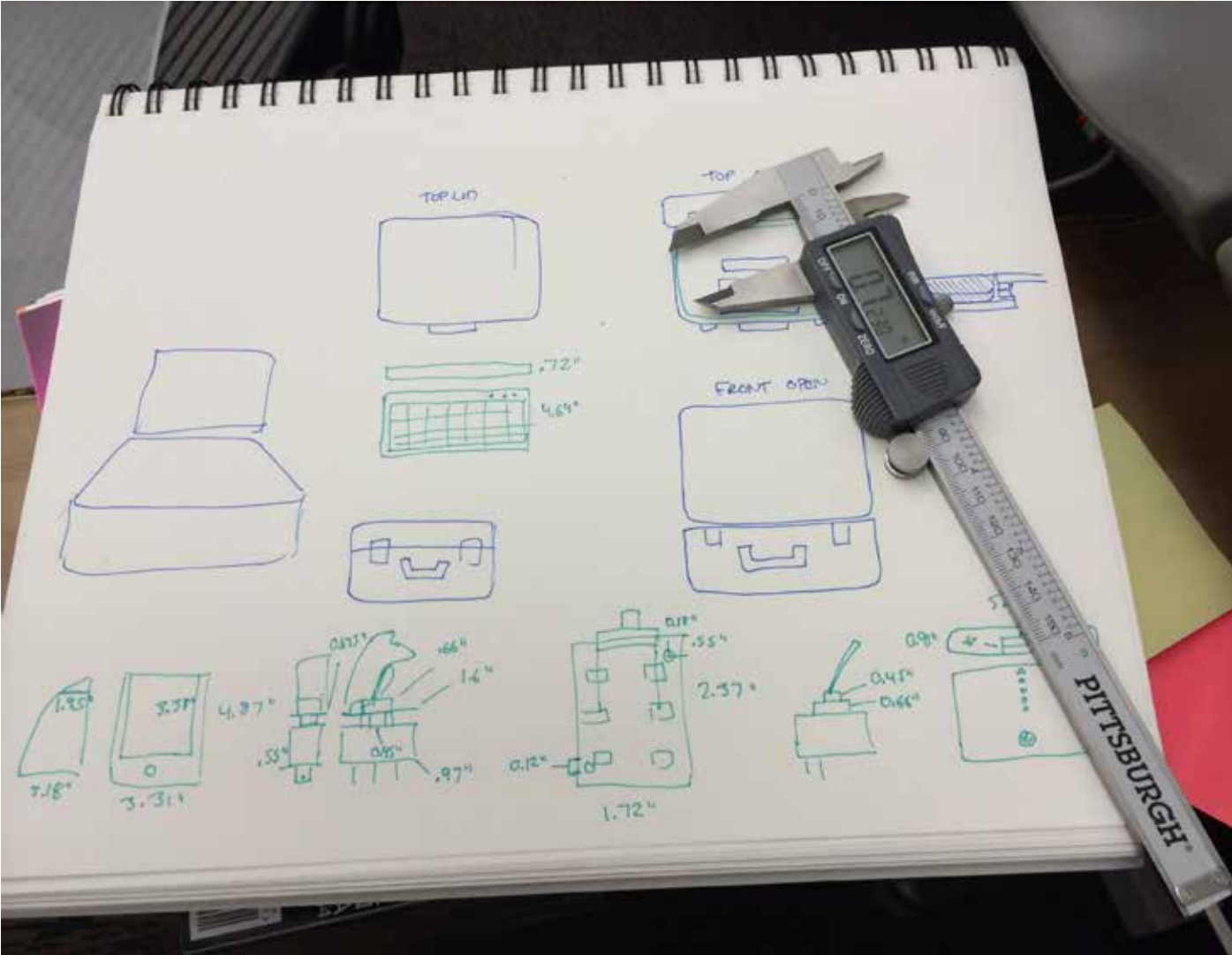
With the recent Cease and Desist of their Mad Science The LAB current does not have a permanent location. The final project needed to be compact and transportable. In addition, the interaction time needed be short (less than 2min) to avoid individuals hogging the machine. Children also needed multi-sensory stimuli, so I needed to consider engaging other senses besides visual. Finally, events held outside meant that electrical outlets may not be available.

## **Design Ideas**

A few initial ideas involved a time travel capsule that would resurrect archived messages in the future, a (Mis)fortune cookie maker, an ID badge maker, and a Rube Goldberg machine.

Ultimately, we modified the time travel capsule idea and added more real-time interactive elements to it such as a dialogue, as well as a printed transcript to take home.

# Design Implementation



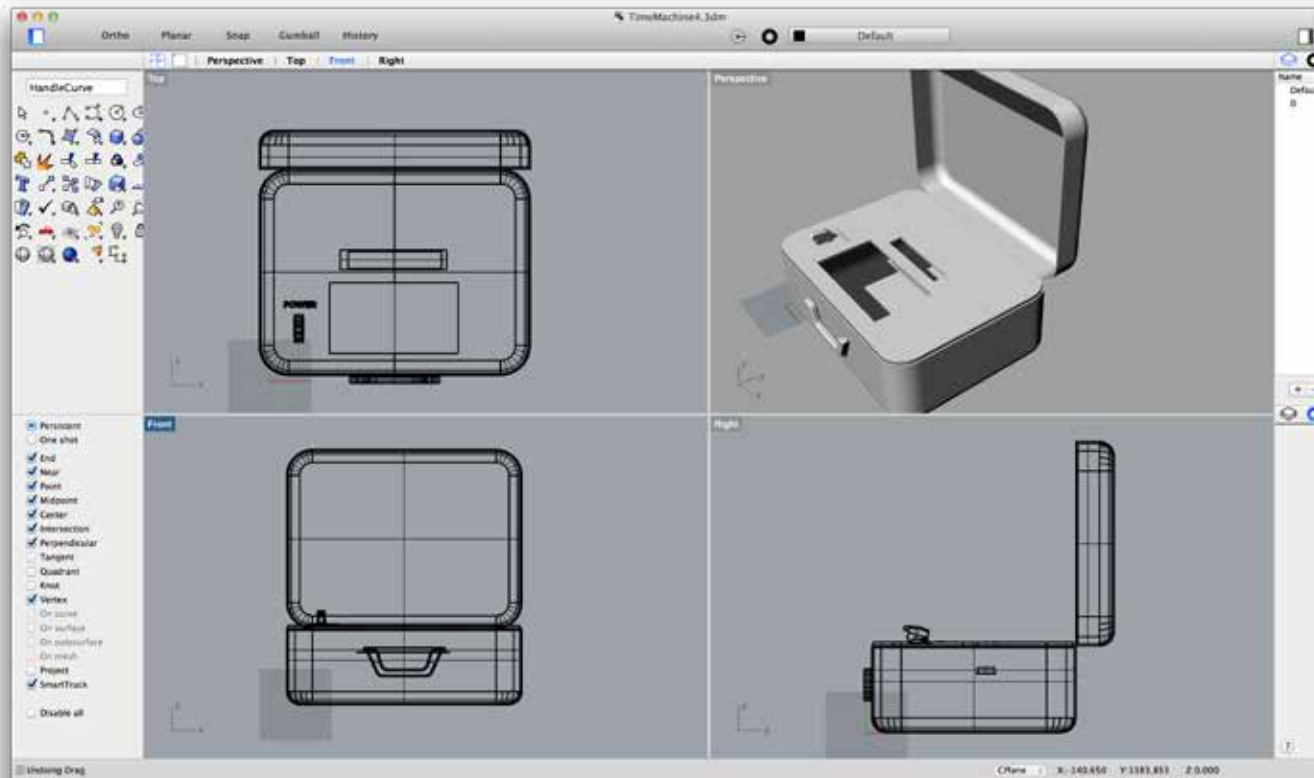
These sketches show a vintage scavenged equipment re-purposed for this project. Following the same theme as the other Mad Science projects, we opted to place the time machine into an old suitcase for mobility and storage as well as aesthetics.

## The case



This is the case I found at Goodwill and would act as the foundation for the entire project.

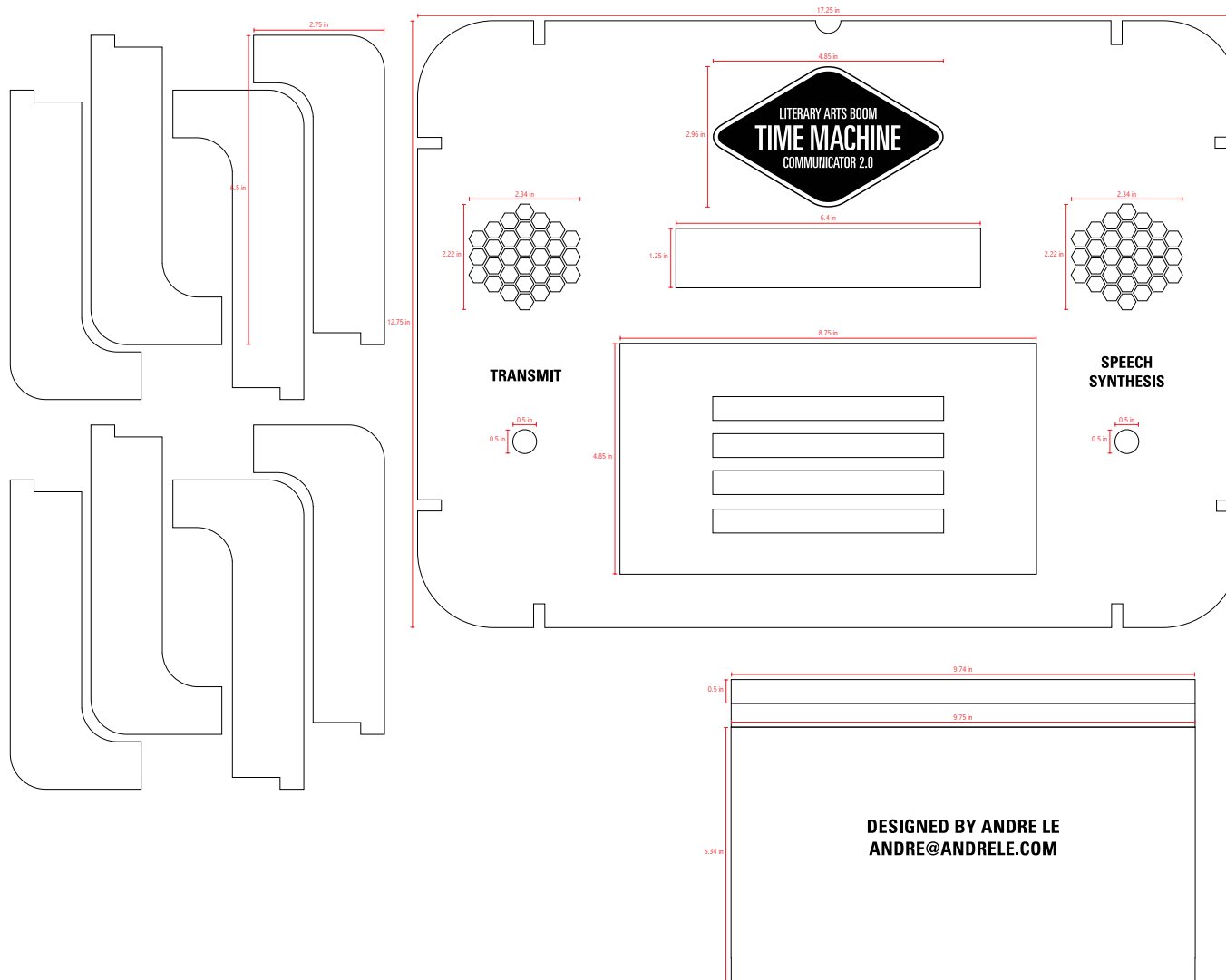
# 3D Model



This model gave me a sense of the relationship of the parts both spatially and how they would be positioned in 3D space.



# Laser Cutting



To contrast the vintage exterior of the case, I decided to use laser-cut acrylic for its synthetic look and feel. The laser cutting medium also allowed for etching of logos and other markings

## Parts



A Raspberry Pi was used due to its versatility and compatibility with many devices. The LCD screen was purchased on eBay with no documentation, and the speakers from Goodwill. The wiring harness was scavenged from an old IDE cable and wired by hand.

# Assembly



# Assembly



## Assembly



This faceplate was laser-cut on 1/4" plywood with the etching power adjusted to cut through the first layer of the plywood, leaving a darker underside. The final plate was fastened to the suitcase with pop-rivets.

# Debugging



## Final

The end result was a sturdy, mobile, and battery-operated system that allows the flexibility of software updates. The vintage-style faceplate mates perfectly with the suitcase and was well received by the client and the presentation audience.

