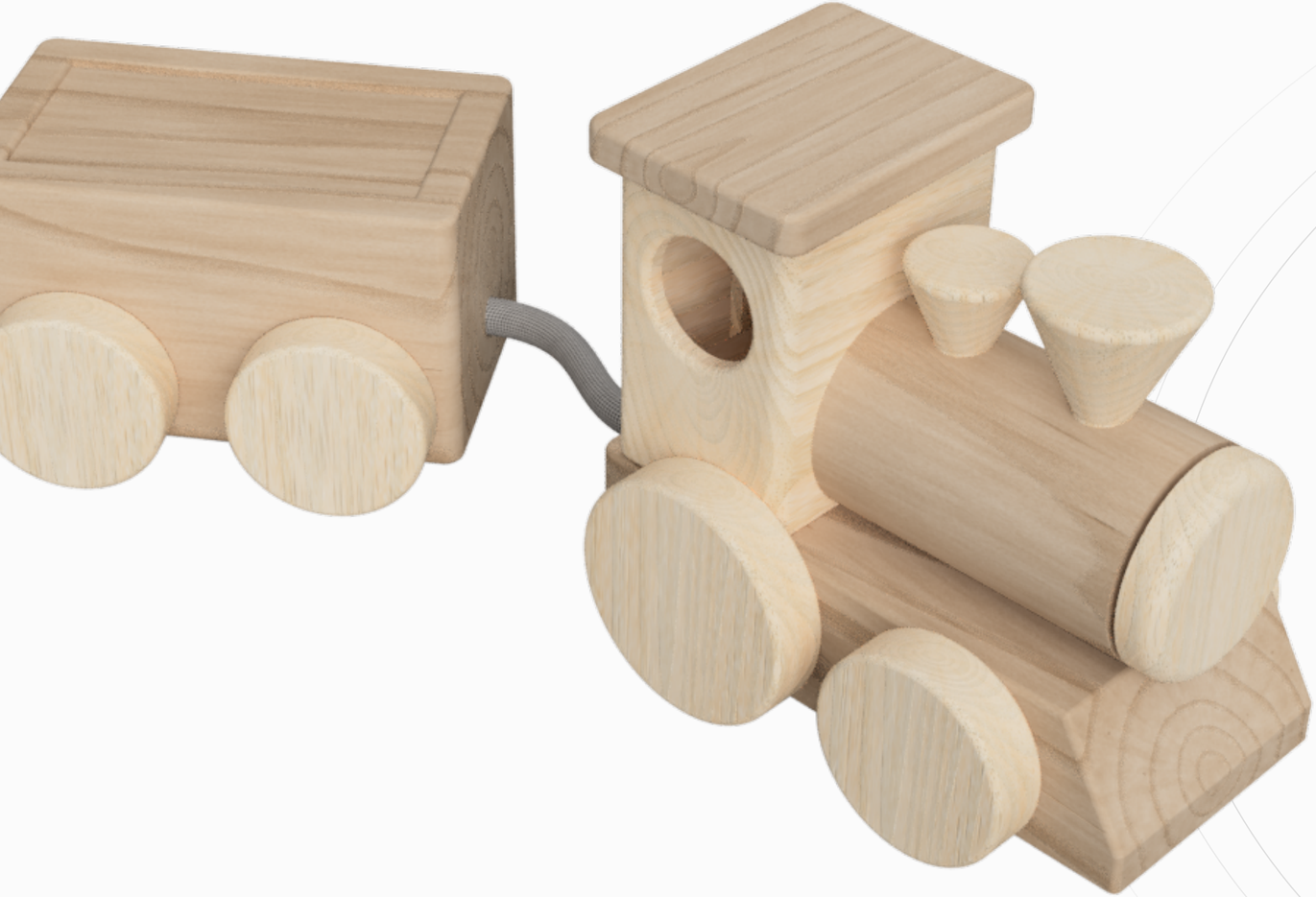
HYEWON LEE

ARTVENTURE



Click here to see a demo

https://youtu.be/1ZR__Rh8d1k

Artventure is a game toy that provides opportunities to experience the **visual thinking** process through art, taken away from digital simulations.

Users can enjoy the complicated thinking process via gamification and take a break from daily digital simulations by making their own artwork during the game.

DESK RESEARCH

Person who has grown up in the digital age

THE DIGITAL NATIVE ABSORBS EVERYTHING THROUGH MULTIMEDIA.

Multimedia is effective for introducing new concepts, but not for deep learning or complicated understanding. Due to the **cognitive miser**, it makes our brain biased toward mental shortcuts when we consume it.

It is revealed that the children who consume more multimedia showed lower performance on comprehension and retention tests and it cannot replace text-based learning and traditional thinking. Moreover, **digital fatigue** caused by multimedia cannot be ignored.

These imply that we need **sufficient time to take a break from digital stimulations and need to experience complicated thinking processes** often in other ways.

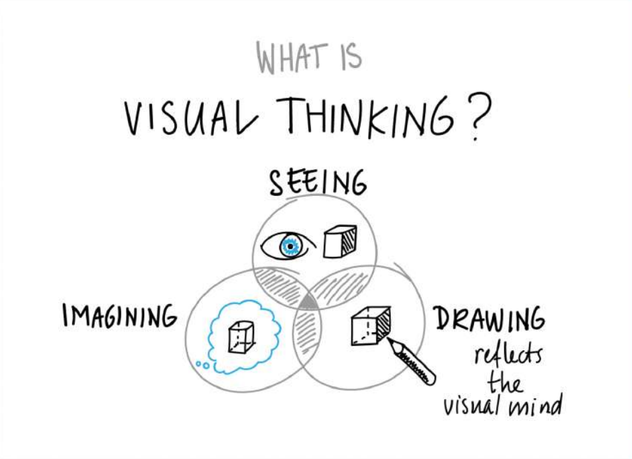
Journal Computers & Education, 2016
Journal of Educational Multimedia and Hypermedia, 2018

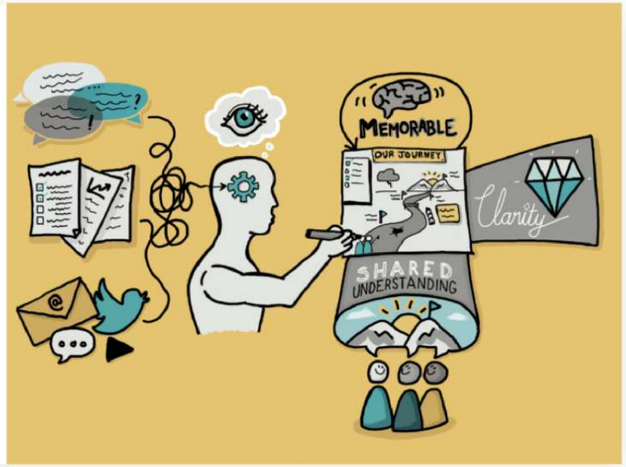
INSPIRATION

This project is tailored for digital native to

PROVIDES AN OPPORTUNITY 🏁

TO ENJOY VISUAL THINKING THROUGH ART AWAY FROM DIGITAL SIMULATION





Visual thinking is the ability to process and interpret information using mental images or pictures, rather than relying solely on verbal or textual descriptions.

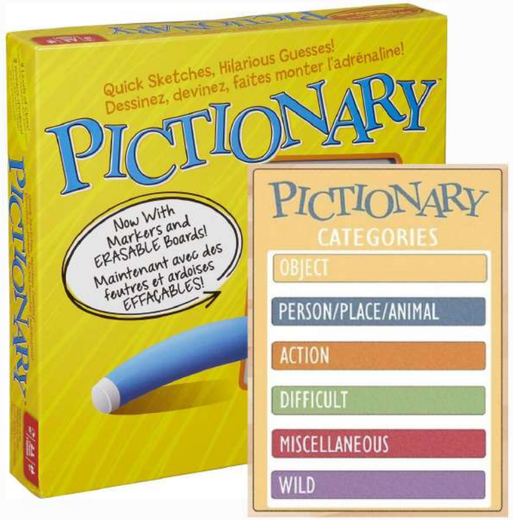
It requires a complex thinking process to integrate new information with prior knowledge and enhance creative problem-solving, overall understanding, and retention.

Journal Trends in Cognitive Sciences, 2015

CONCEPT

The game process of Artventure was constructed by the following 2 concepts. The game proceeds by **assigning various words** from different categories to **envision them as a single image** and then **represent them through drawings**. After that, other players **guess the assigned words** only through the drawings.

PICTIONARY



Gamification

ILLUSTRATED DIARY

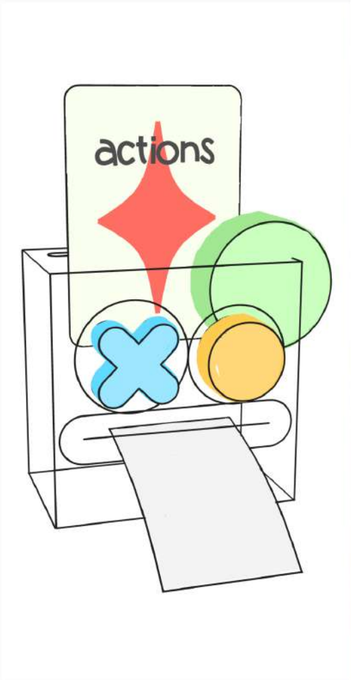
Easiest way to practice complicated visual thinking process and add artistic side

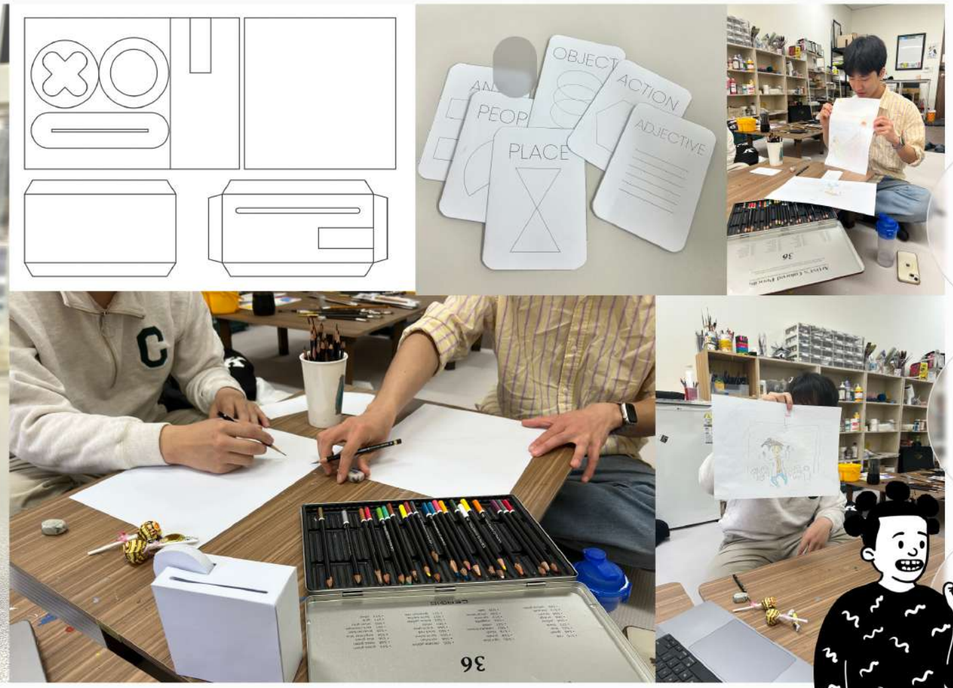
The effects of Pictonary-based training on cognitive performance, 2019
Drawing-to-learn, Journal of Educational Psychology, 2004

LOW-FI PROTOTYPE

USER TESTING

Based on the concept sketch, user testing proceeded in the type of wizard of OZ with a paper prototype for proof of the new concept (N=2). The test results and feedback were incorporated into the next prototyping stage.





It would be better to explicitly add the steps to imagine the storyline and to set a unique concept as a board game.

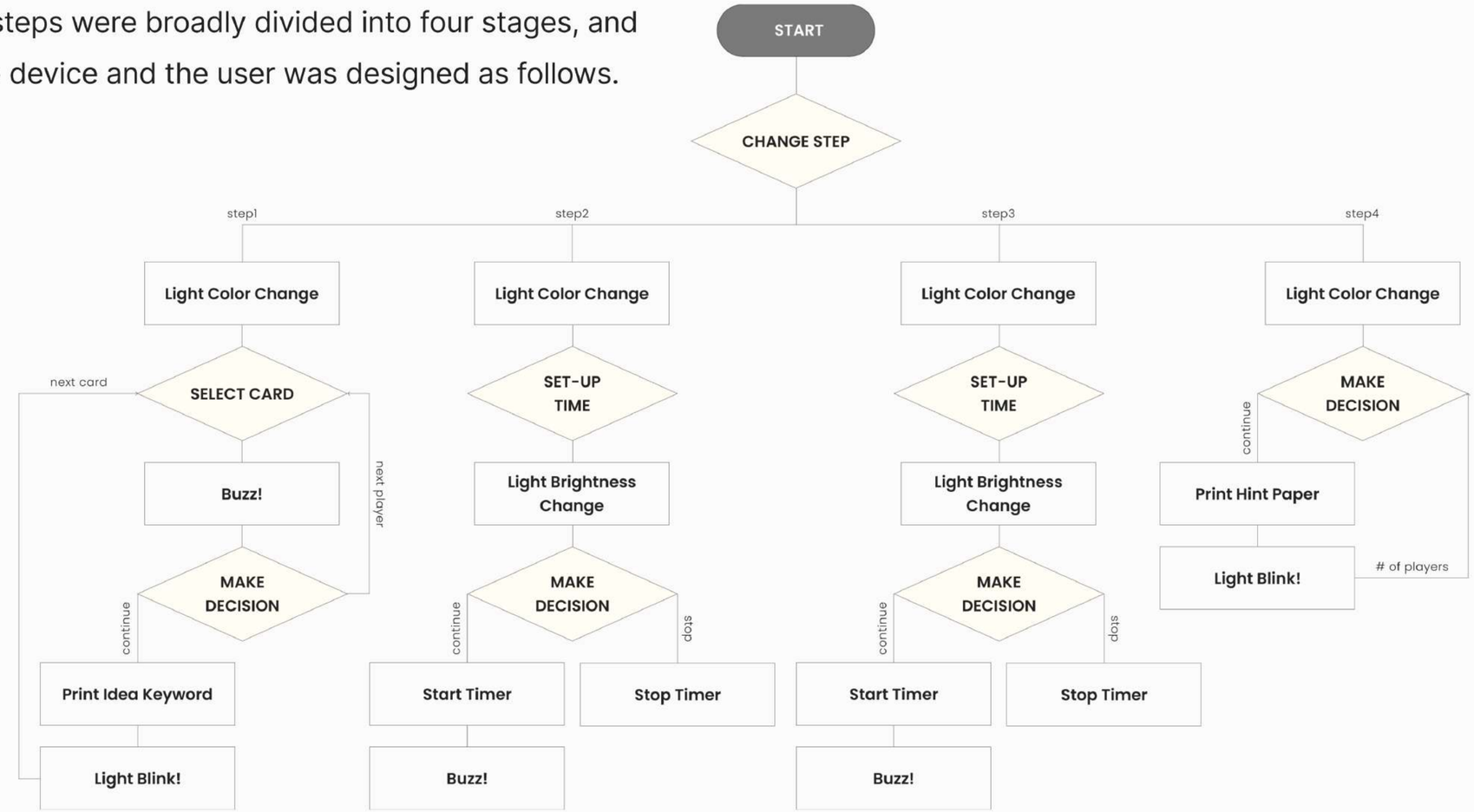
It was good that all the digital elements were hidden. I could enjoy analog mood like polaroid camera.

Unlike other drawing games, it requires complicated thoughts. It was fun to imagine various storylines.

MID-FI PROTOTYPE

USER EXPERIENCE

Based on user testing, the game steps were broadly divided into four stages, and the interaction between the game device and the user was designed as follows.

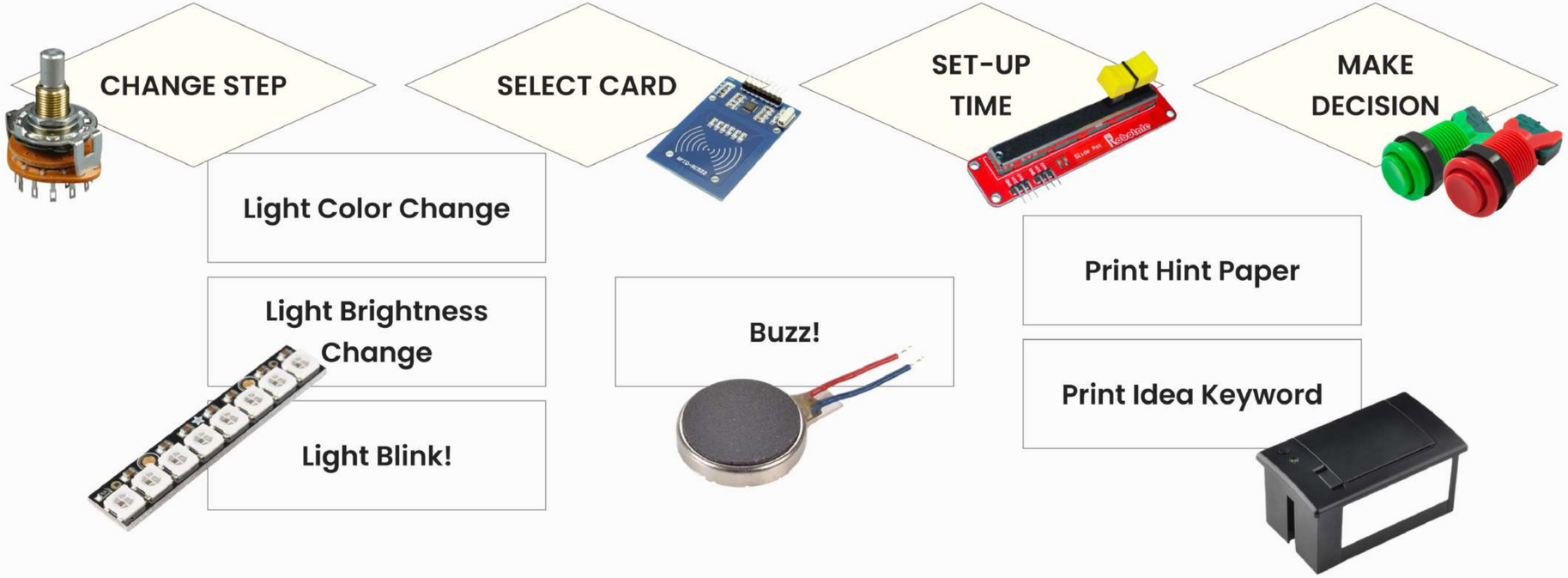


1. GET THEME WORDS
2. ENVISION OWN STORY
3. EXPRESS AS ARTWORK
4. SHARE, GUESS ORIGIN THEME

MID-FI PROTOTYPE

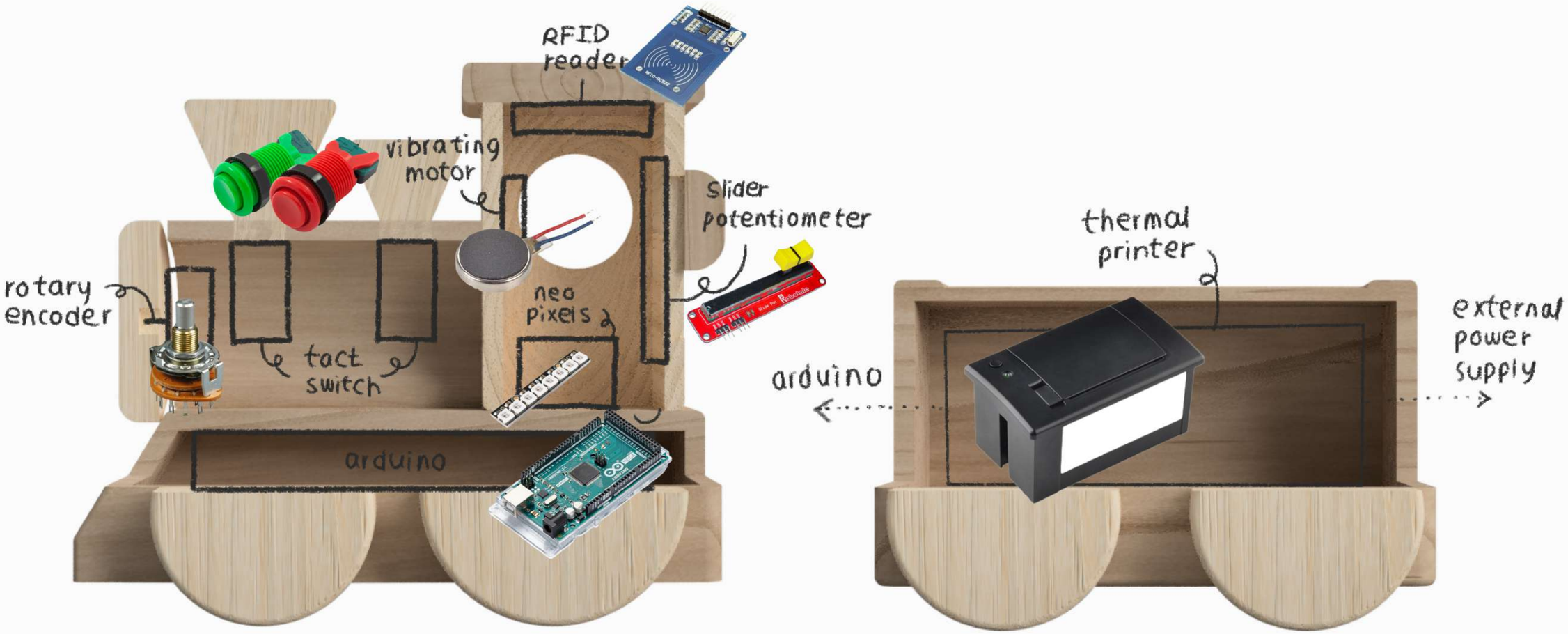
USER INTERACTION

Artventure facilitates user liberation from digital stimuli by aligning all interactions with the game device with physical actions and concealing digital elements within the product. It utilizes an Arduino Mega board and eight additional modules.



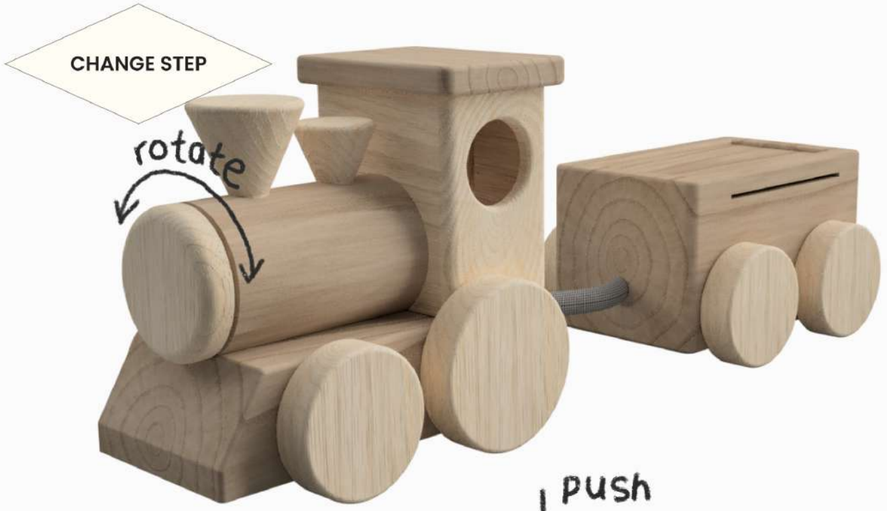
MID-FI PROTOTYPE

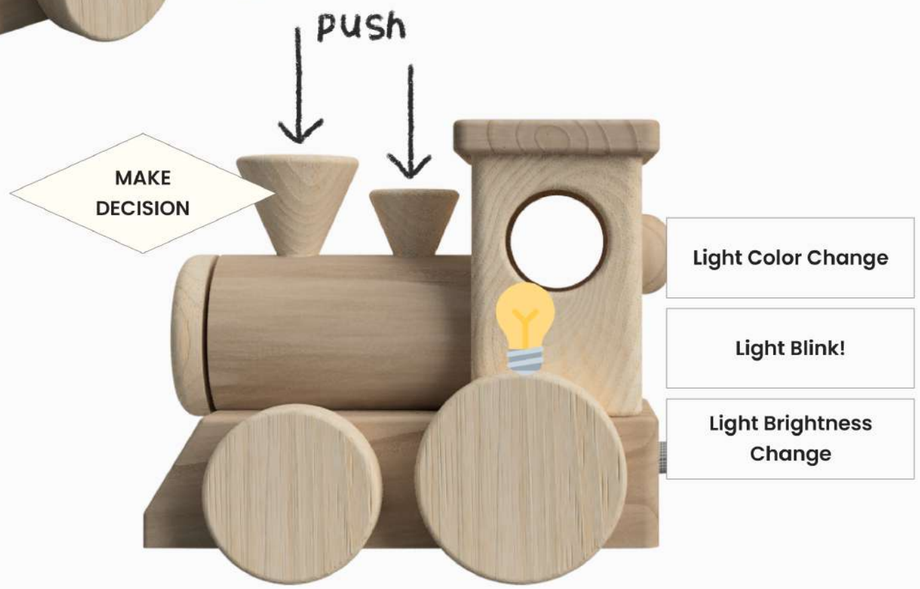
The product is designed in the form of a train, which best encapsulates various physical actions,
and it carries the following concept, **“Let’s get ready for a visual thinking journey with your art adventure buddy!”**

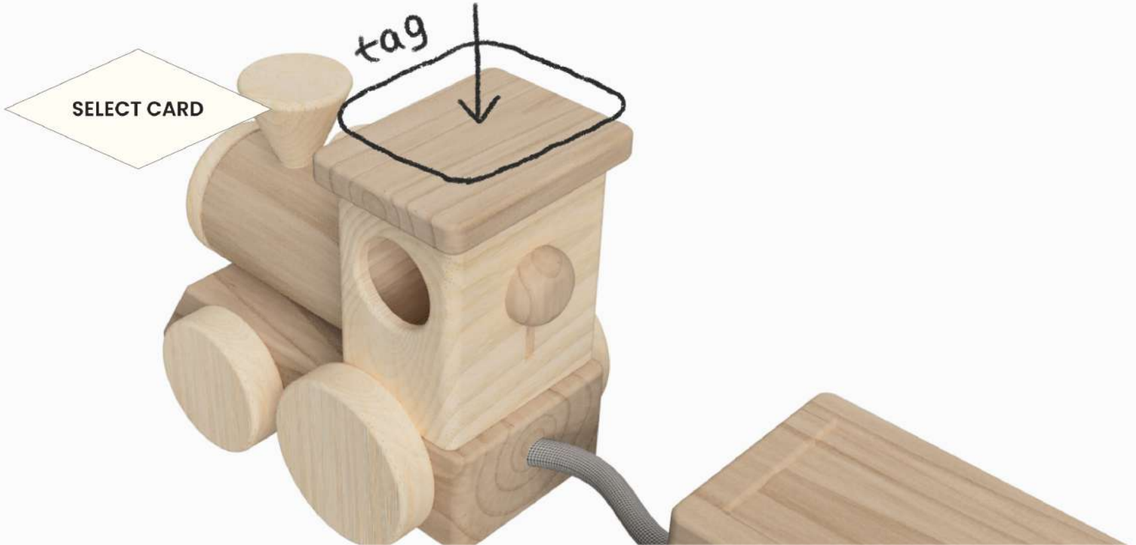


MID-FI PROTOTYPE

PHYSICAL ACTIONS

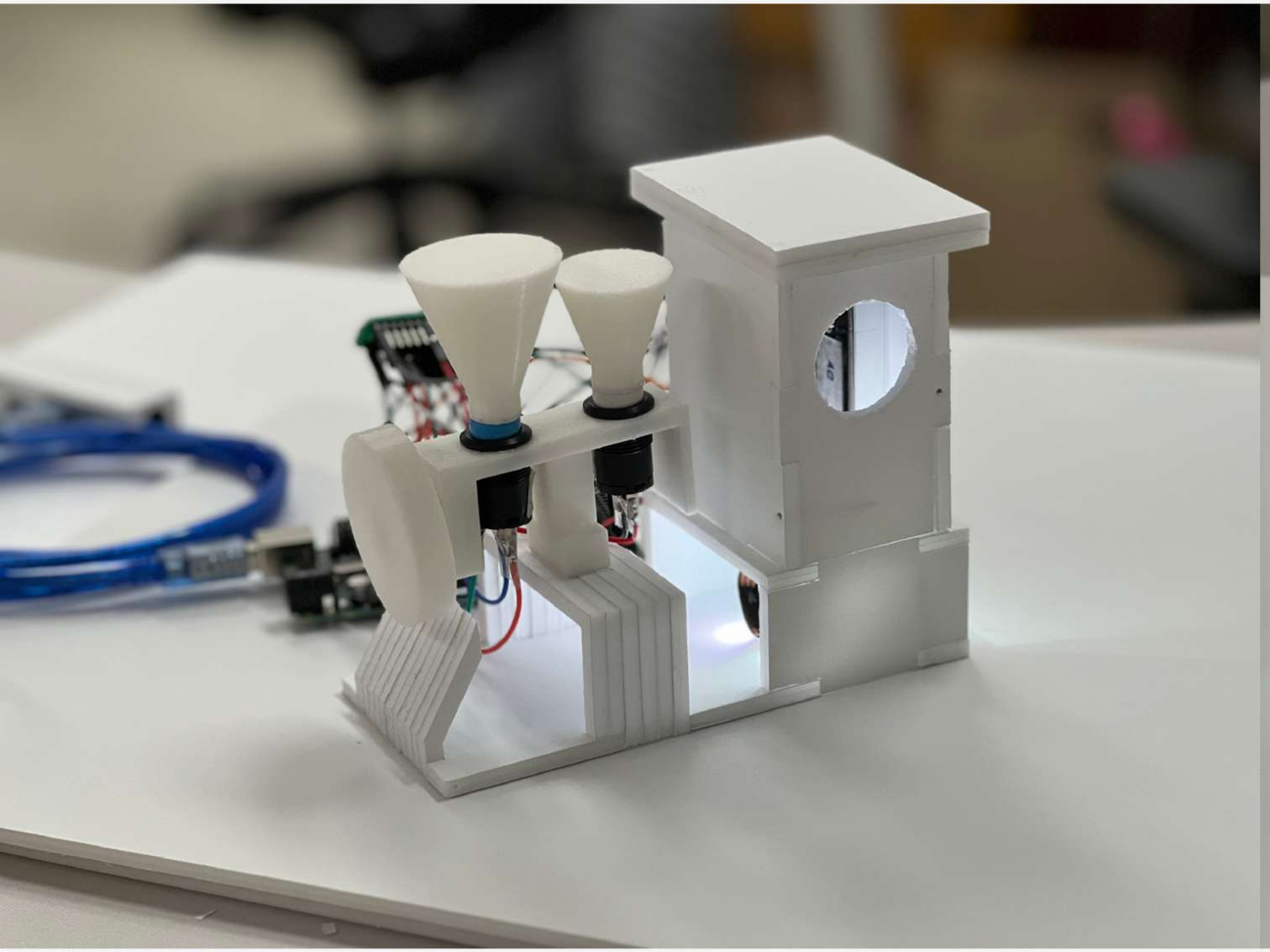


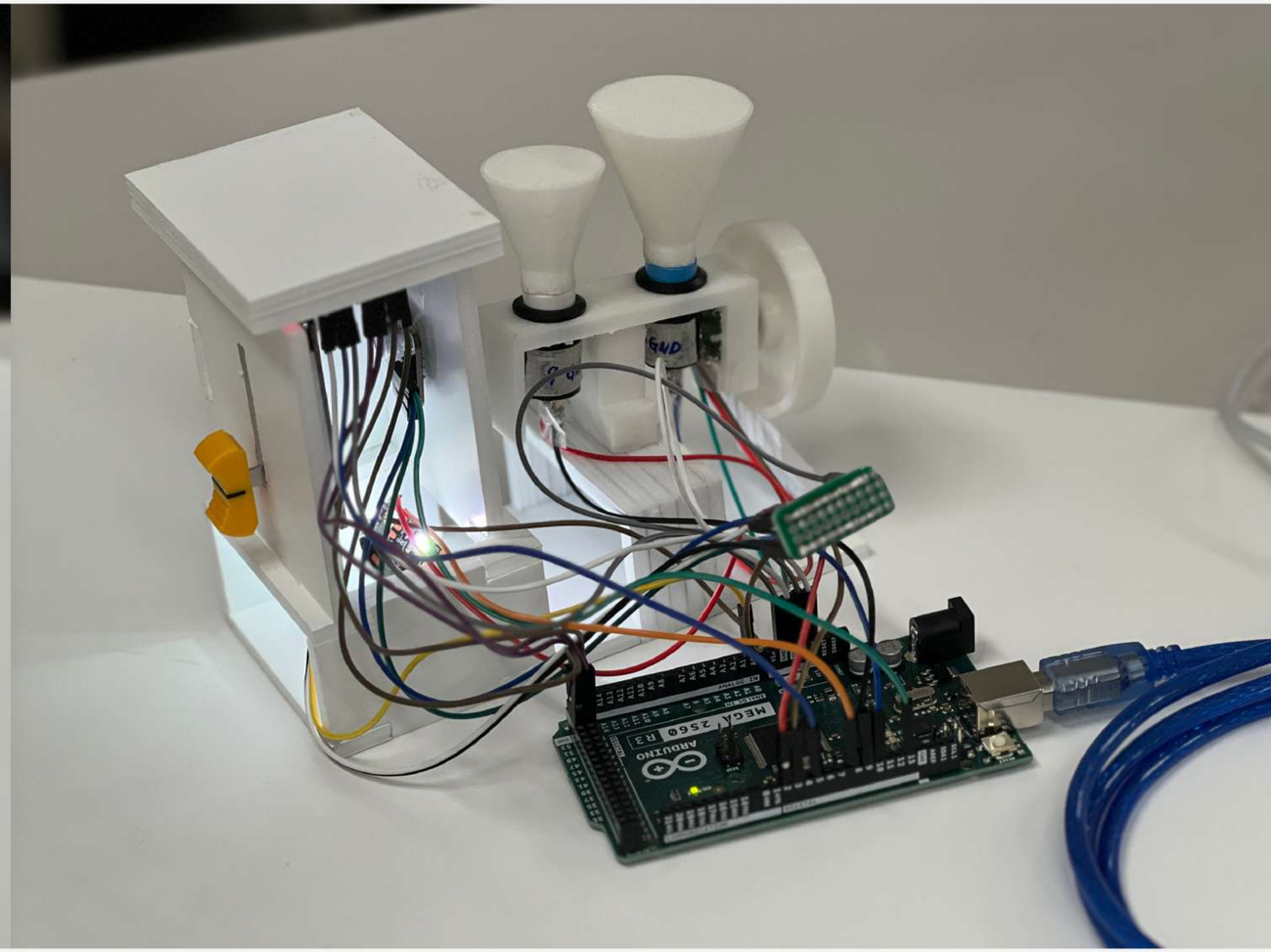




MID-FI PROTOTYPE

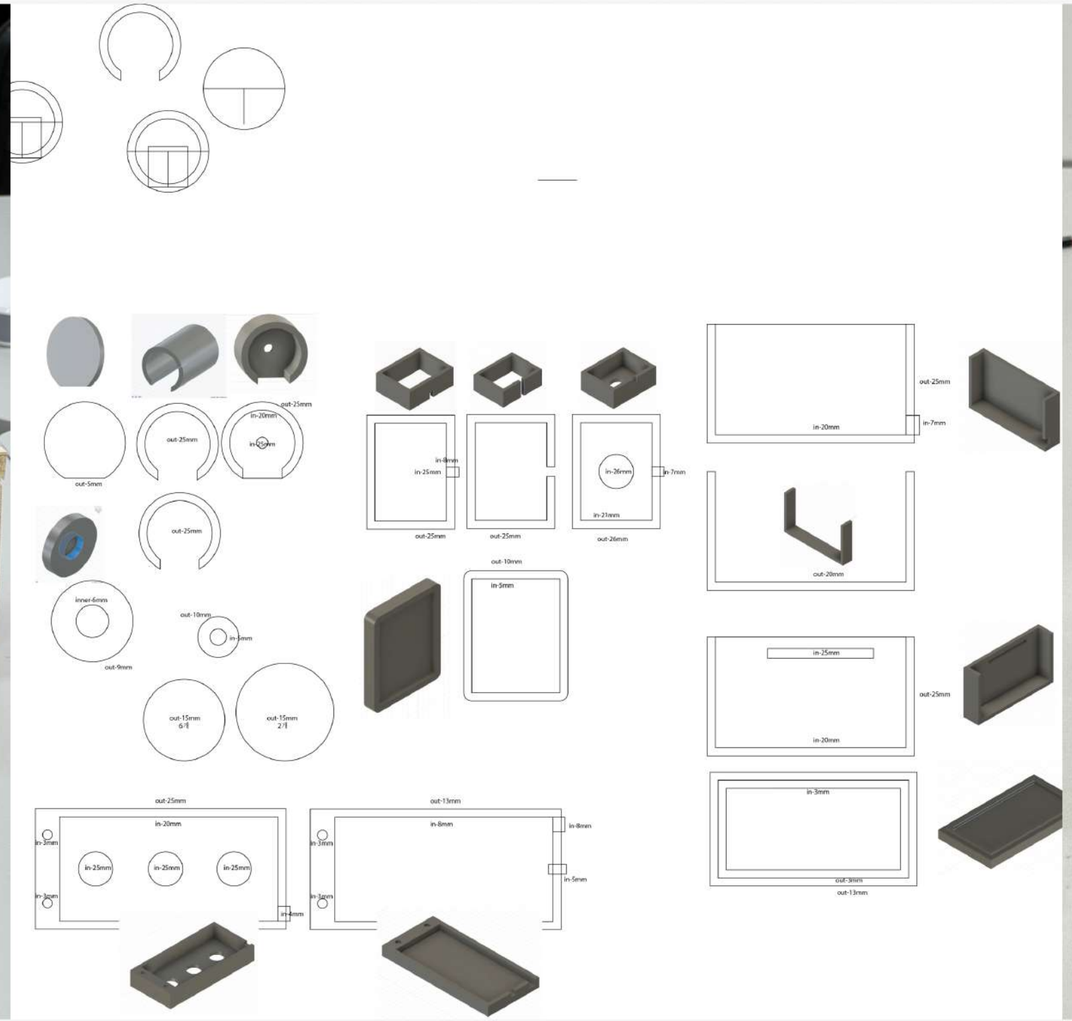
Confirmed circuit design with full working prototype.

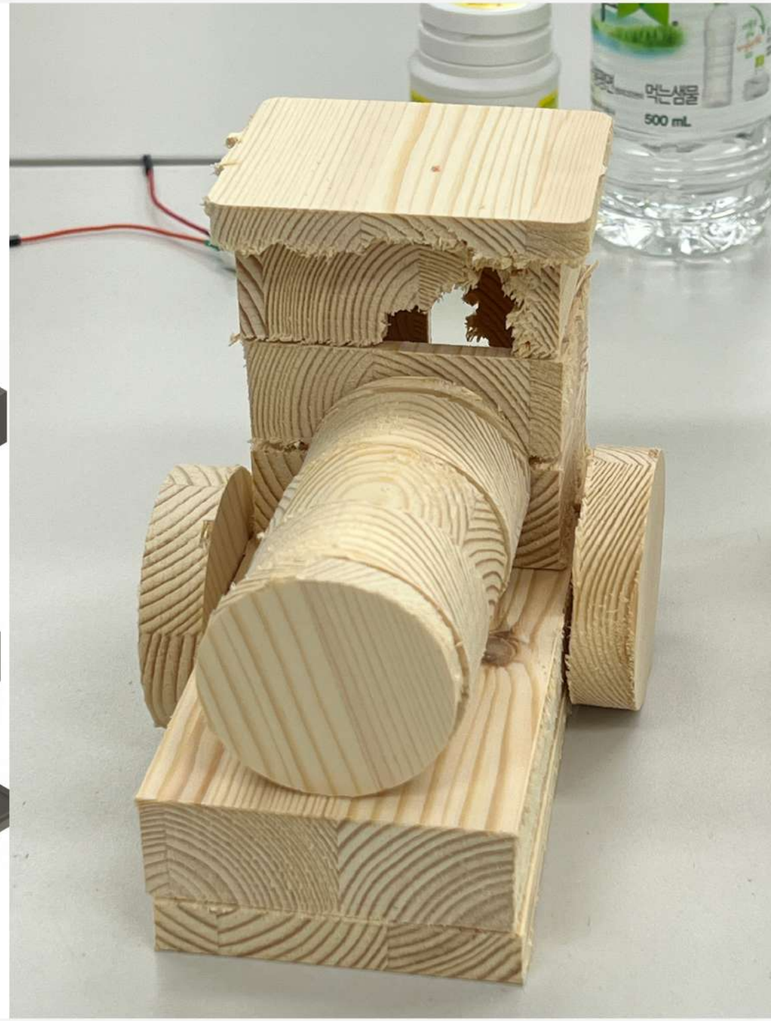




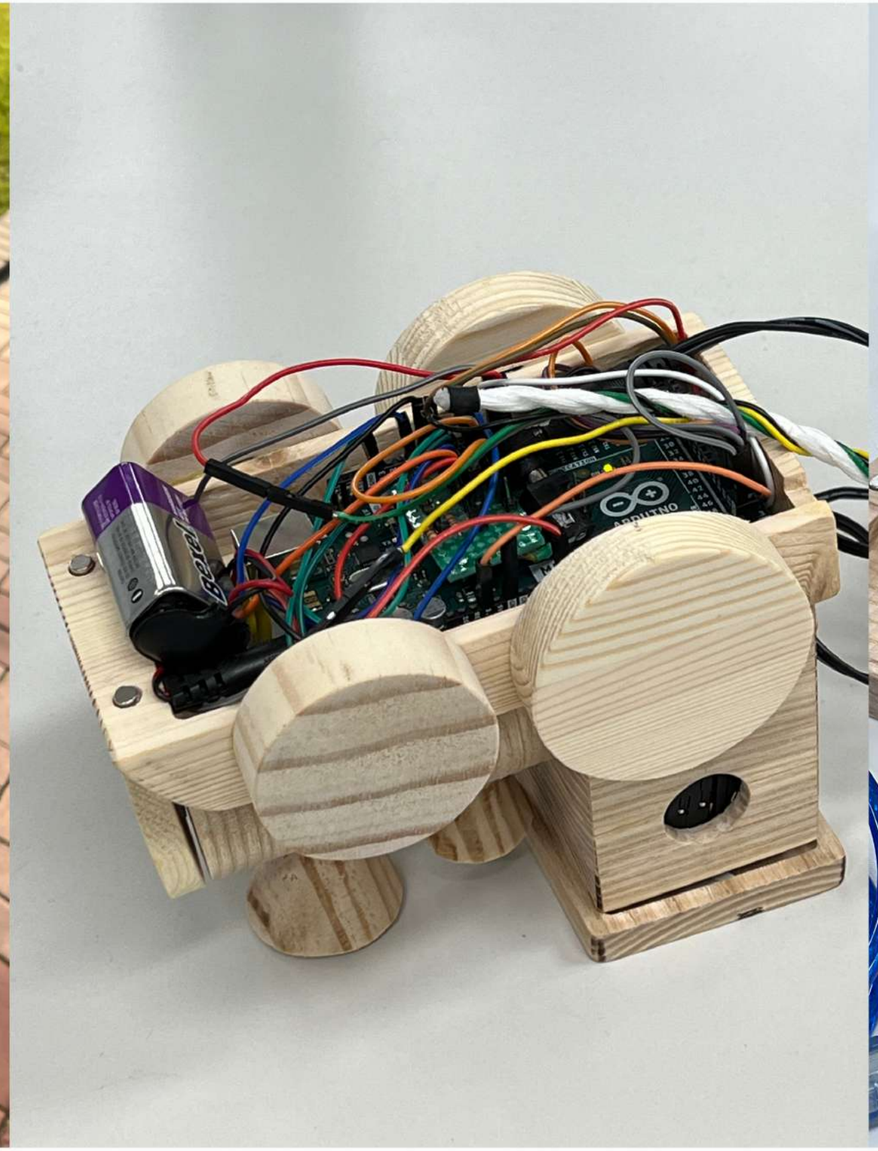
HIGH-FI PROTOTYPE

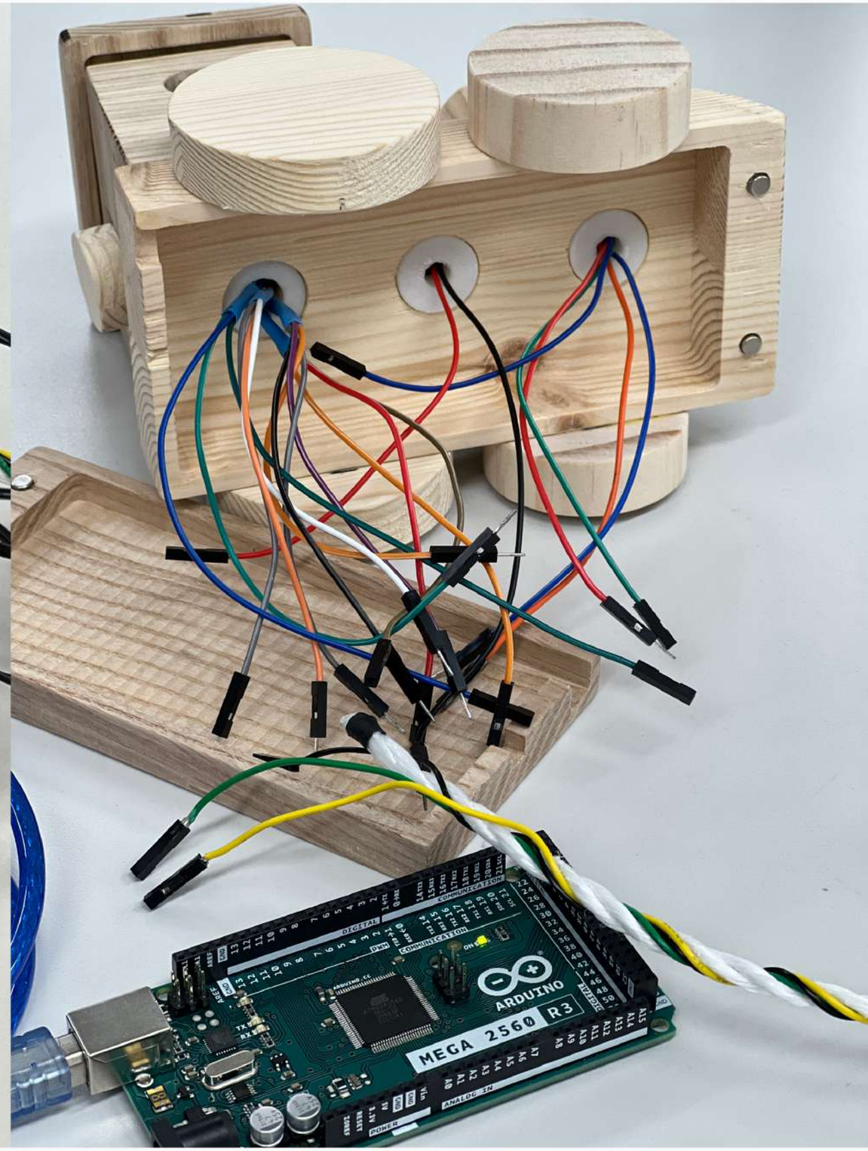
Verified and modified the CNC design with testing wood.





FINAL PRODUCT





FINAL PRODUCT

Click here to see a demo!

FINAL PRODUCT