

TOYS+ GAMES

"NATURE OF THE GAME"

IOWA STATE UNIVERSITY
Extension and Outreach

IOWA STATE
UNIVERSITY
College of Design

REIMAN
GARDENS
IOWA STATE UNIVERSITY

Scavenger Hunt

INSPIRED BY “I SPY/Scavenger Hunt”



Biomes

Sonoran Desert
Great Smoky Mountains
Florida Everglades
Midwestern Prairie
High Plains Alpine

The goal of the scavenger hunt is for the individual to explore different Biomes in the United States and learn about the plants and animals that live within those biomes.



Great Barrier Reef



The Sonoran Desert

North American desert which covers large parts of the Southwestern United States in Arizona and California and of Northwestern Mexico in Sonora, Baja California, and Baja California Sur.



MORPHING MORPHOLOGY

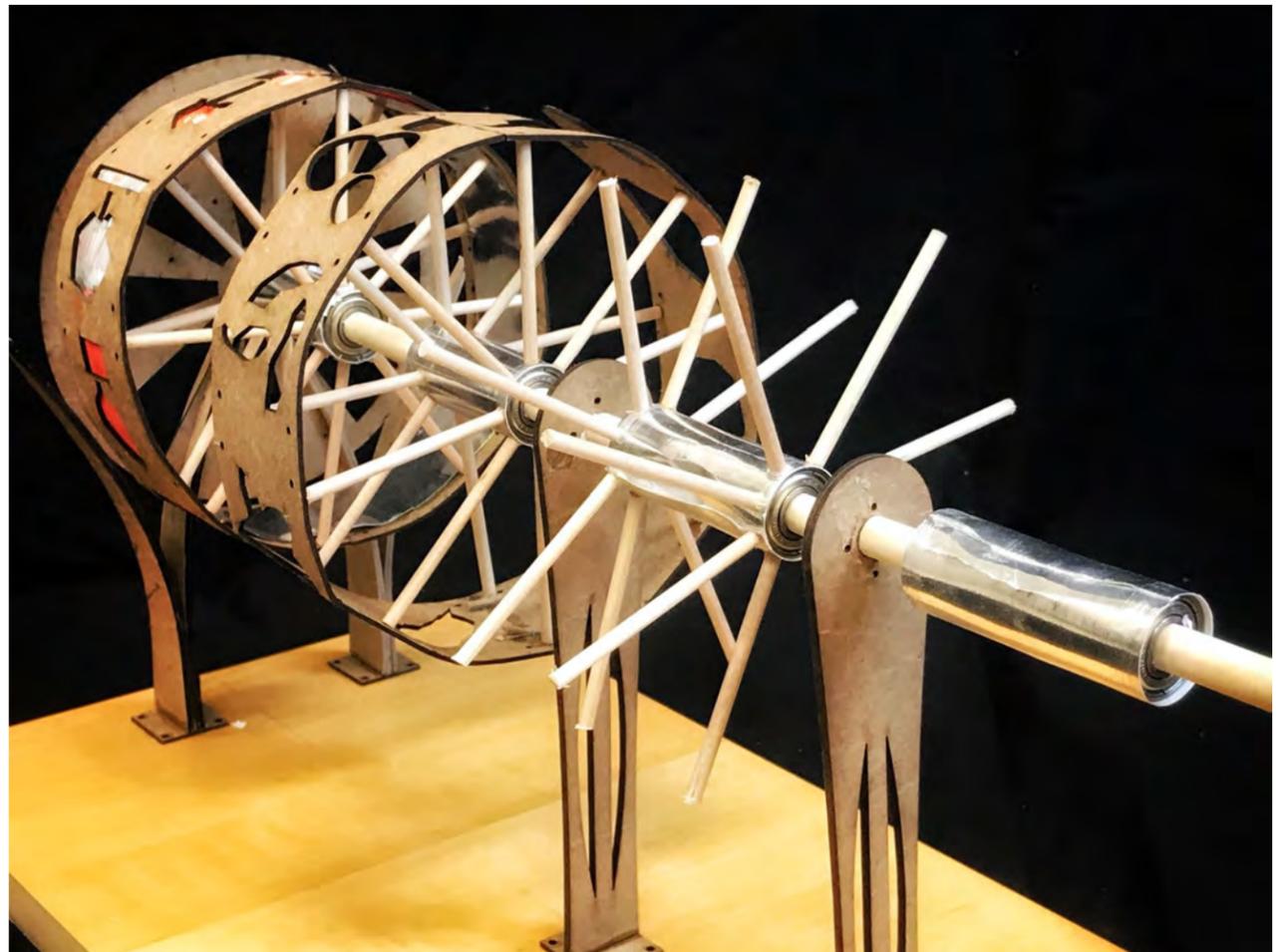
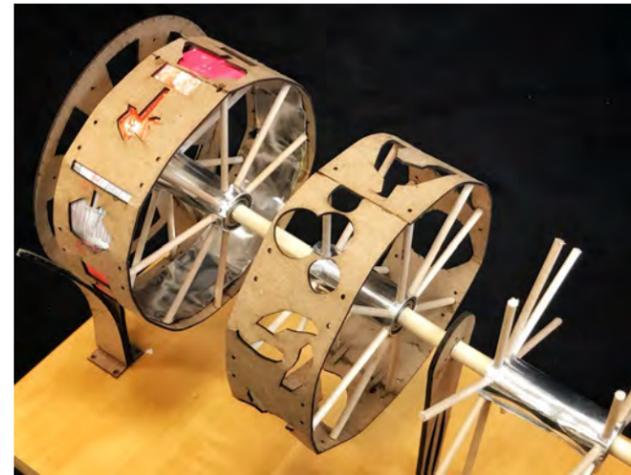
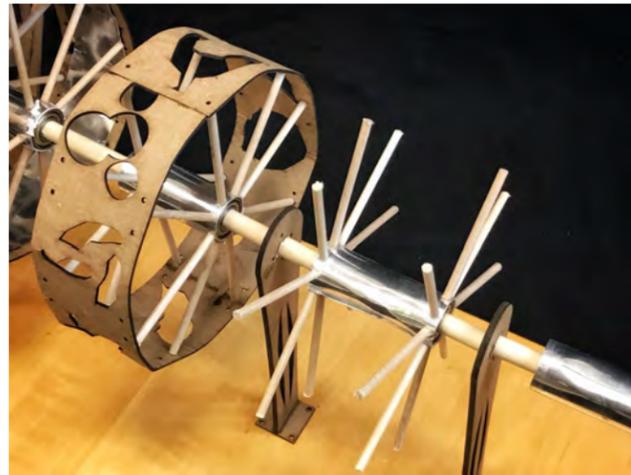
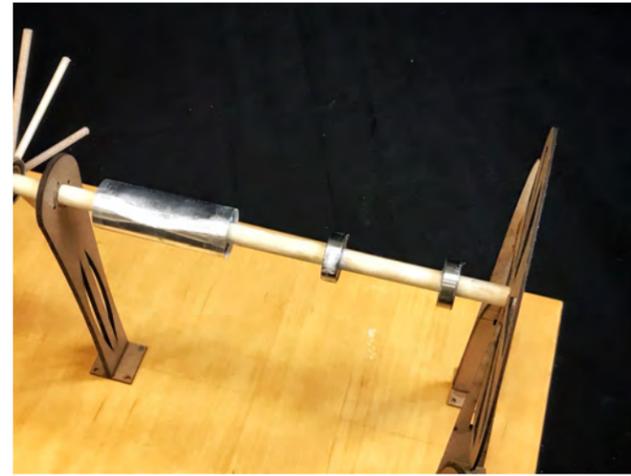
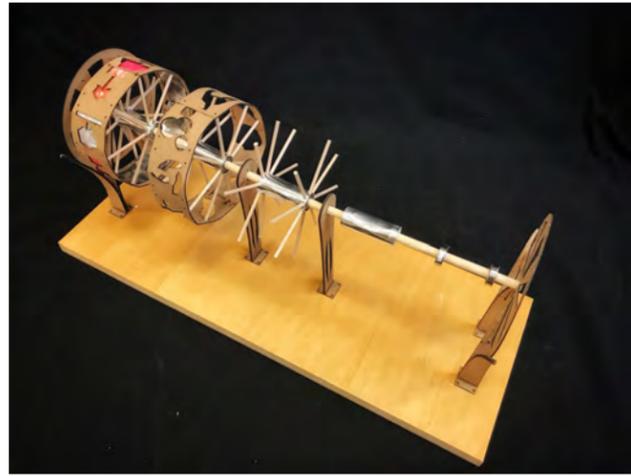
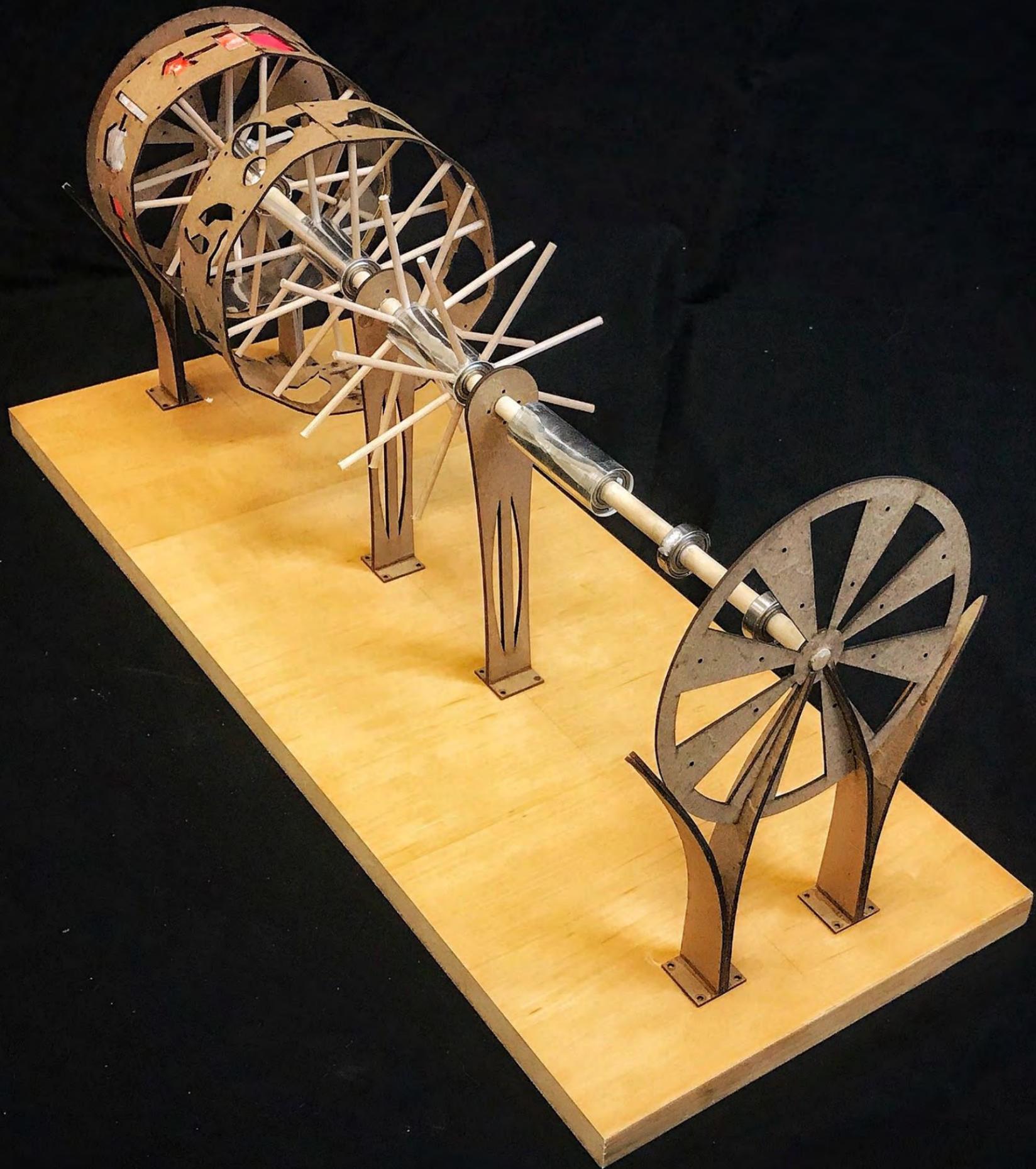
INSPIRED BY "cryptex"



Inspired by a cryptex, or even just your common bike lock, the morphing morphology piece intends on allowing visitors to match the components of plant morphology.

There are five wheels which each one containing a different element, tree range, leaf, flower, seed and overall tree/name. Each wheel has eight images that align by color and plant species. The wheels spin and different colored acrylic allows the user to know they have the right combination. The game intends on teaching anyone who plays what parts make up eight distinct yet common trees in North America, these trees are bur oak, cottonwood, eastern white pine, flowering dogwood, palo verde, sabal palmetto, sugar maple and tulip poplar





PHOTOSYNTHESIZE

INSPIRED BY “Balance Ball”



Photosynthesize is inspired by balance ball, a team based game where the strategy is to work together to pivot a ball on a platform ultimately trying to balance the ball in the designated holes.

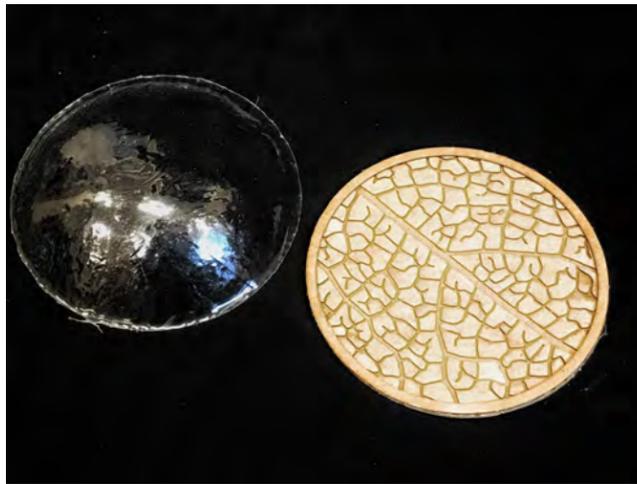
In Photosynthesize, we incorporate a learning curve to help educate the user on the six required elements to complete the cycle of photosynthesis. These elements include carbon dioxide, water, sunlight, chlorophyll, oxygen, and glucose. To complete the cycle in Photosynthesize, you must balance the ball and maneuver through an organic maze to reach all six checkpoints of which are marked with a different element. This maze form is inspired by the path of the veins of a red maple tree leaf viewed at a microscopic level. The red maple was chosen due to its existence nationwide making it a very recognizable tree.





TESTING 10 DEGREE
TILT...
WORKS!

ACRYLIC COVER



FOOD WEB CHESS

INSPIRED BY "CHESS"

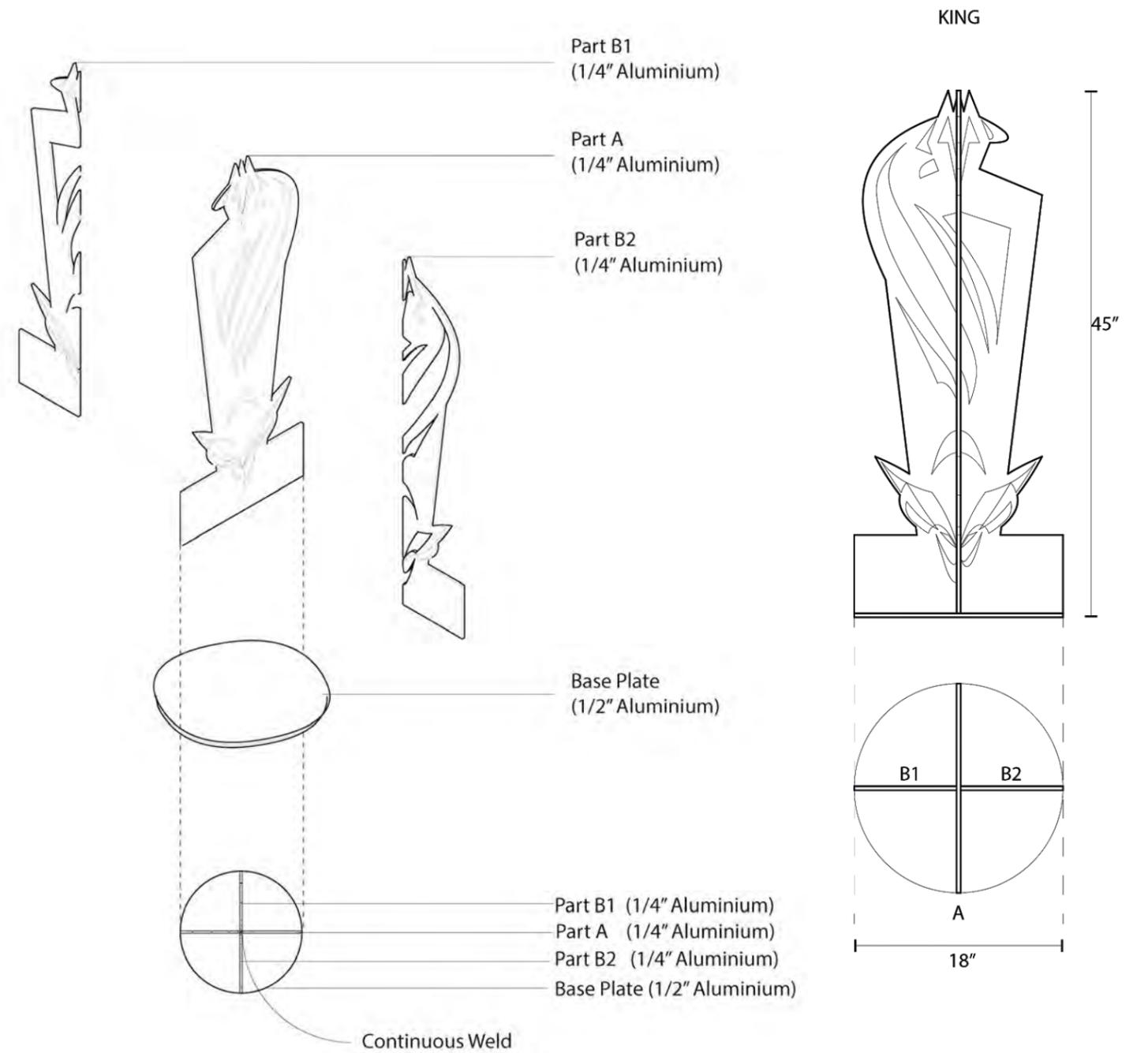


Chess has been a game since ancient times and has crossed borders in being one of the few first international games. This version of chess includes a twist which follows that the pieces represent animals from the different parts of the food chain. Once the game starts however, one goes through multiple food chains and thereby creates a food web.

King - Grey Fox
Queen - Red Tailed Hawk
Bishop - Painted Turtle
Knight - Praying Mantis
Rook - Stink Bug
Pawn - Dandelions, Clover



FABRICATION METHOD 1



NOTE:
-CUT SLOTS ON BASE PLATES TO GUIDE SIDE A, B1 & B2.

Cause & Effect

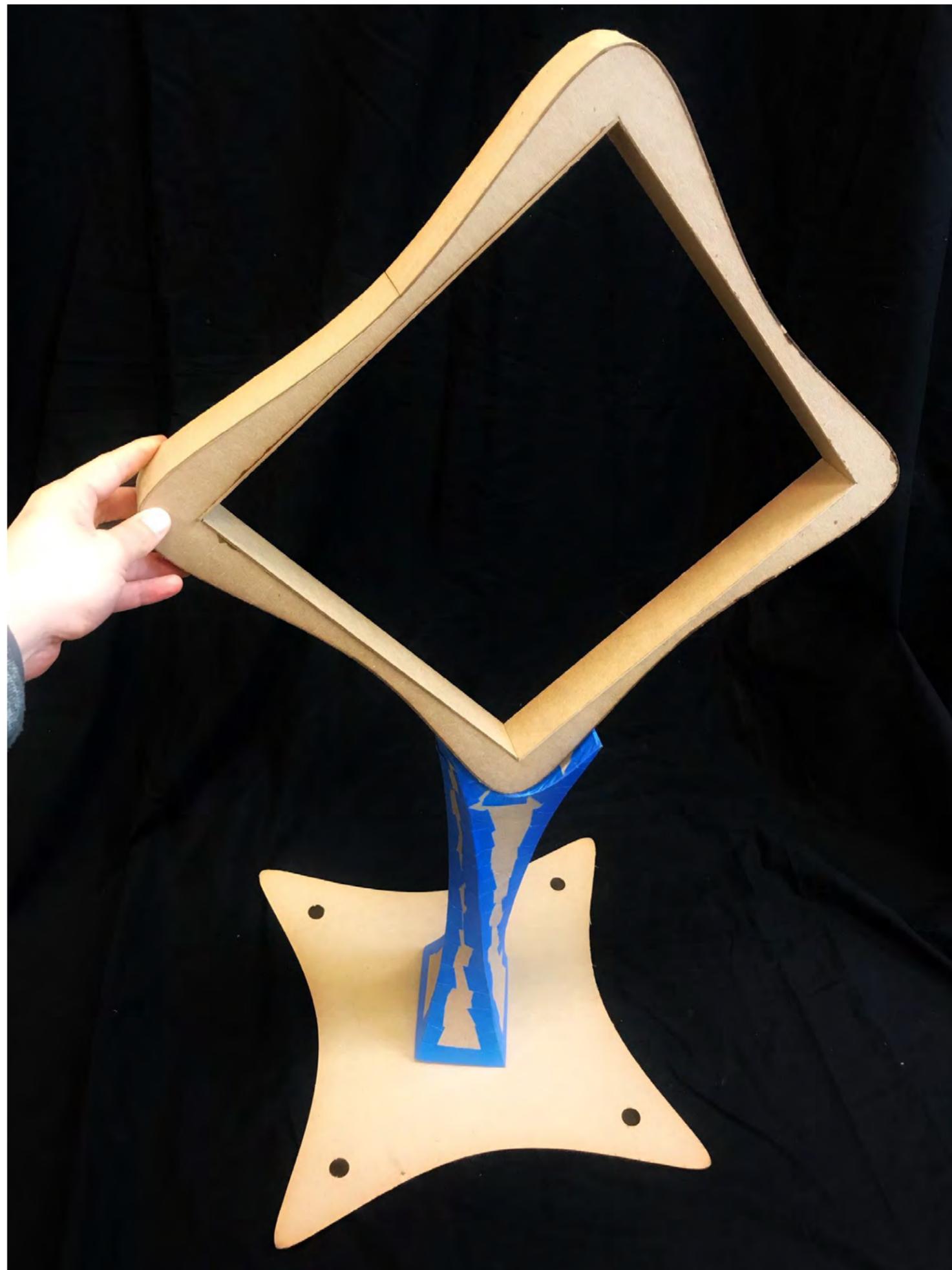
INSPIRED BY "Sliding Tile Puzzles"



Tile puzzles are often used in the form of small hand held mechanisms that usually depict an image, phrase, or ordered number set when completed. The puzzle pieces side from side and are usually contained within the frame of the device.

Our abstraction of the sliding tile puzzle would draw connections to different biomes and their biggest threats. The puzzles would be sized up and have different difficulty levels for different ages of users. Making the puzzles double sided gives the cause and effect of the game. If one side is completed, the other side is scrambled. This way when one biome is fully visible, its threat is diminished. Thus teaching the user that more of a threatening factor yields less of its corresponding biome and vice versa.





CONSEQUENCE

INSPIRED BY "KERPLUNK"

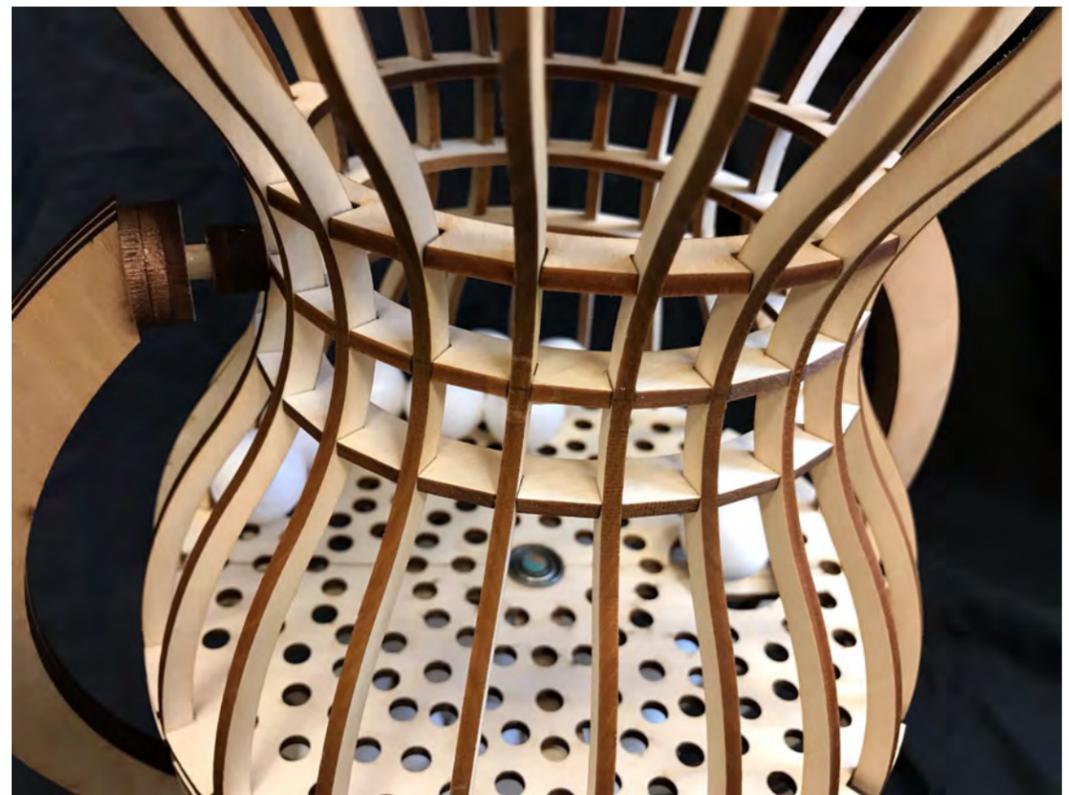
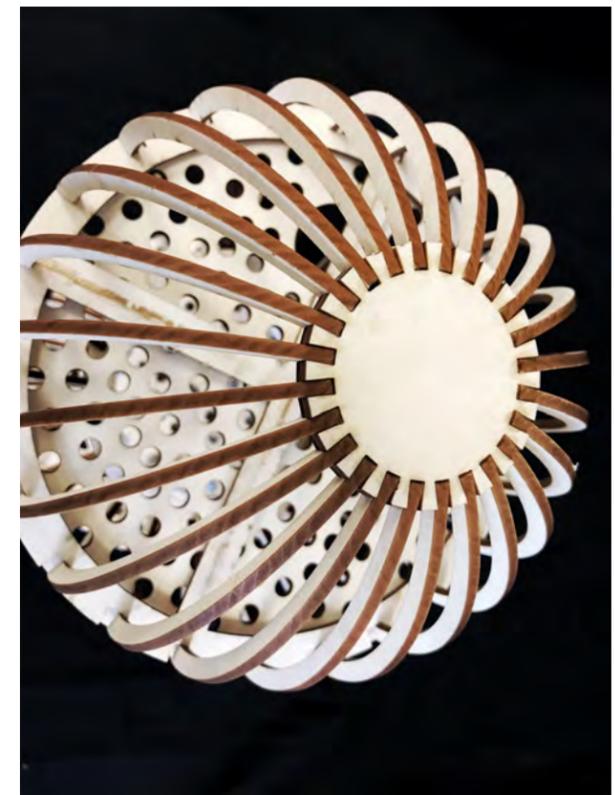


Consequence is a representation of human impact on the environment. The balls have relief patterns of endangered plant species while the polls of the game have engraved negative human actions. As the individual removes each poll the balls begin to tumble down. The consequence of human activity in an environment results in the destruction of the ecosystem.





ROTATION SEQUENCE



DETAIL SHOTS.

I is for Invasion

INSPIRED BY PANDEMIC & FLASH POINT

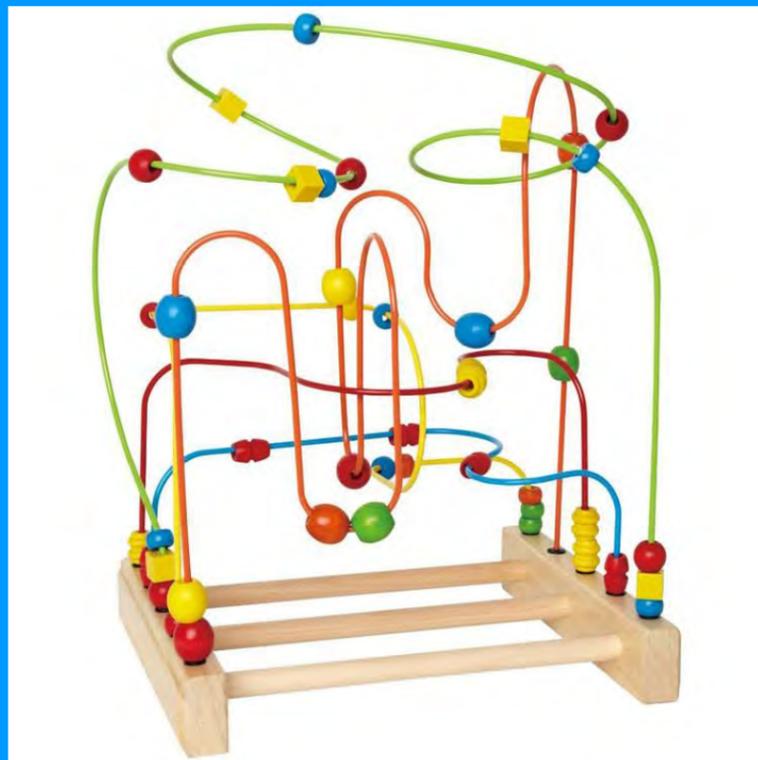
Learning goals of *I is for Invasive*:

- Invasive species and their characters
- Solutions to curing severe geological “outbreaks”
- Fun and complicated strategy games



“BEEs” Maze

INSPIRED BY “Bead Mazes”



Bead mazes are commonly found in waiting areas like doctors offices. They offer simple amusement to children as they push small beads around twisted and warped metal rods. We have adapted this simple toy into a much larger and educational piece. The BEEd maze will use the overarching theme of bees to teach about pollination while maintaining its true identity as a toy. The warped poles will line up to form a flower from a certain vantage point. Bees and other insects will be pushed around the flower as they “pollinate”. The form of the BEEs maze will be sized to be able to be used by all ages.



Project Team

PROJECT TEAM |



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