ANTHROPOCENE

CAPSTONE 2 // SPRING 2023

INTRODUCTION

Climate change has been a steadily worsening concern for decades. With polar ice caps melting, seas rising, and weather worsening, the state of the climate is more pressing than ever. However, many people have a poor grasp on what causes climate change, how it can be slowed, and the effects it could have on the Earth and our society.

According to a 2016 study by Pew Research, **less than half of American adults** believe climate change is primarily caused by human actions, as opposed to **nearly 100% of climate scientists.**

Board games have long been used to teach difficult concepts, particularly in scenarios where different actions affect a situation in complex ways...

...so why are there so few games about climate change?

USER RESEARCH

- The winner of a good game should be determined by strategy, not luck
- Competitive games are more generally appealing than collaborative ones
- Games should be easy to pick up but more challenging to master strategy
- Games should have a progression, instead of forcing players to do the same things over and over again

"[Games are] fun when they are multi-layered, such that there is an overall goal, but it can be accomplished in a number of ways and the player has to decide which way to pursue."

- Mark

climate & education

- Educational games can be "a bit of a turn-off," but if done correctly can actually increase enjoyment
- Games marketed explicitly as educational can dissuade people looking for a casual game night

"Education in games should increase enjoyment rather than feel like it's checking a box."

- Ben

MARKET RESEARCH

Name	Pandemic	Wingspan	Codenames	Puerto Rico
Number of Players	2-4	1-5	2-8+	2-5
Gameplay Type	Collaborative	Ind. Competitive	Team Competitive	Ind. Competitive
Theme	Stopping a plague	Collecting birds	Guessing word clues	Collecting resources
Amazon Rating	4.8/5	4.8/5	4.8/5	4.7/5
Positive Review	Difficult but fun	Easy and replayable	Fun family game	Strategic and unique
Negative Review	Confusing	Hard to read cards	Too simple	Deals with colonialism
Time to Play	45 minutes	40-70 minutes	15 minutes	90 minutes
Ease of Learning	Medium	Easy	Easy	Medium

PROBLEM STATEMENTS

How might we gamify climate change education?

How might we create a set of game rules that integrate enough terest a variety of users without to intimidate?

Aesthetically appealing, both visually and tactilely; clear indication of what pieces accomplish what.

Educational aspects should be woven in with enough subtlety to make it an enjoyable game.

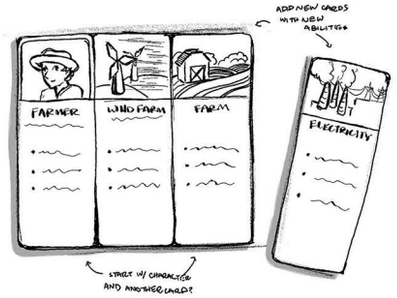
The stakes of the game should be such that players are invested in winning.

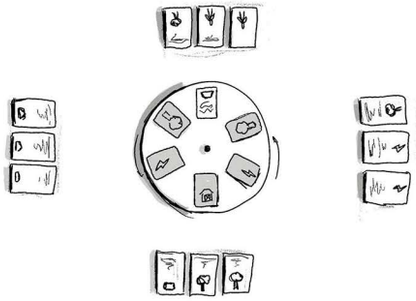
Randomness or RNG should be a minimal factor in who wins.

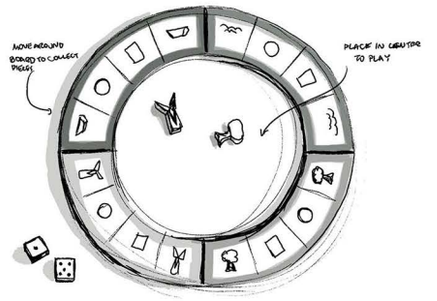
Complex, but not too complex; rules should be short but allow for multiple strategies.

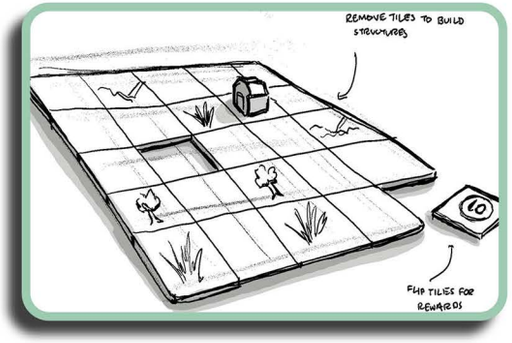
IDEATION

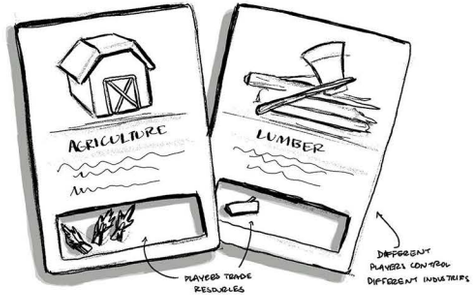
I sketched out fifteen different game concepts exploring mechanics and themes for the game.

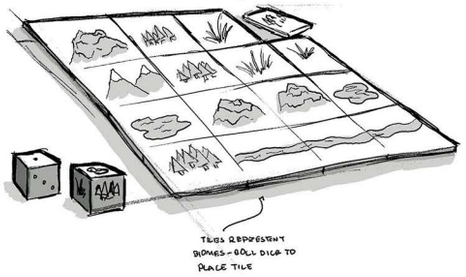


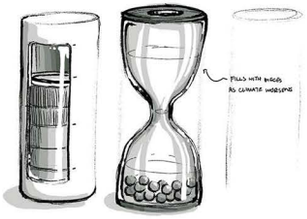


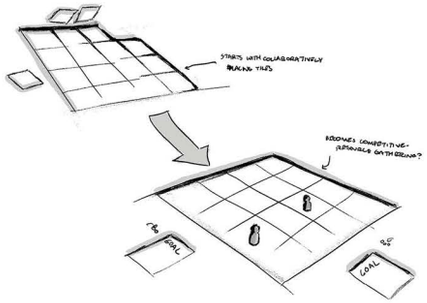


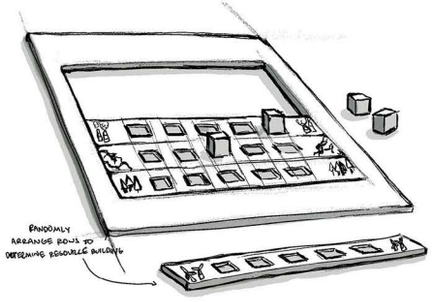


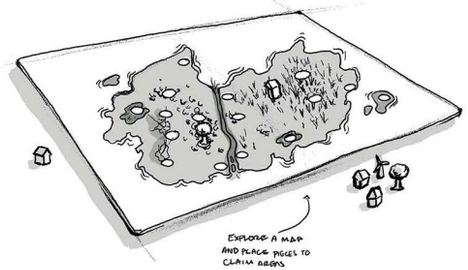


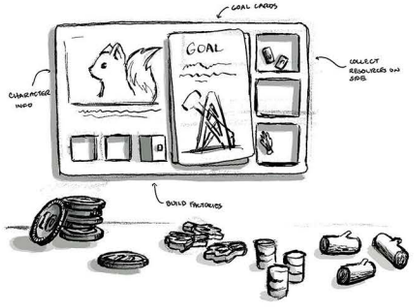


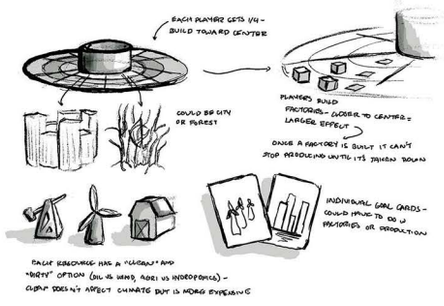












PROTOTYPING

My prototype consisted of easily modifiable printed paper pieces, which were used to conduct a series of playtesting sessions.

Key components:

- Randomized biome tiles (water, plains, forests, and mountains)
- Individual player components, including placeable structures and worker pieces ("meeples"), whose point values and purposes were modified throughout testing
- A damage counter system, including a die, a counter, and a deck of consequence cards, which tracks the environmental cost of players' actions
- "Developed" and "preserved" markers, denoting tile use
- The ruleset, which was modified and updated throughout testing to ensure fair gameplay, and which after testing included two different rulesets, one for educational settings and one for general entertainment

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FINAL PRODUCT

Biome Tile

Place these tiles to expand the board; develop or preserve them to gain points or space to build.

Worker

Interact with the world through workers, which move across the board completing tasks.

Structure

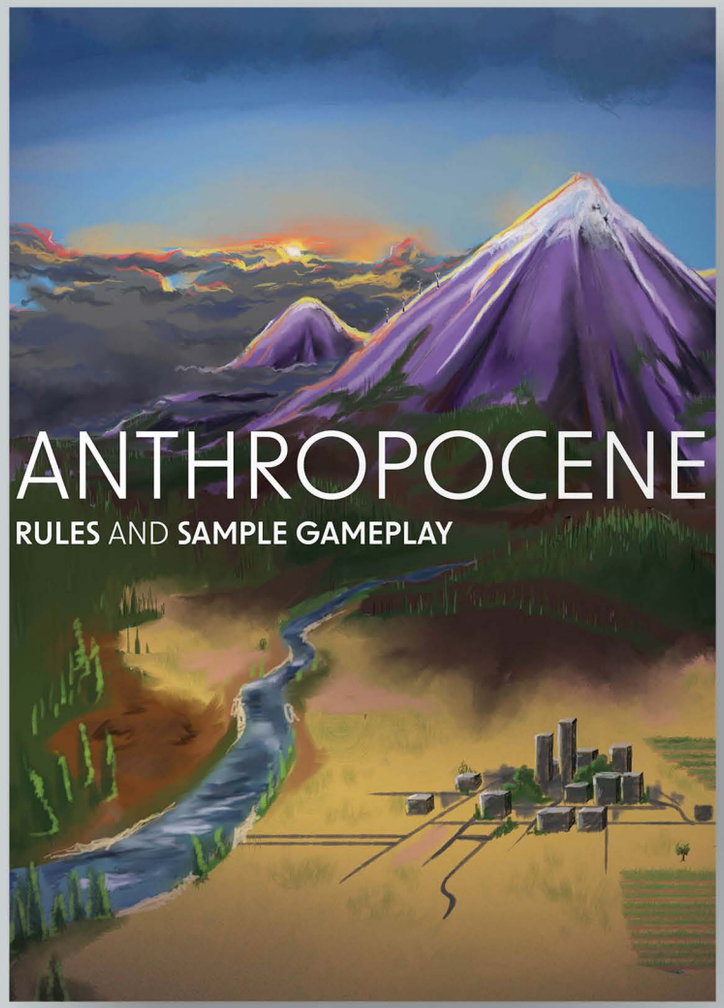
Each player begins with eight structures, which can be built on developed tiles to produce resources.

Resource

A finite number of resources within the game economy can be produced, traded, and used to build cities.

Climate Counter

Certain actions require rolling the climate die, which has a 2/3 chance of contributing to the counter. When it fills, the person responsible draws a consequence card.



sometime in the near future...

A new continent has been discovered, and with populations rising around the world, the world's governments have sent task forces to colonize the new land.

But not everything is as simple as it seems: developing a society comes at a cost, and every move you make to establish your cities affects you, your opponents, and the world around you. Will you save the world around you, or will you risk everything in the name of success?

quick start

game board

This 2x2 tile starts in the middle, and should have some space around it. All workers should be placed on this tile.

structures

Each player should begin with all of their color-coordinated structures in front of them.

communal pieces

preservation and development tokens

These pieces should be grouped by type.

event cards

These cards should be shuffled and placed facedown in a pile.

These tiles should be shuffled and placed facedown in one or more piles.

resource tokens

These pieces should be grouped by type; the number of each token should equal the number of players.

scoreboard

This board should be placed with the round player point counters in the zero row.

counter and die

The counter should begin set at zero.

2
2
1