Thursday, October 20: Brainstorming

We started brainstorming for our board game by throwing out ideas and themes we had thought of over the course of the semester. We all got excited about doing something extremely different, a hybrid of a board game and a physical game. Patrick and Katie were super excited of doing a board game like “Settlers of Catan” but with a twister-esque component to it. Jean then proposed the idea of team based game. The whole group then proposed making a fun 2v2 resource-gaining game in which one person per team is on the twister-esque mat while the other person concentrates on the game board. We tried for about an hour to come up with the physical side of the game but to no avail. We finally decided to scrap the idea for a bit. We realized that we started in the wrong place, it would be way more important to start designing the board aspect of the game before doing the physical side.
We brainstormed further with the idea of making a game centralized around gaining a specific resource to win the game. We came up with the idea of a game where opposing robots attempt to collect resources from the same small planet. We thought of many ideas like a timed game, and we also wanted there to be trade. Trade in fact was what initially sold us the game. It would be a 4v4 game where you could upgrade your robots with resources or fuel your ship which you needed to win the game. We wanted a major aspect of the game to be evolving your robots, and wanted the players to feel connected to their characters as they upgraded them. Finally, we decided to set the game on a grid of around 9 x 9 squares and finished our meeting.
Figure 2. After putting aside the idea of a physical Twister-esque board, we started working with the idea of a grid-like board, evolving characters, timed gameplay, and robots.

Figure 3. Here we started brainstorming new ideas to add to the game to make it more fun to play. We had the idea of moving ore around to keep the game changing, as well as giving players the option to make more robots. Finally, this page also shows the value of ore pieces, which we originally implemented so players would want to cross the map for more valuable ore. This idea was later scrapped for being too confusing.
Friday, October 21:

We started this play-test session by designing a board and game pieces so we could actually play-test what we finally came up with on Thursday. Katie came up with the idea of robot cards in which people can place their fuel and stat points in. We decided that combat would be based on dice rolls. For each combat point in the robot, the player can roll 1 more die. We decided to put the resources at the far corners and to put only a bit of extra resources in the middle. Finally we decided what exactly each ore would be worth: to each different player, the opposite color ore would be extremely more profitable than adjacent colors. We did our first play test and found out many things. Firstly, putting too many resources in the middle is boring, reducing them would make players fight for the resources. Secondly the game got really boring after the first 10 minutes. We made the board smaller to address the slowness of the game. Also, we were concerned with the complexity of the game, keeping track of your robots as well as the worth of a players ores was too much. Finally, we realized we did not trade at all. We decided that we could only weigh the complexity of the game once we had everything colored which would make the game far easier to understand. We would prepare for the play-testing on Wednesday as well as think for more solutions to these problems.

Figure 4. During the 10/21 playtest session, we started clearing up major rules of the game so we could test them out in our first paper prototype.
Wednesday, October 26:

We met today to make sure we could have a presentable version that was decent for the following day. First order of business was to color the board and game pieces.
Because we had a fresh mind from the game (5 days without playing it) we came to realize that the game has a lot of information to grasp; the new colored board helped a bit though.

We still couldn’t come to finish a game, we would just rush the middle of the map, then steal our enemy bases and be left bored and never finishing the game. We were bummed that our game was boring and did not achieve our vision. We tried out many new changes to address this, like sending enemies back to their bases after combat. We tried a base destruction version of the game where the objective was to destroy the enemy base. We tried making the objective to simply get the opposite ore. We also tried changing the map, and simplifying the robots.

We stuck with a couple of things, changing the map layout a bit. We made the bases more spread out and added mailboxes at 4 positions of the map so robots didn’t have to travel all the way back to their base. We also simplified ores, adjacent enemy ores would be worth 2, and opposite would be worth 4. Whichever player to reach 7 first wins. After all these changes we actually finished a game without being utterly bored. We still believe it’s quite complex and slightly boring, but we hope to fix that over the course of the next week. Hopefully we will get some awesome feedback on Thursday!
Thursday, October 27: In-Lab Playtest Session #1

Thursday's playtest went well, the main points we came across was how the players really did not have fun. The game seemed to have no flavor. One of our testers mentioned, "The game was fun, but I have no reason to play it again, I feel like I have seen all the game has to offer." In the end we had a lot of feedback so a chart would probably help explain the issues of our game:

<table>
<thead>
<tr>
<th>What player said</th>
<th>What we plan to respond with</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Perhaps add a more in-depth element, such as defenses, or bringing back bases, would be better.&quot;</td>
<td>Add a way to more easily defend your base also spice the game up somehow...</td>
</tr>
<tr>
<td>The game is slightly over complicated, have you tried using 1 robot?</td>
<td>Try out the game with only 1 robot.</td>
</tr>
<tr>
<td>Some players where behind the entire game, they could never get back up.</td>
<td>We will have to balance capacity so that ganging up on a player is not a viable strategy.</td>
</tr>
<tr>
<td>Offense seemed to have a great advantage, try making defense win on tie rolls.</td>
<td>We will surely try this out.</td>
</tr>
<tr>
<td>The game needs more player interaction, trading is fun, but it seemed like nobody was willing to do it.</td>
<td>This was a very big problem, the game is a lot about trading, but also a lot about not helping other players. We need to balance this and add incentive to trading.</td>
</tr>
<tr>
<td>Robots on an alien planet is very un-original</td>
<td>Yes it is, we have to change the story although we will not make it our top priority for next week's playtest. We should still try keep the &quot;pikmin&quot; idea in mind, it might inspire us with other parts of the game.</td>
</tr>
</tbody>
</table>
The game is extremely bland, unoriginal and just plain boring. Well at least it’s a game! Our next week we will try to slowly build a more fun game while also balancing all the game play, maybe change the board setup.

Wasn't the game about trading for resources? Yes, our main goal is to have a game where players are against each other but also want to trade.

So our objectives for this week are to fulfill all which we mentioned in the graph.

**Online Ratings for Playtest #1:**

<table>
<thead>
<tr>
<th></th>
<th>Formal Elements</th>
<th>Dramatic Elements</th>
<th>Dynamic Elements</th>
<th>Presentation &amp; Accessibility</th>
<th>Originality</th>
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<tr>
<td>Player #1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Player #2</td>
<td>2</td>
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<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Player #3</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Player #4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Average</td>
<td>2.75</td>
<td>3.5</td>
<td>2.75</td>
<td>3.5</td>
<td>3.25</td>
</tr>
</tbody>
</table>

**Wednesday, November 2**

During this meeting, we basically play-tested for 4 hours straight trying out different and radically new ideas.

What we wanted to keep:

- The stats: we felt that combat/speed/capacity were great
- The board size
- 4 types of resources used to build a ship

Another major complaint from Thursday was that the game needed more player interaction (trading, battling, co-op). We decided we needed to add another element to the game entirely that would contrast with the player’s main
objective but still add to their overall goal of winning the game. During the playtest session on November 2\textsuperscript{nd}, we considered the following:

- Opening a door: we considered having players work together to stand in a certain pattern to open a door and get a powerup or win the game.
- “Hot Potato” resource: we considered a new type of resource, that would be needed to win. There would be only one of this resource on the board, so the players would have to fight for it in order to win.
- Reactor core: similar to the “hot potato” concept, we considered a reactor core on the planet which would eventually destroy the planet. If a player picked it up, it would count for a “wild card” towards the completion of the player’s ship, but it wasn’t mandatory for winning the game.

We started by proposing changes to parts of the game, without changing the entire game (see Figure 7). A lot of the proposed changes here never made it into the final game, but during the playtest session on the 2\textsuperscript{nd} we played through many different revisions of the game with these ideas. After multiple play-

*Figure 7. Here, we started brainstorming changes to the game.*
throughs, the game was still confusing, and the newest rules we had made in an effort to balance the game were not working well together.

At this point we started making drastic changes to gameplay. We would come up with a “radical” idea to change the entire game, with rules that fit together well, and then we would set a timer and play out the new style of gameplay. The following table shows our results from such playtests:

<table>
<thead>
<tr>
<th>Radical Idea # and general rules</th>
<th>What we didn’t like</th>
<th>What made it into the game</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Radical Idea #1:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Black resources are scattered around the board, and can only be used on robots</td>
<td>• Needs more balancing</td>
<td>• Black pieces scattered on the board</td>
</tr>
<tr>
<td>• Players need two of each color to win (regardless of position on board)</td>
<td>• Took too little time</td>
<td>• Players need a set # of each color to win</td>
</tr>
<tr>
<td>• Becomes an attack-fest (since there are less resources than needed)</td>
<td>• Minimal player interaction</td>
<td>• Less resources on board than needed for all players to win</td>
</tr>
<tr>
<td><strong>Radical Idea #2:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Many different spaceship recipes, each player gets one at the beginning of the game which only he/she can view</td>
<td>• It took too long for players to get items back to their base to trade</td>
<td>• Individual recipes</td>
</tr>
<tr>
<td>• Trade and battle for pieces</td>
<td>• Putting the wild piece on the bottom of the ore in the middle seemed like it gave an advantage to whomever happened to mine it first (and it was a game of waiting for others to mine so you could get the wild piece)</td>
<td>• More recipes than players so there are many different ways to play</td>
</tr>
<tr>
<td>• Trade and complete spaceship from “stockpile” left at your base</td>
<td>• The lost piece going to the center of the board</td>
<td>• Trade and battling for pieces</td>
</tr>
<tr>
<td>• Black pieces are stat points, colored pieces are ship parts</td>
<td></td>
<td>• Colored and black pieces are different and have different purposes</td>
</tr>
<tr>
<td>• Last piece on bottom of the center pile is a wild piece, can be any color, but must be the last piece you place on your spaceship</td>
<td></td>
<td>• We kept the “wild piece” but implemented it in a different way</td>
</tr>
<tr>
<td>• If ore isn’t set up at the beginning of</td>
<td></td>
<td>• Rolling dice to determine new ore location</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Wildcard pops out first in</td>
</tr>
</tbody>
</table>
the game, you could have spaces 1-6 on the board and roll a die on each turn to determine where new ore is placed
- If you lose in combat, you lose one of anything on that robot (user decides), unless you have the wildcard (which pops out first)
- If you lose a piece and winner is at full capacity, it goes to the middle of the board

seemed interesting but we didn’t use it in the end

combat, otherwise the loser decides what to give up

---

**Radical Idea #3:**

- Items start out in a circular shape around the board, with the players in the middle (see below)

![Circular board layout](image)

- Less items in a recipe (6)
- 4 robots instead of 8
- No stockpile, hold extra pieces on your robot
- “Capacity” is how many things you can mine in one turn
- Attack & trade between individual robots at the beginning of each turn (you don’t have to wait for the item to get back to your base to trade it since you don’t have a base)
- At beginning of each turn, roll 2 die to determine coordinates of a new location

- Recipes need balancing
- Took 10 minutes
- Minimal player interaction
- Too few items in a recipe might not drive player interaction

- Board beginning setup looks circular
- 4 robots instead of 8
- No stockpile, hold extra pieces on your robot and capacity is how much you can pick up in a turn
- Attack and trade between robots
- No base
- Roll to determine coordinates of new ore location
- Ore can land anywhere
- 1st player to get back to center wins (later we changed it to the center 9 instead of center tile)
Ore placement (if >81, nothing spawns)
- Ore can land anywhere on board (even on players, in which case the player automatically has it)
- 1st player to get back to center tile with a full ship wins

**Radical Idea #4:**
- Ore from the base on your left counts for capacity
- Ore from the base on your right counts for combat
- Ore from the base across from you counts for speed
- All ore can go towards your spaceship
- Fuel core – after someone picks it up, it ends the game in 3 turns, HOWEVER it’s worth a lot towards the completion of a ship

- During the playtest, Pat got angry and picked up the fuel core right away, ending the game way too soon
- Designating ore from different places as counting for different things is still too confusing

- The one main thing we took away from this Radical Idea was the fuel core (later, the meteorite)

Finally, we decided on a game with the following *major* changes:
- Ore would drop based on a dice roll after each player’s turn
- 4 robots would start in the middle of the board
- Each player got a recipe
- After a certain number of turns a fuel core would drop (which would end the game in a set number of turns, but would help out whoever picked it up)
- First player to the middle wins
- No bases
Thursday, November 3: In-Lab Playtest Session #2

This week we basically presented a much more simplified version of our old game with more trade and combat incentive. We also changed the map and placement of pieces as well as took out mailboxes. We decided against presenting the fuel core in order to get better feedback (the fuel core at this point wasn’t entirely balanced yet).

What feedback we got from lab:

<table>
<thead>
<tr>
<th>What players said</th>
<th>What we said in response</th>
</tr>
</thead>
<tbody>
<tr>
<td>The game is too luck based, where the players start and how combat works.</td>
<td>This is true, the starting player has a huge advantage, combat dice rolls are also too luck based. Putting points into combat has to feel worth it, on top of that stealing all of a players items can be very discouraging. We will plan on fixing this next.</td>
</tr>
<tr>
<td>Story has been done before, think of something creative.</td>
<td>We have a couple of awesome ideas we want to try out! This week we will brainstorm better dramatic elements.</td>
</tr>
<tr>
<td>The recipe idea was great! Trading is now important.</td>
<td>Awesome!</td>
</tr>
<tr>
<td>The game was easy to understand! Don’t go back to 2 robots.</td>
<td>If it was fun with 1 robot then there is no reason to over complicate things with 2.</td>
</tr>
<tr>
<td>Fix capacity and combat, having a player fall behind others is not good at all.</td>
<td>Very true, we will put a cap on combat and capacity. We also plan to make players only able to steal 1 item from a player. However, to keep an incentive to build capacity, we let players steal a 2nd item if they max out their capacity stat.</td>
</tr>
</tbody>
</table>
Rolling of the die to determine the (x,y) coordinate of the stat boost was flawed because a roll of 5 and 9 could be read as (5,9) or (9,5).

We will get a new die to represent the y coordinate. Some players also complained that it slowed the game down substantially. We will try making it spawn after every 4 turns instead of every turn.

Have more player interaction!

We might plan on adding a piece of engine that spawns in the middle that people have to fight for.

The second half of the game was much more fun than the start. This is mostly because ore was scarce and people were forced to trade and battle.

What we plan on doing is shortening the start of the game, so players get to the interesting part faster. We have many ideas on how to make this happen, one of them is letting players do more actions in a turn. This also means that we have to make late game longer.

Make the pieces heavier so they don't get blown away.

We plan on making the pieces larger.

Excess of points on board

We need to balance the number of black robot-power-up points on the board so it doesn’t feel like the game economy is inflated.

<table>
<thead>
<tr>
<th>Online Ratings for Playtest #2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Player</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Player #1</td>
</tr>
<tr>
<td>Player #2</td>
</tr>
<tr>
<td>Player #3</td>
</tr>
<tr>
<td>Player #4</td>
</tr>
<tr>
<td>Player #5</td>
</tr>
</tbody>
</table>
Friday, November 4

At the beginning of this playtest session, we made a list of all the things we needed to change about the game. Verbatim from our notebook:

Need:

- To lessen the amount of ore available
- To lengthen the game control the length of the game
- To lessen bonking on each other (over powerful combat) (too chance-based)
- To formalize dramatic elements
- To make things pretty
- To balance recipes – save for Monday
- To balance reactor core

We changed a lot of things during this playtest:

**LESSEN AMOUNT OF ORE:**

We decided that at the beginning of the game there would be 4 ore pieces in each corner. After each round a new piece of ore would drop based on a dice roll. This lessened the amount of ore since we weren’t dropping a new piece of ore after each player’s turn, and it sped up the game (for the same reason).

**CONTROL LENGTH OF GAME:**

To make the beginning (boring) part of the game quicker, we allowed players to move, then mine, then move, then mine. Originally mining would end a player’s turn. This new addition to the game made the beginning move much faster, and players would get enough ore and resources to trade early on.
COMBAT:

We tried changing the combat so that the number of points you had in combat did not determine how many dice you rolled, but the number of combat you started out with (like a statistic using the Fate system), and after that each player would roll a set number of die to add or subtract points from this number. We didn’t like changing the combat so drastically, however, so we decided that players would still roll as many dice as they had points in combat, except now each roll would be halved. This served the same purpose: combat was now closer, and someone with a higher combat stat was not necessarily overpowered in comparison to others with lower combat. We also balanced combat by allowing either the attacker or the defender to gain from winning the battle, but attackers won ties. The winner in combat could take pieces from the loser based on the winner’s capacity divided by two. This meant that people with 1, 2, or 3 points in capacity could only take 1 item from the loser of a battle, but someone who had 4 points could take 2 items. This added an extra incentive to build capacity which was not there before, while still balancing combat.

FORMALIZE DRAMATIC ELEMENTS:

Since we had heard complaints about our story not being creative enough, we brainstormed ideas overnight and came to the meeting on Friday with a lot of new ideas. Figure 8 shows our brainstorming process to come up with a creative story.

After a while, deciding the story behind the game turned into Alan, Jean, and Katie banging their heads against a wall trying to decide between:

- Lord of the Flies in Space with hyperactive children fuelled by space candy
- Hyper-intelligent polar bears on a melting iceberg
- Space miners with SCV’s that got powered up over the course of the game
- Chef Gordon Ramsey’s Ultimate Cooking Challenge (on a sinking island where the recipe ingredients for muffins, pies, etc are scattered
• Archaeologists in a temple trying to find artifacts

In the end, we decided to wait for our next playtest session to clear our heads and ask Pat what his opinions were (he had to leave the meeting early and didn’t stay for the head-banging, but fortunately was therefore not biased when we told him our ideas).

MAKE THINGS PRETTY:

We ended up doing nothing to the board this time around simply because we couldn’t decide on the story.

BALANCING RECIPES:

We took the time to balance the recipes during this meeting, so that each would require 8 resources, and the resources would show up evenly (for example, between all 8 recipes, blue parts show up 16 times, and so do yellow, red and green parts).

BALANCING REACTOR CORE:

We also formalized the idea of the reactor core in this game. We made a draw pile for the power-up ore pieces, and put the reactor core at the bottom. This way we could control the length of the game by changing how many ore would drop before the reactor core did (how many turns passed before the game started to end). When the reactor core popped up in the draw pile, players would roll the dice to determine where to place it. Once it had been picked up by a player, the world would start to collapse from the outside in. This would force the players closer together, initiating more combat, and also create a sense of urgency and rising tension to complete the game. The reactor core would also count for 1 wild piece (a value we kept changing) and would be the first thing to drop if someone lost in combat.
Because Jeremy doesn't like robots: in Space!

- Robots
- Hyperactive children (reduce anxiety increase productivity)
- Fat children
- Chickens
- Puppies
- People
- Tomatoes
- Monkeys
- Turtles
- Snails
- Art Critics
- Game Critics
- Beaucrats
- Buckets
- Radioactive Mice
- Spiders
- Spider Monkeys
- Kittens
- Preps
- Hippies
- Environmentalists
- Jacks
- Nerds
- Lord of the Flies
- Dinosaurs (resource pooling)
- Panies
- Penguins
- LOST
- Archaeology (not in Space) (orig Space)
- Bakers
- Radioactive Baker Mice
- Underwater in Space
- Sinking Island
- Sinking Island + LOTF
- Mining
- Gerontologists
- Gangsters
- BLACK PEOPLE IN SPACE
- Wizards
- Shrek Bakers

Elimination Rounds Survivals

- Robots
- Hyperactive children
- Tomatoes
- Game Critics
- Beaucrats
- Radioactive Mice
- Kitten-Baker Shrek
- LOTF in Space
- Dinosaurs
- Iceberg (engineering Rockers)
- Archaeologists
- Bakers/Master Chef
- Sinking Island
- Mining
- Black Roque in Space
- Archaeologists
- Civilian
- Last Survivors on Earth

Figure 8. Brainstorming new ideas for the story
Monday, November 7

At the very beginning of this meeting we formalized our dramatic elements. Pat wanted polar bears, so we ironed out the kinks and went with it. Our story in brief:

“You’re a breed of hyper-intelligent polar bears that finally figured out that global warming is going to destroy the iceberg on which you live, so using only the materials on your iceberg, you try to build a rocket ship to fly to Pluto so you can stay cold.”

Our resources would be:

- Highly combustible whale blubber
- Packed “super cold” ice
- Seal bones for structure
- Penguin feathers for lift
- Meteorite made of iron – ultimate drop
- Fish for powering up polar bears

Finally, we split up tasks for our next meeting. Pat and Alan worked on the board and pieces, Jean worked on the recipes and player sheets, and Katie worked on the rule sheet and resources. Our next meeting was on Wednesday the 9th, although all we did was put together what we had done so we could have a deliverable board by Thursday morning’s lab.

Thursday, November 10: In-Lab Playtest Session #3

We came to this play test confident, sure that our game had finally “clicked”. Now that we considered the game to be fun, we wanted to find out what people thought of it. In this version we had a new exciting story about polar bears. The game was much more balanced, the start of the game was faster, and we added the meteor which made the end-game even more exciting.
<table>
<thead>
<tr>
<th><strong>What players said</strong></th>
<th><strong>What we said in response</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The dramatic elements where hilarious, fun, and it worked!</td>
<td>We really worked hard on making a fun story that fit with our game play.</td>
</tr>
<tr>
<td>The most over-done strategy was the one of obtaining a monopoly with a specific material. I thought it was okay as players would eventually want to trade them.</td>
<td>This is very true, but recipes are balanced in such a way that the game should not resort to a stalemate, even in the event of player monopolies. Play tests show that discouraging monopolies might hamper the game more.</td>
</tr>
<tr>
<td>The end of the game felt a little bit too luck based.</td>
<td>If the game does come down to a final combat, a dice roll seems to be quite an anti-climactic way to finish the game. We will try to fix this.</td>
</tr>
<tr>
<td>Combat didn't really seem that useful.</td>
<td>This is very debatable as it has been the key to many player's winning strategy. It is true that there is less combat in this version of the game, but it still happens. It makes keeping the meteor easier which helps in winning the game.</td>
</tr>
<tr>
<td>I feel like players shouldn't be able to take other people's stat points in the beginning of the game.</td>
<td>We didn't see this as a main problem but stealing can get very “not fun”, very fast. It's tricky. We will try brainstorming ideas for this.</td>
</tr>
<tr>
<td>The rules where ugly and not easy to read over. Put more diagrams.</td>
<td>Yes sir! We will work hard on making the rules easy and fast to grasp.</td>
</tr>
</tbody>
</table>

This week we plan on:
- Making the rules awesome
- Making the movie
- Finishing the play test notes
- Slightly modifying end-game:
  - We want the game not to come down to luck
  - We'll try making the end-state not come down to 4 dice rolls.

### Online Ratings for Playtest #3:

<table>
<thead>
<tr>
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</tr>
<tr>
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<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Player #3</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Player #4</td>
<td>4</td>
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