

Abstract

No longer can you rely on blind luck to win rock-paper-scissors, rather, you must think ahead in order to outwit your opponent in a battle to the death. This board game is turned-based where each player has three types of soldiers (rock, paper, scissors). Capturing land, battling, and swapping are key to defeating all of your opponent's soldiers in order to win the game.

Our Fix-A-Game

- The game we are working on is Rock, Paper and Scissors which is an ancient and simple game, usually used to resolve conflict between people or to kill time.
- In the original game, players will choose among three choices which are rock, paper and scissors. The result of the game will depend on both players' choices. But this is actually a meaningless decision because players can not get any information to help them make the choice. The result is totally random. Another minor problem is players may predict their opponent's move in a split second delay where the hands are being "thrown" which makes the game somewhat unfair.
- To fix these problems, we first made the game into a turn-based game. The turn-based game system gave all players a fair chance to predict their opponent's next move and react accordingly. Also, both players can see what they may fight with later and they have a limited amount of rocks, papers and scissors. These mechanics give the players a more complicated and meaningful choice. We also keep the "rock beats scissors, scissors beats paper, paper beats rock" system from the original game. Finally, in order to prevent there being a better choice, we

made it that both soldiers (explained below) are used in the attack instead of just one.

Overview

- Type: board game
- Number of players: 2
- Target age: 12 years and up
- What you'll need (see appendix section for pics):
 - A 5x5 grid (main playing space)
 - If made on graph paper, each square should be composed of 36 smaller squares
 - IE: one BIG square on the 5x5 grid is a 6x6 smaller square
 - A smaller grid (18x18 on graph paper) for the battlefield
 - Inside the larger grid, there will be four smaller squares labeled A1, A2, D1, and D2 which is where the two soldiers for each player will be placed
 - Another 18x18 grid (same as the battlefield) with nothing inside to serve as the graveyard
 - Two different color writing utensils that can be erased (our group used erasable highlighters)
 - 24 game pieces total
 - 8 rock, 8 paper, and 8 scissor
 - Half of the rock, paper, and scissors will be on a black background for one player
 - And the remaining pieces will have a light gray background for the other player
- Game pieces:



3C (character, camera, control)

- Character
 - play as the leader of an army, aiming to defeat your opponent
 - control 12 soldiers (4 rock, 4 scissors and 4 paper)
- Camera
 - top down view of the battle field, main map, and graveyard
- Control
 - player can control their army to have different actions, which are deploy: move, switch units, conquer and fight (if they meet the opponent's soldiers)
 - This is explained in the playing the game section as some actions go hand-in-hand with another

Gameplay Loop

- Goal
 - Destroy opponent's soldiers while seizing territory
- Obstacle
 - Opponent is arranging soldiers in order to defend the attack
- Solution
 - Change the sequence of your soldier in order to kill your opponent's soldier

- Block off and conquer the opponent's base so they cannot bring more soldiers in
- Destroy connected territories to prevent soldier swaps
- Reward
 - Winning the game

Game Mechanics/Elements + Rules/How To Play

Set up:

Players play the game on a 5x5 map, and each player has a base at the corner of the map. There are four soldiers of each type (rock, paper, scissors) for each player. Off to the side, there is a separate battlefield (where fights take place) as well as a graveyard where the defeated soldiers go to.

General Rules

1. The game is played on a turn-by-turn basis
2. To decide who goes first, the players will play classic rock-paper-scissors and the winner goes first
3. For each turn, there are two choices: move or swap
 - See above for specifics
4. Win/Lose conditions:
 - The game will conclude when one player has run out of soldiers.
 - If your own base/barracks are occupied by the other side, you cannot send soldiers to the battlefield and will lose when all soldiers on the main grid are killed.

Mechanics:

Move:

If player decide to move, choose one from three following:

1. Put one group of soldiers (two is a group) on the base. (You can not move the soldier that are just put into the base/game)

BASE				
				BASE

2. move one pair of soldiers to anywhere which is connected. (you would mark this square with your color)

		B		
				A

(for example, soldiers can directly move from A to B or from B to A)

3. move one pair of soldiers to anyplace not belonging to yours. (only cross move)

	(move)	
(move)	soldier	(move)
	(move)	

For example, the soldier can only move across four directions.

- IF the land isn't owned by your opponent, you can directly take the land.
- ELSE IF it's owned by your opponent:

- IF there isn't enemy soldiers on the square you can take it
- OTHERWISE you need to fight to take the place

Fight:

The "attacker" (one who calls the attack) and "defender" (other player) put their soldiers on the battlefield. Put the soldier on the left side at place 1 and right side at place 2.

Defender's soldier 2 (D2)	Defender's soldier 1 (D1)
Attacker's soldier 1 (A1)	Attacker's soldier 2 (A2)

First, A1 fights with D1.

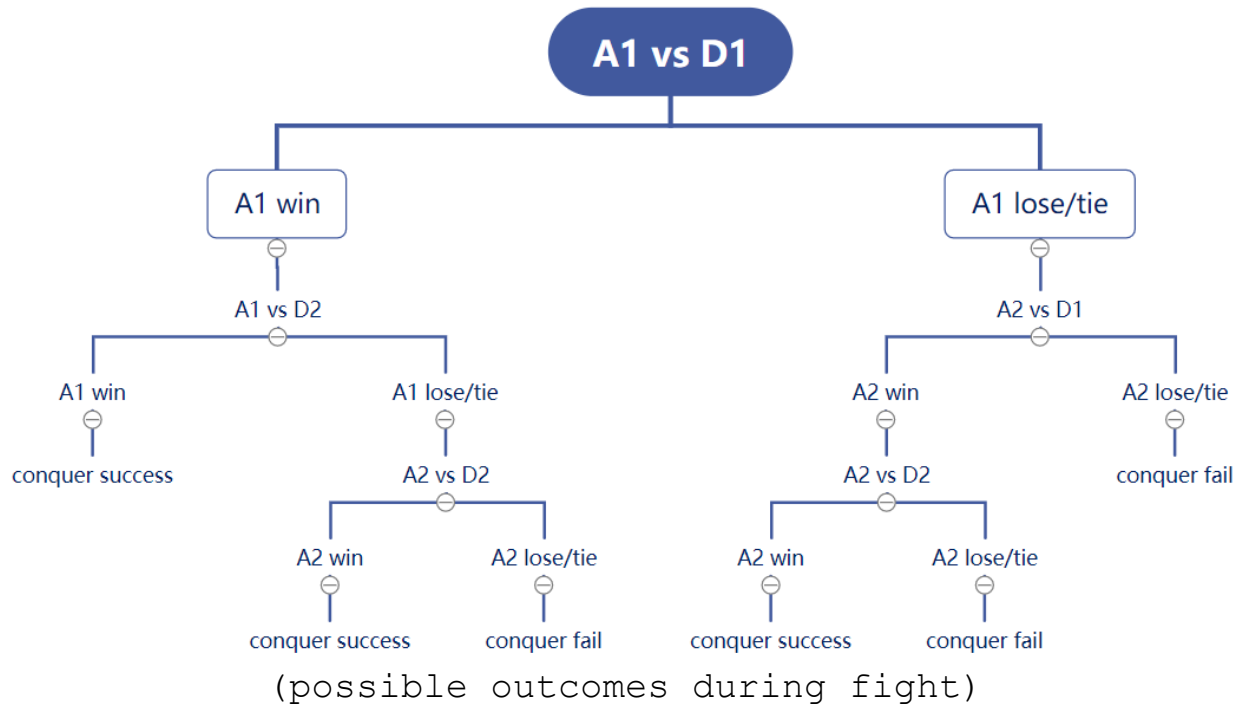
If A1 wins, A1 should fight with D2.

If A1 wins again, then the attacker successfully kills all defenders and can conquer the place.

If A1 ties or loses against D2, A2 should fight with D2.

If A2 wins, the attacker successfully conquers this place, else, the conquer fails.

If A1 tie or lose, A2 should fight with D1. And follow the same loop.



The attacker can choose to stop the battle at anytime after the first battle(A1 vs D1)
 When a soldier dies, it should be moved out of the game and placed into the designated graveyard.
 If there is only one soldier going to attack/defend, it will be regarded as A1/D1.

“Swap”:

If the player decides to swap instead of move, there are three options:

1. Switch the left and right positions of two soldiers in one of your territories.
2. Swap any soldier in one of your territories with any soldier in the connected territories.
3. If one territory has only one soldier on it, the player can choose to send one soldier on the base to this territory and send one soldier into the base (base always needs to have two soldiers on it).

Design Process

Before our group even considered what kind of game we were going to make, we needed to figure out what the broken mechanic was and how to fix it. During our first meeting, we concluded that the broken mechanic was that neither player had any idea what their opponent was going to play. It was similar to the chest example in class: you have three options to play (rock,paper,scissors) but because you have no way of knowing what your opponent is playing, you are unable to see what the outcome may be. Like the chest example, you're making a choice in randomness and hoping you are lucky and throw either a tie or a win.

From there, the real brainstorming could begin. The first meeting was very fruitful in the sense we made a very rough (emphasis on very) paper prototype of the game. Our first fixed concept involved turning RPS into a game of cards where the winning condition was drawing the win card from the draw pile. Similarly, the losing condition was drawing the lose card from the pile. The setup was as follows: two players would sit facing one another with the draw pile in between them. One player would shuffle the deck and hand out four cards to each of them. Eah card was a part of a set and there were three sets total. Post distribution, there were 10 cards remaining and the win/lose card was sandwiched in between them (five cards below the win/lose and five cards above it). The game was then conducted in a similar style to the original RPS, on the count of three, the players would put one of their cards in the middle and the classic mechanics were applied (rock beats scissors, scissors beat paper, and paper beat rock). However, in the case of a tie, the players flipped their cards to reveal new ones that were previously displayed to the opponent. The drawing deck

was also flipped. We thought that by having the backsides visible to the opponent, you would be able to strategize what to play next in order to win.

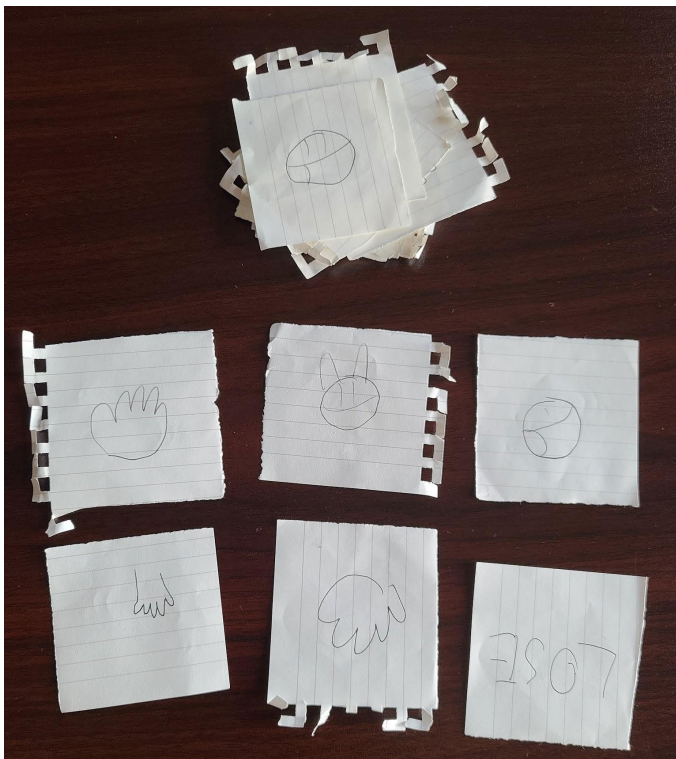
However, this wasn't the case. Instead of fixing the problem, the random choice aspect was pushed further down the game. We found this out after the professor meeting during class. With this thought in mind, the group tried to keep the card idea but totally revamp the play style. To summarize the new concept, each player started with the same number of cards, four of each type, which was displayed in an inventory that was visible to their opponent. From there, each player picked up two cards to keep in their hands which was reflected in the inventory (the count of two different materials would go down by one). We thought that because you knew what the player had in their hand, that would fix the random choice aspect. It did, in a sense but created a new issue- there was always a better choice. The choice was either a win/lose or a tie and everyone would rather tie then lose. The following day, we brought this issue up during our mentor meeting.

It was during our mentor meeting that we made this new concept. Our mentor, Evan, revealed to us that we could use our broken mechanic as a mechanic in a larger game instead of on its own. We spent some time discussing what we could do and the idea that you read above is what we came to. We kept the element of only having two options to make the game more interesting and require more thinking and strategy developing. Our group was still in danger of having the better choice option so we made it that both "soldiers" fought in the battle. It starts with A1 attacking D1 and if that's a win, A1 goes on to attack D2. There are different

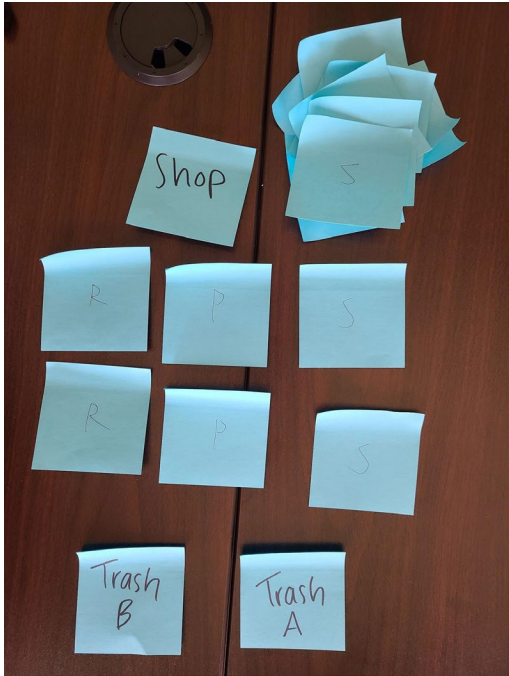
possibilities for each piece and that is explained in further details up in the game mechanic section.

After testing mainly the battle mechanics, the group discovered the game was heavily based on strategy. This is not necessarily a bad thing especially since the original RPS had little strategy involved due to randomness. It also took some time to reach the battling phase but not all games get right to the action right away. Overall, the game may seem quite intricate at points but our group didn't find any other solution that fixed the mechanic fully instead of pushing it back or adding a new choice issue.

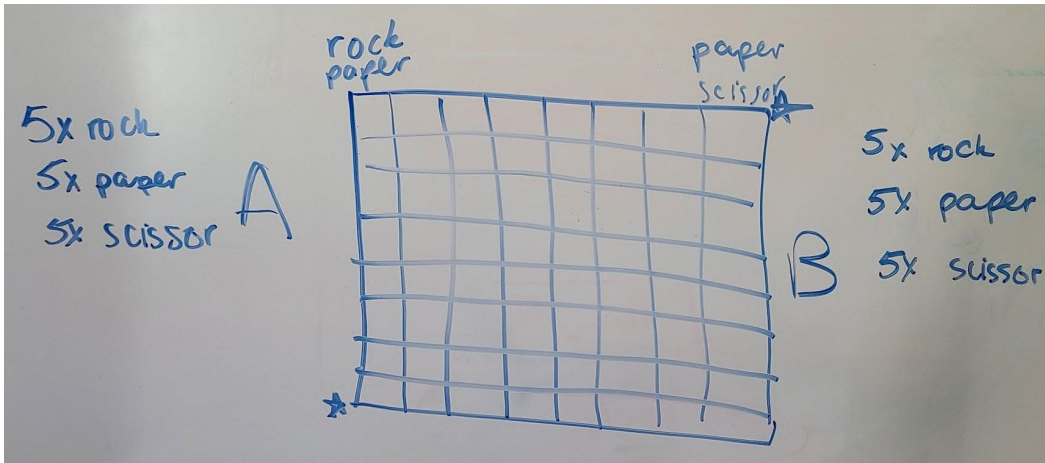
Appendix



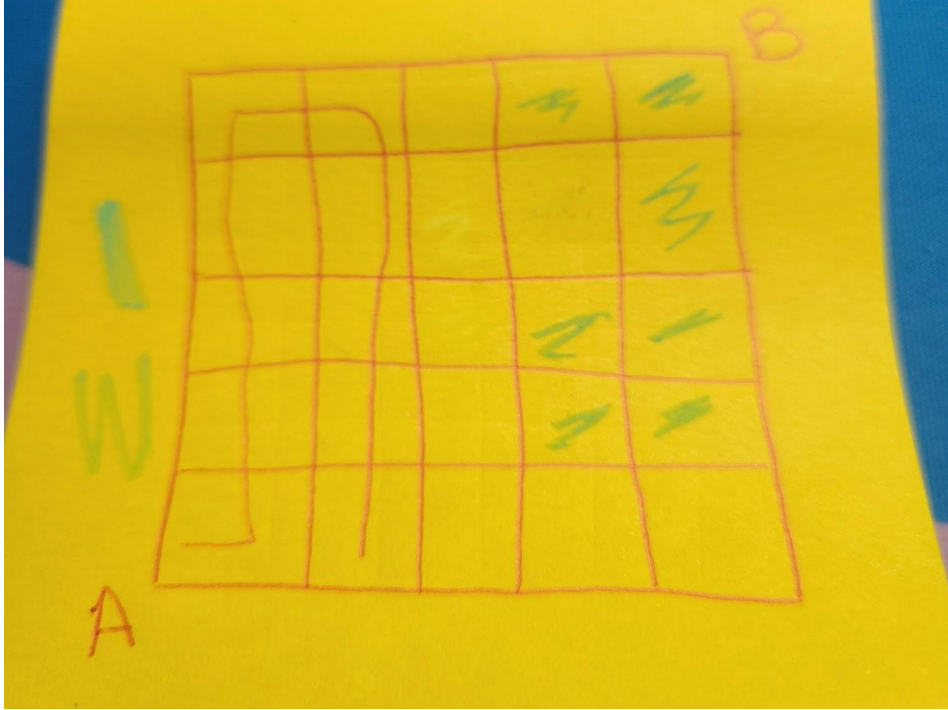
^^ first concept using cards with the win/lose card



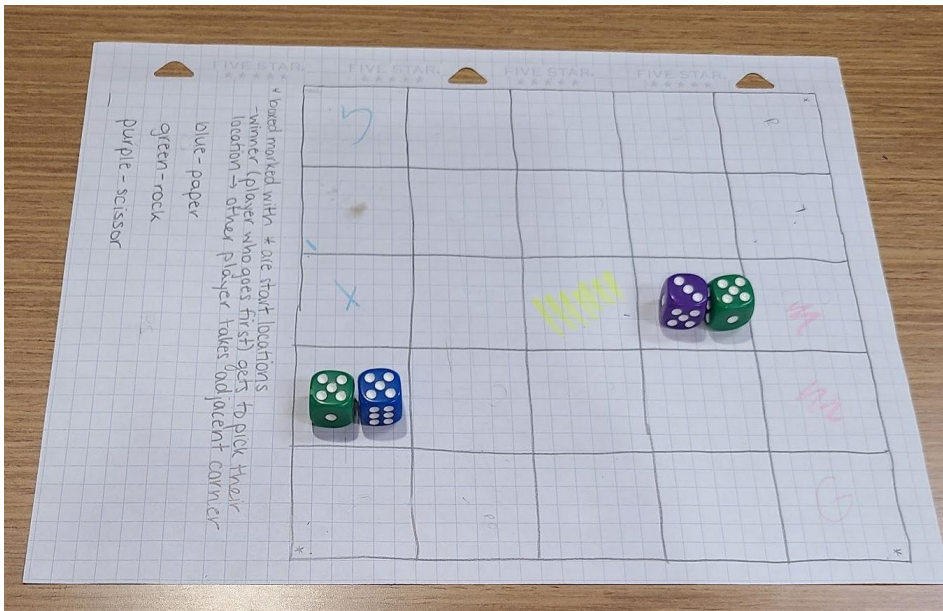
^^second concept shop feature where a player can exchange tokens



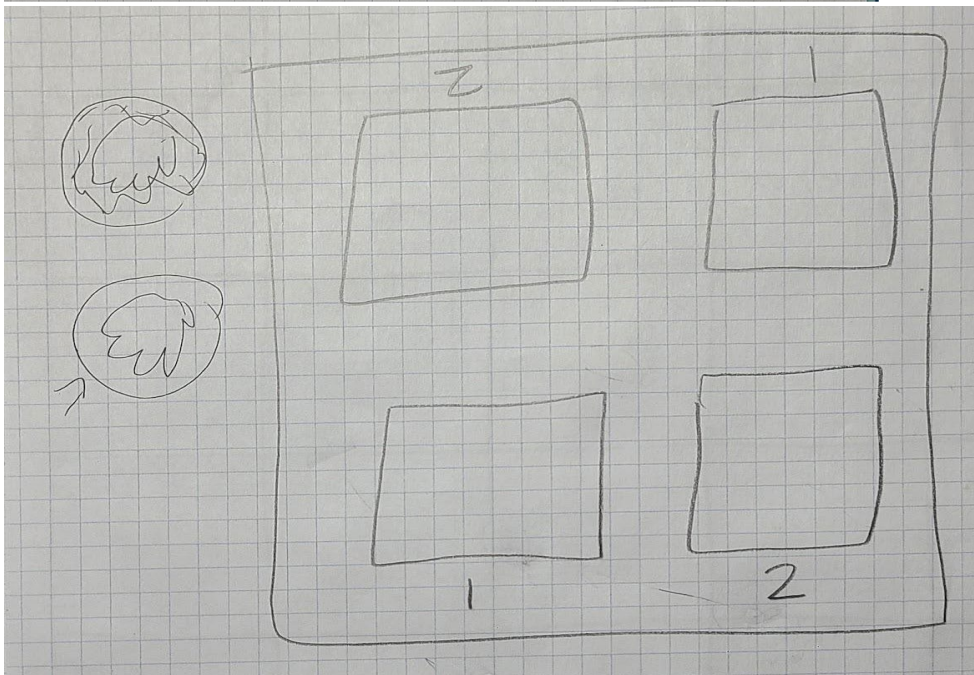
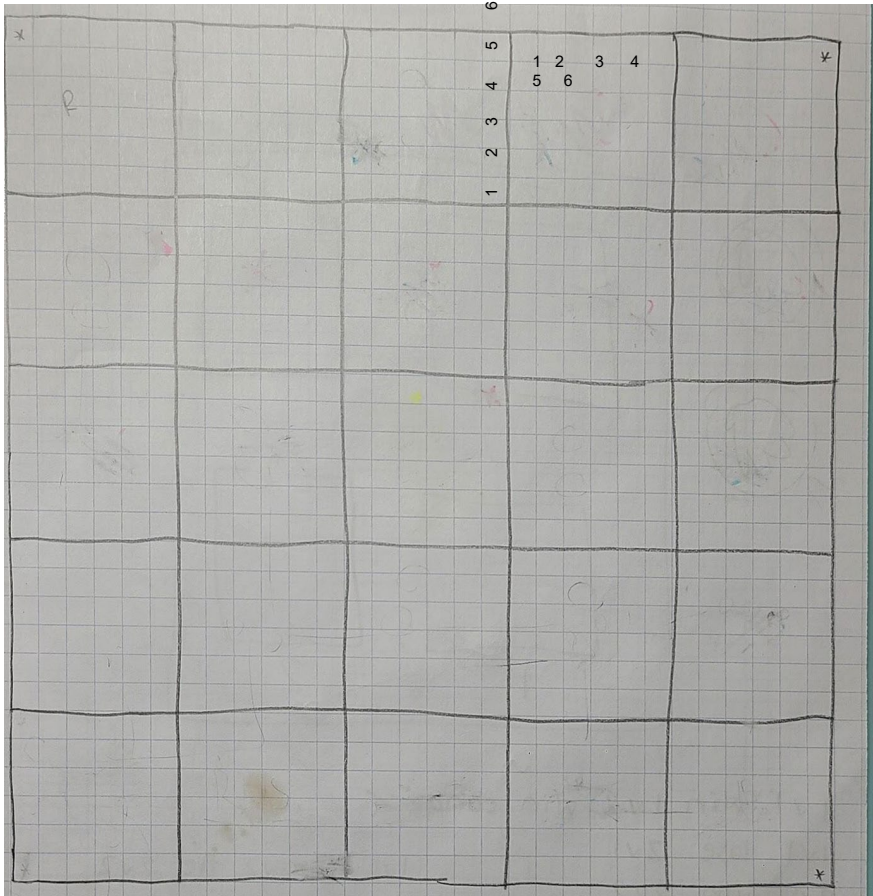
^^the beginning of our current concept



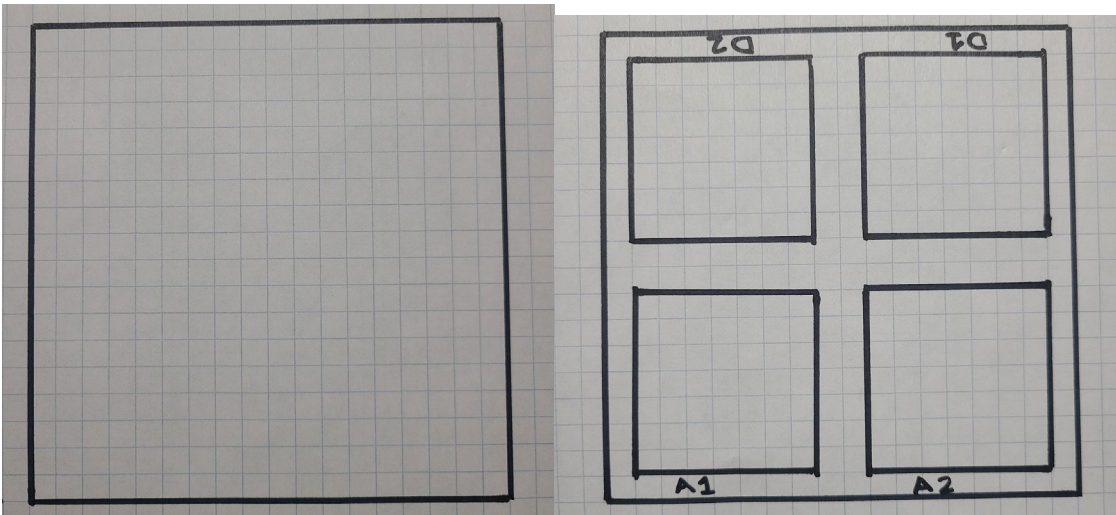
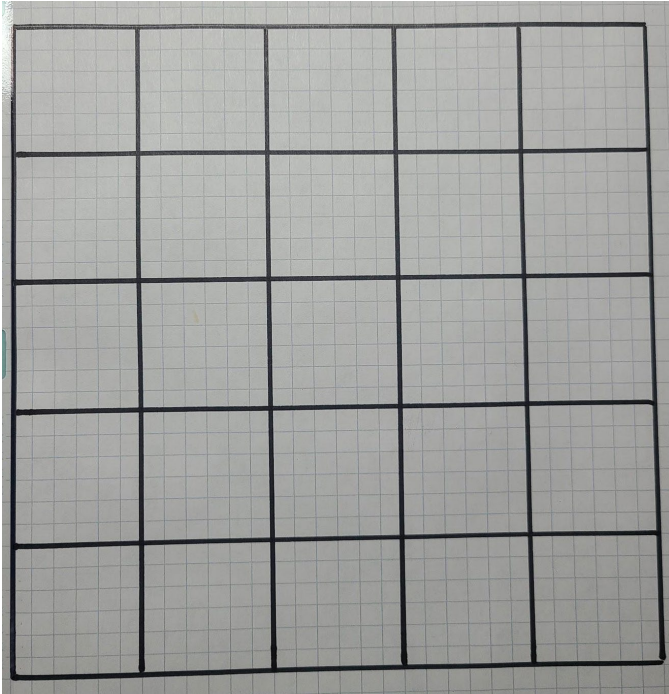
^^another rough sketch of our current concept



(use dice to represent soldiers during playtest)



^^ pictures from team's playtest



^^ complete/cleaner paper prototype for playtest