Emma Hopson

ATLS 3100: Form

Final Project

May 1, 2023

References


PANDEMIC

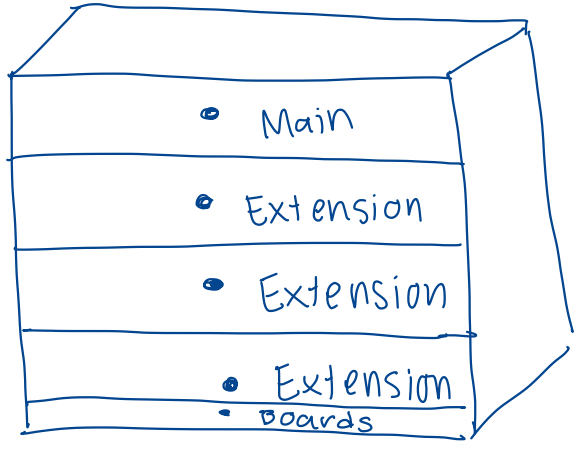

PANDEMIC
PANDEMIC
ON THE BRINK
PANDEMIC
STATE OF EMERGENCY
PANDEMIC
IN THE LAB
CAN YOU SAVE HUMANITY?
ZMAN games

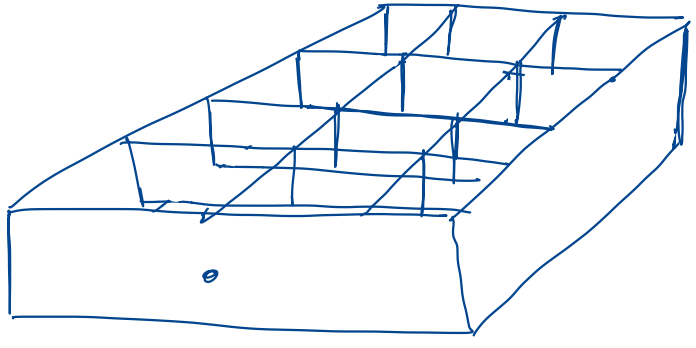
Inventory

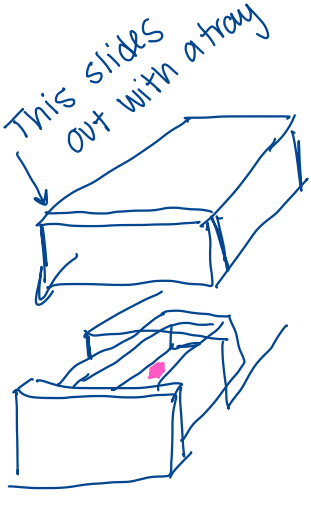
	Game	Piece Name	Number	Volume/ Area	External Box?	Added to Model?
2	Main	Game Board	1	volume = 11 1/4" x 8" x 1/2"	☐	☑
3	Main	Instruction	1	area = 11 5/8" x 8 1/4"	☐	☑
4	Main	Role Cards	6	thickness = 1/8"	☐	☑
5	Main	City Cards	48	thickness = 1 1/8"	☐	☑
6	Main	Infection Cards	48	thickness = 1 1/8"	☐	☑
7	Main	Event Cards	5	thickness = 1/16"	☐	☑
8	Main	Epidemic Cards	8	thicness = 1/8"	☐	☑
9	Main	Player Action Cards	4	thickness = negligible	☐	☑
10	Main	Player Pawns	7	volume = 2" x 1 " x 1 "	☐	☑
11	Main	Blue Cubes	24	volume = 1" x 1 1/4" x 10/16"	☑	☑
12	Main	Red Cubes	24	volume = 1" x 1 1/4" x 10/16"	☑	☑
13	Main	Black Cubes	24	volume = 1" x 1 1/4" x 10/16"	☑	☑
14	Main	Yellow Cubes	24	volume = 1" x 1 1/4" x 10/16"	☑	☑
15	Main	Research Stations	6	volume = 3/4" x 1.5 " x 1/2"	☐	☑
16	Main	Miscell Game Tokens	6	volume = 1.5" x 3/4" x 5/8"	☐	☑
17	State Of Emergency	Game Board	2	volume = 6" x 11 3/8" x 3/16"	☐	☑
18	State Of Emergency	Instruction	1	area = 11 5/8" x 8 1/4"	☐	☑
19	State Of Emergency	Role Cards	6	thickness = 1/8"	☐	☑
20	State Of Emergency	Superbug Cards	15	thickness = 1/4"	☐	☑
21	State Of Emergency	Event Cards	7	thickness = 1/8"	☐	☑
22	State Of Emergency	Emergency Event Cards	10	thickness = 3/16"	☐	☑
23	State Of Emergency	Quarentine Markers	6	diameter = 1 3/16" height = 3/8"	☐	☑
24	State Of Emergency	Dice	1	5/8" x 5/8" x 5/8"	☐	☑
25	State Of Emergency	Vaccines	24	very small volume	☑	☑
26	State Of Emergency	Vaccine Factories	4	volume = 1" x 2" x 1/2"	☐	☑
27	State Of Emergency	Player Pawns	5	volume = 1" x .5" x 1.5"	☐	☑
28	State Of Emergency	Cure Marker	1	area = 1/2" x 3/4"	☐	☑
29	State Of Emergency	Purple Cubes	24	volume = 1" x 1 1/4" x 10/16"	☑	☑
30	State Of Emergency	Hinterlands Markers	18	volume = 1" x 1 1/4" x 10/16"	☑	☑
31	In the Lab	Board	1	thickness = 3/8 "	☐	☑
32	In the Lab	Instruction	1	area = 11 5/8" x 8 1/4"	☐	☑
33	In the Lab	Role Cards	6	thickness = 1/8"	☐	☑
34	In the Lab	Lab Challenge Cards	19	thickness = 1/4"	☐	☑
35	In the Lab	Team/Solo Cards	19	thickness = 1/4"	☐	☑
36	In the Lab	Other misc. Cards	7	thickness = 1/8"	☐	☑
37	In the Lab	Team Tokens	16	Volume = 2.5" x 2.5" 5/16"	☐	☑
38	In the Lab	Cure Viles	5	diameter = 7/8" height = 1 3/8"	☐	☑
39	In the Lab	Petrie Dishes	5	Diameter = 2 13/16" height = 1/2"	☐	☑
40	In the Lab	Player Pawns	4	volume = 1" x 1" x 1"	☐	☑
41	In the Lab	Purple Cubes	12	volume = 1" x 1 1/4" x 10/16"	☑	☑
42	In the Lab	Team Research Stations	3	Small	☐	☑
43	On The Brink	Note Pad	1	thickness = 1/4"	☐	☑
44	On The Brink	Instruction	1	area = 11 5/8" x 8 1/4"	☐	☑
45	On The Brink	Role Cards	12	thickness = 3/8"	☐	☑
46	On The Brink	Event Cards	8	thickness = 1/8"	☐	☑
47	On The Brink	Epidemic Cards	9	thickness = 1/8"	☐	☑
48	On The Brink	Mutation Cards	6	thickness = 1/8"	☐	☑
49	On The Brink	Player Pawns	7	volume = 2" x 1 " x 1 "	☐	☑
50	On The Brink	Purple Cubes	12	volume = 1" x 1 1/4" x 10/16"	☑	☑
51					☐	☐

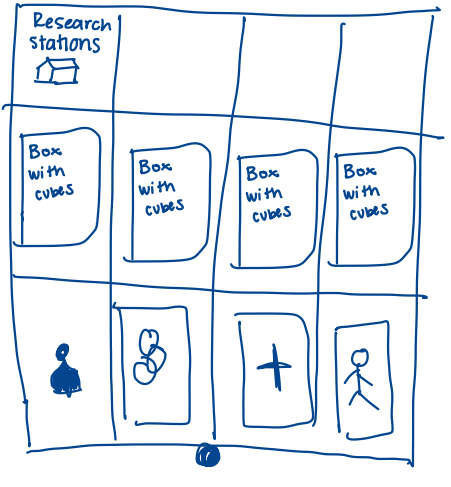
All cards are 2.5x3.5 inches in area
All cubes are 5/16" cubed
Player pawsn are 0.5x0.5x1"

Sketches


Main
Extension
Extension
Extension
Boards



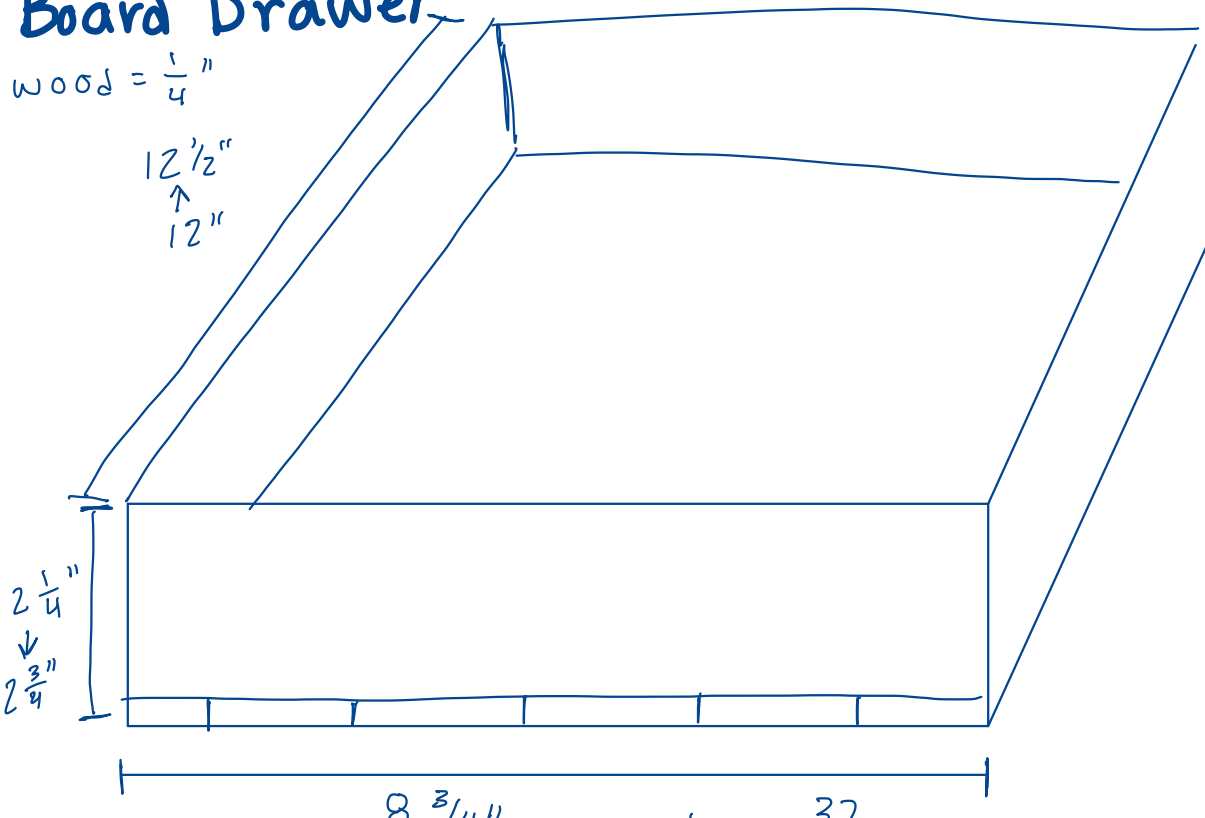

This slides out with a tray


Research stations
Box with cubes
Box with cubes
Box with cubes
Box with cubes

Board Drawer

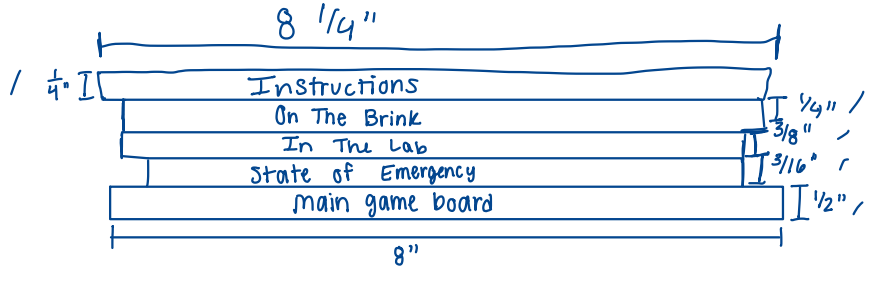
wood = $\frac{1}{4}$"

12 1/2"
↑
12"

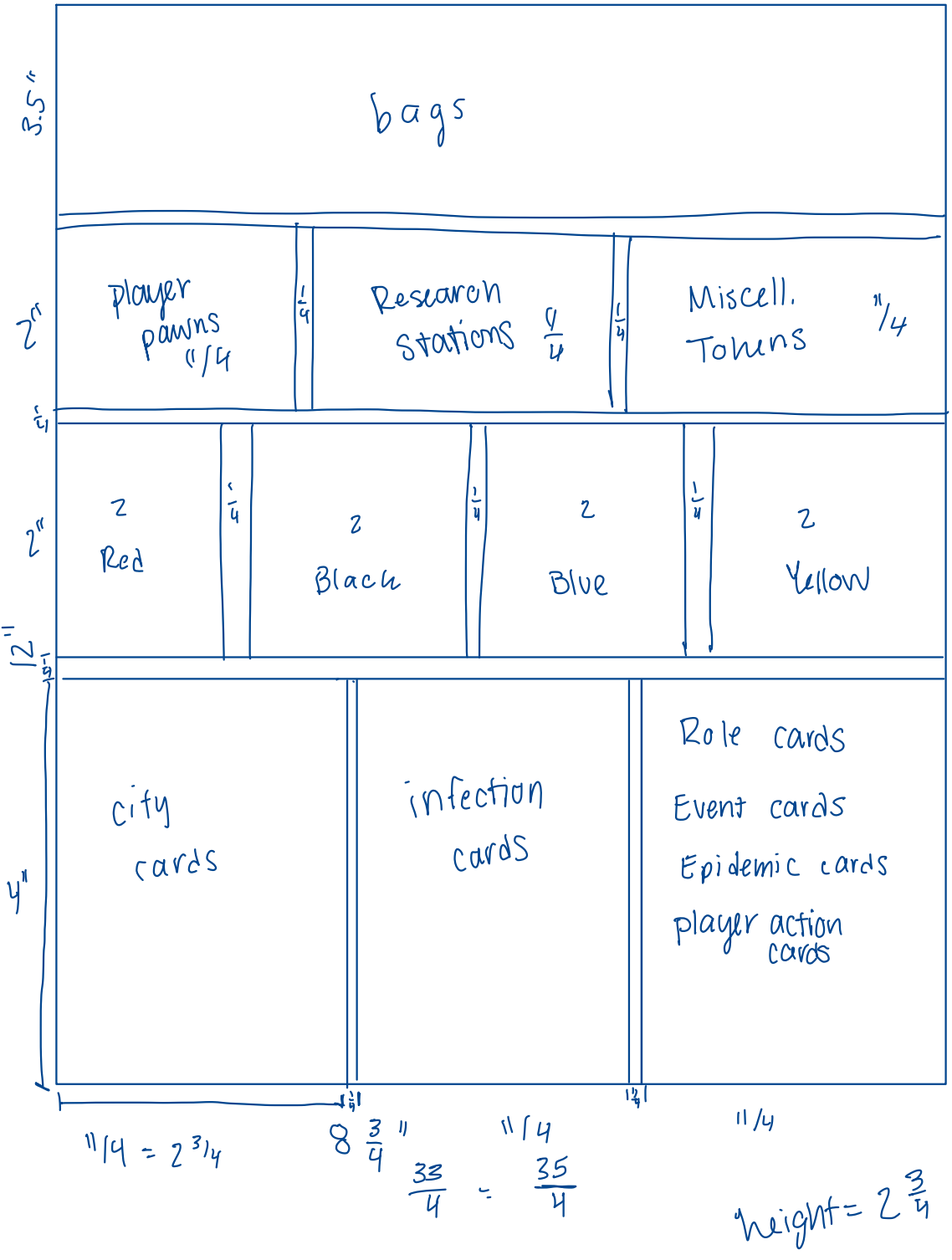


$8\ \frac{3}{4}" \rightarrow 9\ \frac{1}{4}" = \frac{37}{4}$

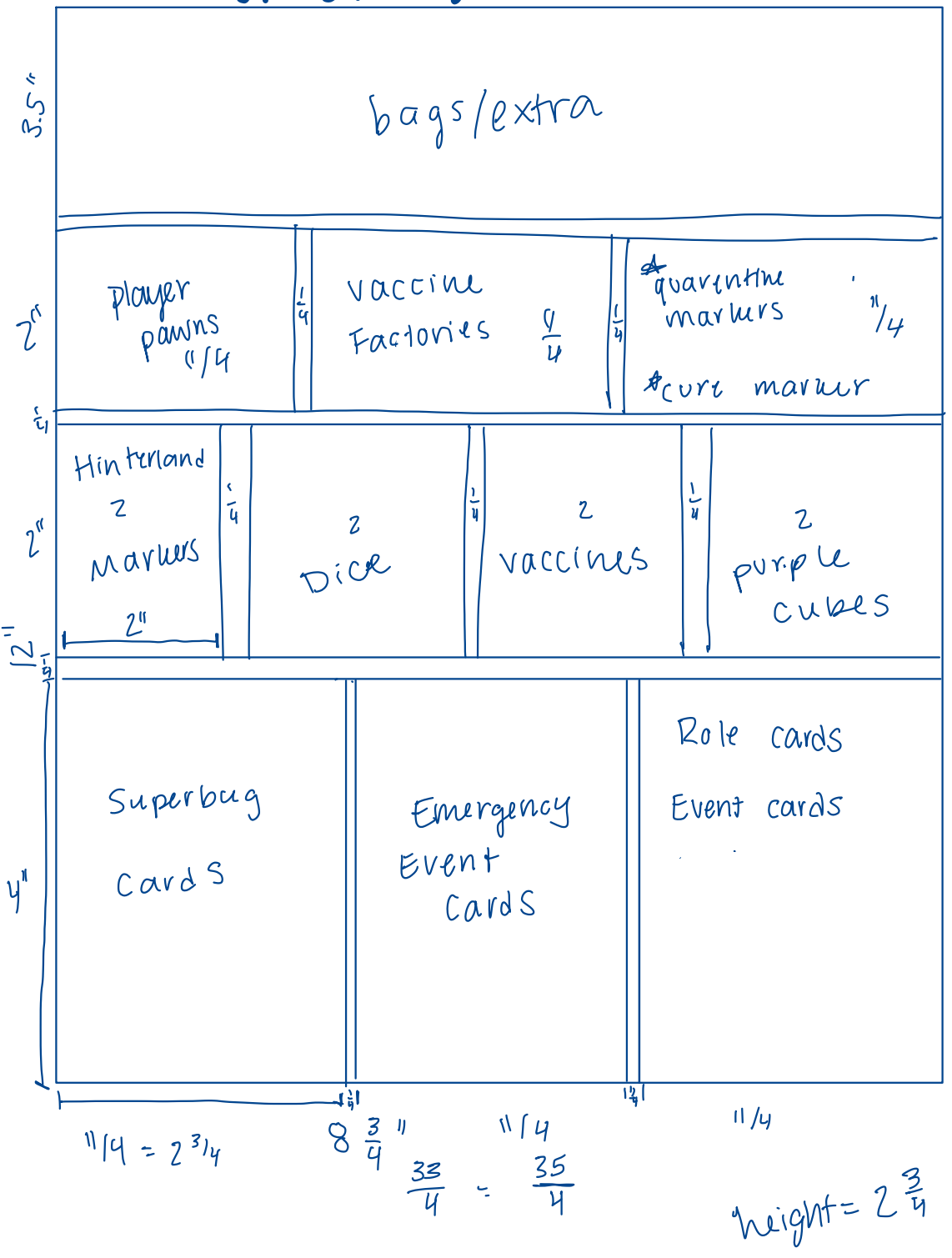
$\frac{4}{16} + \frac{8}{16} + \frac{3}{16} + \frac{6}{16} + \frac{4}{16} = \frac{25}{16} = 1\ \frac{9}{16}$



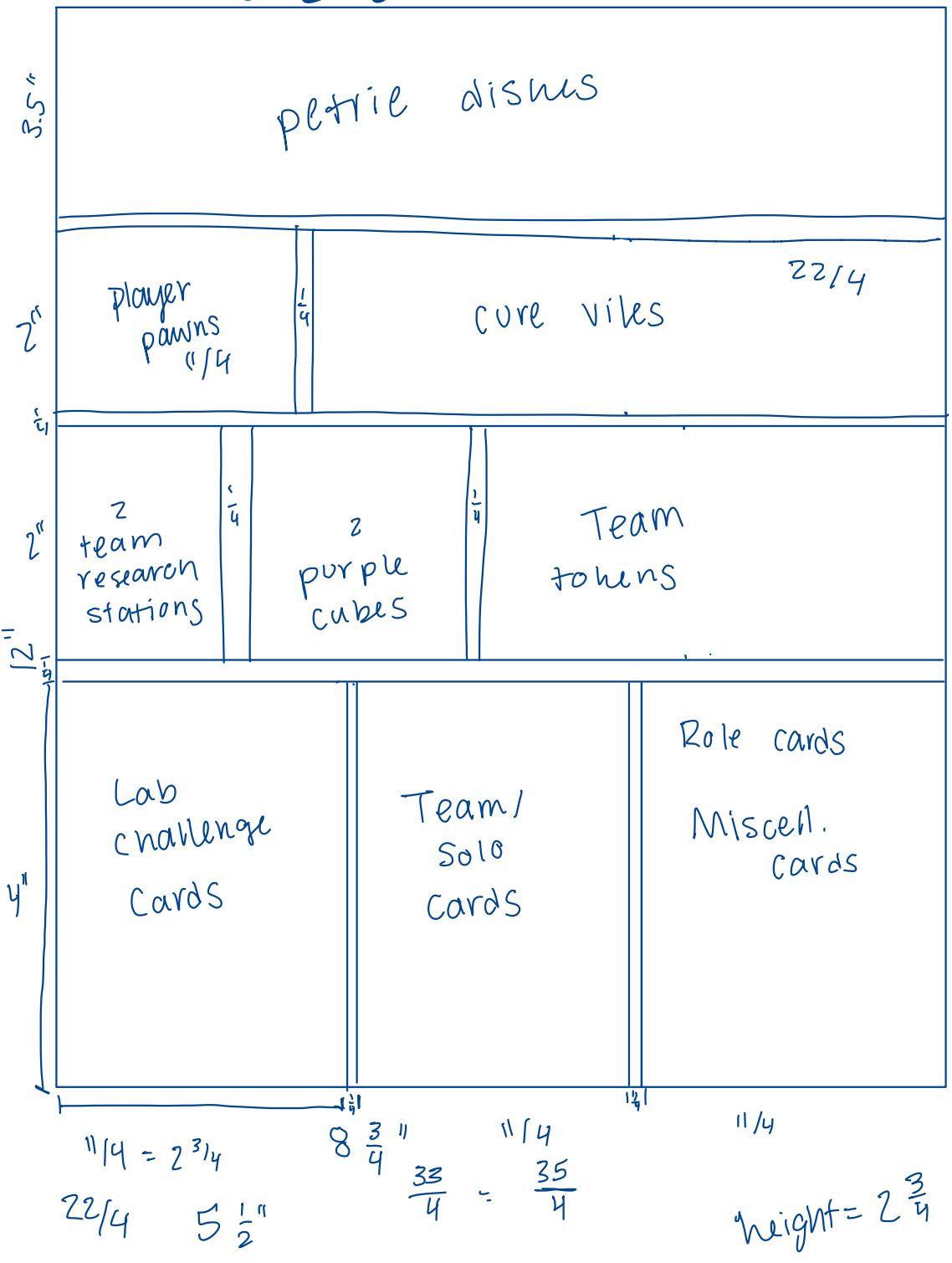
Main Game


bags
player pawns 11/4
1/4
Research Stations 9/4
1/4
Miscell. Tokens 11/4
3.5"
2"
1/4
2 Red
1/4
2 Black
1/4
2 Blue
1/4
2 Yellow
2"
12"
city cards
infection cards
Role cards
Event cards
Epidemic cards
player action cards
4"
11/4 = 2 3/4
8 3/4"
11/4
11/4
33/4 = 35/4
height = 2 3/4

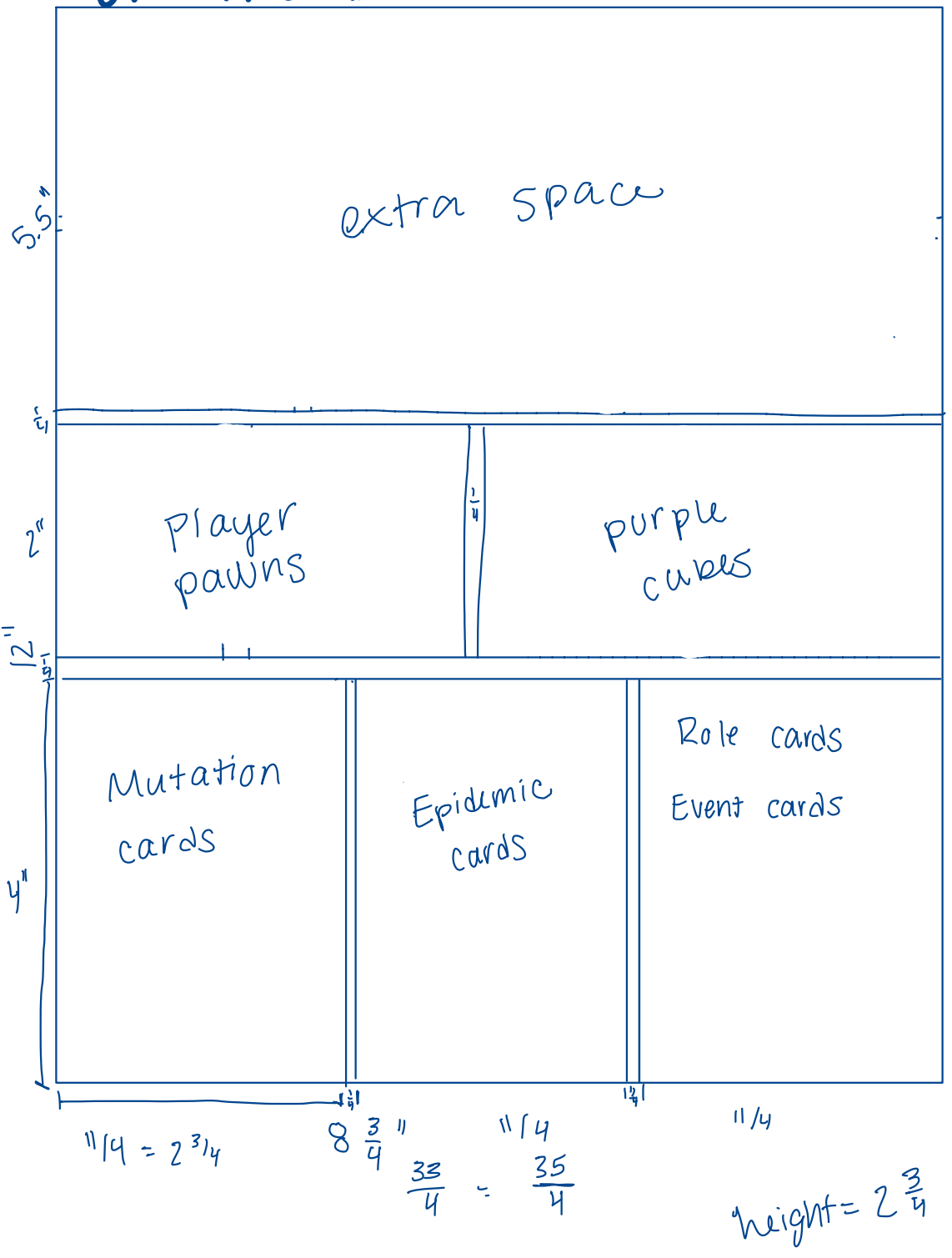
State of Emergencies



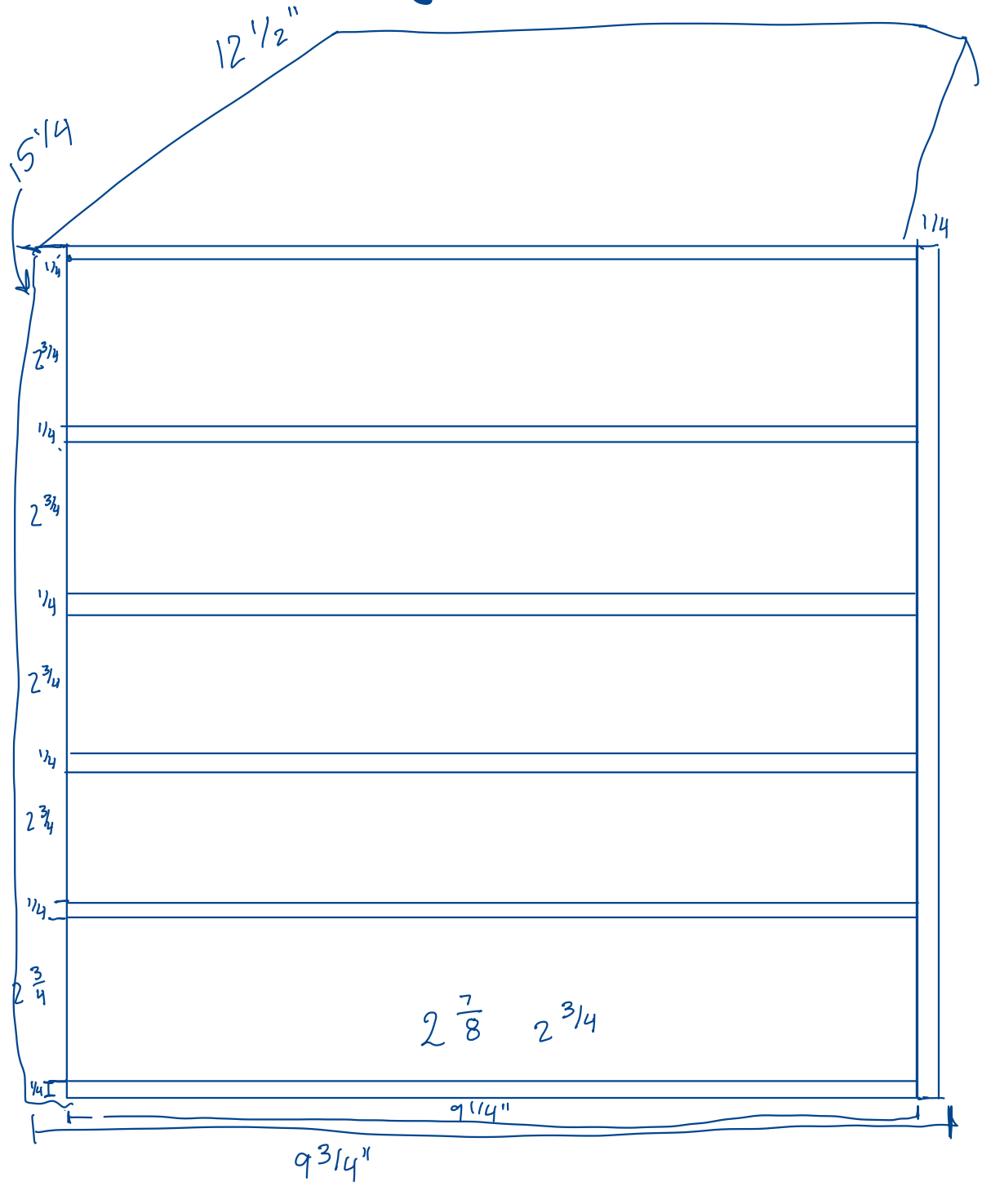
In the Lab


petrie dishes
3.5"
player pawns 11/4
1/4
cure vials
22/4
2"
1/4
2 team research stations
1/4
2 purple cubes
1/4
Team tokens
2"
12"
Lab challenge Cards
Team/ Solo Cards
Role cards
Miscell. cards
4"
11/4 = 2 3/4
8 3/4"
11/4
11/4
22/4
5 1/2"
33/4 = 35/4
height = 2 3/4

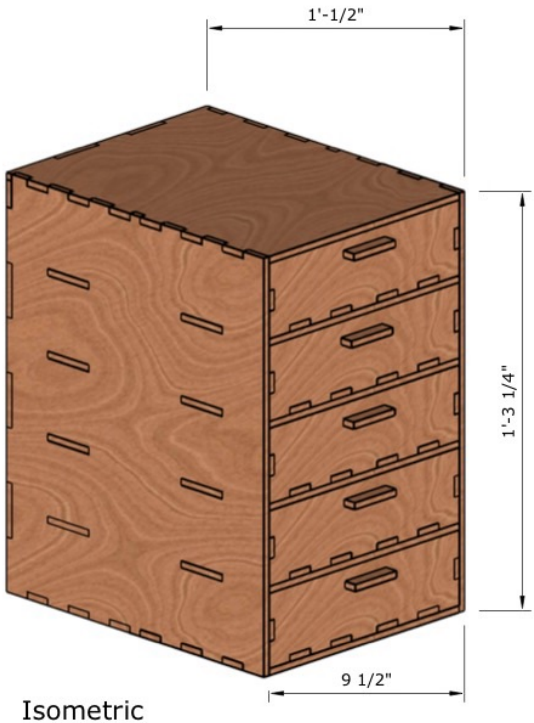
On The Brink


extra space
5.5"
1/4
2"
player pawns
1/4
purple cubes
12"
1/4
Mutation cards
Epidemic cards
Role cards
Event cards
4"
1/4
1/4
11/4 = 2 3/4
8 3/4"
11/4
11/4
33/4 = 35/4
height = 2 3/4

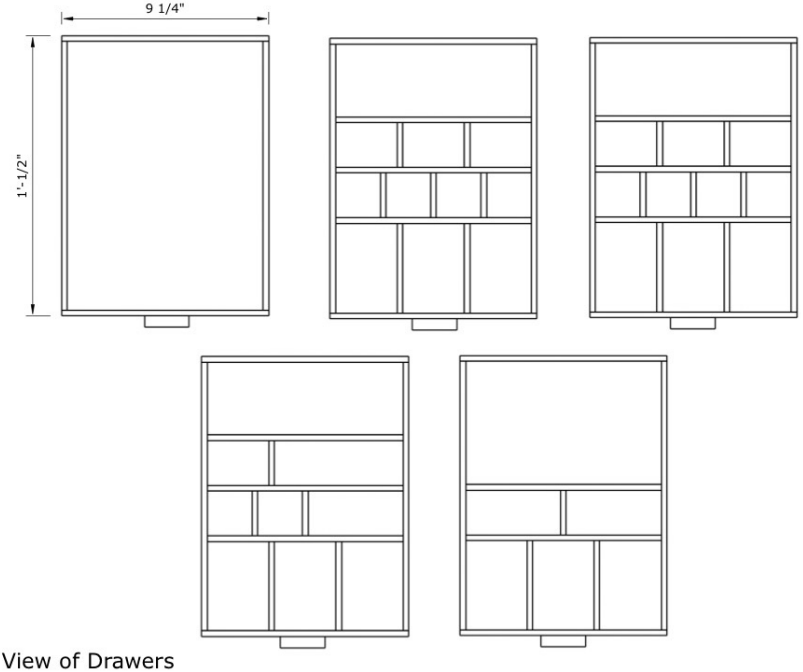
Overall Housing



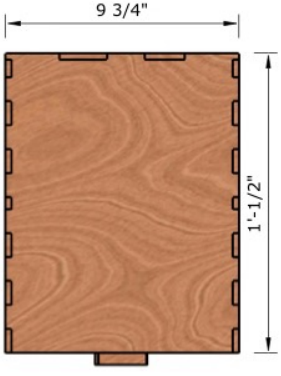
Orthographic Model Views



Isometric
Scale: 3" = 1' (1:4)

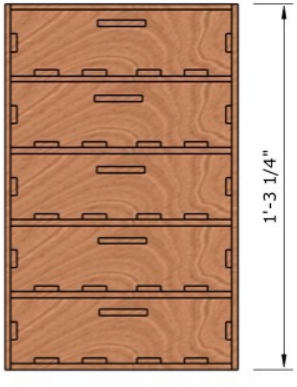


Top View of Drawers
Scale: 3" = 1' (1:4)

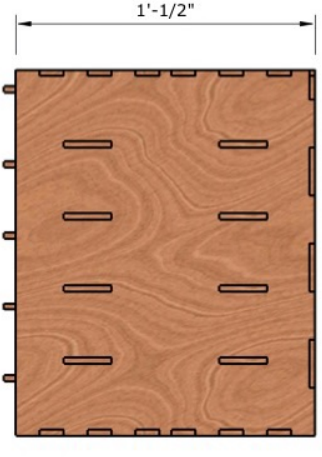


Top

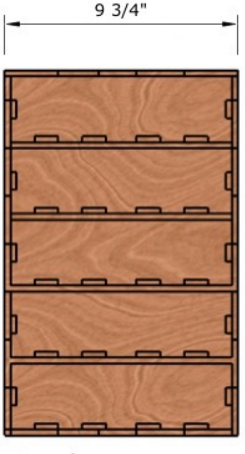
Scale 1mm:5mm (1:5)



Front

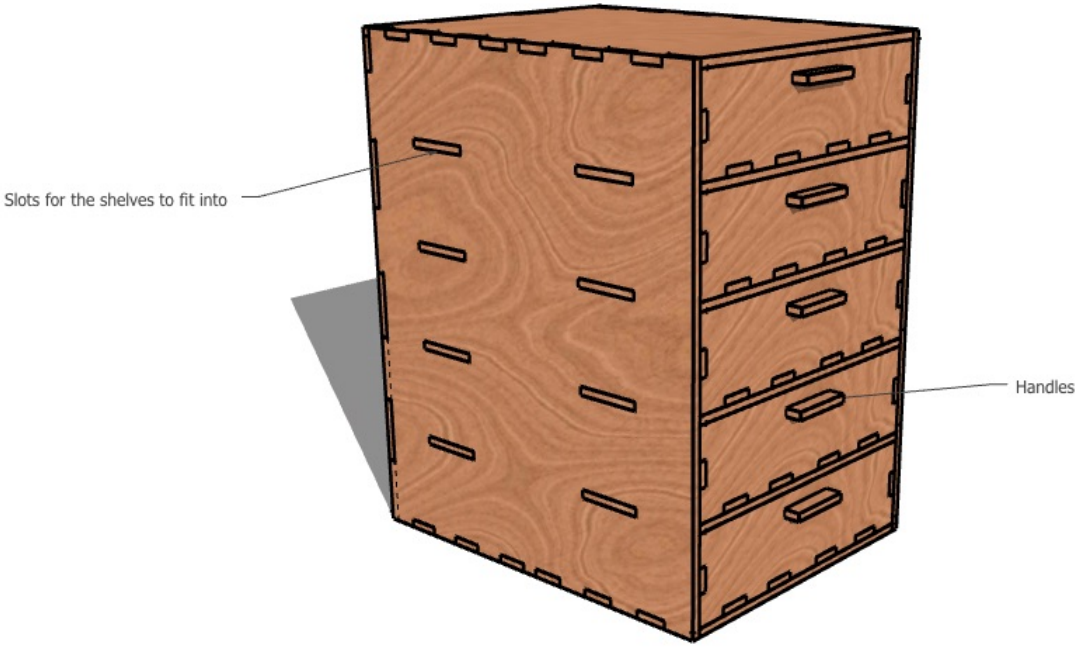


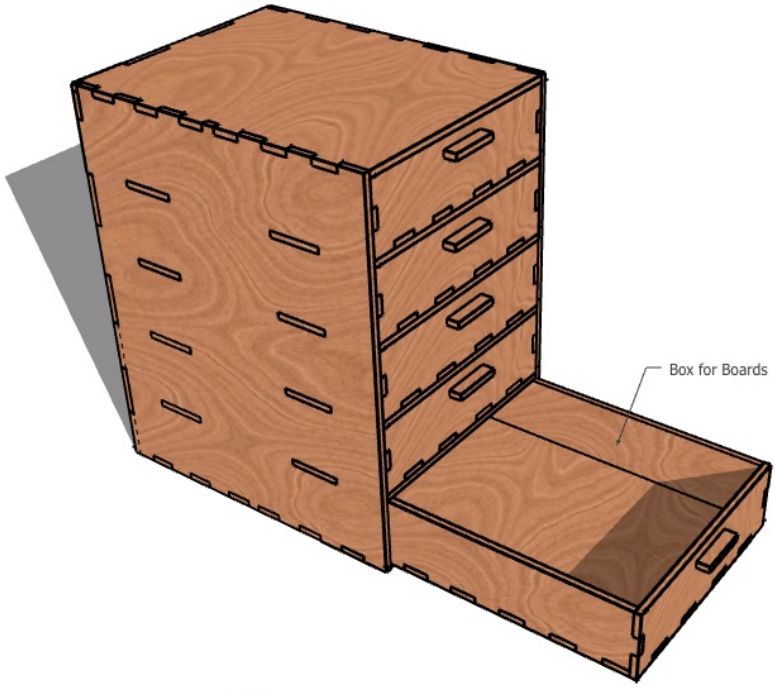
Side

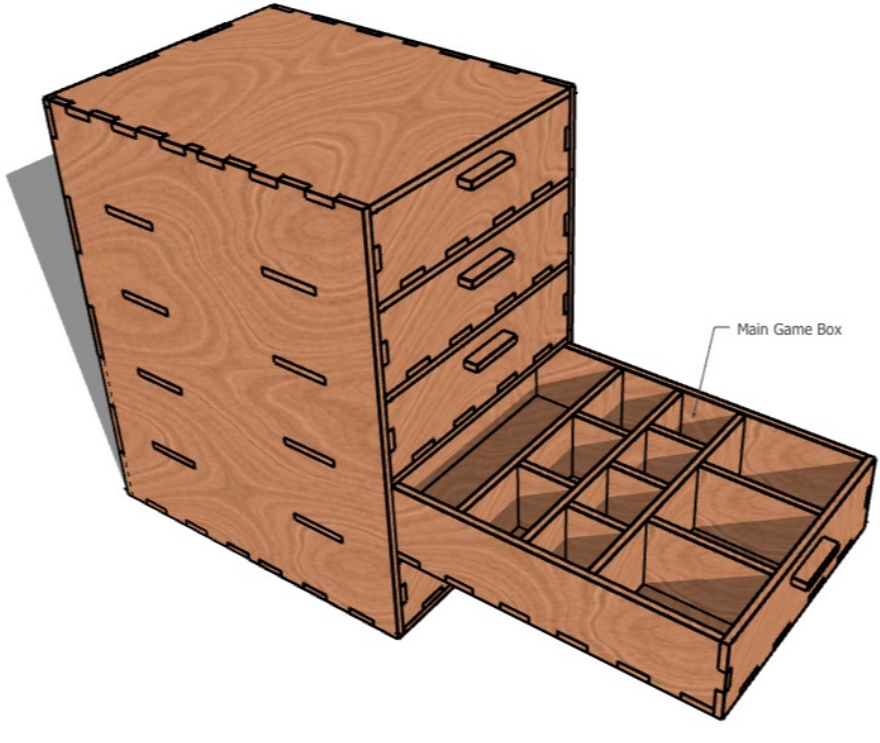


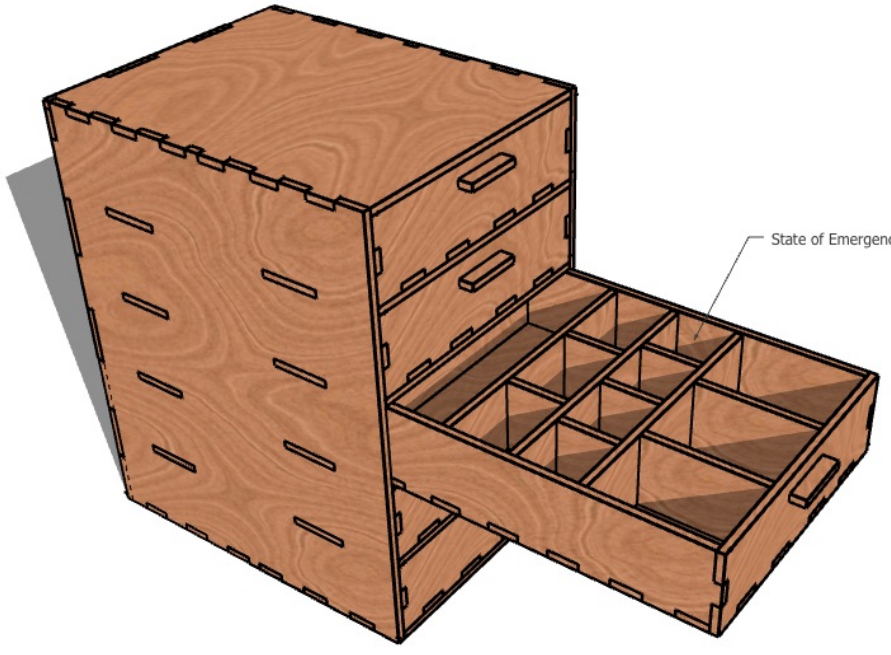
Back

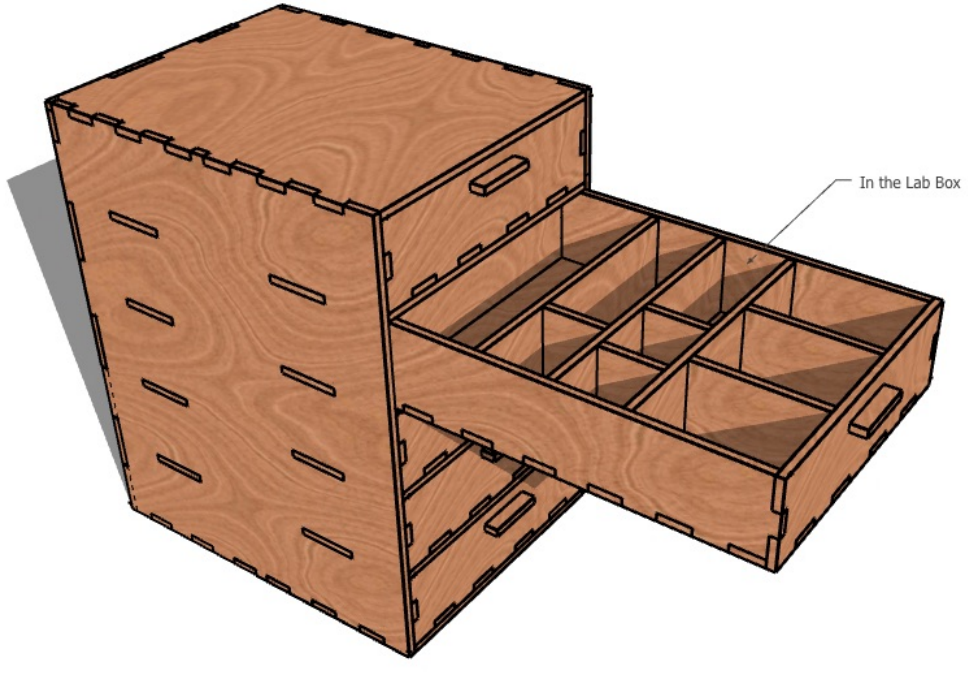
Perspective Model Views

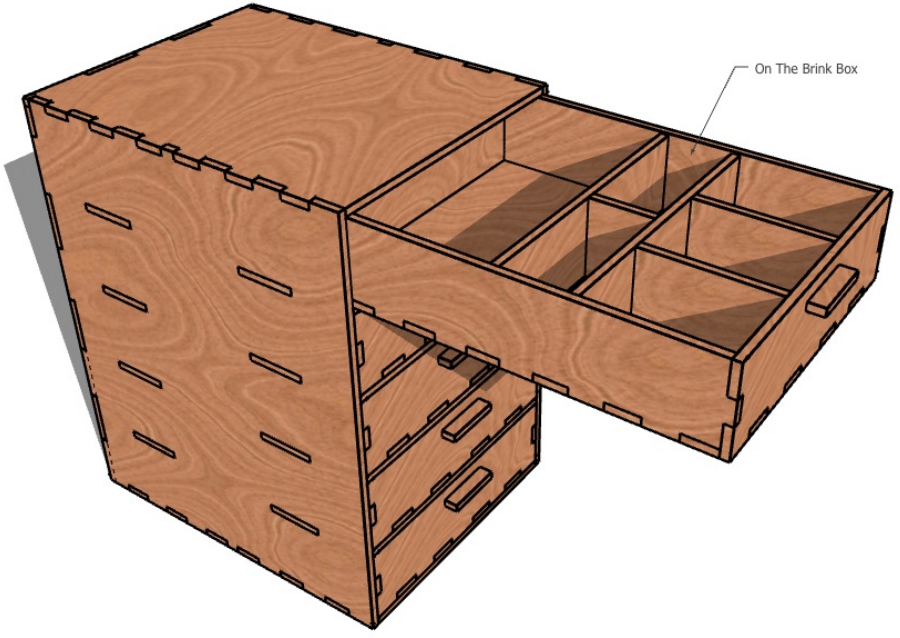


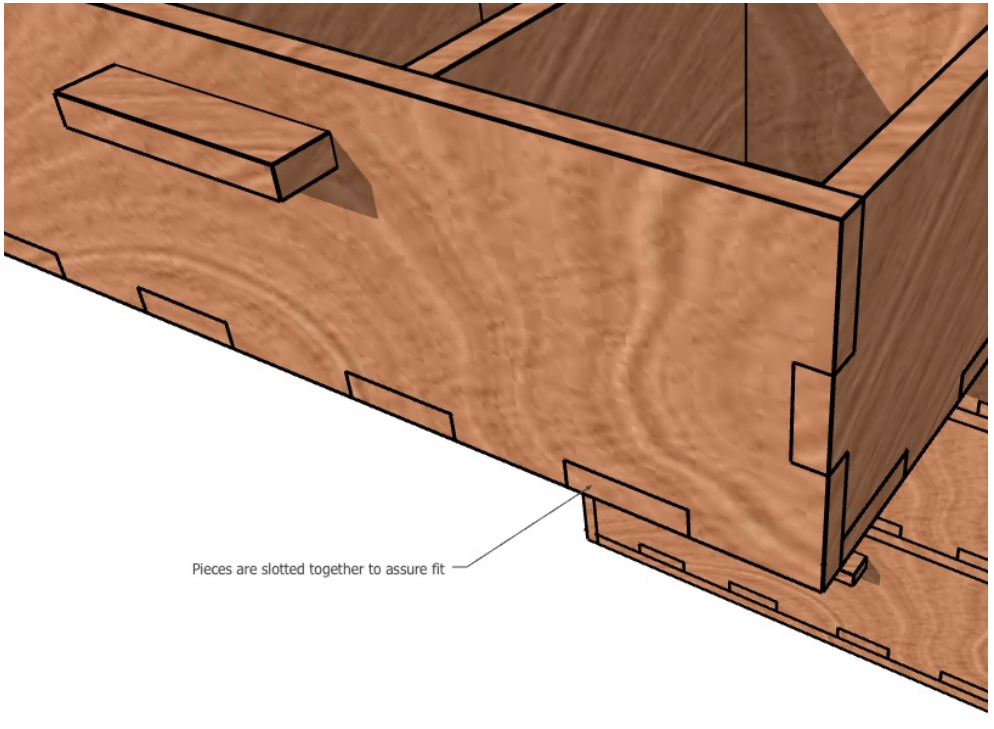

Box for Boards


Main Game Box

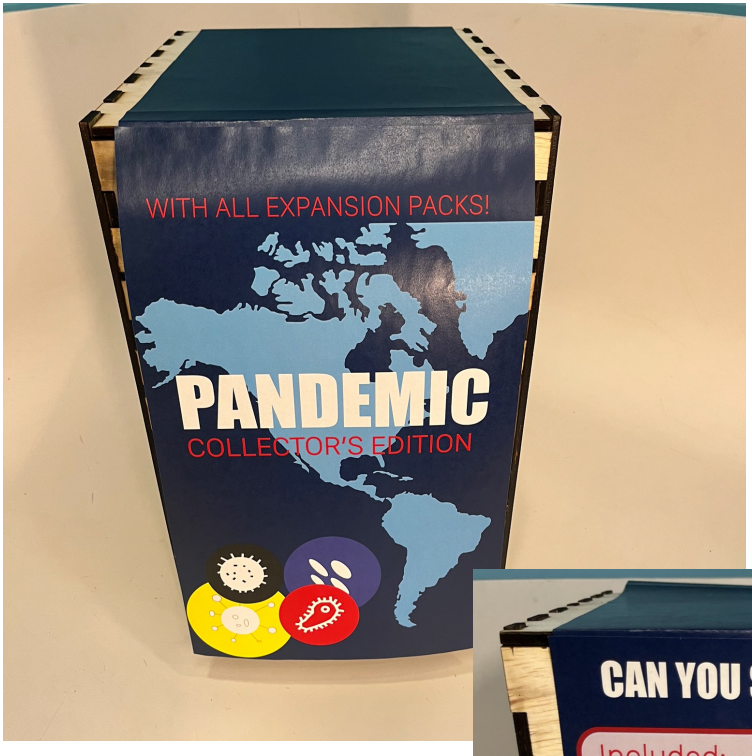

State of Emergency Box


In the Lab Box


On The Brink Box


Pieces are slotted together to assure fit

Final Object Photos



Iso

Front

Back

Drawers

Process Log

I think the easiest way for me to write this journal is if I put bullet points under main task items.

Research/Brainstorming

- I know that I want my housing unit to keep the different game pieces separate from each other but in one housing unit. I think that drawers would be the easiest to store
- I am going to create a spreadsheet to take inventory of all of the pieces and also the size because I don't want to "eyeball" the dimensions
- After measuring all of the pieces I think that a drawer system would work the best and it would be easy to separate all of the extensions but still have the game be together. The boards might need their own drawer though.

Digital Modeling

- I think I'm going to start with drawing out the layout that I want for all of the drawers. The boards are the biggest things so all of the drawers will have to be at least that size.
- I want to make sure that there is enough wiggle room within the drawer so that people can get the pieces out. I'm thinking that an extra half inch or quarter inch on each side would be enough for people to reach in.
- OOOOOOO I'm making the layouts for the expansion drawers now and since a lot of the pieces are similar I can kinda use the main game layout as a template and remove some of the little compartments as necessary since the expansions don't have as many pieces. That is going to save a lot of time when making this in the model too.
- Okay so I'm doing my first drawer layout for the main game and I'm realizing that it's gonna be hard to measure out these exact distances of all of the inside compartments without some sort of outline on the base. Since my wood is ¼ inches thick I'm gonna have the outlines be ⅛ set into the wood.
  - I think this means that I should make the compartment walls the same as though they weren't ⅛ offset because if the raster doesn't work then I don't want the walls coming out of the box.
- I've found that grouping is really important for this project. I want each wall to be a group so I can move it around. Then I want the outer walls to be a group and then the inner walls to be grouped in after. This will help me move things around for the expansion drawers.
- Yeah, I was right, it was super easy to use the main drawer as a template and since the walls were grouped I could just go in and delete the ones I didn't need.
- So I realize that the bottom templates need to change and when I close off the indent of walls that I deleted it still leaves lines and faces within the "base board" and it's causing my model to glitch. So I'm gonna go in and delete all of those random edges.
- I'm building the drawer housing now and I think that I'll offset the drawers a little bit so they can grab the sides to pull them out. I'm hoping that it will be grippy enough.
- Now that the digital model is done I'm going to assemble it onto flat sheets. I'm going to use the TBD lab laser cutter because it can fit a bigger sheet of wood and it's more powerful.
- Lol, I'm gonna have to buy some more wood….. This project is bigger than I think I originally thought. I'll end up using 4 big sheets.

Laser cutting

- So I'm realizing that the depth of the outlines for the compartments on the digital model are kinda arbitrary because the illustrator file doesn't copy the third dimension over. But the lines they create still help me fill it in so that I can raster. I just need to find the right raster settings to get the outlines deep enough so the compartment walls don't stick up.
- Welp, I failed and I'm tired. I decided to only try rastering one of the base plates to see how it goes. Turns out that it IS cutting the yellow lines from the imported pdf. I thought that it only cut .001 thick black lines but this a) didn't raster well at all (I think it might need to be focused more. And b) it cut the yellow lines so now my base board is in like 6 different pieces. AND to make things worse this whole cut took like an hour and a half so now I have to redo it. I'm realizing that this is going to take like 8 hours to cut.
- Yeah… it is gonna take forever. I fixed the problems with the base plate and I just want to get this rastering out of the way so I put all four raster pieces on one sheet. It's going to take 4 hours to cut this ONE SHEET. Depending on how it rasters I may or may not put some fun designs on the front and/or sides.
- Okay, well it made good outlines this time but the sande wood that I'm using smears the raster dust and ash ALL OVER and I can't even use sandpaper to get it out. It's just wiping gray all over the wood and it looks terrible. The wood also looks really burned. So I think I'm not going to do more rastering.
- After putting the pieces together dry it all seems like it's going to fit! So I'm going to go ahead and cut all of the boxes

Glueing/Assembly

- So I'm frustrated already. I glued the first box together but the wood I got from Home Depot was already a little warped so some of the edges bend out a little. I had to go get all of the clamps possible to hold it down while the glue is drying. It's gonna just have to be the best it can but it's still not fully flattening.
- After doing the rest of the boxes the wood is definitely a little bent. I'm hoping that it still fits in the overall housing.
- So they do all fit, it's a little snug but it works. I'm thinking however that I need handles. The edges are too small to actually grab and with the wood being a little warped it's hard to get a good hold. I'm going to go back and add some handles to my digital model and cut them out.
- So much better. I can actually get the drawers out of the housing now.

Graphic Design

- I'm thinking of doing something basic since this is also more of a personal project as well. I do want it to resemble the game a bit because all of the pieces are in a certain color scheme.
- I think I'm goin to use illustrator to do some vector art. I'm going to trace the world map that's on the game board so that it spans across the front and back of the game.
- So that took forever to trace the entire world. There are definitely some islands missing but I got the main parts. I'm going to print this at work since they have a big printer.
- Okay, so I'm realizing that I want the front and back to be connected. I'm going to just print out a piece of paper with the blue background and use it on top to connect the pieces. It will be like a blanket for the housing I guess.
- I just used some glue to glue the paper together but it actually worked really well. The paper in the front sticks out a bit since the handles are there but I think if I tape them down it will work well. The packaging is meant to be thrown away anyways.
- Yay!! I just put everything together and it actually turned out! I'm excited to take it home and put all the pieces in it! Overall I think I'm really happy with the way it turned out!

After thoughts

- After talking to some people in class after presenting I think I want to paint the exterior of the box. It would be fun to make the outside something fun and maybe aesthetic with my room but the drawers could be painted with fun things that represent the expansion. That would be a fun creative summer project.
- I also think I want to add felt to the bottom of the drawers to make it look a little nicer. The bottoms look really burnt from the rastering so it would be nice to cover that up.
- I think that I can also keep iterating on this project since now I know what works well and what doesn't. I think even after our "final showcase" I'm still happy with what I made.