

Magnetized Diner



Behind The Scenes Info:

Research Question:

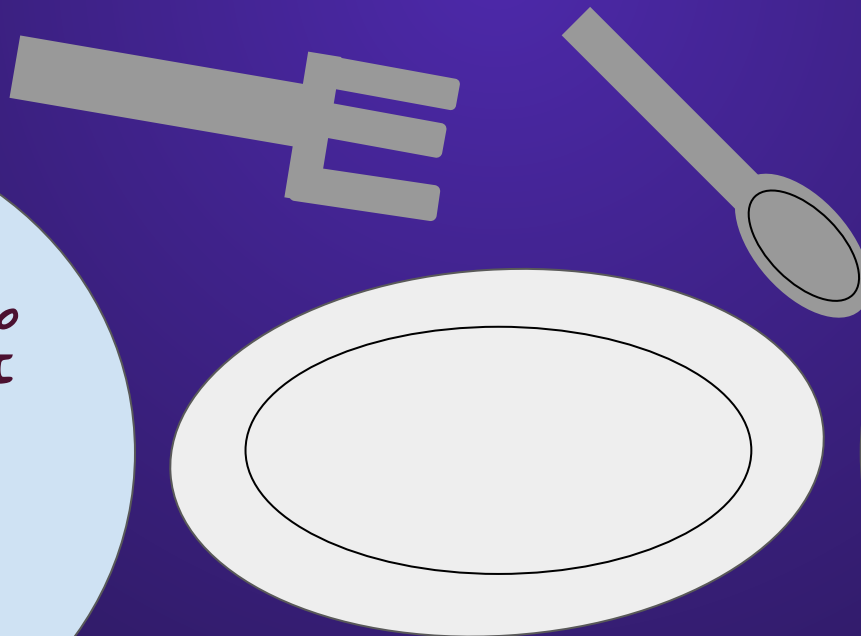
Have you ever finished your dinner and wanted dessert, but your plate was dirty from dinner and you had to get a new one? Well that's what I am solving with this double trouble plate.

Notes:

- Worry about how presentation works/looks.
- Find out if this whole pastel thing works.

Process:

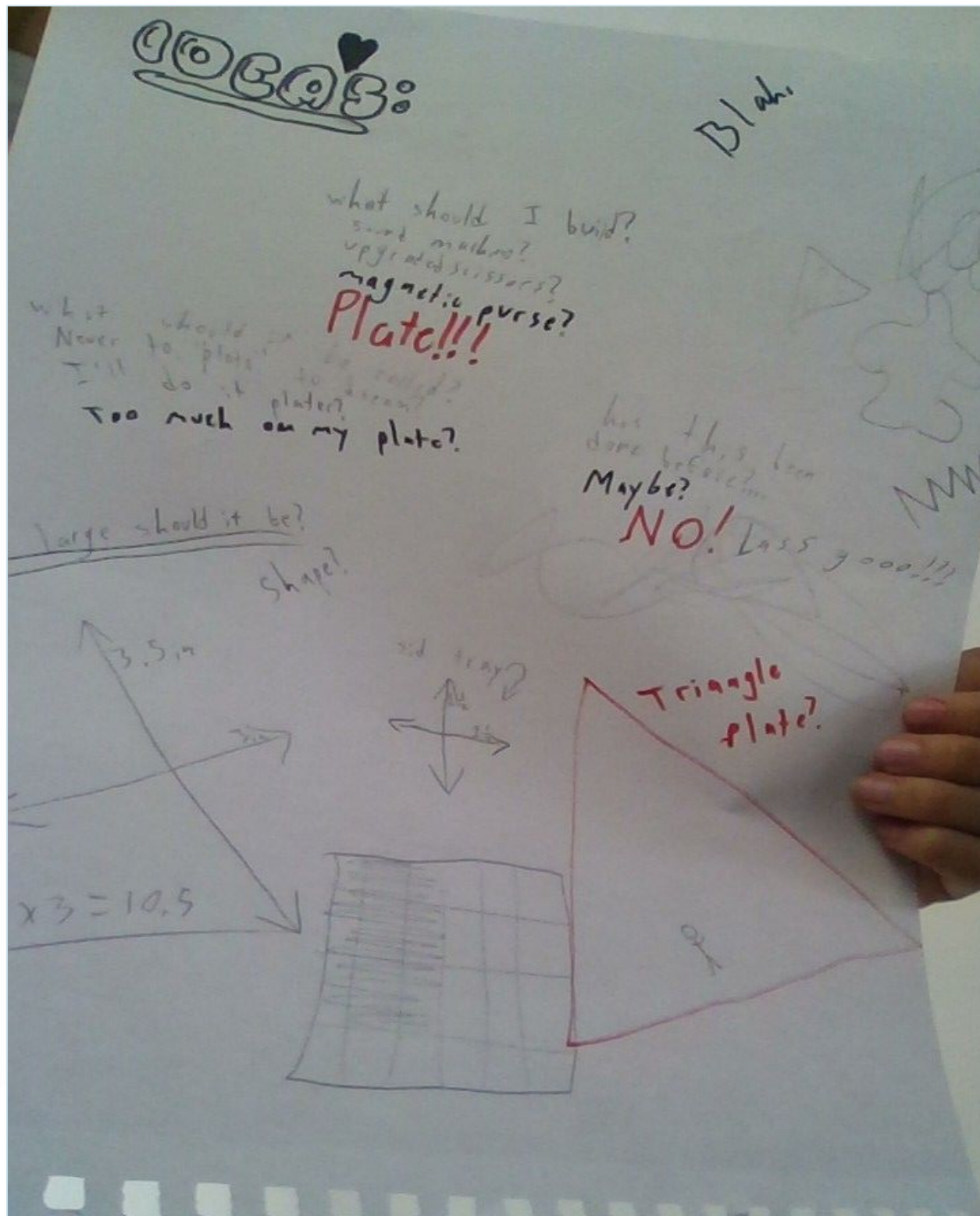
Something that has to happen for me, is I need to figure out what material I should use to make my double-sided plate, that won't break, and looks somewhat decent.



Problems:

A problem I will run into is actually building this. Because it could either be a total monstrosity or a masterpiece. Plus, I have created a whole, pastel theme, and I am not 100% sure that fits too well.

Notes I Took:



Design

Flaws and Foresights:

Flaws:

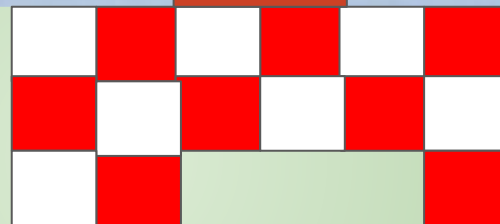
Some flaws of my design could be, is that my materials may or may not be strong enough, and could break. My prototypes could be pretty jank, and I would have to create unnecessary prototypes.

Foresights:

Some predictions I have for my prototypes and project is that I might have to make the plate a square because circles are hard to make out of wood. I also need to find a way that grime doesn't get stuck in crevices.

Design Materials:

- Art Supplies
- Plastic Plates
- Scraps of Wood
- Clay
- Glue



Prototypes:



The plastic prototype was most definitely the easiest to build as all I did was glue some plates together. But, this plate is weak, can't be washed, and looks kinda dumb.



The wooden prototype was most certainly the best. It was the only one that didn't fall apart or look horrible.



The clay prototype was the absolute worst because it falls apart really easily, it looks bad, and I can't even attach the second side. Overall, it was the worst prototype.

Data Visualization, Data Table & Graph:

**Clay
Prototype:**



Wood Prototype:

**Plastic
Prototype:**

Rating Ruler

5

4.5

4

3.5

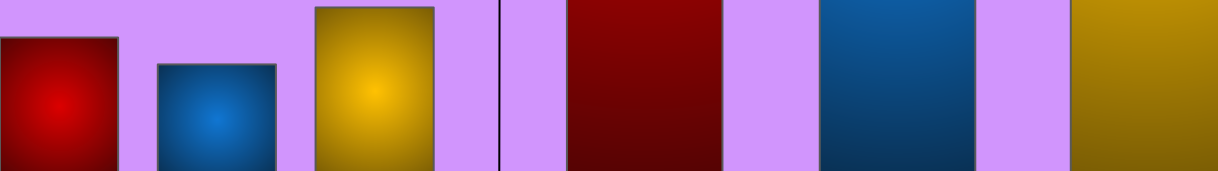
3

2.5

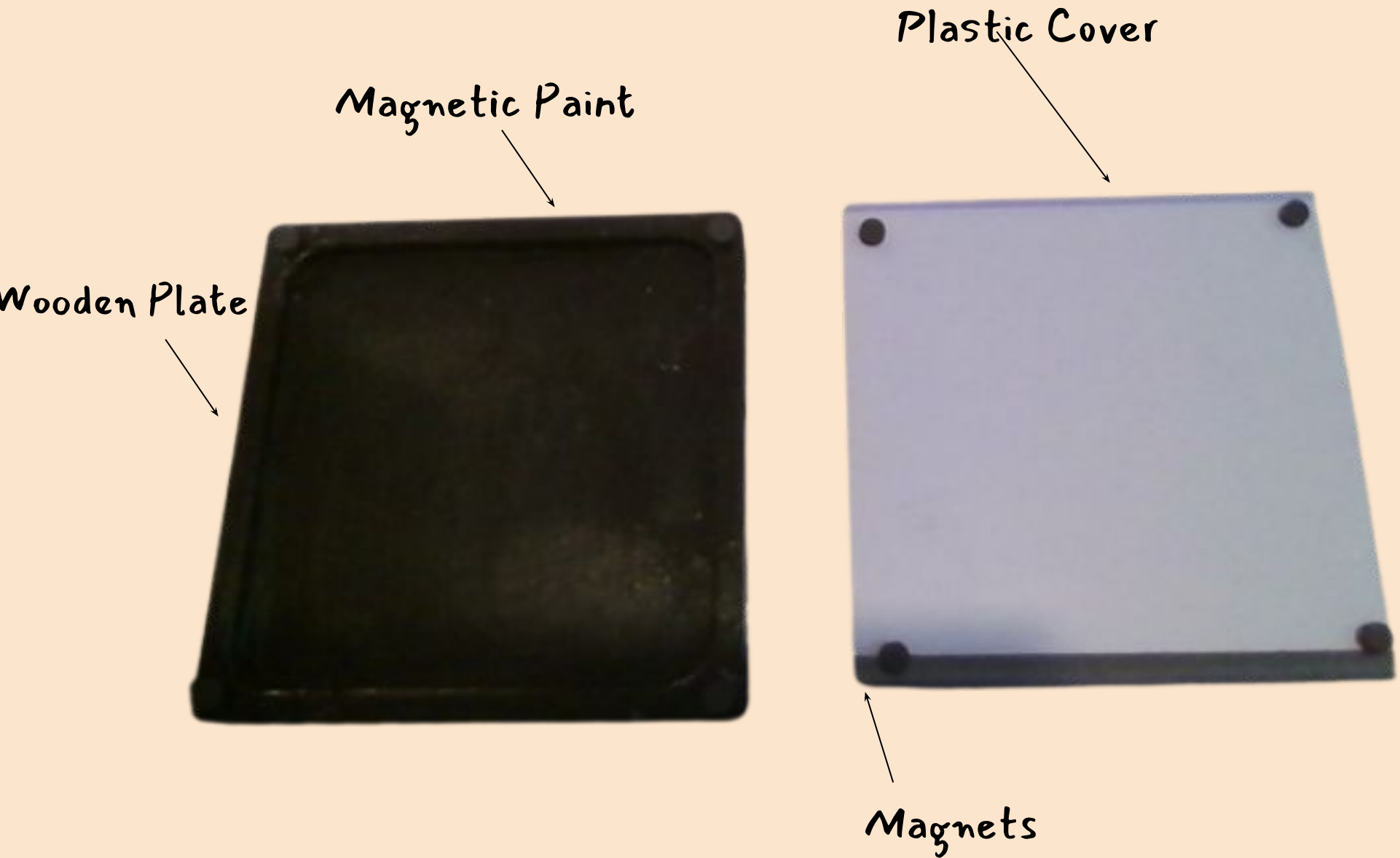
2

1.5

1



Final Product



Limitations and

Limitations Implications

- One limitation could be that my cover is not exactly airtight, because the magnets leave a gap between the cover of the plate. I could've fixed this by making the magnets stronger, so I could lay them on top of the cover.

Implications

- What this means for my project is that if you were to eat curry or spaghetti or something, the sauce could leak a little when you flip it. Another problem that stronger magnets would solve is that if you shake the plate hard, the cover comes off.

CONCLUSIONS AND IDEAS FOR FUTURE RESEARCH

Well, I just created a double sided plate to prevent the mixture of dinner and dessert. It took a course of several years... November to February. It did take some help, shoutout to my dad for buying the materials, my mom for being my co-conspirator, and my old teacher, Mrs. Baden who encouraged me to get it done and make it better. Honestly next year, for this project I might build a double sided spoon. Some things I would want to look into is maybe changing the variations of the plate, or make it so that the magnetic paint would stick to a fridge.

References

1. <https://www.konga.com/product/two-sided-unbreakable-ceramic-plates-set-of-6-6064317>
2. <https://www.remove.bg/upload>
3. <https://njspe.org/2024/09/19/what-it-takes-to-be-an-engineer-skills-education-and-career-pathways/>

Found on Google

Link to Journal → https://docs.google.com/presentation/d/1P6EKCC5aEuqDlzyMjbwEY_wCXoUvfTPxEIsZfZJlbG0/edit?slide=id.ga47f9431e9_3_76#slide=id.ga47f9431e9_3_76



THANK YOU FOR LISTENING

BTW: I already have investors.

TY



Thank You!

