CPSS 240

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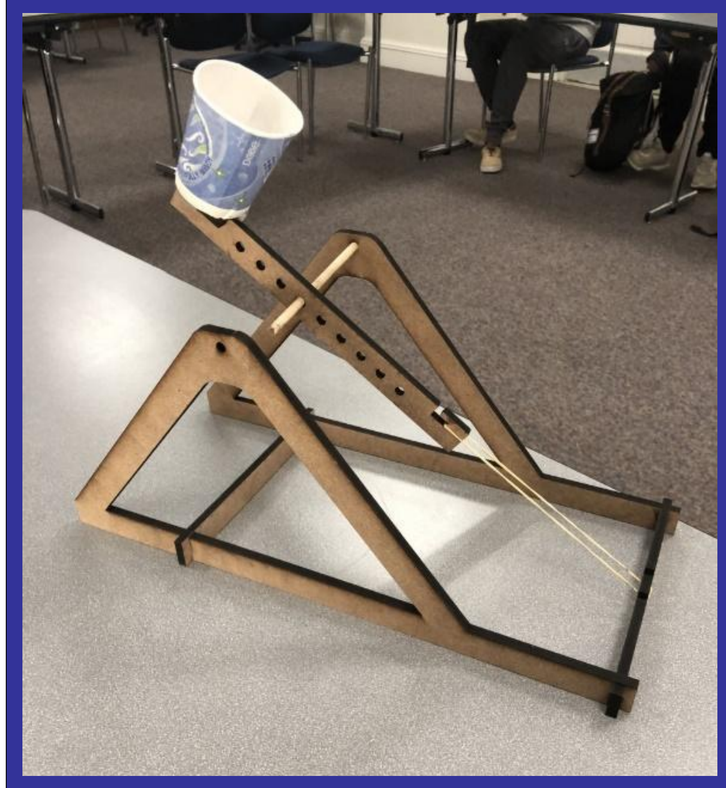
Introduction:

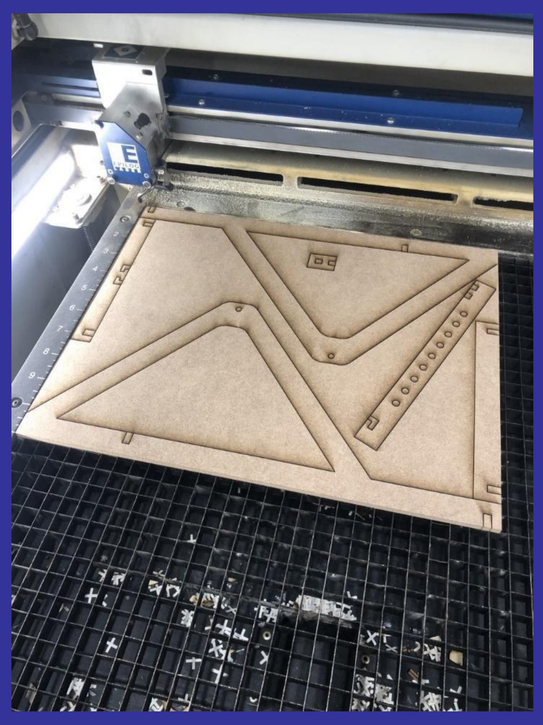
This course was different from the usual robotics program that would usually be taught. This course focused on creating an engineering curriculum for local schools.



Here is a picture of our finished prototype for our catapult. It was designed with a lower cost in mind to be good activity in schools to introduce them to engineering.

Activities:

- Met twice a week in a classroom setting on Tuesday and Thursday, and eventually only Tuesday when we were finishing up our project. Thursday would be the day we would use to work on our project.
- Large part of the course was understanding the issues in STEM education
- We met in our teams and pitched out prototypes/ideas to our assigned school teacher.



The laser cut board, designed to be mass produced and be able to pop out easily for the kits. We used MDF, so it would be cheap and durable.

Site Information:

Name of Site: Cumberland Hall

Address: 4145 Farm Dr. College Park, MD 20742

Your supervisor: Matt Aruch

The particular goals of the site you were at: Design an engineering curriculum for nearby schools

Impact:

This course gave me a new perspective on what goes into creating a curriculum, and a deeper understanding of the design process. It also gave me a new perspective on the issues of STEM education and how it should be properly combated. We had to keep these issues in mind and also be able to create a curriculum that showed what engineering is about. A new perspective related to creating a curriculum was the cost aspect. Each group was given a small budget to create our prototype, something that many school systems have to take into account.

Issues Confronting Site:

Due to the pandemic, we were forced online and were not able to work with our school as much as we wanted to. We were only able to communicate with our corresponding teacher a few times, and we could not show our teacher our prototypes in person.

Future Work:

This course sets the groundwork for the creation of future engineering curriculum kits. I liked how it was sort of a competition where it put all of the groups against each other to see who came up with the best kit. The winner would have their kit be improved upon by engineering students in a tech elective. It really motivated us to try to create the best possible kit prototype.

Acknowledgments:

I would like to thank Dr. Holtz and Dr. Merck for leading me through the Science and Global Change Scholars Program these past two years. I would also like to thank Matt Aruch for teaching the CPSS 240 course and my partner Anton Preslopsky for working with me to complete the project and the course.