Team 216 Cosmic Quest Engineering Notebook

Mechatronics Engineering 2023-2024
TheBIGNoNo

- Rafael Guillen
- Diego Palomino
- Damian Renteria
 - Sean Phi





2/9/2024 Ideas on what we should build



A Trebuchet just like one that Sean built for his AP physics one project.

A catapult.



A tube where the ball fits and behind it there's something that pushes it like some sort of cannon /grenade launcher like contraption (Something like this)



3/1/2024 Which launcher we're gonna use

The tube design might be the best option because it can allow us to accurately aim at the target and control how far. The ball is around 63mm. The design will need tubes, springs, a tripod like thing, and a triggering mechanism.



Launchers not selected for pretty obvious reasons aka its most likely what people would chose like the trebuchet



Or something like the catapult which I do believe is a simple design that most would chose as well



3/8/2024 Material and trigger design

Materials needed:

- 1. 68.9mm tube w/ hole 104mm from end of tube
- 2. Compression spring
- 3. Rubber band or a tough string
- 4. Metal rod
- 5. Tennis ball

The idea we have for the trigger mechanism is to drill a hole in between the tube so a little rod can go in and be pulled by a string.



4/16/2024 New Design Approach

We thought that the tube idea was too complicated, so we decided to go with the trebuchet design.

4/22/2024 - New trigger mechanism

We decided to have a ratchet tie down ropes to work as our trigger mechanism. This would allow us to adjust the power and distance of the launcher. I might get it tomorrow morning.



4/24/2024 Final design and trigger

The final design concludes the brick permanently attached to the board and a pin tied to a fishing line where it gets pulled.



4/26/2024 Testing and calculating

For the first platform, we simply aim for it. For the second platform, we need about 4 wood bricks. For the last one, we need around 2-3 bricks.

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<Date> <Title - Daily/Weekly "Blog" Project Title - compelling, descriptive title>

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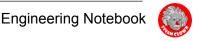
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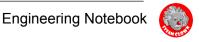
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