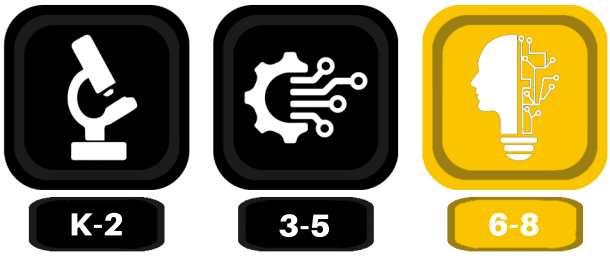
Posterboard Table



Objective:

Brainstorm, design, and construct a table to hold as much weight as possible with the given materials.

Materials:

- **One 22" x 28" Poster Board**
- **Masking Tape**

Engineering Constraints:

- **5 minutes to explain activity, 20 min to brainstorm and design, 40 min of building, 25 min of testing, 10 min snack break**
- **Table has to fit inside a 28"x28" area**
- **Table has to be bigger than 14"x14"14"**
- **Table top at start has to be parallel to the ground**
- **Table top has to be at least 14" from the ground**
- **Bottom of table top cannot touch the ground**
- **Table top cannot exceed failure line (drawn behind)**
- **After finishing construction, table top must be able to maintain stability with no weight for X seconds (15?)**

Engineering Desing Process:

1. **Define the Problem - What is the problem or challenge you are trying to solve or fix?**
2. **Background Research/Benchmarking - What do I have to work with? What solutions have been done before? What hasn't been done?**
3. **Specify Customer Requirements - What does my final design need to be seen as successful?**
4. **Brainstorm Solutions - What are possible solutions to the problem or challenge?**
5. **Chose the Best Solution - Which solution is the best (think time to build, cost, effectiveness, etc.)?**
6. **Build a Prototype - You must build your concept, so you can test your solution.**
7. **Test - Did it work?**
8. **Redesign - What could make my design better?**

Future Improvement:

1. **What methodology did you use to build your table?**

2. **What was your most important material or shape in your design?**

3. **What was the least effective material or shape of your design?**

4. **What would you do differently next time?**

5. **What application do you think this knowledge of building out of cheap material has?**