**Design a Candy Dispenser** *Team of 2*

**Problem Statement:**

A candy company needs a miniature candy machine for their 50th anniversary. The machine must be able to dispense 2 types of candy.

**Design Statement:**

You must build a new miniature candy machine. To help create the machine, you must use the Autodesk Inventor Pro CAD software. Possibly animate you're machine during the Inventor process.

**Constraints:**

1. Must be durable.
2. Must not exceed 24”x24”x24”.
3. Must have 4 or more parts.
4. Must have 2 types of candy. You decide the candy.
5. Candy cannot exceed ½” for all measurements.

**RUBRIC:**

|  |  |  |
| --- | --- | --- |
| **Product Design**  | **Points**  |  |
| Define the Problem  | 5 |  |
| Research the Problem | 10 |  |
| Develop Possible Solutions | 15 |  |
| Choose the Best Solution | 5 |  |
| Create a Prototype | 60 |  |
| 4 parts (10pts each), assembly (20pts),  |
| Test and Evaluate  | 10 |  |
| Communicate  | 20 |  |
| Redesign  | 5 |  |
| **Total Points** | **130** |  |

Use the Engineering Design Process to help with your planning and create a poster/blog to document your design ideas using your OneDrive – Title the page with your name .

* Define the problem
* Research – include a list, picture, and description of 5 designs that already exist.
* Develop possible solutions – create 3 solutions. Take a picture and insert it into your poster/blog.
* Choose the best solution – create a pugh chart using the criteria and constraints to choose your design.
* Create a prototype – draw each of the 4 parts using AutoDesk Inventor and make an assembly animation. Lookup how to do it…remember the trains. Include copies of the drawings in your poster/blog. You can use the snipping tool under accessories to help with this. Remember to include your candy.
* Test and Evaluate – what changes would you make to your design now that you have drawn it?
* Communicate – your poster/blog will be your communication.

*Example documentation for*

*create a prototype*

* Redesign – what changes would you make?

*Example of brainstorming drawings*