Rube Goldberg Challenge!

Objective: Design and build a complex machine that will perform a simple task in a series of six (or more!) steps. Your machine will use at least three different types of simple machines.

Logistics:

1. Choose a task!
   - ❖ You have been grouped with students who have the same idea in mind as you. Finalize your idea and record it in your comp book.

2. Brainstorm different simple machines you could use to complete your task!
   - ❖ Remember to include at least 3 machines

3. Make a plan!
   - ❖ You will draw a detailed, labeled sketch of your machine.
   - ❖ You will write down your plan for how your machine will accomplish this task.
   - ❖ You will make a list of the materials you need to build your machine

4. Build your machine!
   - ❖ You will work on your machine.
   - ❖ Keep a journal of your findings each day.

5. Final machine and sketch!
   - ❖ Once you have tweaked your original plan and built a working six-step machine, you will create a final sketch.

6. Present!
   - ❖ Plan your part of the presentation
   - ❖ Present your final machine to the class.

Your Rube Goldberg Machine must….

- € Use at least six steps (the more, the better!!!)
- € Use at least 3 simple machines (*lever, pulley, inclined plane)*
- € Display each simple machine name on the device.
- € Only require a human to touch the machine once to start the motion.
- € Complete the task within 5 minutes.
- € Be fun and creative!

** For more information and ideas, see www.rubegoldberg.com!**

Rube Goldberg Challenge Rubric!

Design Process	Below Expectations (2)	Meets Expectations (4)	Exceeds Expectations (5)
Original Sketch and Explanation	Student's sketch is not complete, lacks effort, and/or is not labeled. Student did not write a clear explanation/the explanation was not plausible	Student's sketch is complete, labeled, and carefully drawn. Students explanation was clear and plausible	Student's sketch is complete, labeled, and carefully drawn. Sketch also shows **revisions.** Student's explanation was clear and plausible. It also used **scientific language.**
Final Sketch	Student's final sketch is no different from their original sketch.	Student's final sketch that is neatly drawn, with clear revisions and labels.	Student went above and beyond in creating their final sketch.

Building and Presenting	Below Expectations (2)	Meets Expectations (4)	Exceeds Expectations (5)
Rube Goldberg Machine	The student's machine is missing an important element such as: Labels Six steps 3 different simple machines OR Student's machine does not complete task or requires human touch more than once.	Student's machine includes all elements and functions properly.	Student's machine uses more than 3 simple machines and/or includes more than 6 steps. Each of which is labeled and explained.
Presentation	The student was unable to clearly present their project to their classmates.	The student was knowledgeable about their machine and spoke clearly to the class.	The student was confident and knowledgeable about their machine; they used scientific language to explain how and why the machine works and the design decisions they made.

SCORE:_____/20 points