

# Rube Goldberg Machine Project

Due 10/28

**Goal:** Construct a successful Rube Goldberg machine.

**Purpose:** To build and foster (1) problem solving skills, (2) critical thinking, (3) use of technology, and (4) cooperative learning.

**Due Date:** Videos must be posted on YouTube.com by Friday, October 28<sup>th</sup> at 4:30 p.m. Written reports must be handed in to Mrs. Clow by the end of the school day on the same date.

**Project:** Students must provide their own materials (i.e. dominoes, balls, containers, string, paper cups, Hot Wheel cars, books, rulers, kitchenware, etc.) Each group must video record their Rube Goldberg machine performing a simple task (i.e. ringing a bell, releasing a balloon, popping a balloon, turning on the TV, etc) and post the video on youtube.com.

In addition to constructing a Rube Goldberg machine, each group must create a written report that includes: a Rube Goldberg picture/diagram of your machine and a written explanation of the series of operations in the chain reaction. *See below*

**Rules:**

- A simple task must be clearly stated and approved by teacher
- The number of operations in the chain reaction to achieve the simple task is dependent on the number of students in the group:

|                               |   |   |   |              |              |
|-------------------------------|---|---|---|--------------|--------------|
| Number of students in group   | 1 | 2 | 3 | <del>4</del> | <del>5</del> |
| Number of required operations | 4 | 5 | 6 | <del>7</del> | <del>8</del> |

Example of written report:

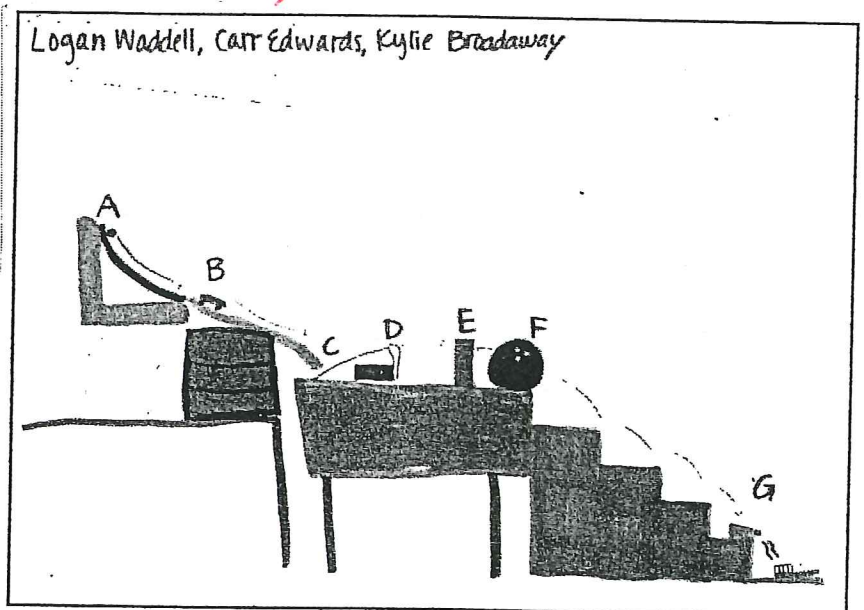
*Our Rube Goldberg machine's task is to squeeze toothpaste out of a tube.*

*A: Marble rolls down a ramp and hits a Hot Wheels car*

*B: Collision causes car to roll down a ramp.*

*C: Candle attached to car ignites and burns a string.*

*D: Snapped string releases spoon that catapults into a stood up book and squeezes toothpaste out of a tube*



## RUBRIC

|                    | 1  | 2   | 3   | 4  |
|--------------------|--|---|---|--|
| Workable Machine   | The machine was either missing 3 operations or was not successful. | The machine was missing 2 operations but was successful.                                | The machine was missing 1 operation but was successful.   | The machine included the necessary operations and was successful.                                  |
| Video Presentation | Video was not uploaded on YouTube.                                 | Video was successfully uploaded on YouTube but viewer cannot follow the chain reaction. | Video was successfully uploaded on YouTube but view struggled to see every operation in action. | Video was successfully uploaded on YouTube and filmed so the viewer can follow the chain reaction. |
| Written Report     | Written was missing cartoon or explanation and lacked clarity.     | Written report was missing either cartoon or explanation.                               | Written report lacked clarity.  | Written report included: clear explanation of machine's chain reaction.                            |
| Teamwork           | Team did not cooperate or use their time wisely.                   | Two team members relied on others to do all the work.                                   | One member did not pull his/her weight during the project.                                      | Every member of team cooperated and shared responsibilities.                                       |

Below is a tutorial to help you upload a video onto YouTube. Students must NOT be visible in their video and make it public to watch in class. Once video is graded then came be removed from YouTube or made private. **This is the preferred and easiest method of video submission**

<http://www.wikihow.com/Upload-a-Video-to-YouTube>

Please be aware that some programs used to create your video and saved to a USB may not work with our technology.