

Rube Goldberg Extra Credit Summer Challenge

*****This is an OPTIONAL Summer Work Assignment!*****

Purpose: [Rube Goldberg](#) was a cartoonist who depicted complicated machines used to solve very simple tasks (i.e. a multistep device to simply turn on the light switch). These devices employ many concepts in Physics which will be exclusively covered in 8th grade science, but will also be relevant topics during 6th & 7th grade science as well.

Why a Summer Project??? After a very successful assignment with the current 8th graders and also via Field Day fun during the Remote Learning from March-June 2020, I've decided to offer a **Rube Goldberg extra credit opportunity for the rising 6th, 7th & 8th graders (i.e. current 5th, 6th & 7th graders)**. Since I know how challenging it would be to successfully assign this type of a project during a normal school year due to time and other commitments, I've devised this activity to keep students engaged in science over the summer with the intent of also "front loading" some Physics concepts to help deepen learning for students as they progress through middle school science. Participation is completely **OPTIONAL** but for those who do the work and submit to this Summer Work Google Classroom assignment post, this extra credit opportunity could pay off during the 2020-2021 school year as it is worth up to 0.5 points on a TEST weighted grade.

Details (see also the sample videos and ideas at the bottom of this document):

1. Create a Rube Goldberg contraption with at least **6 steps**, and **4 different elements** (choices are domino effect, simple ramp, pulley, release tool, tunnel (i.e. closed tube))
2. Take **videos of at least 2 failed attempts and any successful attempts**. All videos must have the student appear in the video for credit to be received. If your contraption does not work after 15+ attempts, you will need to submit your closest attempt video as well as at least 5 other failed attempt videos.
3. **Due Date:** Labor Day weekend (i.e. Monday, September 7th) - submit your work via this assignment post in the Google Classroom Summer Work space (emailed videos will NOT be graded).
4. **What it's Worth:** Extra credit up to 0.5 points on a future TEST weighted assignment will be awarded for fully completed, on-time submissions.

Helpful Tips & Examples:

To help with setting up a successful Rube Goldberg contraption, here are some helpful links/videos for explanations and ideas:

1. [Video of Mrs. McLaughlin explaining the different elements of a Rube Goldberg contraption and the task it is completing](#) (i.e. turning on a light switch)
2. [Video of Mrs. McLaughlin's final, mostly successful, run from the sample Rube Goldberg contraption](#) used for the 8th graders class project (FYI - that run would NOT actually count for this assignment as the "help" broom kick means it wasn't truly successful....however, that was our 30+ attempt!!)
3. Link to a basic instruction page about [how to make a Rube Goldberg contraption](#)