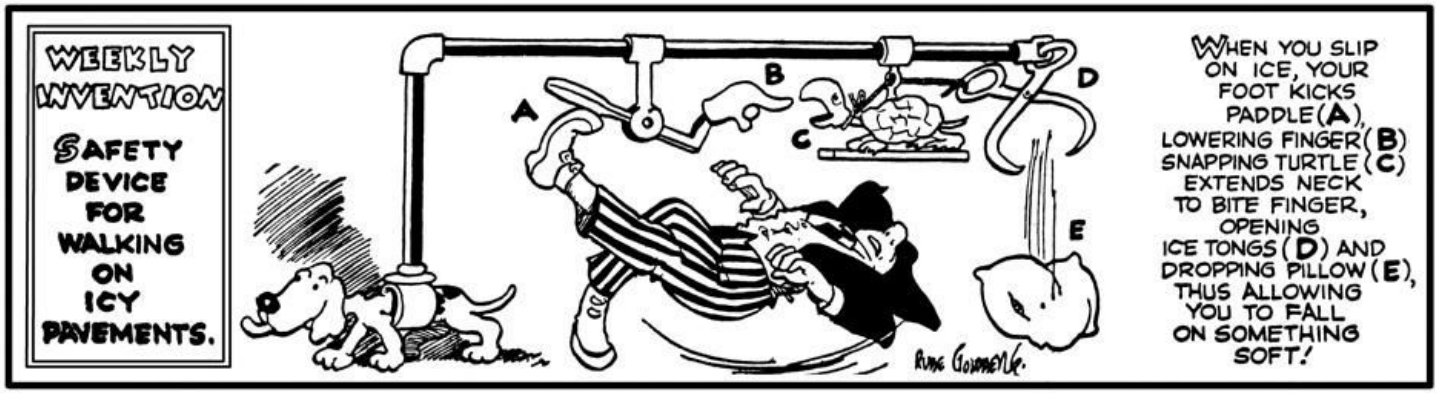
Name _____ Date _____

Intro to Engineering Rube Goldberg Timeline

Period _____ Mr. Moy

This project will take place between September 28 and November 13.



Timeline (Use this to pace yourself and as a guide to complete assignments)

September 28 to October 2:

- Create a group to work with the project and decide what task you want you machine to accomplish (pop a balloon, flip a light switch, turn a page in a book, etc.)
- First class period: Build and describe a simple machine to other groups - Peer Teaching.
- Last class period: Complete the Energy and Simple Machines WS.

Website Resources:

SIMPLE MACHINES EXPLAINED-

http://www.cosi.org/downloads/activities/simplemachines/sm1.html

GAME:

http://www.msichicago.org/online-science/simple-machines/activities/simple-machines-1/

Rube Goldberg Research Assignment:

Directions: Research the following questions. Please answer using your own words and cite sources informally in your lab journal (example: web address, book with author and indicate page number, magazine- Issue and Volume number and page).

1. What is work?
2. What is energy? What types of mechanical energy are there and how are they similar and different?
3. How is mechanical different from electrical energy?
4. What is a mechanical advantage?
5. Define and describe the three classes of levers in your own words and begin by defining terms such as fulcrum, load, and effort.
6. What do pulleys do and how do they create a mechanical advantage?
7. Why is an inclined plane (aka ramp) a simple machine?
8. Why is a wheel and axle a simple machine?

October 5 to October 9:

- Decide which partner will work on which steps in the machine.
- Work on what simple machines you will use and where.
- Begin a sketch/drawing of your machine step by step.
- *Safety Workshop* - Learn to use tools to help construct the machine

October 12 to October 16:

- Get your overall design and your individual steps approved by the instructor - **This must happen before you choose or use any materials.**

October 19 to October 23:

- Build and Revise
    - Describe any obstacles in your Daily Log, how you overcame them
    - Document any changes to your design and get approved by the instructor.

October 26 to October 30:

- Build and Revise
    - Describe any obstacles in your Daily Log, how you overcame them
    - Document any changes to your design and get approved by the instructor.

November 2 to November 6:

- Build and Revise
    - Describe any obstacles in your Daily Log, how you overcame them
    - Document any changes to your design and get approved by the instructor.
    - Document each step of your machine as well as your overall machine with pictures/video and ID your simple machines.

November 9 to November 13:

- Build and Revise
    - ***ALL WORK IS DUE THIS WEEK***
    - Document each step of your machine as well as your overall machine with pictures/video and ID your simple machines.
    - Describe how successful your group was with your machine.
    - Describe the major challenges of your design and what you may have done differently.
    - *Present your machines*