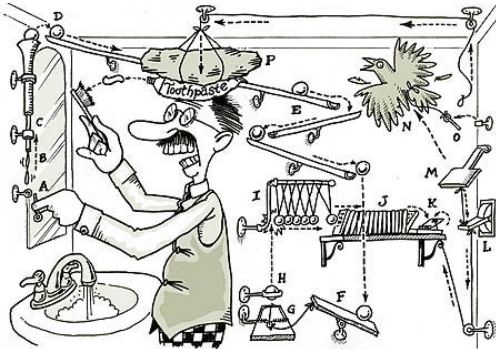


Rube Goldberg Project

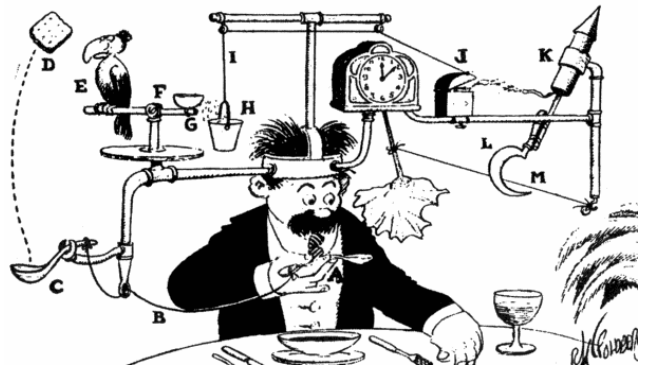


Rube Goldberg was a cartoonist that specialized in making drawings of complex machines that performed simple tasks. His cartoons were popular enough that sequences of machines performing a simple task became known as Rube Goldbergs.

In this project you will build your own Rube Goldberg to perform the “simple” task of popping a balloon. In order to perform your task you will need to use at least three types of simple machines. Simple machines that work together to make work easier and use the resistance force of one machine to become the effort force of the next machine are known as compound machines.

Rules:

1. You may complete this project individually or with a group of two or more freshmen.
2. At *least* three simple machines must be used per person. (If three freshmen work together, a total of nine simple machines must be in the design.)
3. Every project must include at least three types of simple machines. So, if only three machines are used for a single person completing this project, three different types of simple machines must be used. Six machines are used because it is a group of two people, you could have four levers, an inclined plane, and a pulley.
4. You may bring the materials for your Rube Goldberg to class to personally demonstrate the popping of the balloon or you may make a video of your Rube Goldberg in action.
 - a. If a video is made all of the faces of the students involved must be included in the actual video.
 - b. You may hand in the video in a way that works best for your group. It could be uploaded to the internet or handed in on a VHS, CD, or DVD.
5. In addition to the video or demonstrated project you must also hand in a diagram of your Rube Goldberg. The diagram should include labels that show the type of simple machine in each part of the complex machine. In addition, you should show the calculations for the ideal mechanical advantage of three of the simple machines.



Project Assessment

4 3 2 1 Video or Demonstration

Your video or demonstration of the Rube Goldberg actually popped the balloon and followed all of the directions given above and in class.

4 3 2 1 Diagram

Your diagram is complete and follows all of the directions given above. Each of the simple machines is labeled correctly. The IMA calculations for three of the machines are shown and done correctly.

4 3 2 1 Preparedness

All the parts of the project were handed in on time and in good order.