Introduction:

Reuben Lucius Goldberg was a famous cartoonist born in San Francisco in 1883. Many of his cartoons became popular for satirizing the so-called “advancement of technology.” He depicted the use of many household or relatively simple items in conjunction with each other in order to show a domino effect to complete a relatively menial task. In other words, a Rube Goldberg device is one that tackles a simple task in a roundabout or difficult manner.

Choose a Task:

You are to design and build a Rube-Goldberg device using simple machines. First you need to decide, what do you want your device to do? Note: it is not necessary for your machine to move mountains or finish your math homework for you. The task can be something simple.

Ideas for tasks:

- Turn on a light
- Pour a glass of water
- Turn the page of a book
- Pick something up
- Blow out a candle
Simple Machines:

Choose at least four different simple machines to be included in your device (you may use more than 4 total steps). Simple machines are: incline plane, wedge, screw, pendulum, lever, wheel and axle, and pulley.

Design Your Device and Make a List of Materials Needed:

Draft the design of your device on paper. Make sure that your device is actually buildable and that you have access to the materials in your design either at home and/or at school. Before going to the next step have your design and materials list approved by the teacher.

Possible Materials:

<table>
<thead>
<tr>
<th>Ball</th>
<th>Funnels</th>
<th>Paper Towel Roll</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee Can</td>
<td>Gears</td>
<td>Wire Hangers</td>
</tr>
<tr>
<td>Coins</td>
<td>Old Toys</td>
<td>Clips (paper, close pin)</td>
</tr>
<tr>
<td>String</td>
<td>Paper</td>
<td>Tacks, Screws, Nails</td>
</tr>
<tr>
<td>Cardboard</td>
<td>Hinges</td>
<td>Mouse Trap (ask teacher)</td>
</tr>
</tbody>
</table>

Build Your Device:

Assemble your device according to your teacher-approved design. Test your device and make adjustments as needed. Bring the device to school to demonstrate and present to the class.

NOTE: your device should be able to be carried by hand by one person to and from the classroom. You may use a box to bring in pieces of the project; additionally, the entire device must be easy to assemble and not too much for one person to carry to and from the building/classroom.

For Inspiration Go To:

These RG machines are extreme...

http://coolmaterial.com/roundup/rube-goldberg-machines/
Rube-Goldberg Devices and Simple Machines

Name

Task:

Design your Device:

Simple Machines in design (at least 4):

List of Materials Needed: