

## Simple Machine and Rube Goldberg Project

### Introduction

Does life keep getting harder and harder? One way we can make life easier is to get a little help from machines. Using simple and compound machines can make work easier and faster! You, like other inventors, will have the opportunity to come up with your own machine invention, but before that, you will learn more about simple machines.



### The Task

Using Trackstar ([trackstar.4teachers.org](http://trackstar.4teachers.org); track #270786), you will research simple machines and Rube Goldberg and his devices. Then you and your partner get to design and draw your own Rube Goldberg device!

### The Process

**Step One:** First, you'll need to learn about the six simple machines. Using the first two links, define each simple machine and give two examples of each. This information must be included on the simple machines workpage.

**Step Two:** Do you know your simple machines? We'll find out! Using the simple machines tutorial, review all the concepts on simple machines. Once you get to the end, take the quiz and print out the final page that shows your score. This must be handed in with the rest of your work.

**Step Three:** Who is Rube Goldberg? Check out the Rube Goldberg website and answer questions on the Rube Goldberg workpage. Also, check out the Honda cog commercial for the ultimate Rube Goldberg device.

**Step Four:** Check out EdHead's Odd Machine activity. Watch a Rube Goldberg device and answer questions along the way. Make sure to print out your score card- it's part of your grade!

**Step Five:** Your turn! It is time for you to create a new machine, just like Rube Goldberg did. Your machine must combine at least 3 simple machines to accomplish a task. The task can be anything you want... wake you up in the morning, pick up your clothes, turn on the TV, whatever you can think of! Be sure to remember:

- Your machine must be a combination of at least 3 simple machines
- You cannot connect two of the same simple machines together (cannot connect 2 levers in a row)
- Your invention must be displayed on a poster and all simple machines must be labeled
- Poster must include a brief explanation of what the machine does

## Evaluation

- Workpages will be corrected for accuracy and given a grade based on point value.
- Invention Poster and User Manual will be evaluated based on the following rubric: (please note that this will be a group grade and your group effort is also being evaluated!)

	<b>Beginning 1</b>	<b>Developing 2</b>	<b>Accomplished 3</b>	<b>Exemplary 4</b>	<b>Score</b>
Required Poster Labels	Poster does not contain at least 3 labeled simple machines.	Only 1 simple machine is labeled.	Only 2 simple machines are labeled.	All simple machines are labeled.	
Required Poster Explanation	Explanation of machine's job is not included.	Explanation is included but is not clear or thorough.	Explanation is included but is not thorough.	Explanation is included and gives clear and thorough details to machine's job.	
Poster Overall Look	Device is drawn in pencil, explanation is hard to read, title is not easily identified	Device is drawn without color, explanation is written, title is easy to read	Device is neatly drawn with attempted color, explanation is written neatly and title is easily identified	Device is drawn neatly and colored, explanation is typed, title is easily identified	
Group Work	Members rarely provided useful ideas when participating in the group. (No members contributing)	One member rarely provided useful ideas when participating in the group. (Not all members contributing)	All members inconsistently provided satisfactory ideas when working in the group. (Satisfactory group work)	All members routinely provided useful ideas when working in the group. (Great group work)	