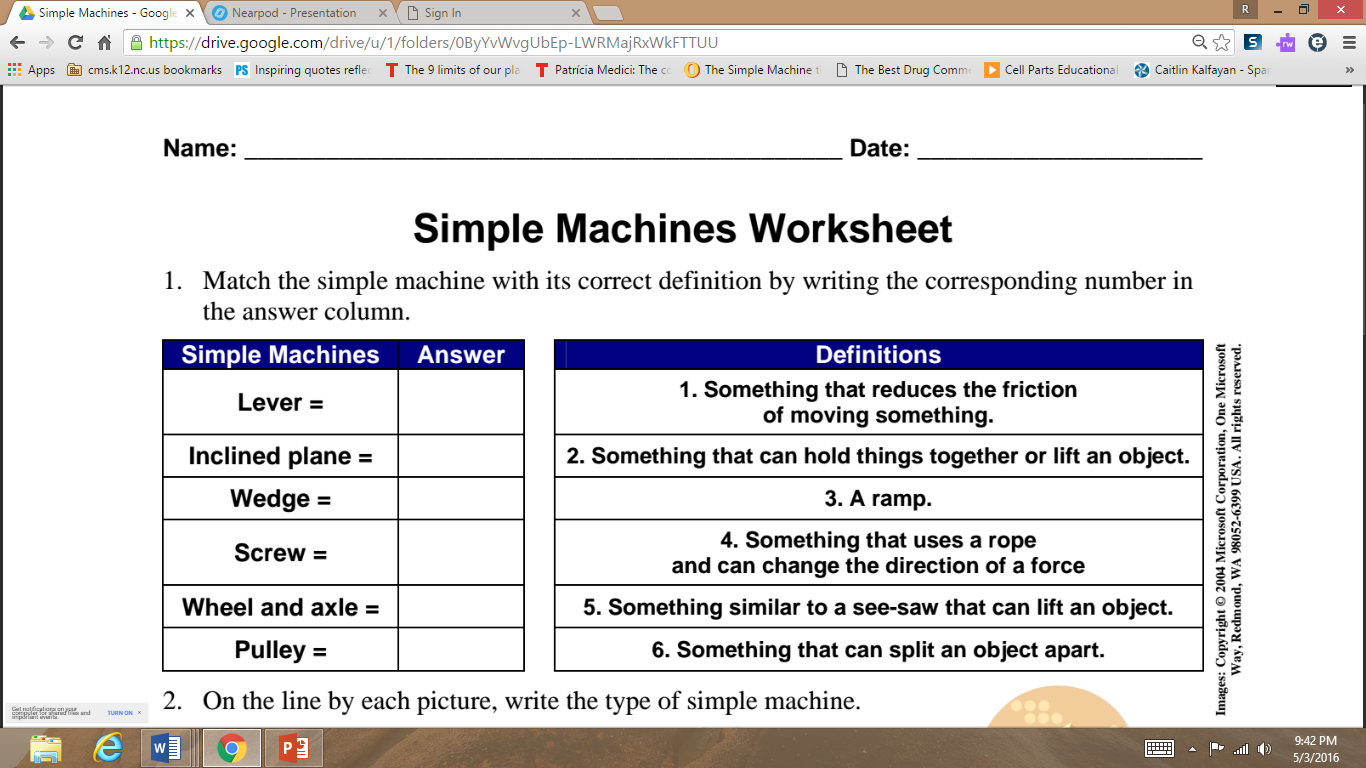
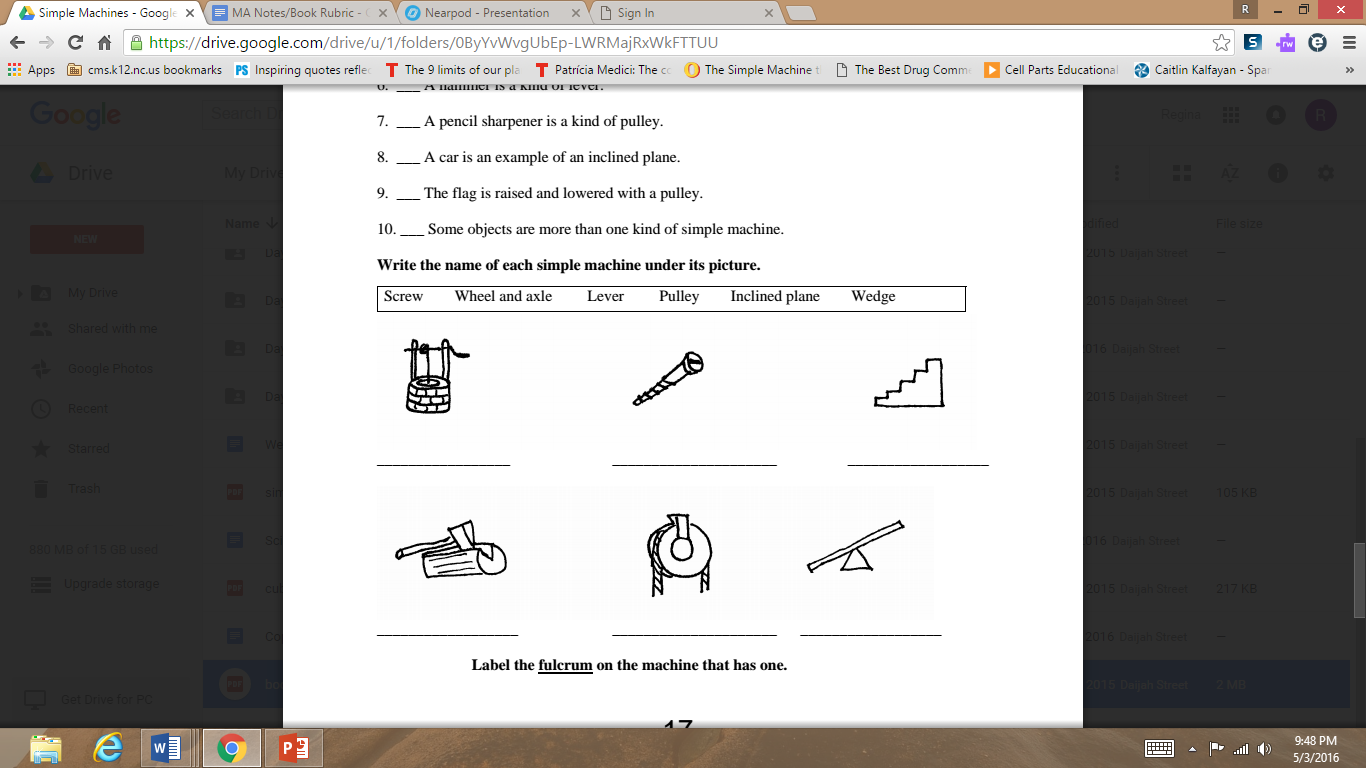
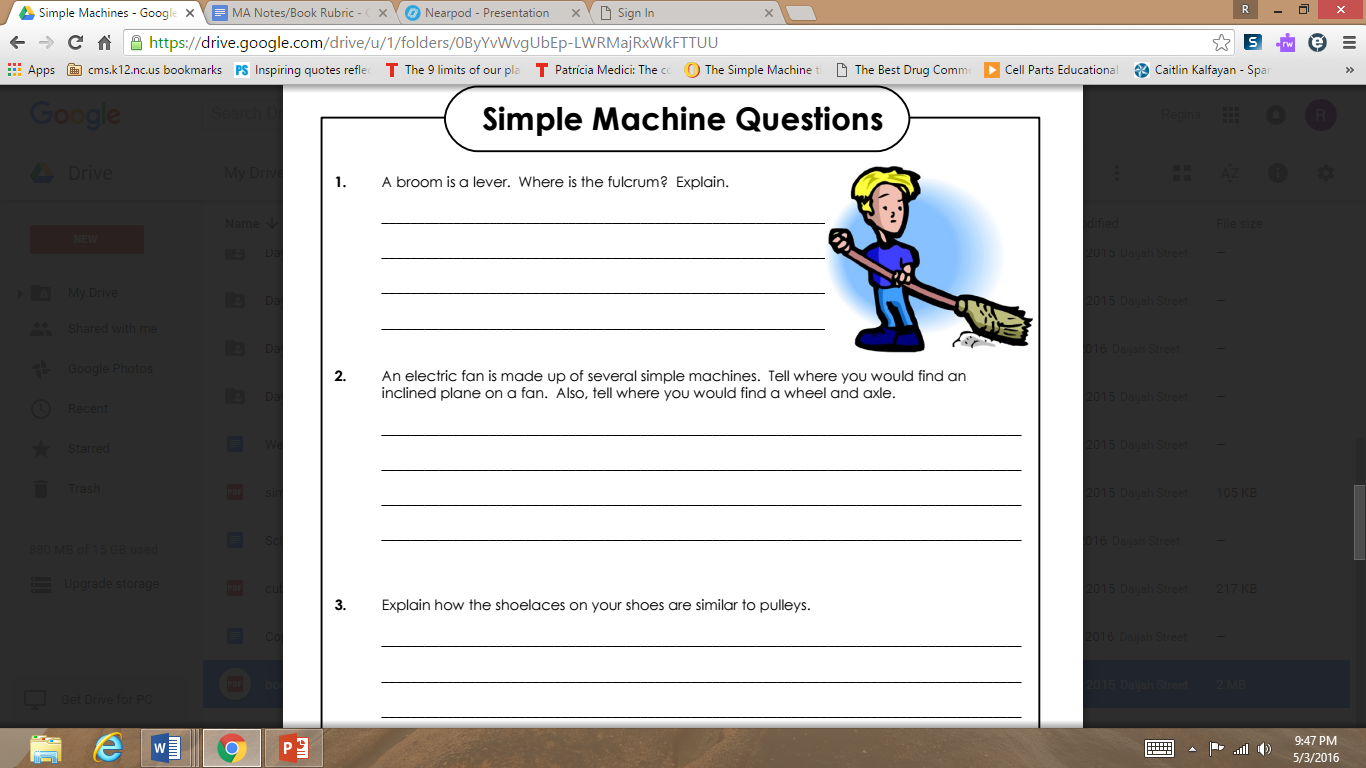
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**Simple Machines Playlist**

**Step 1**: Match the simple machine with its correct definition by writing the corresponding number in the answer column.

Teacher Check



**Step 2**: Write the name of each simple machine under its picture. Label the fulcrums.   
Answer the question below.   


Teacher Check

**Step 3**: Go to <http://www.msichicago.org/play/simplemachines/> and complete the game! MAKE SURE you read all parts of the game (even the information pages) and watch the intro. Answer the questions as you play.

**Room #1:**

Teacher Check

What object did you pick to help you reach the object? Was it successful?

When you’re dealing with an inclined plane, the longer the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ force you have to use to do the same amount of work.

**Room #2:**  
What direction did you have to move the battery in (LEFT OR RIGHT?) in order to make it easier to launch yourself into the air? Did the battery move closer to you or farther away?

What kind of simple machine was being used to launch yourself into the air?

What **part** of this simple machine was the battery used for?

What does moving the fulcrum do to the force?

Give an example of a lever with a fulcrum that does not sit on the ground.

**Room #3:**

Which wheels did you pick for your car? Why did you pick them?

What simple machine did you create?

The bigger the wheel, the \_\_\_\_\_\_\_\_\_ force needed to do the same amount of work.

→ Now that you know this, would you go back in make your wheels bigger or smaller? Why?

**Room #4:**

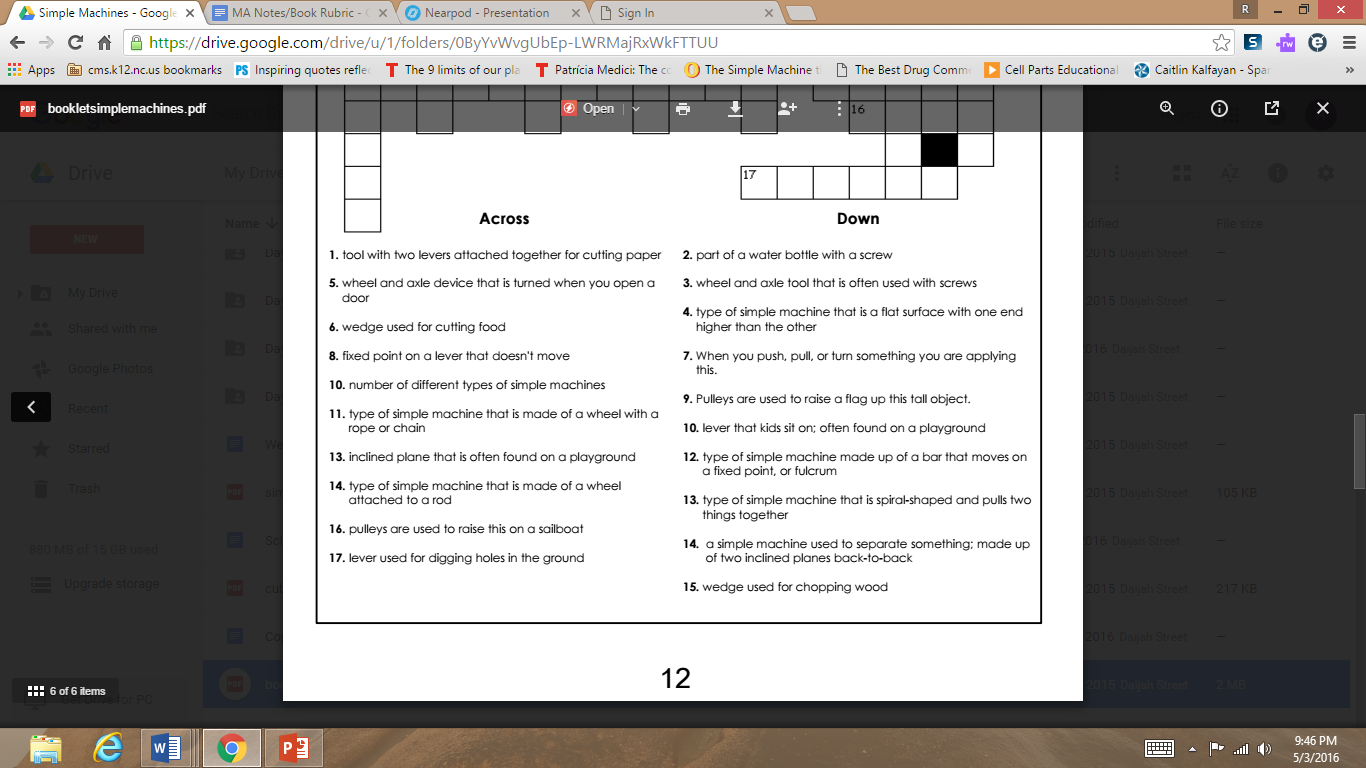
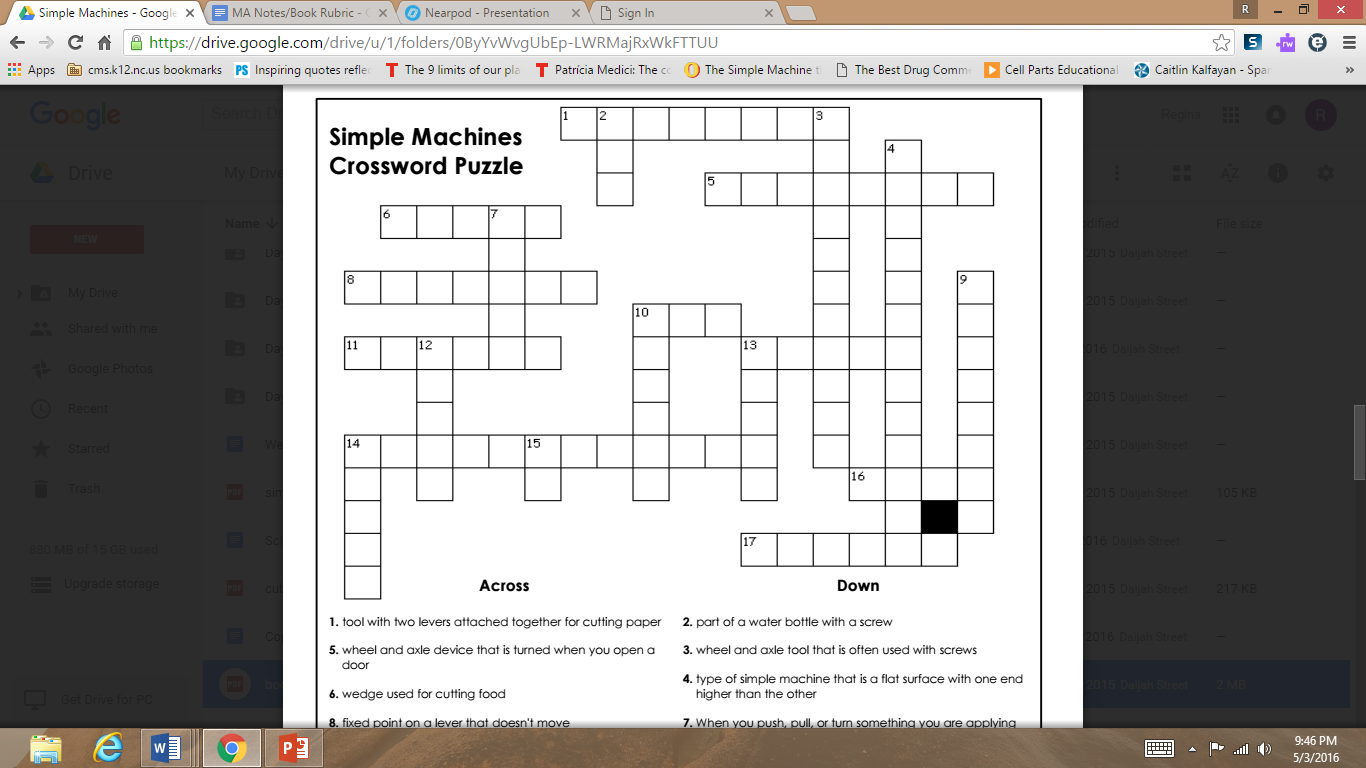
Which simple machine did you use to lift the object?

In order to use less force what do you need to do to with your rope?

Give an example of a pulley.

**Step 4**: Complete the crossword puzzle. Answer the question below.

Teacher Check



**Step 5:** A Rube Goldberg machine is a series of simple machines that do a simple task in a very complex fashion. Watch the video: <https://www.youtube.com/watch?v=I7cFpRsTz3k> Answer the question below.   
  
How was energy transformed throughout the machine?  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 6**: Visit <http://legacy.mos.org/sln/Leonardo/two/two.htmlo> You will look at eight different mystery machines created by Leonardo DaVinci. Each machine is made up of several simple machines. Guess what each machine is then find out what it is.   
  
Draw a picture of one of Leonardo’s machines. Label the picture with the simple machines used.

**Step 7:** Watch the video of how an Archimedes Screw works: <https://www.youtube.com/watch?time_continue=1&v=A-xPRbj88V4> Notice how water rises from a low point and it deposits to a higher point. Answer the question below.

What could this invention be used for?

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**Step 8:** Theo Jansen is a physicist and artist. He combined his loves of science and art in a new exhibit *Strandbeest: The Dream Machines of Theo Jansen.* Explore: <http://www.exploratorium.edu/strandbeest>

*“*Jansen’s [*strandbeests*](http://www.exploratorium.edu/strandbeest/overview)—“beach animals” in Dutch—are enormous, self-propelling kinetic creations. Constructed largely of PVC tubing and other hardware store materials, [*strandbeests*](http://www.exploratorium.edu/strandbeest/overview) are mesmerizing in their motions and eerily lifelike…The *strandbeests* walk a wandering, wind-blown line between art and engineering, mechanics and biology.” (Source: <http://www.exploratorium.edu/>)

In the space below, design your own compound machine!!!

Grade