Hello Discovery Student!

This Word Document is a **template** for how to write a **formal** Lab Report.
 **What’s a *template*?**

It’s a model or an example to follow. College professors and even some High School teachers often have strict rules about how to write certain papers. For instance, many people require a special font or a specific amount of spacing in your document. This is called **formatting**, and in this template I’ve already set-up the most common, standard formatting: 1 inch margins all the way around the paper, double line spacing, and 12-point sized *Times New Roman* font. In a Prezi or PowerPoint presentation, you can usually change these things to make it look prettier, but when writing a special paper, it’s best to leave it the way your teacher wants. (Many professors will deduct points if your paper is not written with the required formatting!)
 **What do you mean by *formal* Lab Report? What makes a paper *formal*?**

 There are two kinds of writing: **formal** and **familiar**. Familiar (from the root word “family”) is the way you’d write a letter or a note to your friends or a family member. Your **tone** would probably be pretty friendly. The language you use might include slang words, maybe even a joke or two. You’d probably refer a lot to yourself (“I think… I saw… I went…”).

 **Formal** writing, on the other hand, is like going to a formal restaurant for dinner; there are lots of rules. The tone, or **mood**, is very serious and straight-to-the-point. Jokes and asides are inappropriate in this type of writing, and it’s even encouraged not to use the word “I.” Instead, the **passive voice** is used, meaning “I conducted the experiment,” would be changed to “The experiment was conducted.” “I thought I needed to use a longer lever arm,” would be written as, “It was determined that a longer lever arm was needed.”

 We’re going to practice writing a formal report for our Mousetrap Powered Vehicle project. As with all serious pieces of writing, we will start with a rough draft. Try to follow the rules explained above. But if you have trouble, prioritize getting your thoughts on paper. We will be peer-reviewing later and can make corrections and revisions then.

When you’ve finalized your report (after writing a rough draft, getting peer-reviewed, revising your writing, etc.) and you’re ready to print, these first two pages of explanation should not be included. The next page, the Title Page, is where your report should begin. Make sure to add your name to the Title Page.

* You’ll need to use WhiteboxLearning.com to retrieve a lot of your data.
* Refer to [www.take-a-screenshot.org](http://www.take-a-screenshot.org) for help with getting pictures of your model.
* Finally, your classmates and Mr. Franklin are always invaluable resources. You just need to be Proactice in asking for assistance when you need it.

*Good luck!*

The Discovery School

Engineering Challenge

**Mousetrap Powered Vehicle**

Lab Report

YOUR NAME

GRADE 6? 7? 8?

DATE?

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**Abstract**

(An **abstract** is like a summary for Science. It always comes first, but usually it’s the very last thing you write. It is essentially an overview of the main ideas from the whole project. Think of the “blurb” on the back of a fiction book or novel from the library. An abstract is the nonfiction equivalent of that. Someone should be able to read only your abstract and have a pretty good idea of what your project was all about. Then if they want the details they can read the rest of the report. We’ll talk more about how to write an abstract once everything else in the report has been written. – P.S.: Delete this explanation in the Final Draft.)

**Introduction**

(The audience reading your report has no idea what your project is all about. They’ve never heard of or seen WhiteboxLearning. They may have never even see your car, or any other Mousetrap Car, for that matter. Pretend that you’re chatting with an elderly neighbor and they ask you what you’re working on in Science class. Give them a brief description, starting from the very beginning. What is the project all about? Why are we doing this, other than for a grade? How is building a model car relevant to the real world outside of our classroom? – P.S.: Delete this explanation in the Final Draft.)

**Objective**

(Objective just means “goal.” What was the primary goal of this project? What were you trying to do from the very beginning? This section can be short, but it needs to be precise. I’m looking for exact, specific details. – P.S.: Delete this explanation in the Final Draft.)

**Initial Brainstorming**

(In this section, you can tell me about your original ideas. When I first told you we were going to build cars out of Mousetraps, what did you envision? What kind of wheels did you see your car being made out of? What was the body of the car made from? Did it look like a car, or else what was different about it? Many students drew sketches in their notebooks, or sketched designs with their neighbors or partners, and this would be a fantastic place to include those. This is kind of like a hypothesis – an educated guess – but before the *educated* part, because Background Research comes next. I’m wanting to see how the Background Research changed your mind about how your car should be constructed. – P.S.: Delete this explanation in the Final Draft.)

**Background Research (“Knowledge At Work”)**

(Remember all those notes you took? I asked for a minimum of 3 for every section. Here is where you summarize those. You don’t need to copy every note. What you should do is read your notes and select the most important pieces of information that came in handy while designing your car. What were the major “takeaways” that you used? What were the main ideas and major concepts that we’ve been studying in class that would be important for your reader to know about if they’re really going to understand your car? – P.S.: Delete this explanation in the Final Draft.)

**Design Parameters & Specifications**

(This information is available on Whitebox. You can highlight, copy, and paste it all. Or, you can take a screenshot. But the reader needs to know what limitations you were working under before you started designing. If you include a table or chart, you should also include a brief description in words of what that chart says. Don’t make the reader search through every column and every row and interpret all that data. That’s your job. Tell them what numbers in there are the most important, and why are they so important? – P.S.: Delete this explanation in the Final Draft.)

**Development of Computer Aided Design Model**

Iteration 1

Iteration 2

Iteration 3

*Iteration #?*

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