Stuff Slides Down Hill…

The Scenario: You take a consulting job as a Quality Control Guru at the local toboggan manufacturing plant in town: Toboggans Is Us. You were called in because the rival competitor, Bob's Rabid Toboggans, has been killing TIU in the sales war. Talking with Mortimer, the owner of TIU, he thinks he is losing sales because his toboggans are too heavy and therefore too slow; and wants to start designing a new, lighter toboggan. Should he??

Your job: To use a **scientific method** to find out and report on whether or not Mortimer will beat Bob with a lighter sleigh. Your final report should contain the following parts.

pre lab work…

1. **Title:** Don't call it "Stuff Slides Down Hill…" because that won't communicate the IV and DV**.**
2. **Problem Statement**: It should communicate specifically what you are studying/testing and should include:
   - **Independent variable:** This is what you changed during each trial of your experiment
   - **Dependent variable:** This is the measured outcome each trial.
   - **Hypothesis:** This must be written as an "if-then statement" (If "x" is done then "y" will happen)
3. **Procedure:** Describe, in detail, the steps you will follow: Steps 1, 2, 3…..and so on… It should be **Controlled:** These are the factors that you **kept the same** through the trials
4. **Data Tables:** Show the results of your experiment and what units of measurement were used.

post lab work…

5. **Graphs:** of data
6. **Conclusion:** Answer the question.
7. **Reflection:** What did you learn?

- **Today:** you will work with your lab group to design an experiment to solve the problem above. Remember to use good experimental practices…
- #'s 1-4 should be completed by your group. **Every member in the group is responsible for their own final lab write-up – therefore each member of the group should be writing everything down!** And yes – you need to make the data table even though you don't have the data yet… You will need to fill in the table you make!
- **Tomorrow:** you will carry out your experimental design in class.