

Physics Final Project Criteria 2013

There is a final project in Physics that you are required to do no matter what grade level you are. It is similar to a science fair project. You do not need to spend any money on this. I'm more concerned with your data, results and analysis than I am about the polish of your project.

- 1) Project must be science related from any subject, but must focus on the physics of that subject. *For example, you choose biology and decide to measure the force required to lift a mass with different muscles and angles. Or measuring and explaining the heat released in a chemical reaction of some type.*
- 2) You must choose a project in which you have:
 - a. An experimental variable that you change; *for example, changing the mass, changing the height, changing the speed, changing the brightness, changing the heat*
 - b. A dependent variable that you measure; *for example, the amount of time, the temperature, the amount of force, the horizontal range.*
- 3) You must state a hypothesis
- 4) You must state the steps of your procedure
- 5) You must record at least 10 measurements with changes in one variable
- 6) Your measurements must appear in a data table
- 7) You must graph your data
 - a. The variable you change will be the horizontal (x) axis.
 - b. The variable you measure will be the vertical (y) axis.
- 8) You must write a conclusion statement that tells me the trend of your data using the following sentence stem:
 - a. "The data show that...."
- 9) PROJECTS ARE DUE BY MONDAY, JUNE 3. Project CAN BE TURNED IN EARLY! You still have to come to school on the days of the final exams.
- 10) Please understand that if you don't turn in a final project, or if you turn something in very poorly done, your grade could suffer tremendously.

Check-in item and dates – These are for a grade.

- 1) **Thursday, Feb. 28th** – Your project proposal due: What is your topic, describe your project in detail. What are you going to measure? How are you going to measure, what are you going to use to measure it? Make a prediction, what do you think might be a possible outcome?
- 2) **Monday, April 1st** – Your procedure is due: list the steps of your procedure in exact detail with any measurements you required. Procedure needs to be written such that anyone could repeat the experiment.
- 3) **Thursday, April 25th** – Your data and graphs are due: All data to be typed into a computer program, no exceptions. All graphs to be done using either Excel, Word, Open Office or other similar program. No pencil graphs will be accepted. Graphs must have title and legend as well as axis labels with proper units.
- 4) **Monday, June 3rd** – Final project is due. It should include the following section headings: Hypothesis, Materials, Procedure, Data (include at least one table and one graph), Conclusion.