

Physics 112 Projects

Below are three projects, of which you may choose any one. **The projects will be due on or before Friday, Dec 7 at 3:30.** ANY project received after this time will be deemed late and will receive a mark of zero (0). Plan to hand it in early to allow for last minute emergencies.

Each project will be marked out of twenty, but will have the approximate weight of a large test. Rubrics are posted separately.

Project 1 - Dynamics Assignment

Write a newspaper article (maximum 400 words - about 1 1/2 pages double spaced, typed in 12 point font) about an example of automobile technology.

Your article must include a description of the technology, a brief discussion of the principles of physics upon which the technology works AND a discussion of how the technology makes automobiles safer. The article should be typed (you can write it in the library if you dont have access at home). If this is a serious problem, please see me **in advance**. With the article, you must also include a list of references from which you got your information (on a separate page). Note that you need at least three references, and that wikipedia is not an acceptable resource.

Project 2 Energy Sources

Design and build a energy source that will light an LED bulb. It must not be powered from an electrical outlet or commercial source (batteries, solar cells, etc.). It may be some form of generator, battery, solar or thermal powered. You may use an electrical source to provide an artificial environment (e.g. a fan to emulate wind, a pump to emulate the flow of water, etc.) The innovation lab may be a good resource for you to use. Provide a brief (1 page maximum) explanation of how your power source works, as well as a list of materials used with a diagram (or diagrams).

The explanation and list of materials must be typed (double spaced, 12 point font). You must also include a list of references on a separate page.

Project 3 - The Physics of a Musical Instrument

Investigate any musical instrument and research the physics involved in one or two aspects of its operation. Your report must identify the musical instrument and the feature or features that you will be discussing. Describe the physics involved and explain any new terms or formulae.

The report must be typed (double spaced, 12 point font) and at least 300 - 400 words in length. Diagrams are acceptable and encouraged. You must also include a list of references on a separate page. Note that you need at least three references, and that wikipedia is not an acceptable resource.

Grading of Projects

To see how the reports will be graded, please see the Report Rubrics file on the wikispace.