

## Physics 203 Project

Each INDIVIDUAL must complete this project.

1. Part One of the project is simply homework assignment #8 on light and geometric optics.
2. Part Two is a description (with diagrams) of how a particular piece of optical equipment works. You can choose any piece of optical equipment that uses geometric optics to produce and image. The equipment must be complicated enough that an explanation beyond the definition of an image is required. Reasonable examples would be telescopes, microscopes, eyes, and projectors. Unreasonably simple examples would be mirrors, eyeglasses, or magnifying lenses.
  - a. Your description MAY NOT include pictures or text from the Internet. Take the time to draw a NEAT DIAGRAM by hand (or by mouse). Write your description in your own words. Failure to do so will earn a zero grade FOR THE WHOLE PROJECT.
  - b. Your work must not look too similar to that of any of your classmates! If you do this entirely on your own, it won't. Avoid working together and do all of your own work. Failure to do so will earn a zero grade FOR THE WHOLE PROJECT. (PS. Don't be self-conscious about your use of language – bad grammar is MUCH better than plagiarism.)
3. Part Three requires you to set up some lenses and maybe some mirrors to make “a real image of an (invisible) image.” In other words, there will be some real object and you will set up some equipment (such as a lens) to make an image of that object *that we can't see*. You will then set up some more equipment (such as a lens) to make an image that *we can see* (projected on a piece of paper or something similar).
  - a. You may work with your classmates (in groups no larger than three) on this, but each individual should be able to do it. “Class time” on *Wednesdays* will be made available and will be a particularly useful time for doing this.