

Homework Assignment #5, Effective Figures and Captions

Create *two figures* and *two figure captions* that explain a physics topic that interests you. Here are some jumping-off points that you could use to get started:

1. Some aspect of your research project, if you're already working in a research group.
2. An experiment that you did in a physics laboratory course.
3. Papers you've read to get ready for your summer research project.
4. An explanation of the physics behind some everyday phenomenon. (Despite ubiquitous popular representations, raindrops aren't shaped like tear drops. Why not?)
5. A Physics Van question. (Make figures that explain the answer.)
6. Ask a professor if you could take a photograph of a piece of equipment in his or her laboratory.

Ideally, one figure should be an “illustration” (a cartoon, diagram, flowchart, drawing, or photograph) and one should present “data” (real data, simulation results, a function, a graph, or other visual representation of numerical data).

For an excellent example of how scientists use different kinds of figures to tell parts of the same story, see the Web article on [epitaxy](#) by the Technical University of Munich.

Each figure should be accompanied by a complete, stand-alone, descriptive figure caption. Your figures should be suitable for publication in a scientific paper and should be understandable if printed in black and white. (No “the red line shows...”)

You must produce your own original figures for this assignment. We know you can easily obtain good existing figures from the Web—don't! Do not recycle figures that you have submitted for another class either—that's academic misconduct. The purpose of the exercise is for you to gain practice in creating your own professional-quality figures and effective captions.

Due: **Friday, March 8, 6:30 PM.** Put your completed assignment in the PHYS 496 homework box. Assignments submitted after the deadline will be downgraded and will be ineligible for rewrite points.

Total—100 points (25 points for each figure and 25 points for each caption)