

**Target time: 8-10 minutes plus questions Audience: Ph50 classmates**

**DO prepare slides.** It's hard for me to imagine a good experimental talk that doesn't include at least one diagram or photo and at least one graph of data.

**DON'T make an outline slide.** Reading through an outline of your talk is probably a waste of time for an 8-minute talk. Instead, dive right in and tell us a story.

**Frame the question or problem.** Introduce us to the experiment and the physical phenomenon investigated in it. What specific puzzle are you trying to solve about it?

**Orient us.** Show photos, diagrams, and/or important theory relationships that relate to your investigation. Label the pictures to show key objects or quantities. Define variables, on the picture(s) or in words. Label the axis on all plots and include units.

**Focus on the independent project you completed over the last two weeks.** Your project may relate to something from Modules 1-3, but discuss what happened in the original module *only* if it is relevant background to your project.

**DON'T write paragraphs on your slides.** You will be speaking to us in words, and most of us can't listen to one sentence and read another at the same time.

**Convince us.** Think of your investigation as a detective story. Show us the evidence and convince us to agree with your interpretation of what is going on. Data presented graphically or pictorially is usually way easier to absorb than tables of numbers.

**It's not quite a courtroom.** OK, you convinced us. But be clear and explicit about what you *aren't* sure about, and why. We'll feel more secure about your main result if we see that you are evaluating your own work in an appropriately critical way.

**Be quantitative in your estimates of uncertainty.** Reporting uncertainties in your initial measured values is not enough – we want to know the uncertainty in any final result you calculated. If someone else did this experiment, what one thing should they improve to most dramatically reduce the final uncertainty? How do you know?

**USE your final slide.** We'll be staring at your final slide while we applaud and ask you questions. We don't really want to stare at "Questions?" or "The End." Make the final slide a good reminder of the main content of your talk.

**Practice with your slides.** Know what you want to say for each slide, and be ready to say it confidently and engagingly. Nothing wins over an audience like an impression that you yourself are interested in what you're saying. You can be very informal with us if that is a comfortable style for you. You should not plan to read your talk from a piece of paper or from the slides. Make sure to practice and plan with your partner.

**Check that your slides are right for your talk.** Make sure your slides contain the images and info that you would like to point to as you speak, and not irrelevant extras.