

### Giving a Talk: Content

Define your audience and specify your goal

Plan an opening “hook”

Buy time for audience to settle in  
Get audience attention

Give audience an overview of your talk

Stress and repeat main point

Pick simple, logical structure

Clarity is more important than detail

Plan a strong ending

For general public, “entertain” with:

Historical, cultural, biographical links  
Anecdotes to add human element

For general public, tell a “story”

Maybe the history of your topic,  
Maybe the race to get a certain result, etc

Involve audience, if possible, with quiz, questions, etc.

Anticipate such questions as: Ho hum? Why bring that up?  
For instance? So what? Huh?

### Giving a Talk: Visuals

Devise demonstrations, if possible

Consider pros and cons of transparencies and  
Power Point

Allow enough time for audience to digest each one  
Allow perhaps 2 minutes per slide

Make only one point per slide

Minimize words. The audience will read your slide  
rather than listen to you.

Make all words legible and label all axes  
Verbally describe each slide in detail,  
Tell what axes are, what graph shows

Use color effectively, not randomly

Use slides to enhance, not drive, your talk

Use slides for visual relief, to add interest

### **Giving a Talk: Delivery**

Speak slowly and enunciate. Aim for 90-120 words/minute.

Nervousness will make you talk faster than normal

Slow speech especially important you or if English is not the first language of you or some of your listeners

Use simple words and sentences, no jargon

Dress neatly, simply.

Make eye contact with audience. In their expressions you can seek feedback to your presentation.

Let your enthusiasm about your subject show through

Move naturally but don't pace; act as relaxed as possible

Use numbered notes, if you wish, but NEVER read your speech

Use humor sparingly and cautiously

Be alert for distracting habits you might have

Don't let your pointer wander.

Plan in visual relief, pauses for stress or transition

### **Giving a Talk: Fielding Questions**

Treat each question with respect: Never belittle a question.

Repeat the poser's question so all can hear.

Answer directly and briefly. If you don't know, say so.

If the questioner persists, suggest discussing the point with him/her later.

### **Giving a Talk: Practice**

Get feedback from family, colleagues.

Watch self on videotape

Time your talk

Learn from watching expert speakers

Try writing out speech but don't memorize it

Fight "Stagefright":

- a. Be well prepared
- b. Arrive early to get used to room, equipment
- c. Have opening remarks well fixed in your head

### Communicating Physics: An Annotated Bibliography

1. Michael Alley, *The Craft of Scientific Writing*, 3<sup>rd</sup> Ed., Springer (New York, 1996).

*Alley's book goes into far more depth than others on this list. The stress is on writing style, and the advice is effectively illustrated by numerous examples. The reader can learn a lot by comparing a poorly written original with a more effective rewrite.*

2. Vernon Booth, *Communicating in Science: Writing and Speaking*, Cambridge University Press (Cambridge, 1985). 68 pp.

*Succinct and sound, this text covers the basic topics focuses on the communications tasks faced by working scientists. Booth has chapters on writing a scientific paper, speaking at scientific meetings, and preparing a doctoral dissertation or thesis. The chapter on English as a foreign language is helpful, but that on the preparation of the typescript and figures has been largely superseded by technology. An Englishman, Booth has devoted an entire chapter to an "appeal to North Americans" in which he points out problems that American English can pose for those who do not have English as their first language.*

3. James Garland, "Advice to Beginning Physics Speakers," *Physics Today*, July 1991, page 42; David Mermin, "What's Wrong with Those Talks?" *Physics Today*, November 1992, page 9.

*This article gives advice on giving talks that, in the author's words, "won't wreck your career or humiliate your advisor." Mermin's response, addressed to "Beginning Physics Students (and Intermediate or Advanced Ones)," is a humor piece that makes the point that in most talks "more than 90% of your audience is able to make sense of less than 10% of anything you say."*

4. Barbara Gastel, *Presenting Science to the Public*, ISI Press (Philadelphia, 1983). 146 pp.

*Gastel aims her book at the scientist who wants to communicate to the general public, either indirectly, through the press, or directly, through articles, books or talks. A final chapter deals with a career in science communications. Nicely illustrated with cartoons.*

5. Clifford Hawkins, Marco Sorgi, eds., *Research: How to Plan, Speak and Write About It*. Springer Verlag (Berlin, 1985) 183 pp.

*This text is a compilation of chapters by different authors. It is a bit dated, as evidenced by its chapter on using a dictating machine, but some advice on talking and writing is rather timeless.*

6. Scott L. Montgomery, *The Chicago Guide to Communicating Science*, The University of Chicago Press (Chicago, 2003). 228 pp.

*Straightforward and clear in style, this text offers practical and wise advice. The author has the expected chapters dealing with writing for various purposes (scientific paper, review articles, proposals), making oral presentation, and preparing and using graphics. In addition, he has written a chapter on "Reading Well" (a necessity, he asserts, for writing well), one on English as a foreign language, one on dealing with the press, and one on using the internet.*

7. D. Eric Walters, Gale Climenson Walters, *Scientists Must Speak*, Routledge (London, 2002).

*This is a nice, up-to-date book devoted entirely to public speaking. Its three main sections are: Preparation, Delivery, and Special Situations. It's full of helpful advice.*