Overview

Talks are one of the most creative and fun parts of science. They are your chance to show some individuality and playfulness. They are not tedious to prepare (like attending to all those details before submitting a manuscript to a journal). Talks can provide instant gratification. And if you screw up, most people forgive you quickly (because, in fact most talks range from terrible to passable).

Not everyone can give a great talk. But everyone can give a decent to good talk. Doing so simply requires paying attention to a few “rules”.

Before preparing a talk, decide what you want to accomplish with that talk. Possibilities include:

Provoke
Establish credibility
Describe a specific scientific result
Advertise an approach
Entertain
Advertise yourself
Advertise someone else or a group effort
Expose self to criticism so you can learn to defend self (or your approach)

But remember, no one can repeat the science you describe in a talk; no one can really follow the math or statistical analyses; spoken talks are not the way science gets recorded so that others can build on that science. A talk is just a sketch. You should have such a clear vision of what is IMPORTANT, AND FEEL SO COMFORTABLE ABOUT EXPLAINING IT, that if the slide projector or computer broke, you could give the talk as a “chalk talk” at a blackboard. The preparation that most makes for a good talk is not in the details, but in having a very clear idea in your own head what the “bottom line” message is, and how to motivate the audience to care about your message.

With experience, everyone gets better at giving talks. But the fastest way to get better is when you attend ANY seminar, pay attention to the “talk” as a craft, and write down after the talk (or during it) what you like about it and what you did not like. Notice how the audience is reacting (snoring? snickering? attentive? etc)

Twelve steps to eloquence?

The first thing you do when preparing your talk is make an outline of it – the outline should develop a clear story.
Then, heed the following twelve rules:

1. Most importantly, recognize that a talk/seminar is NOT a spoken paper.

2. It is very hard to listen to and absorb a talk. Most people include far, far, far too much material and too much detail. Do NOT.

3. Never produce slides with tables or figures that people cannot read or understand – you have all seen someone give a talk and say, “I know you cannot read his...but...”. Well then why the hell are they showing the slide?

4. Start in an engaging and personal way if possible (“what I want to do today is...”). Then give an outline of the talk. Give the talk. Return to the outline at the end, and tell the audience what the bottom line is. In other words: **tell the audience what you are going to tell them, tell them it, remind them what you told them, and tell them what to remember.**

5. NEVER, EVER read slides, and do not put too many words on a slide.

6. Explain graphs vividly. “on the vertical axes we have...on the horizontal axis...”, “look at these points.”... “compare this bar to...” ..AND POINT TO THE DATA, BARS, ETC..as opposed to talking with your back to the screen.

7. Everyone gets nervous. If you do not, you will give a boring talk. But learn how to calm yourself, and make yourself comfortable.

8. There may be difficult aspects of your talk. Warn the audience. Say something like, “this next result is hard to explain..i always have trouble getting it right. Let’s see if I can do a decent job now...”

9. Use some key phrases or words throughout the talk that are key to your themes. Repetition is a good way to help an audience remember some point.

10. I realize powerpoint presentations are all the rage. They can be effective and good. But the natural default for a powerpoint presentation is total boredom – too many words per slide, no personality, something a robot would give, no connection to audience. The powerpoint presentation replaces content and idea and connection. So when you use powerpoint take care to not fall into some presentation that looks like an android put it together...or worse yet, a “management consultant” or a federal bureaucrat.

11. If you are young and do not have an established scientific reputation, it is good to, early in a talk, go into some details to establish credibility. Then later in the talk, you can gloss over details.

12. For every slide you make, ask yourself – CAN THE AUDIENCE REALLY FOLLOW THIS SLIDE AND GET ITS MESSAGE in five seconds. Come on now – get
serious. Most of the graphs or equations or tables we make slides of ARE TERRIBLE.

**Why talks fail?**

1. The speaker does not read the audience.
2. Poor time management.
3. Lousy slides.
4. Speaker is not sure what he/she wants the audience to remember, or simply has some vague notion that they will “talk about” some piece of research they did. That is not a sufficiently well-defined sense of message.
5. The speaker is too self-indulgent, and forgets to ask self, “why should anyone listen to my message?”
6. The speaker is trying to be cool.
7. The speaker is using the talk to show she/he is smart.

**How to respond to questions?**

1. Repeat the question for the whole audience...rephrasing it to make sure you understand the question.

2. Never be defensive. If someone is asking a harshly critical or aggressive question(s), respond with humor and candor. Even if the person has uncovered a fatal flaw, you will learn points by being pleasant, and they will lose points for being aggressive.

3. Most of us have a hard time answering questions. A large part of that is we do not understand the questions or “where the person is coming from”. Try to figure out what the person asking a question is TRYING to get at? Do they have an agenda? The six basic reasons people ask questions are: (i) to clear up something they were confused about, (ii) to suggest something helpful, (iii) to actually engage in an intellectual discussion about an issue, (iv) to “strut” and show the audience they are smart and an authority on the topic at hand, (v) because they got A’s all through grammar school, middle school, high school, college, and so on and teachers always liked them and such students raise their hands and ask questions (“teacher’s pet syndrome”), or (vi) because they have an AGENDA. If it is reasons (vi), it is nice to realize that before you answer the question and you can thereby do a better job.

**Different Kinds of talks**

1. 15 – minute talk at national meeting: hardest to give, cannot go into details or methods, select a few points and slides – do not try to compress a 30-50 minute talk into 15 minutes. (think of it as a “commercial”)

2. 30-50 minute scientific talk: tell a story and teach the audience something
3. “agency type presentation”. REALLY STOP AND ASK, what do these people need to know.

This is NOT a talk to a group of like-minded scientists.

If you forget most of this advice, at least try to remember:

1. Start by making an outline of the talk.
2. When thinking about what you will say: think about your audience, and ask yourself, do they REALLY need to know what you are going to tell them.
3. Slides should be simple, very few words, and easy to read/interpret
4. Be able to say in two minutes or less what the point of your talk is. Then construct the talk to make sure that point comes across.