Tips for preparing an effective scientific talk

Slide preparation
1. Try to have one (and only one) **central idea** for the talk. Decide which "takeaway message" you are aiming for.
2. Provide **enough introduction.** A reasonable aim is to have 80% of the people understand 80% of the talk.
3. Define the **research question**
4. Use **meaningful titles** for slides – a sentence that clarifies the message of the slide. For example: instead of "plant pigments" write "plant pigments are important visual signals and protection compounds".
5. Have only a single point in each slide. If you prepare your slides so that they only contain a single point you can calculate about 1-2 minutes per slide
6. **Figures** are key. Strive to make them readable, put only the info that is essential. Explain axis of figures shown, result expected and meaning of result achieved. Better use less figures where each one is fully understood than many figures that are only understood by a few of the listeners.
7. **Usually much better to have only one figure on a slide than two or three.** The listener (and you) knows what to focus on. Otherwise the listener only see the figures as a "nice background" that is not really understood. Of course there are exceptions where several are essential.
8. Use **limited text** on slide – need not have all text that will be said. To enable people to read a bullet while you are talking it should aim to be less than 10 words long. 5 is even better. For example: instead of "The betalain class of pigments contains a wide array of compounds, which are generally classified into two groups, the red to violet betacyanins, and the yellow to orange betaxanthins. Hundreds of betalains have already been identified." write "Hundreds of compounds in two families: red-violet, yellow-orange". People know you are already talking about betalains, that they are pigments etc.
9. Use font size which is easily readable, usually not less than size 20.
10. Refrain from text shadow, makes reading tough
11. Always add slide numbers (easy in ppt) so that people can give pointed feedback to you afterwards.
12. Learn from experts part 1: many good **tips on slides preparation**: www.cellbio.duke.edu/faculty/Hogan/Powerpoints/Powerpointpresentation.ppt

Talk practice
13. **Think of what you want to say on each slide - put yourself in the shoes of a beginner** or non-expert. Remember the "curse of knowledge" – you have to explain to people that do not know the things you learnt working on your project (http://www.37signals.com/svn/posts/213-the-curse-of-knowledge). Note the difference between what you know now and what your audience does.
14. Start **preparing early** - send draft slides a week in advance (will still be updated later of course)
15. **Memorize first two sentences of talk**. It is a good way to ensure a clean start.
16. **Practice makes perfect -** perform a practice talk with people that have not been involved in the project (i.e. not only PI). Get detailed feedback (automatically number your slides for easy commenting). Repeat as much as you can/want.

Talk delivery

17. Learn from experts part 2: **watch movie on "how to give a good talk"** at
http://www.youtube.com/watch?v=5OFAhBw0OXs&feature=related also:
http://www.weizmann.ac.il/mcb/UriAlon/nurturing/How_to_give_a_good_talk.html
18. Make sure to **be on time** or finish early. People never complain on a lecture being too short…
19. **Answering questions**: **listen carefully** to the question, **repeat** it to make sure you understood and give yourself time to reflect on it. **Encourage questions** by being positive, formalize your answer with a YES attitude rather than a NO attitude. This is your chance to learn something new and find the weaknesses in your thinking or your presentation. If you do not know the answer — that is fine too — this is not an exam, this is a discussion, and the most important questions are still unanswered.