



# PRESENTING: SCIENCE!

## Tips & Tricks for Communicating Broadly

*The following tips and tricks will help you deliver your message, and also build trust with your audience.*

### Our Golden Rule of Communication

- **Do it for them!** Think about what is important or interesting to your audience, and keep this in mind in the development and delivery of your talk.

### Nonverbal Communication

- **Lose the podium.** Get out from behind barriers between you and your audience.
- **Gesture.** Keep your hands in front of you and use them. In the absence of great visuals, or even with them, use your hands to show what you are talking about.
- **Show your authentic emotion.** If you are excited, your audience will feel that. And they will also see that scientists are real, live human beings, just like them.
- **Leave your notes.** This will allow you to stay focused on your audience (eye contact), and keep your voice clear, conversational, and active.
- **Take control.** Before starting, tell yourself “I am excited” instead of “I am nervous.” Research shows that directing the initial feelings of stress and adrenaline into a positive mindset helps us to focus and remember our lines or flow better. Also, assuming “power positions” immediately before speaking can help to increase confidence.
- **Take your time.** Pace yourself, take breaks, breath. Silence can be powerful.

### Verbal Communication

- **Identify a single idea.** Figure out what is most important that people walk away with, and build your talk around this idea or concept.
- **Make a good entrance.** You can win or lose an audience in the first few seconds. Spend some extra time planning and rehearsing your first few sentences. (How are you going to start? Will you present yourself first, or jump straight into the story? Pose a question to the audience? Other?)
- **Have a beginning, middle, and end.** What is your story arc? Where does it start, and where does it go? Everything along the way should be relevant to that overarching story.
- **Tell stories.** Telling a story about something that happened in the lab or in the field brings your audience into your work, and shares the emotion and process of doing science.

- **Show the relevance.** So what? What is the *why* behind your science? What makes it meaningful?
- **Shed the details.** What does your audience *need* to know? Leave the rest out.
- **Share, don't brag.** This is about your emotions and relatability, not your accomplishments or the company you keep. People don't need to be impressed by you; they need to be excited about your science, and to relate to you!
- **Choose simple vocabulary.** People of all educational backgrounds will understand it. Using common vocabulary will also make you more relatable.
- **Define your terms.** If you use unfamiliar scientific terms, define them by describing what you mean.
- **Use descriptive words.** Give people a sense of a process or activity by using descriptive words that help them feel and see what you're talking or writing about. Think, for example, "thick, gooey, runny, stinky." These words are easy to visualize and feel, and they are fun!
- **Use the active tense.** Unlike for research papers, speak in the active, not passive tense unless making a strategic decision to do so. For example, use "We installed five temperature sensors" rather than "Five temperature sensors were installed." This personalizes science, takes responsibility, and gives people a better visual of what you are describing.
- **Use analogies and metaphors.** Come up with analogies of earth processes using common everyday objects and processes. For example, tomography is like an MRI, allowing us to make images of things we can't see.
- **Make it interactive.** Get people in the room engaged through asking a question like "How many people in here...?" You can also use this as a way to gauge the knowledge level of your audience.
- **Use humor.** If you're up for it, make your audience laugh. Tell a dumb geology joke or include a funny moment in a story. Whatever feels comfortable for you.
- **Make it personal.** What do *you* love about your science? What excites you? Starting off with this will set the tone immediately for people to be engaged in you *and* your science.
- **Use great, simple visuals.** If you are using slides, go low (low low low) on text and high on visuals. Make sure everything on your slide is visible to the people in the back. Go light on charts and heavy on photos and maps--things people have a real-world connection to. For plots, explain all axes, conscious that you might be using units people are unfamiliar with. Explain overall what the plot means--what's your main point? Use plots very sparingly. Make sure each visual ties into your broader story.
- **Leave plenty of time for questions.** If it's not already in the program, make sure you do this yourself. Let the audience drive the discussion with their curiosity.
- **Keep it short.** Often the event will dictate the length, but remember that punchy and brief is better than long and draggy--and, if posted online, is likely to get more clicks.
- **Embrace the challenge and (try to) have fun with it!**



## Additional Resources

Some of the many resources available online to help you dig deeper into giving great presentations

### To read

**How to give a dynamic scientific presentation**

Elsevier - Marilyn Larkin - [link](#)

**9 simple and effective public speaking tips for scientists**

Scientifica - [link](#)

**The Best Public Speaking Strategies According to Science** (read and watch)

Science of People - [link](#)

### To watch

**Before Public Speaking...**

TED Playlist - [link](#)

**You are Contagious**

TED - Vanessa Van Edwards - [link](#)