

Café Scientifique New Mexico Guidelines for Presenters

Our purpose in the Café program is to broaden the horizons of teens through exposure to science that is relevant to their lives and to give them a new perspective on science and scientists. The program gives teens a real-world view of science that they don't get in the classroom. Your role is essential in accomplishing this; it is achieved via your bio, essay, and the Café presentation itself. Here are some guidelines aimed at helping you prepare.

Your Bio

In the bio, you tell your own personal story. We want to get across to teens that a scientist is a real, complex, multidimensional human, like them, with his or her own unique set of motivations, delights, abilities, and baggage. A speaker will want to get across that, in part because of a career in science, he or she has had—and is having—a particularly interesting life. Stay away from the usual formal—and typically rather sterile—bio sketch. It is much more engaging to the teens if a picture of the real person emerges.

Tell your story. We scientists are not used to thinking in terms of our personal stories, but each of us has an interesting and unique story to tell. Telling that story is a hook for pulling the students into the science story. Think about these questions:

What was your life like growing up in the years before college? What particular experiences shaped your inclination toward science?
How did your education—formal and otherwise—prepare you for your science career?
Has your career path been linear, or had twists and turns? Triumphs and setbacks?
What drives you in doing your science? What rewards make it worth the effort?
How did you arrive in your present position and your present research?
Do you have interests and talents outside science that you could share? How do you mesh your life in science with the rest of your life?
What is the *Most Important Thing* about you that explains why you are a scientist?

Your Essay

Your essay will set the stage for your presentation. Some tips for an effective essay:

Know your audience. Assume that the high school teens know nothing about your topic. They will readily engage with an essay on some hot science topic if it is accessible to them, so write it at their level. Avoid jargon and technical terms.

Don't try to cover the whole breadth of the topic, thus creating too many new mental pictures to process at once. Better to organize your essay—and later your presentation—around one essential provocative idea or concept—the *Most Important Thing*—and let everything flow to it. As you write, think in terms of *telling an interesting story*.

Make it personal. The teens will be very interested in you personally, and will respond to a narrative in which you describe your own pathway to and through the research.

Bios and essays for previous Café presenters can be found at <http://Cafénm.org/archive.html>

Your Presentation

Your presentation will need to be entirely different from the kind of one-way presentation you are used to giving at a professional society meeting. **Interactivity**—two-way verbal communication, supported by a few key graphics—is of the essence.

To **paint a picture of a concept in the mind of each audience member**, put yourself into the mind of the teen who knows little about your topic and imagine how he or she is processing your words into mental images. Feedback along the way gives you clues how to adjust your delivery. Accomplish this by pausing occasionally with a provocative statement or a question that will promote discussion.

Increase interactivity by bringing a mental challenge or “hands-on” activity of some kind. This might take a lot of different forms, for example, handing around some objects, letting them participate in a demonstration, giving them a trivia quiz, or getting them on their feet and choreographing some simple concept. Teens like to *do* stuff. If you have an idea, but are not quite sure how to implement it, talk to us, and we can help you.

Tell a story and teens will listen. Start by arousing their interest with a question, problem, or discrepant event that emotionally and mentally engages them. Finish by providing them with the information or experience to answer the question, have more insight into solutions for the problem, or explain the discrepant event.

Keep it simple. Avoid technical words and jargon. If you can say it more simply, do. If you must use an equation, it has to be basic algebra.

Take care with graphics. Keep slides very simple, colorful, jargon-free. They must create mental images of key concepts. Take time to fully explain diagrams, graphs, and images; assume the teens have never seen anything like them. Keep words to a minimum; a picture is worth a thousand words!

Make it personal! Try and include a slide showing yourself or your colleagues having fun doing science. The teens will be very interested in you personally.

Your **dry run** will help you calibrate the level of the presentation for the teen audience and focus your graphics on the essential take-away concepts. Also, scientists are often somewhat intimidated by this unfamiliar audience; the dry run serves to break that ice.

Tips for Presenters Checklist

1. Parents lecture and friends tell stories. So tell a story and teens will listen.
 - a. Start by arousing their interest with a question, problem or discrepant event that emotionally and mentally engages them.
 - b. Finish by providing them with the information or experience to answer the question, have more insight into solutions for the problem, or can explain the discrepant event.
2. Keep it simple!
 - a. Avoid technical words – if you can say it more simply, do.
 - b. Avoid equations – If you must, it has to be simple, basic algebra, and you only get one equation, so make it count
 - c. Graphs – The simplest graph still requires complex thinking. So, the simpler, the better. And, if you include a graph, explain it thoroughly... legends, axis, symbols... Otherwise, why include it?
 - d. Minimal words – A picture is worth 1000 words. Use more pictures than words
 - i. The more colorful, the better
 - ii. Don't read your slides...the kids can do it faster than you.
 - iii. Use text as queues to remind you of the essence of what you want to say about the slide.
3. Tell us about you!
 - a. Include a slide about yourself, interests, etc.
 - b. Include a slide about your profession
4. Intrigue them with ideas — don't drown them in facts.
 - a. Keep the presentation between 20-25 minutes!
 - b. The less you talk and the more you leave them wondering, the more questions they will have and the more fun for everyone.
 - c. Stop every few minutes to ask the kids questions; it keeps them engaged.
5. Doing is better than listening
 - a. The teens have been listening to adults talk all day. Teach them through an activity instead. If you have a mental challenge or hands on activity we will help you implement it. If you don't have any, we will help you develop one.
 - b. Keep the activity simple so that everyone can understand it!
 - c. If you can walk around, rather than standing behind a podium, that's even better!!