Excellent public engagement with science builds on a foundation of clear, concise communication. This section provides guidance and tips to improve your communication skills.

The way scientists are trained is excellent preparation for communicating with precision about your work with colleagues. When communicating with public audiences, however, you need to shift to the way you would speak when 'off the clock.' Think about the last time you explained your work to a friend or family member. Those who care about you are highly motivated to understand the science you work on, yet they may struggle to engage with it.

As highlighted in the diagram below, typical scientific communication (such as the last journal article you read or wrote) includes a lengthy background, and then describes the methods and process used with great precision. It is not until the very end of the paper that results or conclusions are reported.

Public communication flips this approach on its head: the bottom-line is the lead, followed quickly by the “so what,” and then the supporting details, as appropriate.

SCIENTISTS AND THE PUBLIC HAVE DIFFERENT COMMUNICATION STYLES. WHILE SCIENTISTS OFTEN START BY PLACING RESEARCH IN A HISTORICAL CONTEXT, THE PUBLIC WANTS TO KNOW THE KEY POINT AT THE START.
In a crowded communication environment, most people don’t need to read or listen to content that is not immediately compelling to them. Start with the bottom-line in a way that is relevant to the audience, and then share more details. Being proactive about the way you phrase your key ideas to speak directly to an audience’s interests, or even embedding a discussion of science in places where less motivated audiences might discover them accidentally, will help you more deeply engage with that audience, which will likely increase the odds of achieving your engagement goal. You should also consider tactics like removing jargon, and weighing the need for precise language with what is most relevant to your audience and will engage them.

When thinking about how to communicate, even before designing tactics, consider why you are communicating. What is your communication goal? From there, you can identify appropriate audience(s), and then the words or messages you’ll use to engage that audience with your key ideas. This framework can be applied across communication channels, audiences, and goals.

**Getting Started**

This Communication Toolkit provides guidance for scientists to build skills to more effectively communicate and engage with public audiences, including ways to apply the fundamentals of communication to scientific topics.

Following this overview, sections focus on various channels or modes of communication, including online and face-to-face communication. A section about engaging with journalists provides tips and strategies for communicating with that audience.
How can the news media help you reach your communication and engagement goals? Working with journalists gives scientists opportunities to provide accurate, informative updates about the latest research to the general public, decision-makers, funders, and other scientists. Specifically, scientists can:

- **Reach a wider audience:** Journalists help scientists reach the broader public, decision-makers, and grant-makers, not just those actively seeking information about a particular topic.
• **Raise awareness:** Consistent and accurate news coverage can increase public awareness of specific work and of science in general.

• **Create positive attitudes:** Stories about current science discoveries and future science goals can help generate enthusiasm for research and support for funding.

**Know the audience (and their audience)**

Before giving an interview, consider both the direct audience – the journalist – and the intended audience – their readers, viewers, or listeners.

**Direct Audience: The Journalist**

Before interacting with a journalist, it’s helpful to understand how and why they do their job the way they do. Journalists:

- Consult sources.
- Aim for accuracy.
- Weigh evidence and use the most relevant tidbits in the story.
- Must meet their editor’s or producer’s demands.
- Write in a unique style; journalists are not required to share stories with interviewees before they appear, and just because a story is written differently than how the interviewee told it doesn’t mean it’s inaccurate.
- Write/produce quickly; some journalists turn out more than five stories a day.
- Inform (not educate) the public; journalists may not provide lengthy context or background details for the story.

Journalists want their sources to provide credible, accurate information in time to meet their deadlines, which could be a few minutes or a few hours after your conversation. Interviewees should make every effort to plan their core messages in advance, be on time, and be prepared for questions. Always have the answers to these two questions ready: (1) what is new, and (2) why should readers be interested? In addition, you should attempt to anticipate difficult or potentially controversial questions (and your responses) before the interview.
Intended Audience: The Public

The ultimate goal when talking to a journalist is to convey your core messages to their readers, viewers, or listeners. When preparing for an interview, ask the journalist questions about their audiences. Tailor your core messages to those audiences to improve the odds of successfully reaching them. Public affairs (or public information) officers at most institutions and organizations can provide advice and information to help you prepare for encounters with journalists and to tailor your core messages to their audiences.

Prepare for Interviews

Help ensure a successful interview by taking time to prepare. Be sure to answer these questions:

- Who is the journalist’s audience and what are their values, interests, and concerns?
- What is my core three-point message on this topic and why should the audience care?

Whether it’s five minutes or five hours, a little preparation goes a long way toward boosting confidence.

Resources:

- Tips for Interviews
- TV and Radio Interviews
- Tips for Scientists in Communicating with the Press from Former AAAS Mass Media Science and Engineering Fellow Bethany Halford
- Writing an Op-Ed
- Tips from Science Journalists
Establish a Network

The importance of "who you know" applies to the journalism world, too. Establish a network of resources to make navigating the news media more efficient — and enjoyable!

Get to know:

- **Public information officers**: University media relations and research news offices, government agencies, and other institutions and organizations employ public information officers (PIOs) who act as liaisons between scientists and journalists. Many have backgrounds in journalism and/or science, and are often available to assist scientists and engineers who have information to share with the news media. Most PIO contact information is available online. Or, search for a PIO's contact information on EurekAlert! Science Sources.

- **Other scientist-communicators**: There's a lot to be said for someone who has "been there, done that." Get to know other scientists who have worked with the media and ask them to share best practices.

- **Journalists**: Get to know local journalists. Be a resource for those who have questions about the latest scientific research in your field. PIOs can often help make introductions. Start a personal blog, comment on public websites, and attend media-friendly scientific conferences. Increase the chances of coming to a journalist's mind when they need an expert in your field.
Become a Science Journalist

Learn what it’s like from the inside. Each summer, AAAS places about a dozen scientists in newsrooms across the country to work as print, web, radio, or TV journalists through the Mass Media Science and Engineering Fellows Program. Apply for this fellowship or apply for a science writing internship at a science institution or organization. AAAS fellowship applicants must be enrolled as college or university students (graduate, doctoral, or upper level undergraduates) — or be within one year of a completed degree — in the physical, biological, geological, health, engineering, computer, or social sciences or mathematics.