Framing STEM FAQs

Have you read through the talking points, recommended frames, or other Afterschool STEM Hub materials and feel like they don't quite resonate? This happens a lot. Our recommendations are grounded in scientific evidence, but sometimes they're counterintuitive or seem to go against standard communications practice. Below are answers to common questions about our recommendations for framing afterschool STEM learning and the research that underlies them. We hope they'll help you answer questions about framing STEM that may come up in your organization or your professional community.

Question #1:

Our organization talks about how connecting more students with STEM education will help the United States compete in a global economy. But you don't mention this in any of your recommendations. Why?

Using Global Competition as a value in your messages can cause people to think in terms of "us" (Americans) and "them" (everyone else). This frame tends to evoke two responses, neither of which will help build support for STEM education. Some people have a fatalistic response ("Our glory days as a nation are over"), while others respond with a defiant sense of patriotism ("What are you talking about? America is the best country in the world!"). Either way, the result is disengagement. If we can never be as good as we once were, then there is no point in trying to make things better. Conversely, if we are already the best, then we don't need to improve.

The Global Competition frame also feeds people's biases about other countries and populations, as well as their assumptions about different populations here in the United States, too. When reasoning from a competition frame, people blame disparate STEM learning outcomes on "innate" differences among groups, rather than on structural conditions like access, opportunity, and mentoring. This leads people to make judgments about which groups "deserve" resources, and consequently, to reject solutions that involve increased resources for underserved groups.

Instead of Global Competition, we recommend framing STEM education as a way to boost our Collective Prosperity and readiness for the future. This forward-looking strategy frames STEM learning as an opportunity to create future leaders who can tackle modern challenges. Research shows it boosts support for STEM education policies and programs.

Question #2:

We're used to talking about the importance of "out-of-school time" STEM activities. This campaign recommends the long phrase "programs that meet in the afternoons, on the weekends, or during the summer." Why?

Our research shows that the public compartmentalizes learning. People think that kids learn "critical" academic subjects inside the classroom and less important subjects outside of it. Referring to "in-school" and "out-of-school" activities reinforces this unhelpful distinction: If STEM learning happens outside of the classroom, then people think it must be less important than "in-school" learning.

For this reason, we recommend emphasizing that "real world," "hands-on" STEM learning can happen anytime and anywhere—in the afternoon, on weekends, or over the summer. This longer phrase helps people remember that learning can take place in and out of the classroom. We also recognize that communicators often operate under space constraints, especially in communications involving social media, headlines, or captions. When space allows, use the longer, explanatory phrase; if you must trim for length, introduce the long-form explanation as early as possible in your communication and use shorter references afterword. Also prioritize the adjective "afterschool" over "informal," and spell out the acronym "OST" for out-of-school-time (unless you are certain your audience is familiar with it).

Question #3:

Our organization is proud of our work to end race and gender inequities with respect to access to STEM learning. Why shouldn't we lead with those efforts in our communications?

"Lead with" is the key phrase here. The start of a communication shapes how people will react to its entire message. Framing issues as important "because of" or "for" a specific group can lead to divisive reasoning about disparities between groups. When thinking this way, people assume that providing STEM resources for one group necessarily means taking them away from others.

Instead, we recommend casting a wide net at the start of a communication, framing STEM learning as something that all children benefit from. When we lead with the idea that STEM skills boost our shared social and economic wellbeing, the public sees disparities as a threat to that value. As a result, audiences are more receptive to messages about the need to support STEM learning opportunities for all learners, regardless of where they come from or where they live.

Question #4:

What's wrong with telling a success story about a star student—say, a child who was struggling in school but got inspired by a STEM program? People love those stories.

We do indeed love stories about people succeeding against the odds. They resonate with our deeply held belief in individuals' power to triumph over adversity through hard work, by "pulling themselves up by their bootstraps." But our research shows that individual success stories obscure the larger systemic factors that support (or prevent) an individual's success. These stories may be compelling, but they can backfire because they make it hard for people to see and think about the ways in which our environments—where we live and our available resources—shape outcomes.

We recommend telling stories that help people to see the "big picture" causes and consequences of disparities in STEM education (and solutions to these disparities) instead of zeroing in on one individual's experience. This means focusing attention on the systems that create disparities in access to learning opportunities and educational outcomes, and the system-level solutions that your organization is building with quality STEM programs outside of the classroom.

Question #5:

Afterschool providers are an essential support for many working families. Yet I don't see much about family engagement, or families in general, in this communications strategy. Why?

If our goal is to build public support for quality afterschool STEM programs, then talking about families can actually backfire. FrameWorks' research shows that framing access to afterschool programs as a family problem diminishes support for solutions. That's because people strongly believe that children's outcomes are determined by parents' choices and behavior. When messages use words and ideas that remind them of this belief, people don't focus on the positive effects of afterschool STEM programs. Instead, they think that parents—not society—are responsible for children's outcomes and fail to see why funding better access to quality STEM programs is a matter of public concern.

Noting that afterschool programs meet child care needs for some working families can further dampen public support because it equates STEM learning with "babysitting," which many see as individual families' responsibility to arrange. For these reasons, FrameWorks recommends focusing on the shared, society-wide benefits of improving access to STEM education.

Question #6:

I've heard that crisis messages generate urgency and attention. Why do you recommend against that?

Shouting "Crisis!" or using an overly emotional tone may grab attention but comes at a price: it can cause people to doubt our ability to solve big social problems or lead them to think that the problem is "too far gone" to address with systemic solutions or policy changes. Crisis framing also leads to apathy in audiences frustrated with longstanding social problems—such as educational disparities— and the various "fixes" that have not produced change. Likewise, framing STEM programs as a solution to economic crisis or decline can weaken otherwise productive communications by feeding people's fatalism.

Instead, use a positive or neutral tone in your communications and avoid emotional or rhetorical language. Be sure to include concrete examples of practical solutions and to explain how they can work to address the problem. This will build optimism and engagement, rather than leaving people feeling overwhelmed.

Question #7:

Numbers don't lie. Our messaging strategy focuses on information-sharing, so the public can see the same (shocking) data about STEM-related education that we see every day. But these framing strategies are not focused on data-sharing. Why not?

Data can be an important part of an effective communication—but too often, communicators think numbers speak for themselves. That is rarely the case. When people encounter data that has not been put into context, they make sense of the data themselves, which can lead them far from your intended meaning. Numbers can support a well-framed story, but they should never be the story. Before including data in your message, first check the rest of your framing:
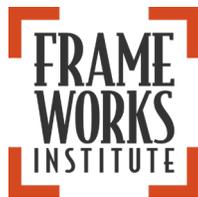
- Have you explained why the program or issue matters to everyone?
- Have you explained it in detail, showing its cause and effect, and what is or isn't working and why?
- Have you included a solution and shown how it will make things better?

Then, if you want to include data in your well-framed story, be sure to compare the numbers to something concrete and easy to imagine, so your audience can better perceive the size, scope, or magnitude that the data are intended to convey. Consider, too, whether the data add to or detract from your message. For example, if you want to persuade people to support a fantastic program, numbers that reinforce people's sense that STEM education in the United States is in crisis may have the opposite effect, causing people to wonder, "What's the point? This program's just a drop in the bucket." Instead, use data to illustrate how quality STEM education advances the nation's ability to build, create, and innovate in the future.

Question #8:

I love metaphors! I've been using the [fill in the blank] metaphor recently. What do you think about that one?

Metaphors are powerful communications tools, but they can also backfire by leading the public to think about an issue in unhelpful ways. The only way to know for certain whether a metaphor works is to test it empirically, by measuring its impact on people's knowledge, attitudes, and beliefs. FrameWorks uses rigorous social science research methods to test every recommended metaphor in multiple experiments for its ability to build people's understanding of an issue, to boost support for target policies, and to pass easily from person to person (its "stickiness"). We recommend that communicators stick to proven, tested metaphors to create effective messages.