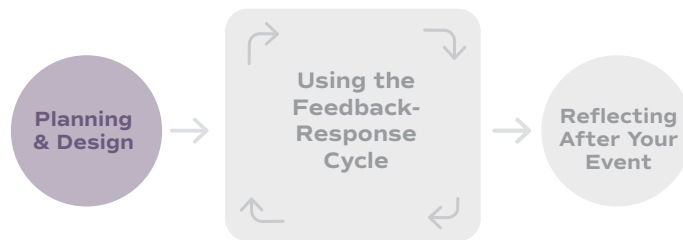


SECTION

2

# Planning & Design

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# Audience Considerations for Inclusion

## While planning your event

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### Representation matters

When participating in an event that promotes public engagement with science, you are representing the culture of science—whether you intend to or not. The scientists who participate in a public engagement program may be the very first scientist some audience members have encountered. An important goal is to make sure the interaction doesn't leave a negative impression or discourage anyone you interact with from having an interest in science. If asked about your career path, as much as you are comfortable doing so, be open and honest about your experience. Be careful not to project or make assumptions about similarities or differences between your life and the lives of your audience. If you plan to dress casually for the event, be mindful of the appropriateness of any slogans or images that are on your clothes.



### Focus on your audience

As you prepare for an event, think about how you can make sure the event attendees are a focus of the planning process. Talk to the program organizer ahead of time and ask what you should know in advance about the audience you will be working with that might impact your planning. How can you design your activity so there is ample space for an expression and exchange of ideas? Remember that everyone has expertise. The most effective and memorable public engagement interactions draw on the expertise of not only the facilitator or scientist, but also audience members.



### Design to support inclusion

Let this serve as a reminder that you should design for outcomes beyond the acquisition of content knowledge by participants. You might want to talk to your event organizer about the host organization and their commitment to inclusion and their priorities for public engagement. If available, you could also reach out to a representative from the community you will be working with, whether that be a tribal community, a teacher who will be attending the program with their class, etc.



**TIP**

If you gather this kind of information ahead of time, you will be in a better position to design and facilitate a learning experience that is a good fit for the circumstances.



**FOR EXAMPLE**

Imagine an outdoor fair where people may stop by various booths as they wander around. This environment has some obvious implications for your engagement activity (e.g., don't rely on specific lighting or sound levels, and be prepared for some people to stay for just a few minutes). **The environment should also inform the kind of feedback you try to gather;** in this kind of environment you'll need to look for quick and fun ways to solicit feedback from participants since they have the freedom to move on any time they want to.

## 1 | Consider the context of the event

Before an engagement event, spend some time thinking about your audience and the setting. Consider, what is the nature of the event, participants, and the event location? What do you know, what information are you missing, and who do you need to talk to ahead of time to learn more? This is especially important if you are working with a community or organization for the first time.

**What type of event will it be?    What will the location be?**

- |  |                                       |
|--|---------------------------------------|
| <input type="checkbox"/> Lecture       | <input type="checkbox"/> Lecture hall |
| <input type="checkbox"/> Demonstration | <input type="checkbox"/> Museum floor |
| <input type="checkbox"/> Small groups  | <input type="checkbox"/> Classroom    |
| <input type="checkbox"/> Virtual event | <input type="checkbox"/> Outdoors     |
| <input type="checkbox"/> Other _____   | <input type="checkbox"/> Other _____  |

**What do you know about the event context?**

What kinds of resources are available for use (e.g., a table, projection capability, can you dim the lights, etc.)?

How many people do you expect to attend? Can they drop in and out?

How much time will you have with them?

What have they been told about the program ahead of time?

What expectations do the event organizers have of you?

## What do you know about the audience?

What is the mix of ages, educational backgrounds, and cultural backgrounds you might expect?

What might they already know about your subject?

Are they required to attend or what might be their motivation for participating in the event?

How interested in your topic do you think they are?



**TIP**

When designing learning experiences, realize that **audience members may come with their own desired outcomes** for the experience. It is essential that you take this into account!

There are many situations where the best course of action is to adjust your facilitation to something more aligned with your participants' desired outcomes.

## 2 | Identify outcomes for the event

Before an event consider what realistic and desirable outcomes you plan to design for. Appropriate outcomes will differ based on a number of variables, including the amount of time you spend with a particular audience member (e.g., 5 minutes, 1 hour). Be cognizant of what may be realistic. "Inspiring a classroom of kindergarteners to become scientists" may not be a realistic or appropriate outcome. When thinking about what you hope participants will gain from the experience, it is also important to remember that there are many kinds of audience outcomes to consider and design for beyond learning science content. There are two levels of outcomes to consider.

### What audience outcomes you will prioritize?

(Choose 1-3)

#### Increased or sustained...

- Enjoyment and/or satisfaction engaging in a science activity
- Excitement about science
- Knowledge or awareness about a particular science topic
- Understanding of how scientific knowledge is discovered or developed
- Understanding how the topic relates to issues they consider important
- Understanding of the different ways that science understanding is viewed and used by individuals and communities
- Interest in learning more
- Satisfaction in meeting their personal goals for the interaction
- Knowledge of and affinity for scientists (particularly by meeting a scientist and learning about their personal history and interests)
- Feeling more confident in their ability or understanding
- Greater ability to do something related to the topic, e.g., use a tool, accomplish a task

### What outcomes for yourself will you prioritize?

(Choose 1-3)

#### Increased or sustained...

- Confidence in conducting a two-way dialogue with the participants (this confidence may not develop immediately, but comes with opportunities to practice facilitation over time)
- Confidence in interacting with audience members of different ages and backgrounds
- Appreciation for and understanding of the participants
- Understanding of common audience misconceptions about your topic
- Understanding of audience interests and questions related to your topic
- Understanding what people in your community think about your topic
- Confidence in incorporating audiences' prior knowledge, interests, experiences, and worldview into your facilitation
- Enjoyment doing public engagement
- Satisfaction after achieving the outcomes you want for your audience



**TIP**

Remember to **think expansively about potential outcomes** and keep in mind that the best outcome is when both the facilitator and audience members come away from an engagement experience having gained insights from one another.

## 3 | Identify what the audience will do during the event

What will you do during the engagement portion of the event in order to support your audience in achieving the outcomes?

What tools will you use to support the engagement experience (e.g., PowerPoint, images, simulations, models, equipment)?

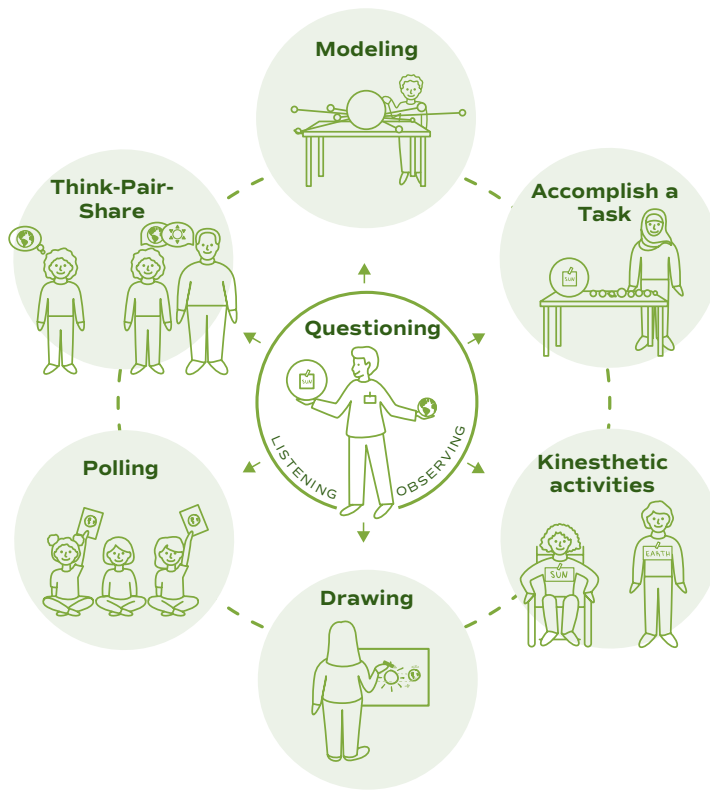
What will the audience do during the engagement to achieve the outcomes?

How will you plan to draw on the assets of the community you are working with, and how will you design for inclusion of diverse participants and perspectives?

What role do you envision feedback playing during the event, and what will you do to create moments for the audience to share their experiences, ideas, or otherwise provide feedback?

4 | Choose **On-the-Spot Feedback tactics** to use.

Consider what kind of feedback you plan to collect and, how you might respond depending on how the audience reacts to each tactic, and how much time you will need. Thinking this through in advance is crucial, and will make it more likely the feedback you collect can be used to improve the engagement experience. While you can't know all the ways that participants will respond, you can do some preparation so you have adjustments "at the ready". Identify which two or three (or more, for longer events) OTSF tactics will you use to determine if your audience is on the path to achieve your planned outcomes. Carefully consider how these tactics will fit into your planned engagement.



Learn more about these tactics starting on page 13

**On-the-Spot Feedback Tactic**

**What Will You Do?**

Tactic 1

Feedback Activity 1




Tactic 2

Feedback Activity 2



## 5 | Consider how you will adjust based on the feedback you might receive.

If you can't name anything you would do differently after participants respond, you might be using a tactic for engagement, but not feedback. Getting your audience engaged is a great first step, but the On-the-Spot tactics can help you create deeper and more meaningful interactions if you are able to customize the experience to each participant.



### FOR EXAMPLE

If you are gathering feedback to determine whether participants are having fun and you discover some are not, how will you change the activity on-the-spot? If you are hoping to learn whether participants are making personal connections to your science topic and you discover they are not, how will you adjust what you're doing on-the-spot?

## Tactic 1:

What are some of the ways that you think participants will respond to tactic 1?

What adjustments would you make?

Hypothetical Response

Adjustment



Hypothetical Response

Adjustment



Hypothetical Response

Adjustment



Planning ahead and thinking through how you might adjust in the moment is challenging, but critical!



**Tactic 2:**

What are some of the ways that you think participants will respond to tactic 2?

Hypothetical Response

What adjustments would you make based on this response?

Adjustment



Hypothetical Response

Adjustment



Hypothetical Response

Adjustment





**The On-the-Spot Feedback tactics are best used at virtual public engagement events that:**

- Are **synchronous**, with no or limited asynchronous engagement
- Are **organized as an event** with a specific and limited timeframe
- Thoughtfully **employ the available technology to interact** with the audience

*We certainly applaud other types of virtual public engagement (e.g., blog posts, Listserv interactions, pre-recorded videos), but these do not lend themselves to effective use of the OTSF tactics.*

## Virtual Engagement

### Using On-the-Spot Feedback virtually

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The On-the-Spot Feedback tactics discussed in this guide may be successfully used to enhance a virtual event with the public, in addition to in-person interactions. There are some additional considerations when planning for and engaging with audiences virtually, which will be discussed below. First, it is important to clarify what we mean by virtual engagement in the context of the OTSF interaction model.

**When planning a virtual public engagement experience:**

**Remember that a virtual engagement with the public can take many formats. An event being virtual does not necessarily dictate the structure of an event.**

For example, a lecture-style presentation followed by a Q&A could take place either in person or virtually. An engagement activity that involves small group work, pair-and-share activities, and even hands-on activities can also be facilitated in-person or virtually. Indeed, engaging with an audience virtually can take many different forms, with some plans being more conducive to audience interaction than others.

Planning for a virtual public engagement can be approached in a few different ways. Sometimes an activity you delivered in an in-person context can successfully translate to an online context. For example, if a hands-on activity uses common household materials that you would normally provide at an in-person event, in the lead-up to a virtual event the participants could be prompted to gather the materials ahead of time. (The materials should be common objects if you do this: spoons, pen/pencil, paper, roll of toilet paper, etc.)

There are also many virtual tools that can support strong engagement practices in an online format and give participants the chance to work through ideas collaboratively including online polling tools, virtual whiteboards, and programs that can create virtual breakout rooms to allow participants to work in small groups. These tools are also useful for gathering feedback, as discussed in the Deep Dives section, starting on page 38.

Do keep in mind that not all in-person activities are well suited for virtual formats. Sometimes it is best to approach your planning by first considering the context of your virtual engagement, the affordances and limitations of the technology, and your desired outcomes for the event. Consider these additional points when using the *OTSF Engagement Planning Worksheets* (starting on page 24) to prepare for a virtual event. It is important to stay focused on your desired outcomes and mindfully incorporate strong practices for virtual engagement and virtual feedback into your plan.

**Connect with the event coordinator to familiarize yourself with their virtual event context and discuss logistical considerations.**

- Have they hosted virtual events like this before? What have they learned?
- What virtual platform will be available (e.g. Zoom, Teams)?
- What issues (technology-related and otherwise) might arise during your virtual event? How would you navigate those issues? Will you have staff support to help troubleshoot?
- Will staff be available to help you monitor audience engagement and feedback (e.g., monitor a chat feature and collect audience questions)?

**Consider the technology tools available as you are planning for your virtual engagement.**

- What technology tools are available to you to use? Have you used this technology before? Would it be helpful to you to test the virtual engagement tools or platforms ahead of the engagement event?
- What are the specific affordances and limitations of the technology tools available?
- How will the audience provide you feedback? Will participants be on camera? Will they have access to a microphone? To a chat box? Will the audience be able to engage with the screen using virtual tools (e.g., annotating)? Can you poll the audience? Will all audience members have access to these feedback tools?
- Will you be able to share your screen with participants?
- Can you divide the audience into smaller groups so they can talk to each other?
- Are there any additional virtual tools you can use to support your audiences' ability to provide feedback (e.g., Poll Everywhere, Jamboard, Mentimeter)

**Consider your audience in the context of the virtual engagement.**

- Will the audience members be joining your event individually, or will they be in the same room as other participants?
- Are participants already likely to be familiar with the technology you will be using? Or, will you need to spend some time to familiarize them with specific tools you will ask them to use?
- Will audience members be able to gather materials ahead of time to follow along with you and engage in a simple activity together?
- How can you invite them to share their expertise, community-based or cultural knowledge that aligns to your presentation?