

Portal to the Public (PoP) Training for Teen Science Café Scientists

Story-weaving

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Category: Facilitation

Approximate Length: 45-60 min.

Format: In-person workshop

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Main Idea:

This session is designed to help scientists identify the major themes and key elements in their stories. It provides scientists with an opportunity to examine their research and think about how they can relate their work to the public. Scientists identify the main theme of their work, find the narrative and discover how to add a meaningful activity that will effectively demonstrate a key concept of their work.

Relevant Objectives

- Scientists will identify the 'Big Ideas' / Theme (spine) of their talk.
- Scientists will learn how to organize their talk in an engaging way.
- Scientists will develop an awareness, comfort and enjoyment of their own stories, which will make them more excited to share their own stories.

How this relates to other PD elements:

This element will work well when the scientist needs help organizing their talk in a meaningful and engaging way. They will learn the elements of a good story and realize that a good story is not necessarily chronological. This element would go nicely with Concept Mapping. This element will also work well for Teen Café speakers after *Learning through Play* and before *Improv*. This element is related to Concept Mapping, Scientists Find Their Stories, Making Meaning, Critique of Scientist videos, What's in a Word.

Prior Knowledge and Experience:

We assume that scientists are open to the idea of rearranging how they talk about their science to align more with the concepts of a good story.

We expect scientists to come to the workshop with the Scientist Preparation Worksheet filled out.

Protocol:

Room Set up and Materials Preparation

Before the workshop, make sure that you have sent all scientists the Scientist Preparation Worksheet and that you have printouts of the “Most Important Thing” worksheet available for each scientist. In addition, a projector, projection screen, and laptop should be set up in advance to enable the facilitator to show video clips. If using the video clips below, the laptop should have internet access, and it is useful to have the listed web sites set as bookmarks to make the viewing process proceed as quickly and smoothly as possible. Make sure the room is adequate in size to handle some movement exercises.

Materials:

- Scientist Preparation Worksheet
- *The Most Important Thing* handout
- *What Will Your Café Look Like?* worksheet
- Pens
- Laptop

Part 1: Activity – Crafting Your Story, an introduction. (10 min)

- Have the scientists pull out a piece of scratch paper and write the following:
 - Three positive adjectives that describe your work
 - One positive adverb that describes how you do your work
 - One verb related to your work
 - Two STEM-job related nouns (i.e. solar panel, microscope)
- Give the scientists plenty of time to come up with their words
- Now try to complete the following sentences with your MadLibs words:
- “I’m a (insert adjective #1) (your profession) and that means I (adverb)(verb)(STEM noun#1). You might have seen me using (STEM noun#2) because I am always (adjective#2) and usually (adjective#3).”
- Spend 5 minutes revising your STEM story personal introduction, including:

- Explain what you do. To what could you compare your job that relates to every day life? Avoid abbreviations and acronyms.
- Explain how your profession affects the audience's lives and communities.
- Background on your academic and career journey. What did you want to be when you were your audience's age?
- 3 Fun Facts about yourself/your hobbies/ family & friends.
- Why you like working in your field of work.

Part 2: Activity - The Most Important Thing (developing your hook) (30 min)

- Have scientists fill out *The Most Important Thing* worksheet
 - a. Most important question I'm trying to answer in the lab today
 - b. Most important question that my field is trying to answer
 - c. Most important way that my research would effect everyday life
 - d. Most important way that my research will have long term impacts
- Regain the focus of the group and have the scientists share their most important thing with the person sitting next to them.

Part 3: Crafting Your Story (20 min)

Provide time for scientists to build their story to highlight their 'most important thing.' Could insert the One Word Story or One Sentence Story Exercise (from Improv workshop) if time allows. Review the 5 C's first and then circle up for the exercise.

Scientists should keep in mind the **Elements of an Engaging Story (The 5 C's)**:

- **Context:** Stories should provide a context or background information so that they make sense. Your audience wants a good set up so they can be on board with you from the start.
- **Change:** Stories describe change, taking the audience through a journey. Classic story structure tells us our stories should have a beginning (context), middle (with rising action and conflict) and an ending or resolution.
- **Conflict:** There must be some sort of struggle, obstacle or hardship to overcome. Conflict that heightens is most desirable.
- **Curiosity:** A story should build and create wonder and suspense about what will happen

next. As a story-teller/presenter, your ability to create and present stories that are mental page-turners will delight your audience.

- **Charisma:** A story told with an engaging delivery style is the final component. It doesn't need to be overly theatrical or animated, but an effective presentation style enhances all of the other elements.

Part 4: Reflection and Discussion

Using the *What will your café look like?* worksheet as a guide, ask scientists to share their stories and ideas for their café with a partner or small group.

- Discuss the need to put their research in the context of the bigger picture.
- Facilitate a discussion of how a common theme can tie a story together.
- Has anything changed about your story that was unexpected?
- How are you going to hook your audience with the main theme in mind?

Have the scientists fill out the worksheet: "What will your Café look like?" to take home.

Wrap-Up: Tell your Story as a Fairy Tale or Ad Campaign Exercise

Using the following prompts, tell your research story like a fairy tale:

- Once upon a time.....
- Everyday.....
- Until one day.....
- And because of that.....
- And because of that.....
- And because of that....
- Until Finally....
- And ever since that day.....

Resource: The Structure of a good Story (video can be watched before the meeting)

- Watch a TED talk by Ben Wellington (Making data mean more through storytelling):
<https://www.youtube.com/watch?v=6xsvGYIxJok>

What will your Café look like?

Teen Café Title...

My idea is....

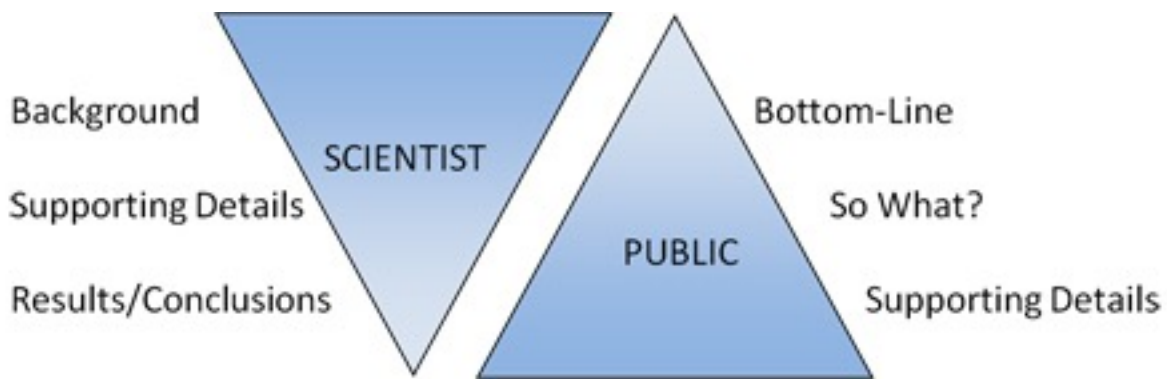
A little about me is...

My activity is ...

Materials

Debrief

Additional Resources



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 point from the beginning.

(From *Communicating to Engage*, AAAS Center for Public Engagement with Science, retrieved from: <https://www.aaas.org/page/communicating-engage>)

How do you translate detailed and complex material into a clear, streamlined structure?

- **What's the Point?** Start out by explaining the "big picture" and why the audience should care. Then go into an appropriate level of detail to emphasize your points.
- **3-Point Structure:** What are the three things you want your audience to remember? Organize your message around these points.

How do you choose just three? Think about your audience and what they want to know. You could talk about 3 focuses of your research, 3 results, 3 reasons your work is important, 3 potential applications, etc.

Bonus Activity – Developing your storytelling expertise through improvisation.

Below are additional activities to develop storytelling skills, to be delivered after warm-up improv exercises.

One Word Story or One Sentence Story

Everyone in a circle. Start by getting a suggestion for a title of a story that has never been told. One at a time each person will add a word/sentence to create a cohesive story. Prior to beginning, the leader should describe the game and discuss the basics of story telling. The story should be at a 3rd or 4th grade level. Remind them of the elements of storytelling- we need a set up, (which includes a main character), a struggle or conflict and a resolution. The story should relate to the title.

Good for: listening skills, building on what was said, thinking on your feet, letting go of your own ideas and practicing the elements of telling a good story.

The Ad Campaign

A group of 5-12 players has five minutes to create an ad campaign for an ordinary product with an unusual quality. For example, a cereal that plays music when milk is poured on it. The group must come up with a name for the product, a package design, a slogan, a spokesperson and a jingle to create an entire marketing strategy and finished commercial. Every idea is accepted enthusiastically and remembered. Each step is built off the previous step. Players should respond enthusiastically to every idea by over-accepting, screaming “Yes!” “Terrific idea!” “Great!” etc. This over acceptance, especially of crazy or stupid ideas makes this game all the more fun. The leader will explain the game as stated here and then get an idea for the ordinary product with an unusual quality from the group. The leader then acts as the president of the company: “We’ve been tasked with creating a campaign for our new xyz product. We need to come up with a slogan for this product, what are your ideas?” Let the group jump in and offer ideas spontaneously. Cue them for the package design, jingle, spokesperson etc. until the campaign is complete.

After a 2 or 3 crazy products, start doing the same thing but creating an ad campaign for your café. Start with the title and then players may add to it using “yes, and...”. Remember, there are no

wrong answers or things that are too crazy. Make the most outrageous ad you can (who knows, you may get some good ideas for activities to do at your café).

Good for: agreeing while taking risks, getting out of the perfectionistic thinking, building agreement with a group, team building and generating ideas.

Press Conference

(Modified, for scientists to think about their research in new and different ways.)

One scientist will be interviewed by the others in the room. The 'journalists' in the audience will ask the scientist silly questions about their research.

- If your research topic were a flavor of ice cream, what would it be?
- If you were the CEO of a company, what would your company be called?
- If your research were animated, what would the main character look like?
- What planet would your research be best suited to?

If time allows, could introduce this exercise with traditional "Press Conference" game played as a warm-up:

One player leaves the room, while the audience provides the name of a famous or historical person. The `absent` player will give a press conference, but he does not know who s/he is. The other players are journalists, whose questions should provide indications as to who the mystery guest might be. Game ends when our player guesses who s/he is. The leader will ask who wants to play and send that person out of the room. Then the leader will guide the group to provide the person's identity. Once decided, the leader will get the person from outside and welcome them into the room as if the press conference were beginning. The leader can say, "We are so glad you are here. Lots of people have questions for you so take it away." The person should begin calling on the "journalists" one at a time. The leader will need to check in periodically to see if the person knows who s/he is.

Good for: embracing the unknown, learning how to ask questions that provoke discovery, having fun and letting go.

New Choice

Two players. The players start doing a straight scene based on the audience's suggestion. At any time, the host can ring a bell or merely shout "new choice" and the player who last spoke must change his or her line to something else. Sometimes the host may ring the bell or call "new action" and the player will change actions instead. The Leader will explain the game and then get two players up. Have the audience provide the players with suggestions of who they are, where they are and what they are doing. Instruct the players to start the scene. Leader will yell out "new choice" at the appropriate times. Each scene should go for a couple minutes with changing choices a dozen times or so. Recommended for groups who are familiar and comfortable with improv and scene work.

Good for: encouraging flexibility, not getting stuck in your own ideas, thinking on your feet, being spontaneous.