Communicating Your Science to Different Audiences

IN THE SPIRIT OF INQUIRY AND DISCOVERY EMBODIED BY BENJAMIN FRANKLIN, THE MISSION OF THE FRANKLIN INSTITUTE IS TO INSPIRE A PASSION FOR LEARNING ABOUT SCIENCE AND TECHNOLOGY.

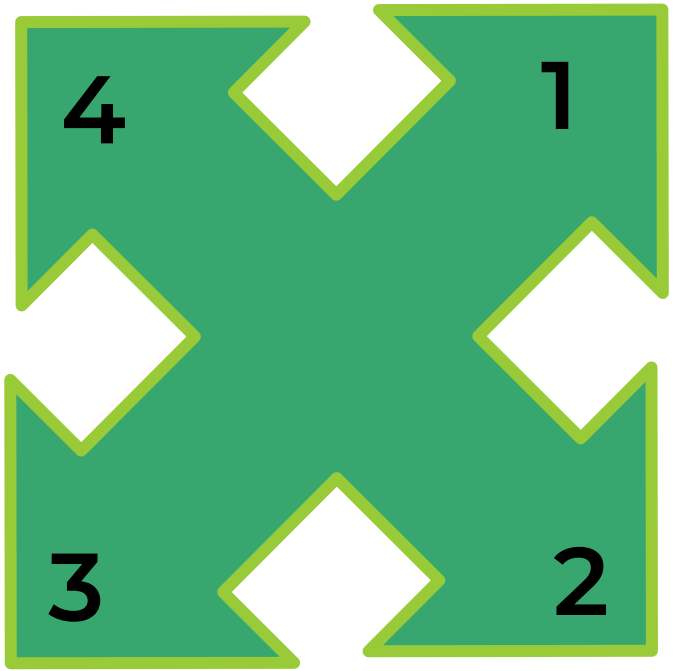
Founded in 1824, opened as science center in 1934

Most visited cultural institution in Pennsylvania

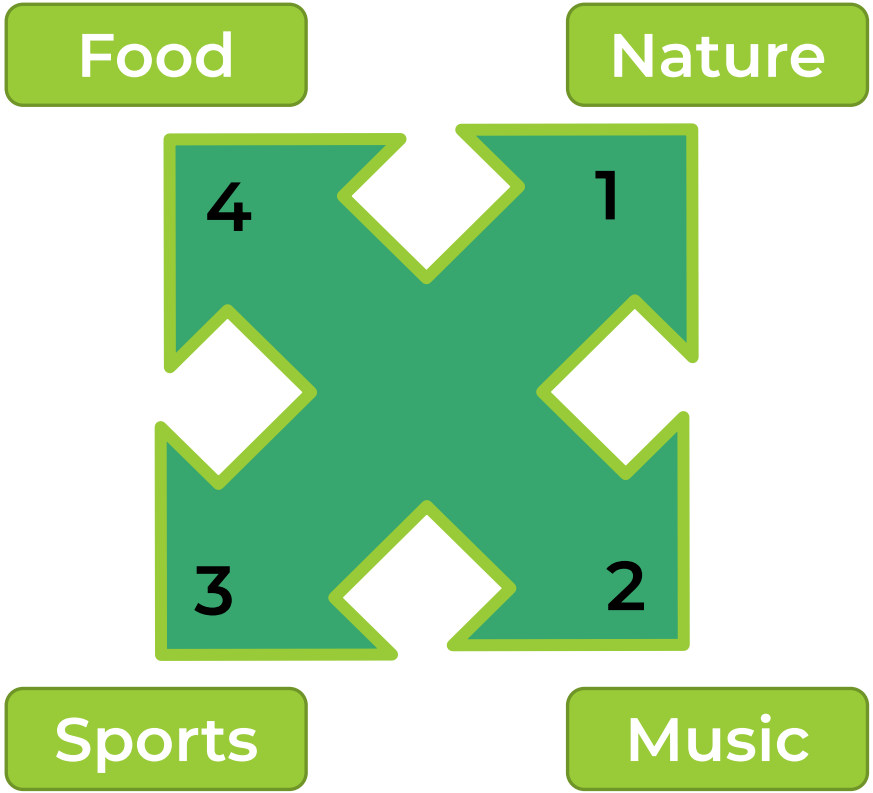
Informal science education programs for youth, families, educators in museum, community, and nationally

Warm-up: Four Corners

- Go to the corner that suits you.
- Discuss the assigned question with another person in your corner.



Favorite HOBBY



Share a **memorable science experience** from childhood.

Why do we do science communication?

- Share excitement & benefits of science
- Increase appreciation of science as a process
- Inform about issues
- Influence behavioral change
- Seek diverse perspectives
- Communicate shared values & care for society

Photo: Morehead Planetarium

Mechanobiology Mobile Exhibit Project

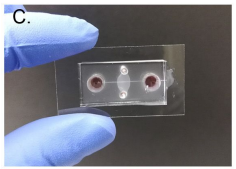
Goals for Broader Impacts: Public Audiences

Children ages 8-13 and their families:

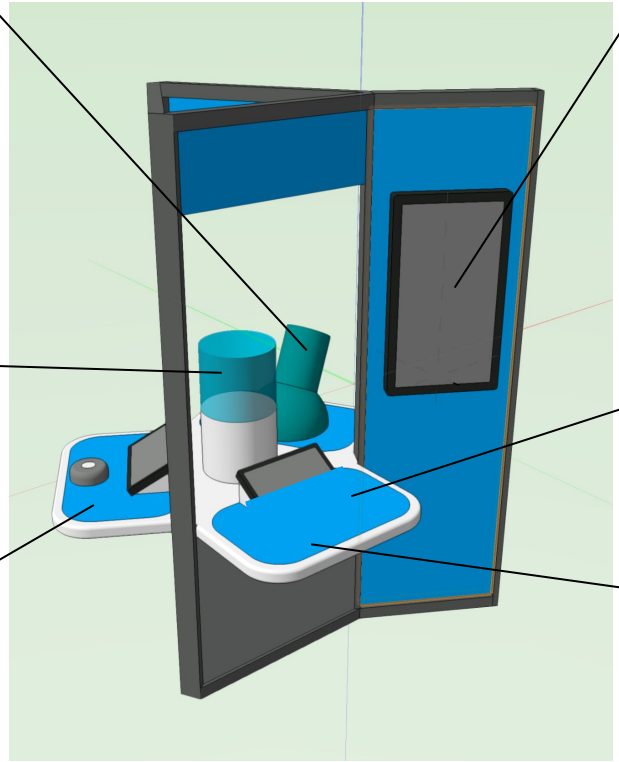
- Engage curiosity and critical thinking
- Promote awareness and relevance of science
- Increase awareness of scientists & current research

Interactive: Microscope for observing real cell/tissue specimens

Objects: Observe examples of new technology in development, e.g., bile duct on a chip



Interactive Media: Spin browser to scroll through time lapse videos of growth and movement



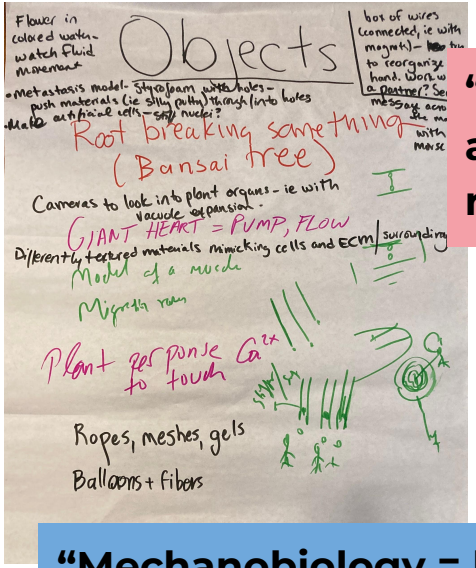
Media: Video of scientists & experimental footage of plant research important for climate adaptation

Interactive: Building with squishy vs. rigid blocks to compare plant and animal cell properties

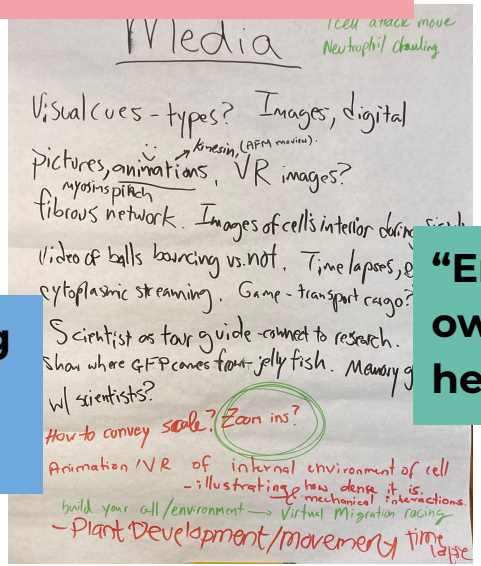
Facilitated Activity: Animal & plant hierarchy card sort

Pilot locally, scale to other CEMB cities

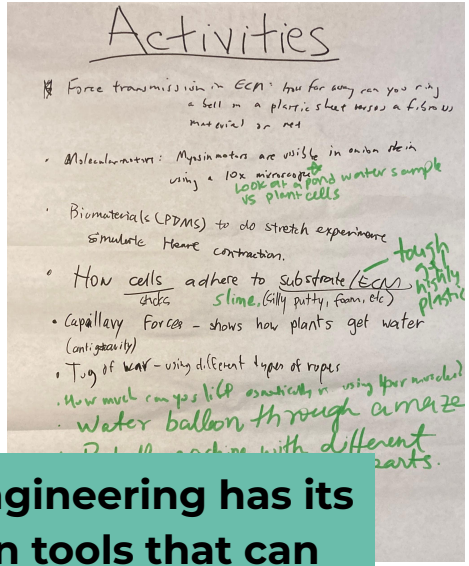
CEMB scicomm training workshop and retreat brainstorming



"Cells are dynamic and adaptive. Cells are really smart!"



"Mechanobiology = living things sensing and responding to force"



"Engineering has its own tools that can help medicine."

CEMB Trainee Leads

Josh Coomey

Washington University in St. Louis

Faviolla Báez-Cruz
Matt Rowe
Paula Camacho Sierra

Penn
University of Pennsylvania

Suraj Sahu

University of California Merced

Communicating Science: Audience

What colors do you see in this dress?

Photo: Cecilia Bleasdale

Photo: Cecilia Bleasdale

Reflective Listening Exercise

Partner 1: Talk for 60 seconds.

Talk about...

- A recent vacation
- A hobby
- Your favorite movie
- A book you read
- Anything you're interested in!

Partner 2: Listen for 60 seconds. Then...

Reflect and repeat:

- "I get the sense that..."
- "What I heard was..."

Affirm positives:

- "You have a passion for..."
- "You are really excited about..."

Ask an open-ended question:

- "What do you think about...?"
- "Tell me about a time when..."

Communicating Science: Message

Simplifying Language Exercise

1. Enter your name in Column A to claim a row.
2. Write a 1-2 sentence summary of your research message in Column B.
3. Then copy and paste your text into the XKCD Simple Writer text editor (link in Column C header).
4. Simplify your text until it's "Simple Writer"-friendly.
5. Copy it back into the spreadsheet in Column C.

https://bit.ly/SEI-simplify

Communicating Science: Goals and Strategies

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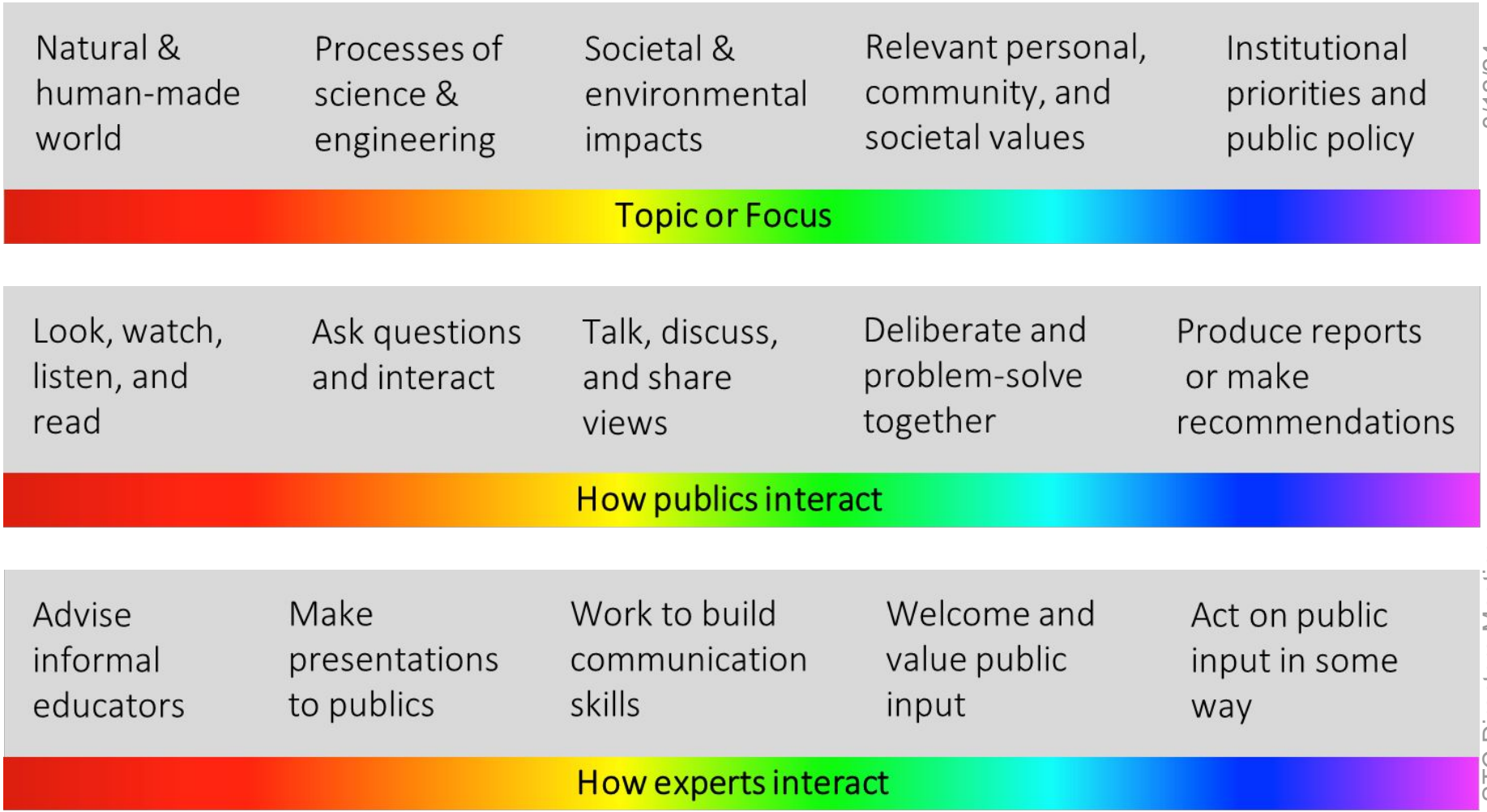
Natural & human-made world
Processes of science & engineering
Societal & environmental impacts
Relevant personal, community, and societal values
Institutional priorities and public policy
Topic or Focus
Look, watch, listen, and read
Ask questions and interact
Talk, discuss, and share views
Deliberate and problem-solve together
Produce reports or make recommendations
How publics interact
Advise informal educators
Make presentations to publics
Work to build communication skills
Welcome and value public input
Act on public input in some way
How experts interact