



Wright  
Laboratory

# Science Communication: Engaging with the Public

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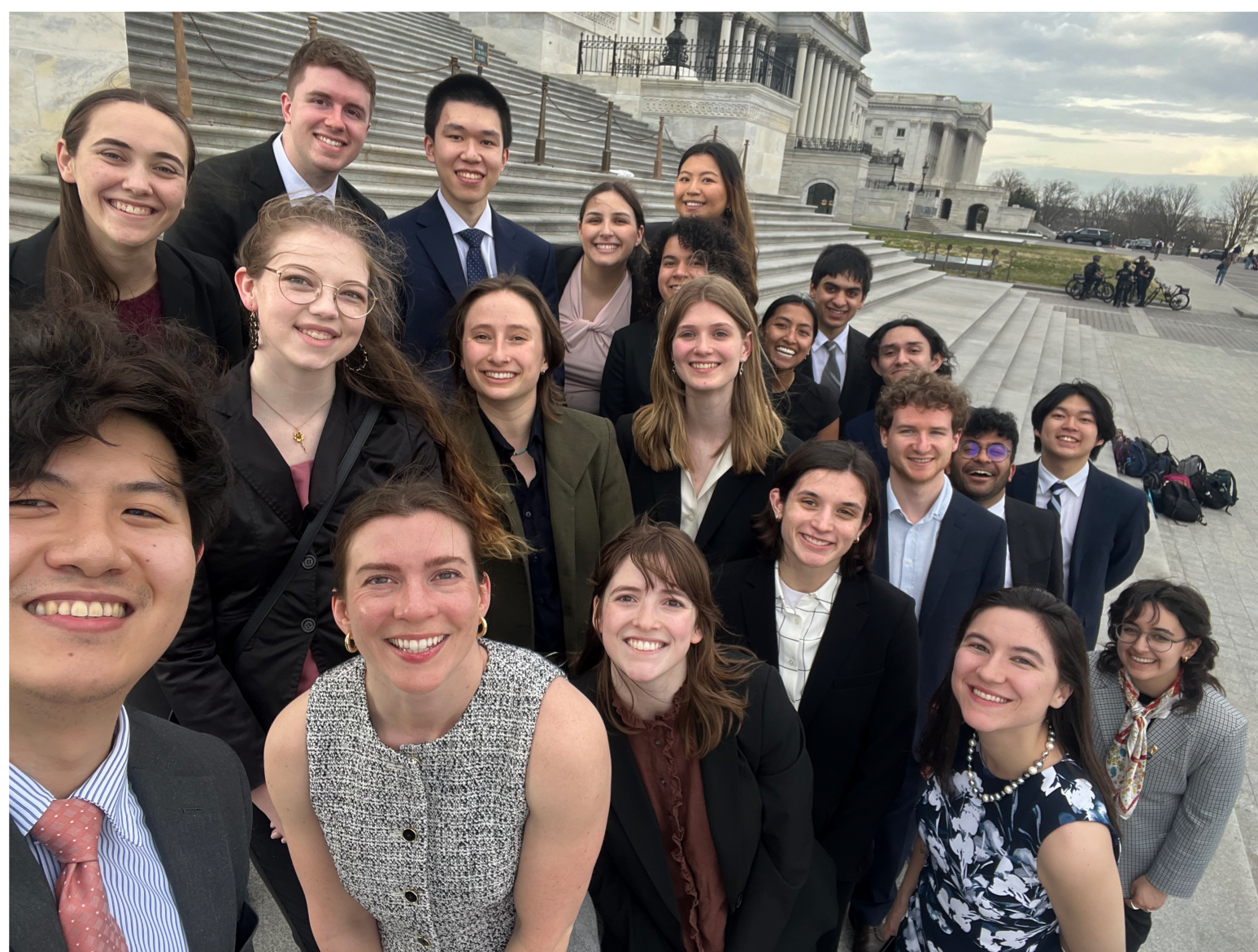
# Why Listen to Me?

Short answer: I've taken on a lot of roles that involve communicating science to different people

(and, in doing so, overcome an intense fear of public speaking)



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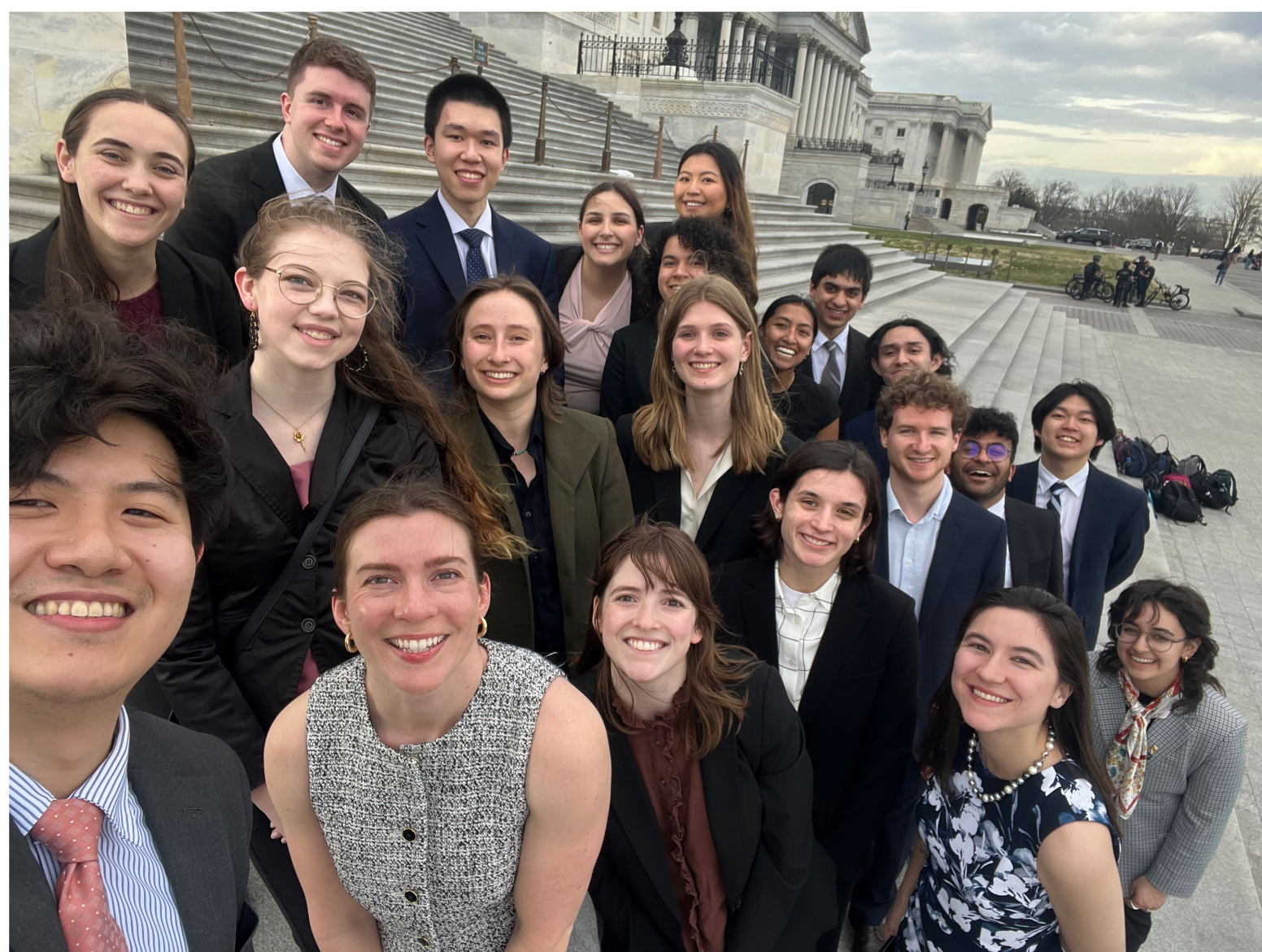


Advocacy in Washington D.C. to talk to lawmakers about the importance of funding various science projects

(Interesting in learning more? Talk to me afterwards about the Yale STEM Hill Day!)



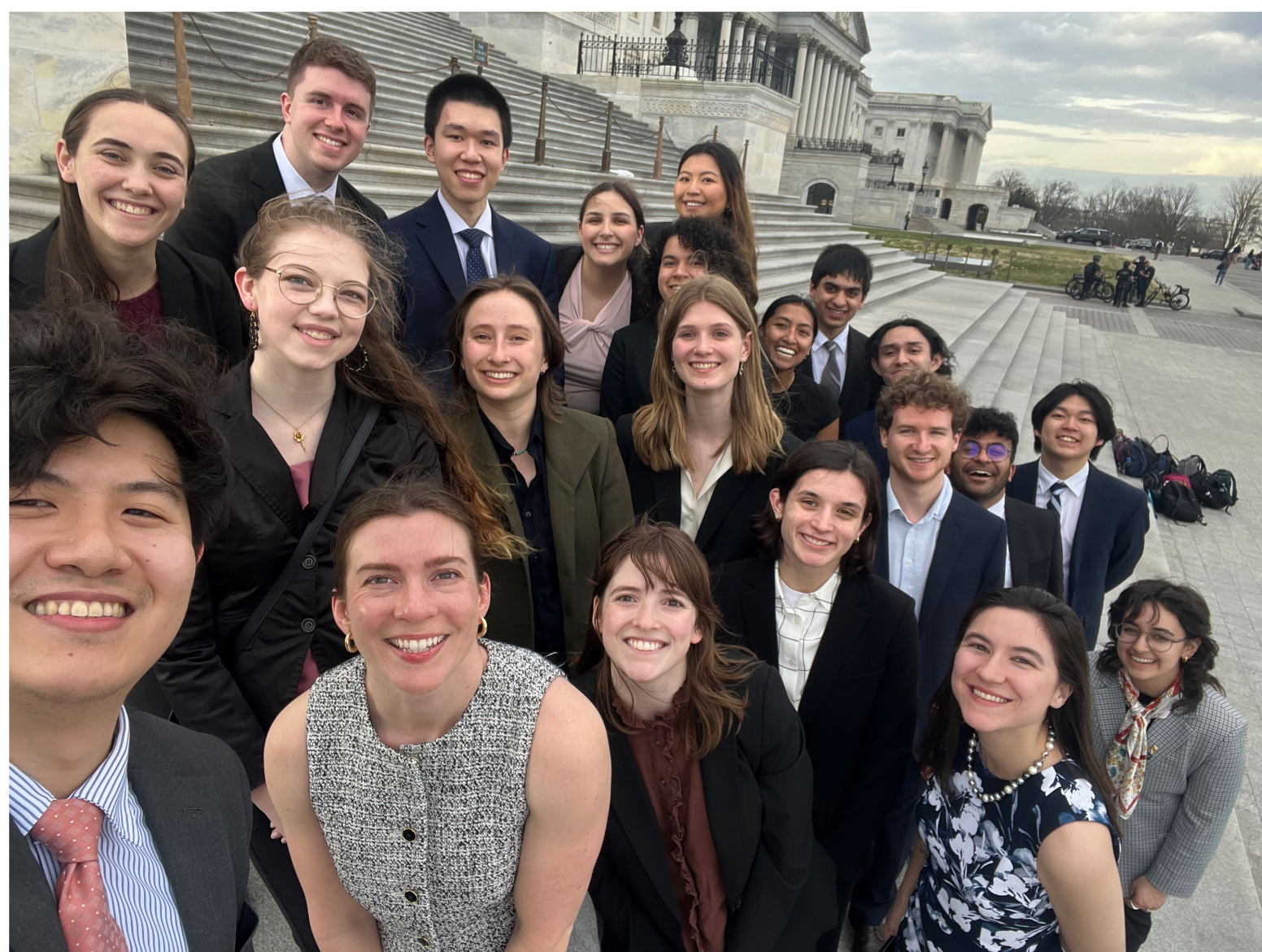
# Why Listen to Me?



Outreach and mentorship!



# Why Listen to Me?



ALICE  
Collaboration  
Diversity Officer



# Why Communicate with the Public?

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- Building trust in science/scientists
  - Only 28% of U.S. adults say they have a ‘great deal’ of confidence in scientists to act in the public’s best interest. Another 49% have a ‘fair amount’ of confidence
  - Wide partisan divide
  - Americans’ confidence in scientists remains lower than it was prior to COVID-19

Source: Pew Research Center (Jan 2026):

<https://www.pewresearch.org/science/2026/01/15/americans-confidence-in-scientists/>

# Why Communicate with the Public?

- Building trust in science/scientists
- People are interested in science!
  - Three-quarters of American adults said they liked science classes in K-12
  - In 2016, a NASA-funded survey found that 51% of Americans are interested in science, but only 28% have high enough science literacy to engage in STEM policy issues

Sources:

<https://www.edweek.org/teaching-learning/most-americans-say-they-liked-math-and-science-in-school-survey-says/2018/01>

<https://record.umich.edu/articles/survey-shows-public-interest-science-high-literacy-constant/>



# Why Communicate with the Public?

- Building trust in science/scientists
- People are interested in science!
- Need to break “Sheldon stereotypes”
  - 89% of U.S. adults say “intelligent” describes most scientists well
  - 47% view scientists as feeling superior to others; 45% view scientists as good communicators; 36% view scientists as not paying attention to the moral values of society; 34% view scientists as cold

Source: Pew Research Center (Nov 2024)

<https://www.pewresearch.org/science/2024/11/14/public-trust-in-scientists-and-views-on-their-role-in-policymaking/#public-perceptions-of-scientists-traits-and-characteristics>

# Why Communicate with the Public?

- Building trust in science/scientists
- People are interested in science!
- Need to break “Sheldon stereotypes”
- Building excitement about science and encourage young people to pursue science



# Types of Science Communication

- Face-to-face — public talks, debates, policy meetings, interviews



National Laboratory and Executive Office  
Logos at the House Science Committee office



Pint of Science - New Haven

<https://wlab.yale.edu/posts/2026-05-28-wright-lab-members-host-2026-pint-of-science-festival-in-new-haven>



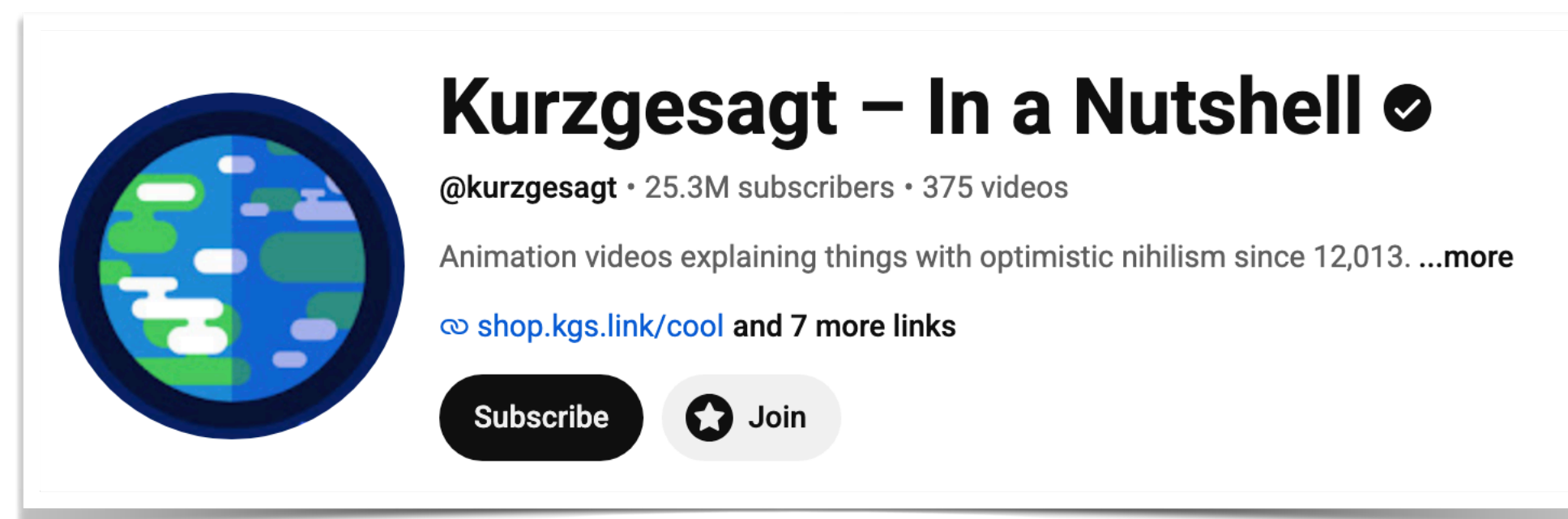
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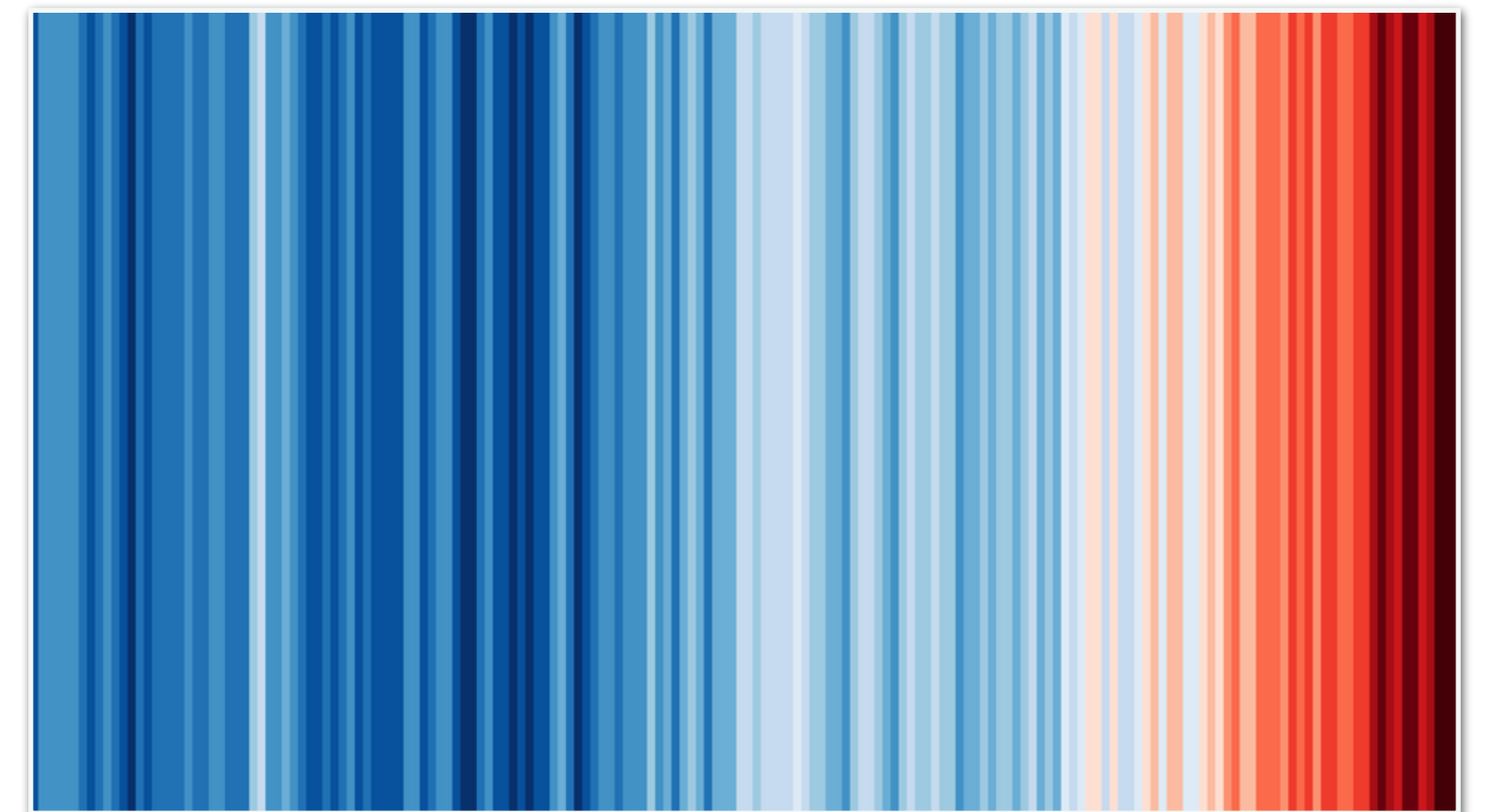
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- Traditional journalism — newspapers, magazines, TV, radio
- Online — Blogs, podcasts, social media\* (YouTube, TikTok, Instagram, ...)
- \*beware of misinformation!





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- Art — visual, performance, museums...



Credit: Ed Hawkins



# Principles of Communication

(An Incomplete Guide Based On My Experiences)



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1. Understand who you're communicating with



# Principles of Communication

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Communication is a back-and-forth!

Even if you are doing most of the talking, watch your audience's expressions, body language, and allow them time to process information and ask questions

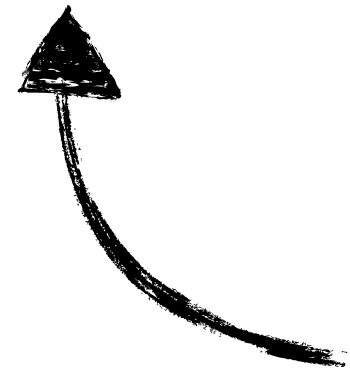
Be open to changing up the flow of the conversation to keep your audience engaged



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## 1. Understand who you're communicating with



Talking to a fellow scientist, a policy-maker, students at an outreach event, and your parents are all very different tasks!

What does your audience value? What preconceived ideas might they have about you and your topic?

What do they want out of this conversation? How does that relate to what you want out of this conversation?



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An example: I want federal funding for particle physics

- Congressional office of a liberal Senator with a history of supporting appropriations to NSF and DOE:
  - Thank you for your support in funding basic science.
  - Here is what we have done...here is what we still need...
  - How can we work together?
- Congressional office of a conservative House Representative who has spoken publicly about reducing the federal deficit by any means necessary:
  - Here are some of the great successes of our field recently...
  - Funding basic science is an investment in our future and is what make the U.S. a global leader...
  - Scientists trained here are leaving and bringing their talent to countries that will fund their science...
  - Where can we find common ground?



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3. Tell a story
  - Your audience is not going to remember a list of facts
  - They are more likely to remember emotional appeals
  - People can relate to a narrative, which helps your topic feel important
  - A narrative gives natural places to pause, reflect, and get people who are lost back on track!!!

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  4. Beware of jargon!
- 
- What counts as jargon depends on your audience
- Ask yourself: What knowledge/understanding is my audience working with?
- This goes beyond defining terms!!! Use language your audience understands without talking down to them — help them feel intelligent

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3. Tell a story
4. Beware of jargon!
5. Practice! (even if you feel silly doing it)



# Some Thoughts on DEI...

- Science communication traditionally centers Western science and Western language — formulaic science is not the only way of knowing
- Science communication should be more diverse and inclusive on both sides of the conversation
- Labor involved in science communication is vastly undervalued, and it takes more work to reach populations that need access to science the most
- Part of communication is listening — we have to be willing to listen to what communities need from us and think about how we can hold ourselves accountable to the people and societies we serve

Questions? Comments? Thoughts?

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