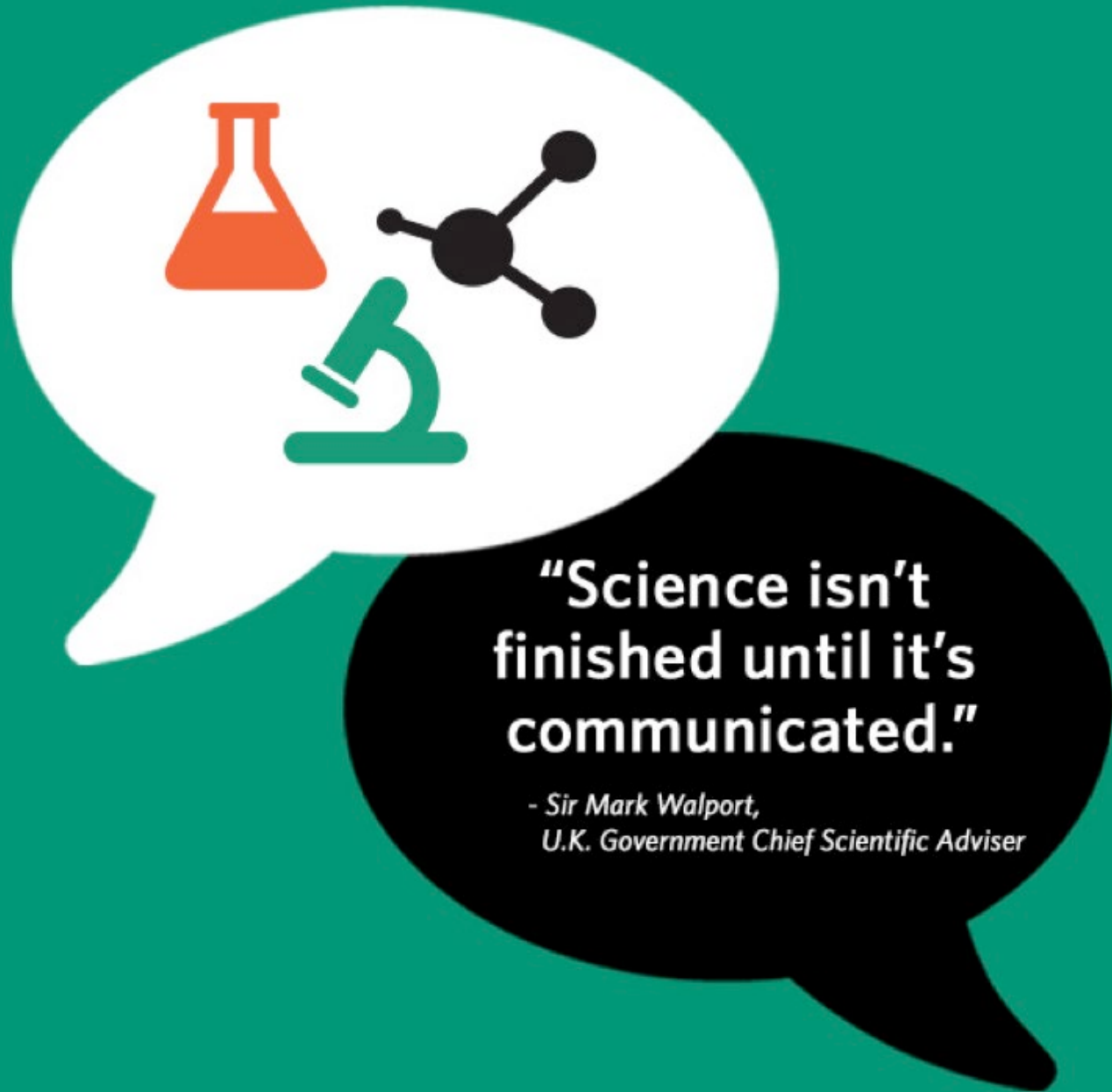




**"Science isn't
finished until it's
communicated."**

*- Sir Mark Walport,
U.K. Government Chief Scientific Adviser*

Science Communication

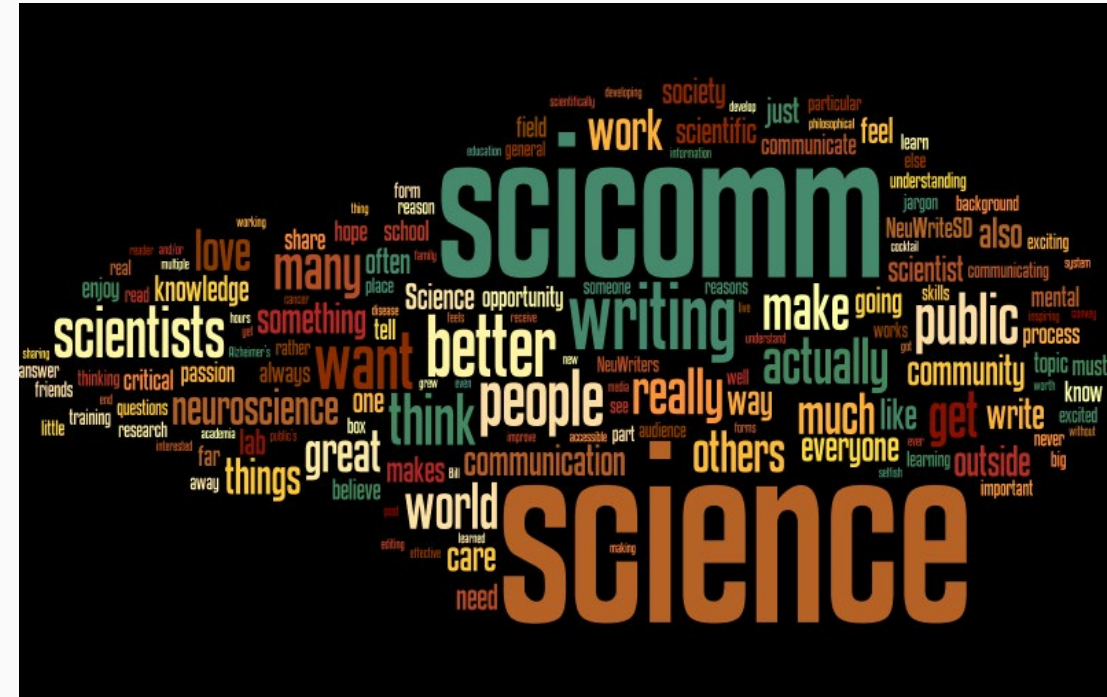
Gavin S. Davies
EPIC 2026



What is Science Communication?

What is Science Communication?

- Communicating the aspects of science
- Knowledge accessibility no longer reserved to the lucky few
- Teach and educate, sharing, and advancing the science by spreading determination and inspiration to new generations all around the world
- Leave the world a better place than we found it; teach next gen. right from wrong

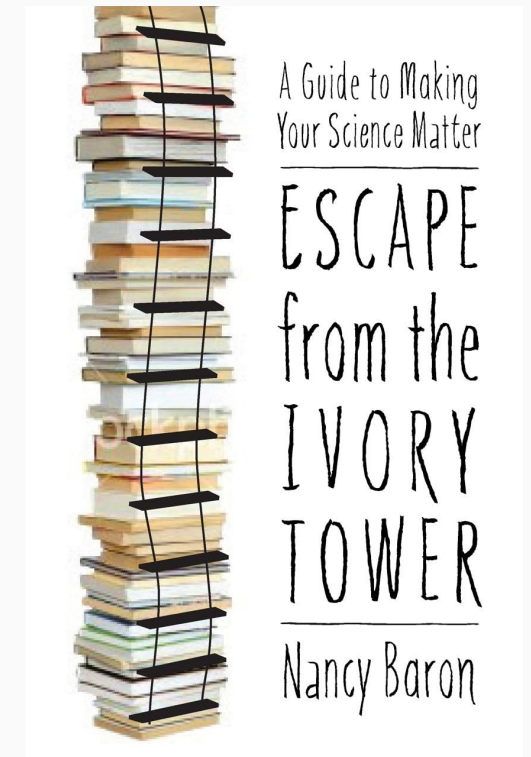


Seth Chagi, [World of Paleoanthropology](#)

Without Science Communication, There Is No Science Literacy

Without Science Communication, There Is No Science Literacy

- Science must be unbiased; feelings and opinions can not affect the data
 - Otherwise the science is flawed (opinion vs. fact)
- SciComm aims to break open the doors of the Ivory Tower
- Take advanced, complex terms or concepts, and break down so anyone can understand
 - Ideally in a fun, engaging, impactful manner

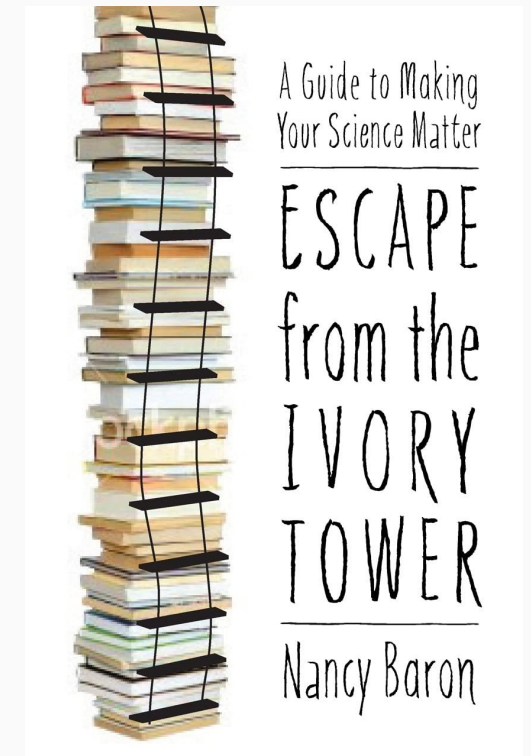


*"Escape from the Ivory Tower" by
Nancy Baron – Practical guide for
scientists on communication*

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- Quoting the National Science Foundation:

"Broader Impacts: The potential to benefit society and contribute to the achievement of specific, desired societal outcomes."



"Escape from the Ivory Tower" by Nancy Baron – Practical guide for scientists on communication

Why should I care?

- Quoting the Research Excellence Framework:

“Scientists must provide accountability for public investment in research and produce evidence of the benefits of this investment.”

Why should I care?

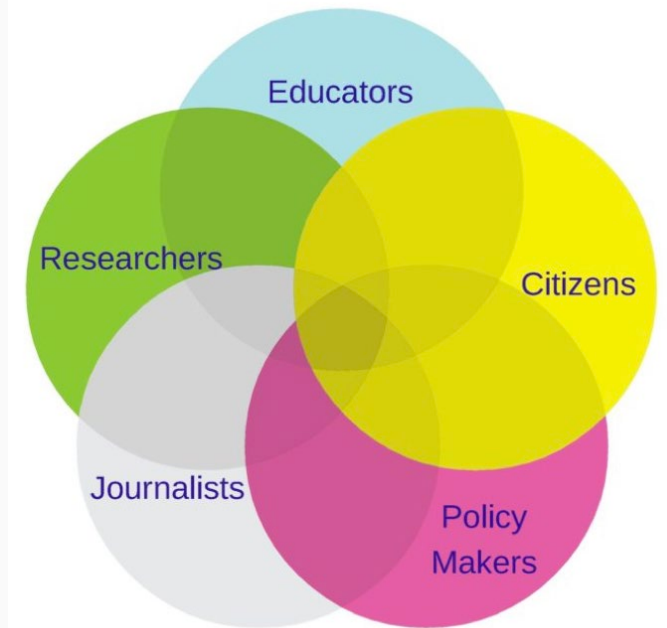
○ Quoting the Research Excellence Framework:

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○ Societal, individual, institutional motivations

- Career enhancement, skills development,...
- Networking opportunities
- To win support for science
- Personal reward

Science is now connected.



HW1: The why and how of science communication, Karen Bultitude, UCL

Why Sci. Comm.?

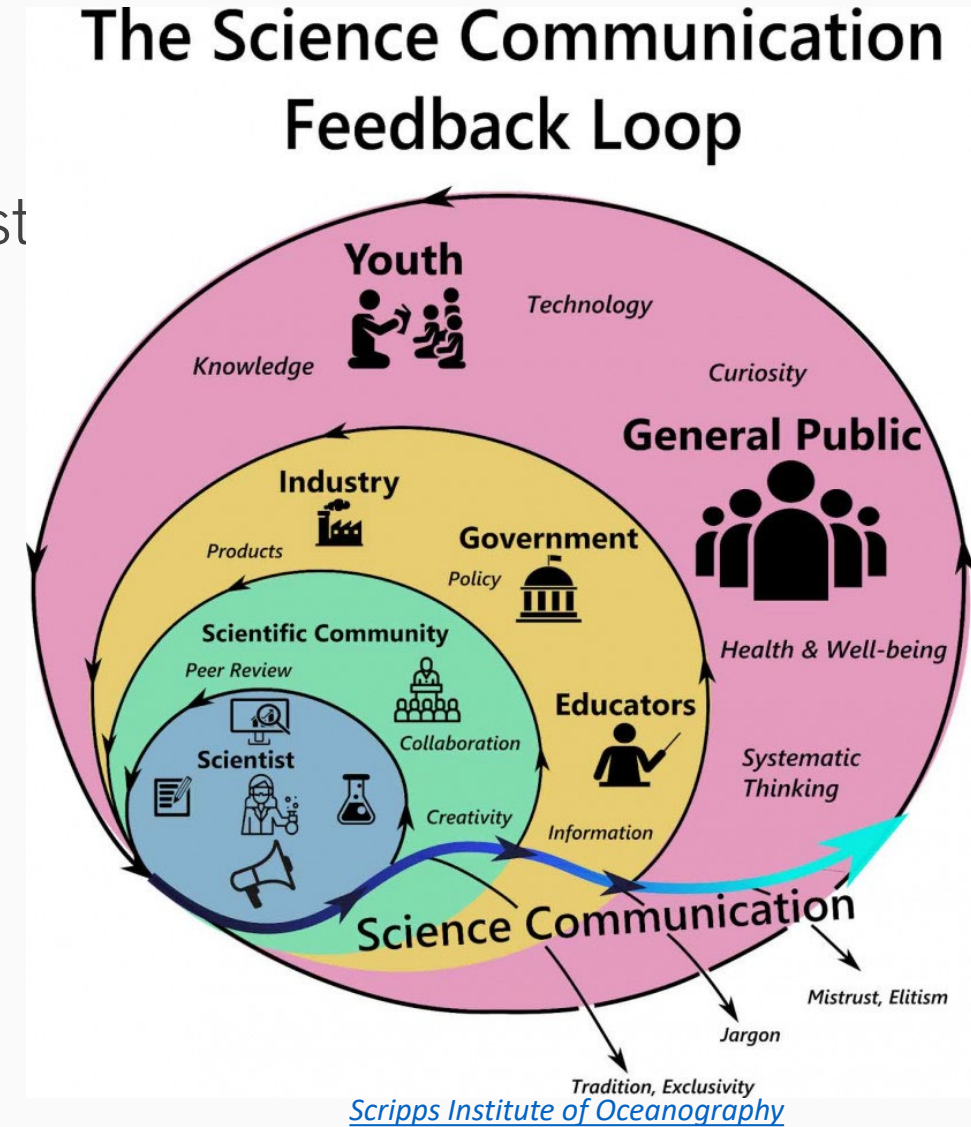
○ Audience

- Professional; scientific papers, presentations
- Institutional: funding agencies, supervisor, CEO, provost
- Public: outreach talks/demos, pop science articles

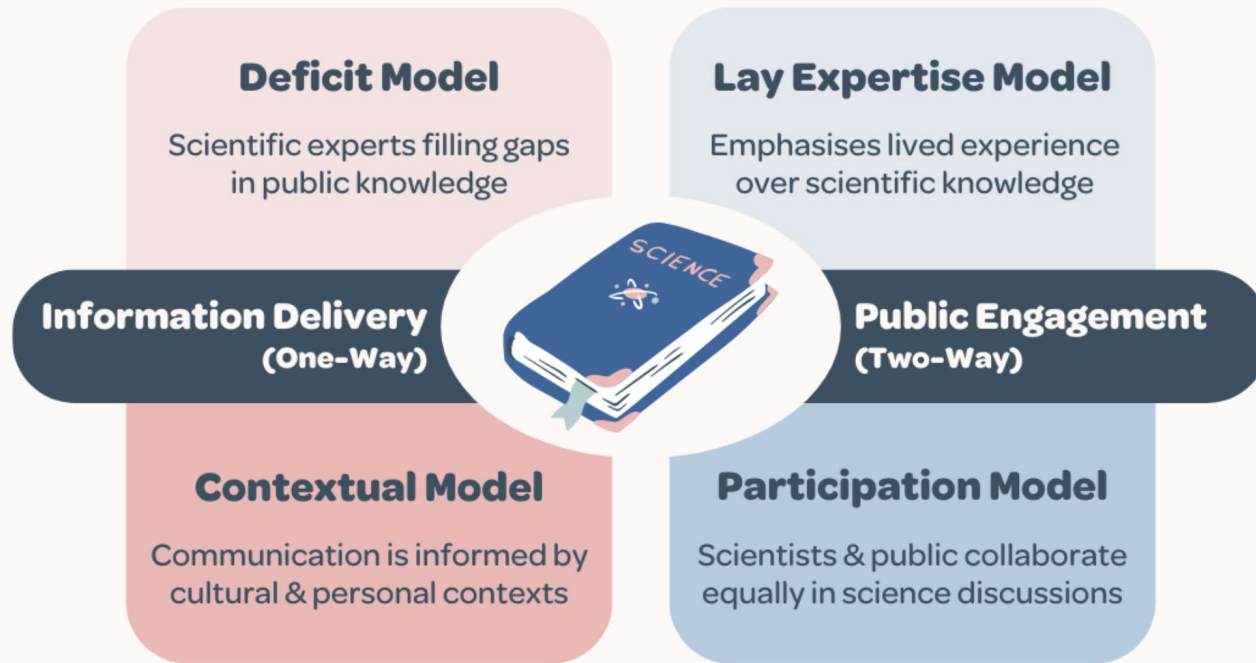
○ Why?

- Informs decision-making
 - Climate/economic/medical policies, education, security
- Sharing ideas
- Evolution of scientific reasoning, critical thinking

○ Funding depends on public support



Sci. Comm. models



pitchscience.com.au

- Deficit model shown to be least effective; knowledge alone is not enough
- People also consider:
 - Popularity : research quantity, reputation
 - Long-term benefits
 - Outcomes
 - Investments
 - Personal values
 - Fear
 - Pop culture

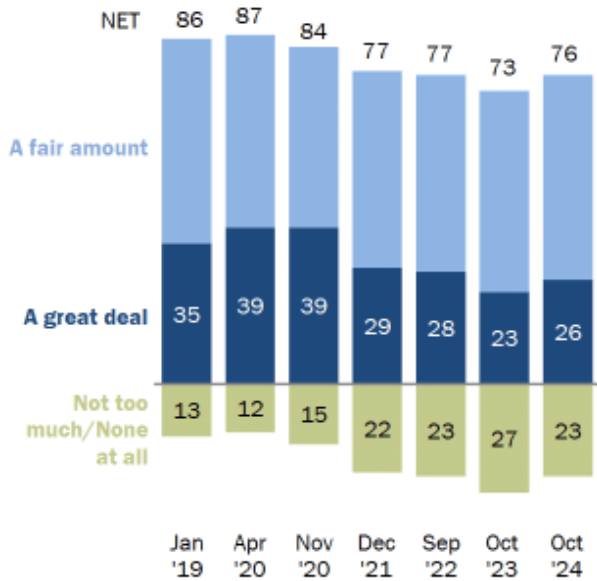
Public Trust in Scientists and Views on Their Role in Policymaking

Trust moves slightly higher but remains lower than before the pandemic

BY ALEC TYSON AND BRIAN KENNEDY

Confidence in scientists up slightly but remains lower than before pandemic

% of U.S. adults who have ___ of confidence in scientists to act in the best interests of the public



Note: Respondents who did not give an answer are not shown.
Source: Survey of U.S. adults conducted Oct. 21-27, 2024.
"Public Trust in Scientists and Views on Their Role in Policymaking"

PEW RESEARCH CENTER

[Pew Research Center, Nov. 2024](#)

Public Trust in Scientists and Views on Their Role in Policymaking

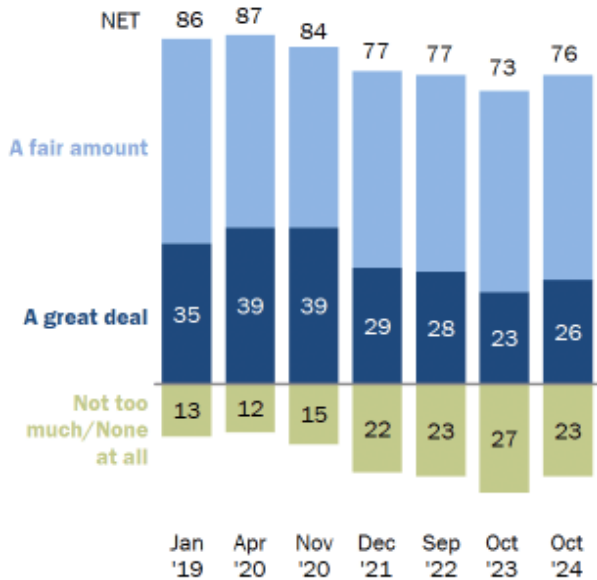
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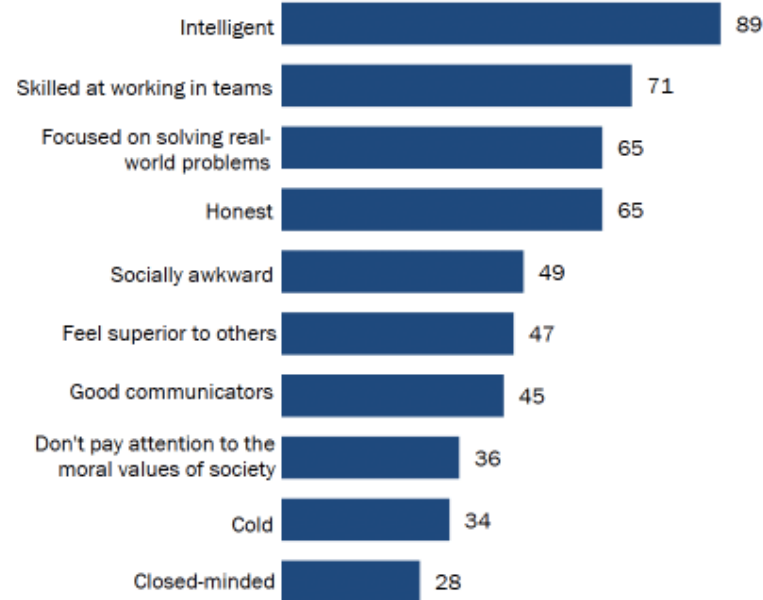


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PEW RESEARCH CENTER

Scientists widely seen as intelligent; fewer than half view them as good communicators

% of U.S. adults who say each of the following statements describes most research scientists well



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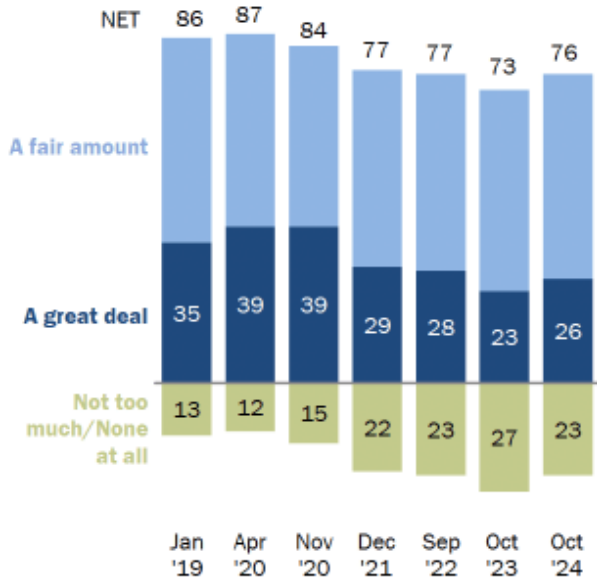
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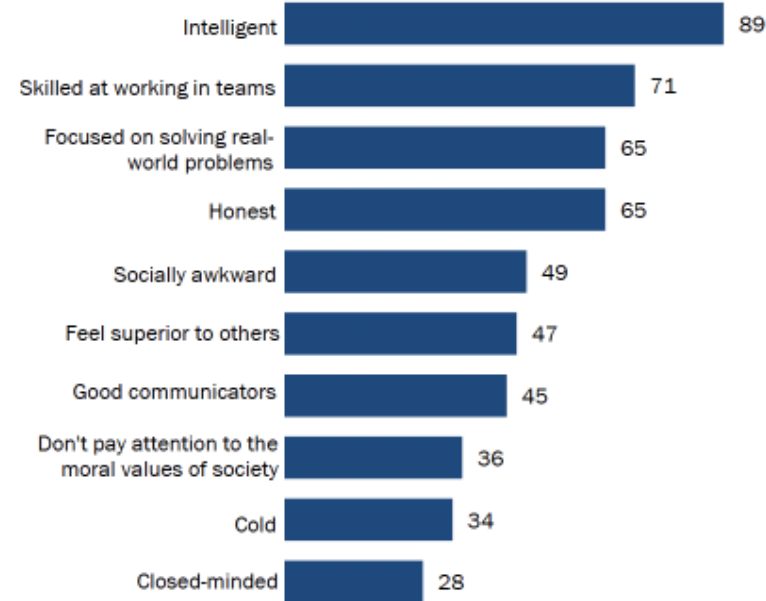


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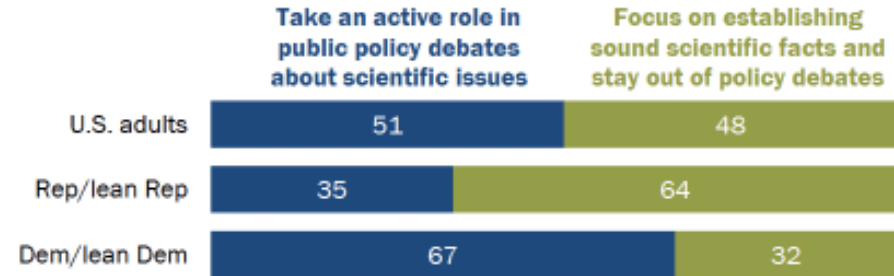


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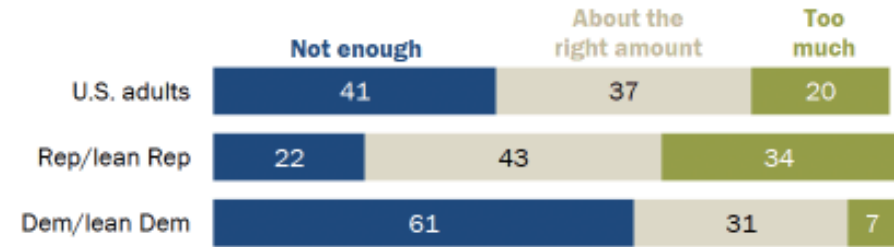
PEW RESEARCH CENTER

Americans are divided over the role for scientists in scientific policy debates

% who say scientists should ...



% who say scientists have ___ influence in public policy debates



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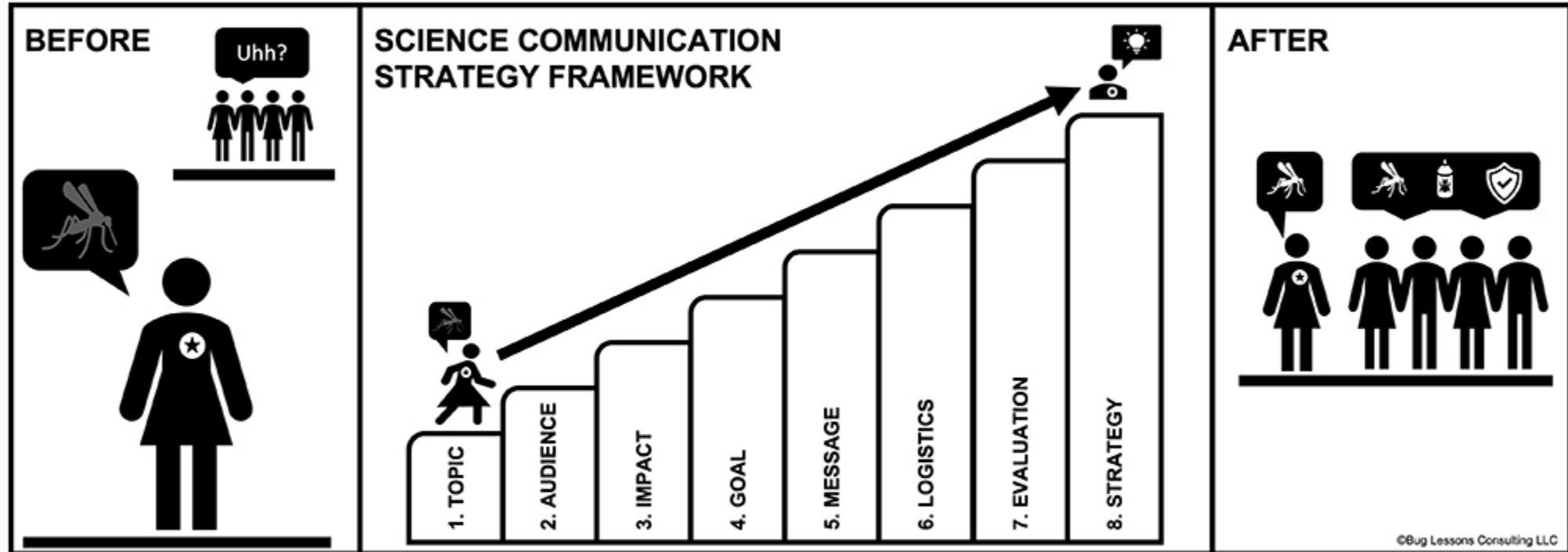
PEW RESEARCH CENTER

How Sci. Comm?

- Bad news: no simple answer!
- Good news: tons of examples and resources
 - With practice, anyone can become a good communicator!
- Sci. Comm. Useful traits:
 - Empathy and rapport
 - Energy
 - Convey interest and excitement
 - Important
- Break down material to meet the audience
- Avoid jargon, identify misconceptions, good use of demos.



How Sci. Comm?



Kasha Patel: The benefits of using comedy to explain science

TED Ideas change everything

WATCH DISCOVER ATTE

Copy link



MORE VIDEOS

0:20 / 8:41

CC HD YouTube

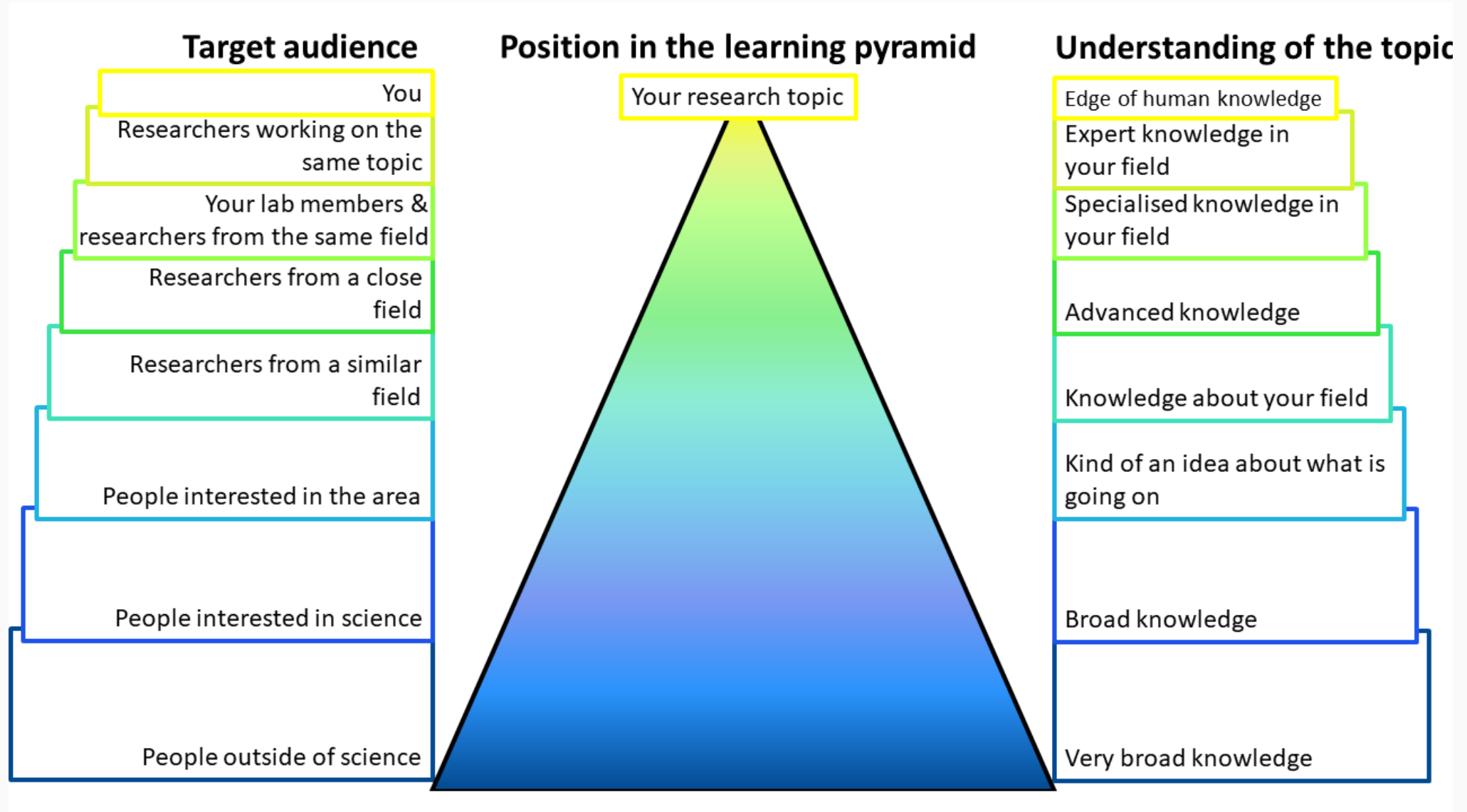
TEDxTysons

KASHA PATEL

The benefits of using comedy to explain science

40,968 plays ⓘ | Kasha Patel | TEDxTysons • November 2018

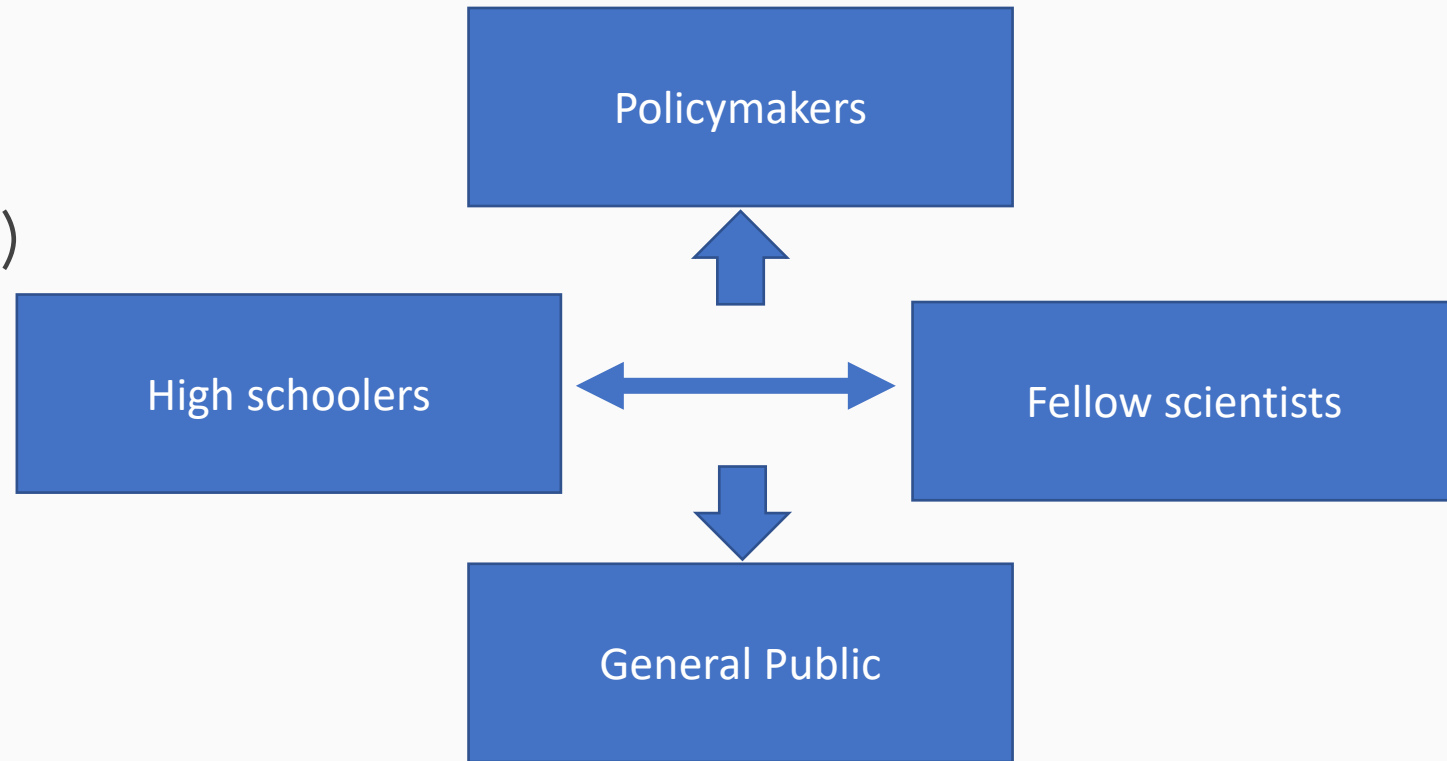
Know your audience



[Alan Alda Center for Communicating Science](#)

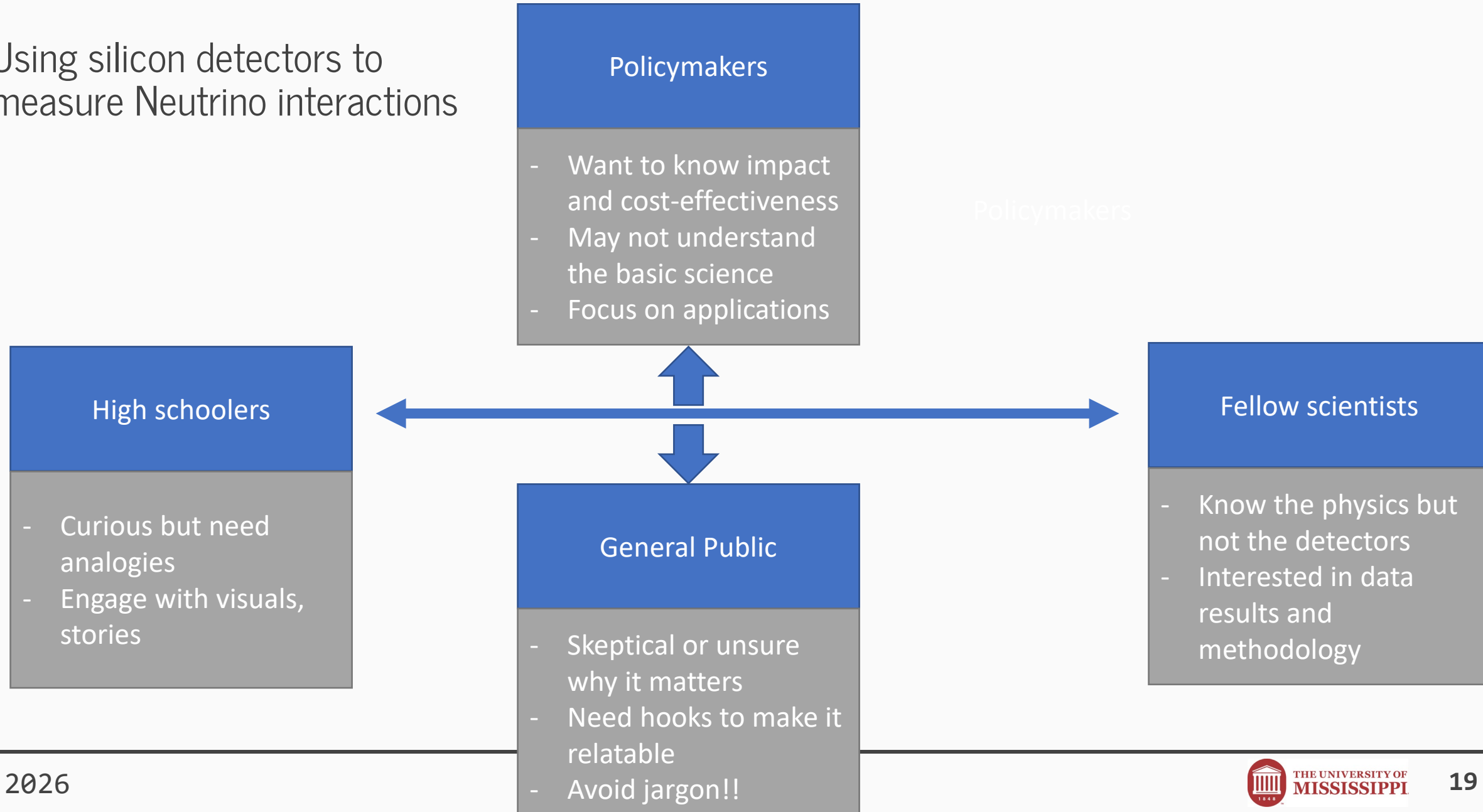
Activity: Audience Mapping

- On whiteboard, draw a simple audience map
- choose a research topic
- For each audience type, write:
 - What that audience cares about
 - What they already know (or assume)
 - What comms. challenges may arise



Activity: Audience Mapping

Using silicon detectors to measure Neutrino interactions



Audience messaging

Audience	How I might change my message
Policymakers	“Our detector helps verify fundamental properties of matter that underlie nuclear security and energy tech. This keeps us globally competitive.”
High Schoolers	“Neutrinos are ghost particles from space. We're building a super-sensitive camera to catch them in action!”
Fellow Scientists	“We're using silicon strip technology with precise timing to reconstruct neutrino-electron scatter events with sub-mm resolution.”
General Public	“This helps us understand the Big Bang better — these particles come from stars and nuclear reactions.”