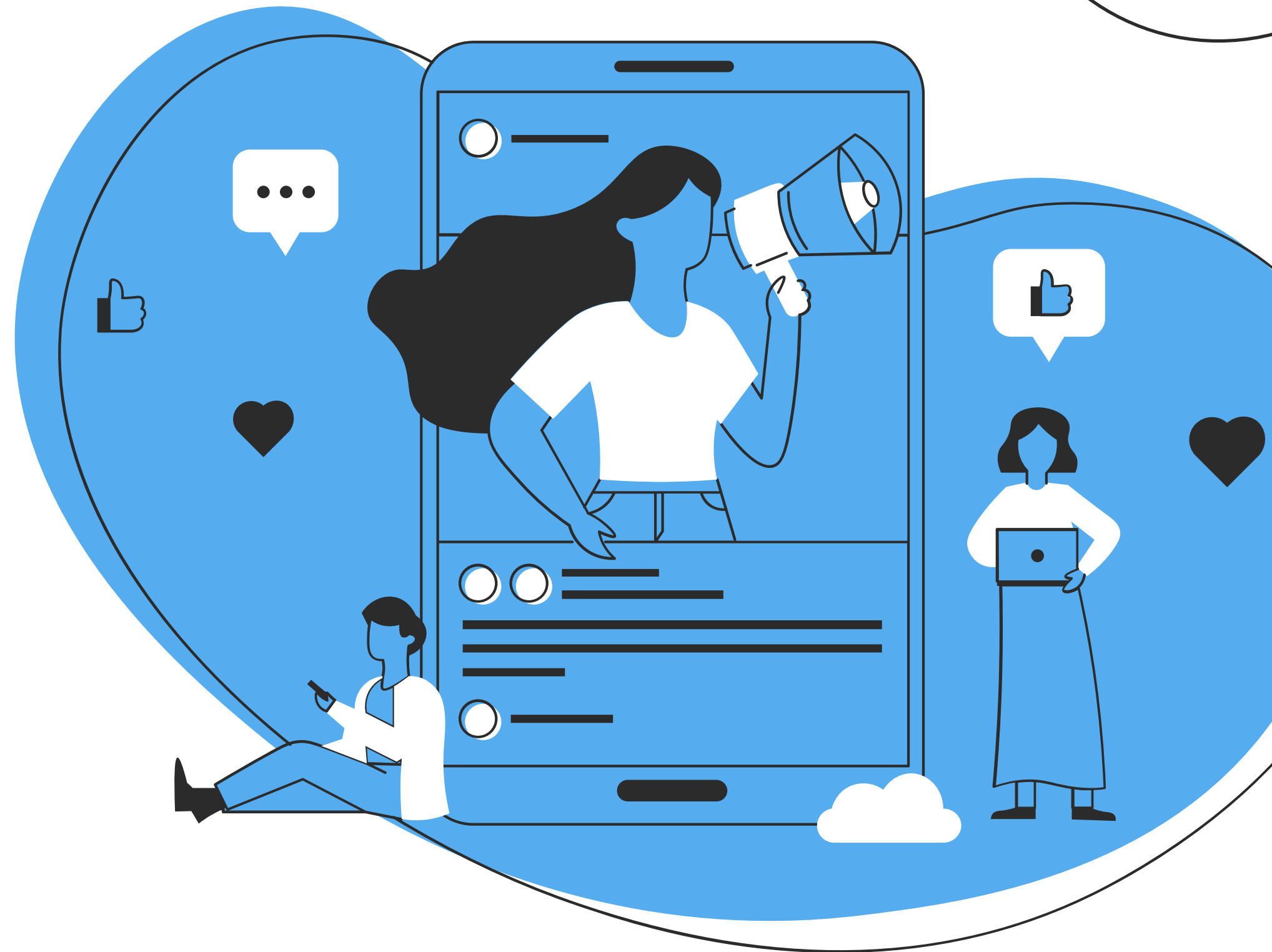


Science Communication: Increase the impact of your work

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Department of Neurobiology, Physiology and Behavior
University of California Davis



Communicating science...

PLOS ONE RESEARCH ARTICLE

Bridge to neuroscience workshop: An effective educational tool to introduce principles of neuroscience to Hispanic students

Alexandra Colón-Rodríguez^{1,2*}, Chelsea T. D. Atchison^{1,2*}

Abstract

Neuroscience as a discipline is an effort to overcome this deficit (BNW), a full-day hands-on workshop, an auxiliary component of a science program (BPNP), and to increase awareness of neuroscience. BNW introduces basic concepts including mini-lectures, interactive brain dissection. Since its inception in 2011, BNW has been offered at University of Puerto Rico (UPR)-Arecibo, UPR-Humacao, Pontificia Universidad Católica de Ponce, and Universidad Interamericana de Puerto Rico-Arecibo. A pre- and post evaluation was given to evaluate material comprehension and thus measure effectiveness of our one-day interactive workshop. Our results suggest that both high school and undergraduate students have little prior knowledge of neuroscience, and that participation in BNW not only improved understanding, but also enthusiasm for the discipline. Currently, our assessment has only been able to evaluate short-term effects (e.g. comprehension and learning). Therefore, our current focus is developing methods capable of determining how participation in BNW impacts future academic and career decisions.

OPEN ACCESS

Citation: Colón-Rodríguez A, Atchison WT (2019) Bridge to neuroscience workshop: An effective educational tool to introduce principles of neuroscience to Hispanic students. PLOS ONE 14(12): e0225116. <https://doi.org/10.1371/journal.pone.0225116>

Editor: Sakumai V. Reddy, Charles P. Darby, Children's Research Institute, 173 Ashley Avenue, Charleston, SC 29425, USA, UNITED STATES

Received: March 27, 2019

Accepted: October 28, 2019

Published: December 12, 2019

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Data Availability Statement: All relevant data are within the paper and its supporting information files.

Funding: Supported by grant R25NS096577 from the National Institutes of Health of the National Institutes of Health of the US. Additional funding provided by Michigan State University College of Natural Science, the Neuroscience Program and the Comparative Medicine and Integrative Biology Program for the

PLOS ONE | <https://doi.org/10.1371/journal.pone.0225116> December 12, 2019

1/14



STEAM100x35
@STEAM100x35

Amplificando Puertorriqueñas en STEAM alrededor del Mundo | Amplifying Puerto Rican women in STEAM around the World | Founders: @alexcr_1 & @semarhyquinones

📍 From PR to the World 🌐 linktr.ee/steam100x35 📅 Joined March 2020

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Sci Comm Faculty Training Program



COVID-19 National Scientist Volunteer Database



COVID-19 National Scientist Volunteer Database

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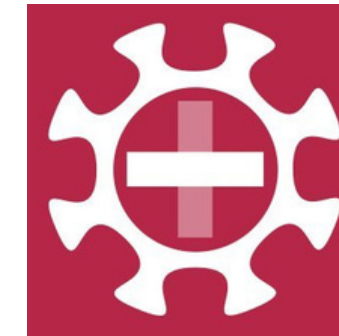
Welcome to the COVID-19 Pandemic Shareable Scientist Response Database

This is a database of scientists from all 50 states, DC, Puerto Rico, and Guam who are eager to volunteer our time, expertise, equipment, and consumables to help you respond to the COVID-19 crisis. We have aggregated our contact information, locations, and skills sets into this easy to use centralized database. Our members include experts in scientific testing, bioinformatics, and data management, as well as key contacts willing to donate lab space and testing supplies.

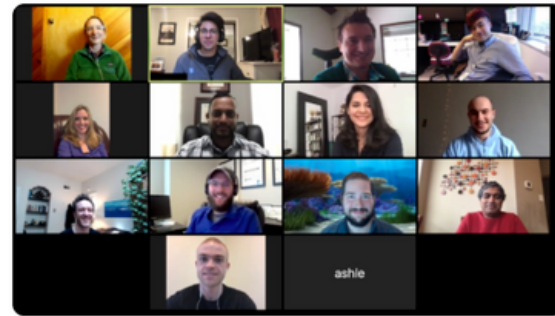
For more information, visit our website at covid19sci.org or contact us at COVID19SciVolunteers@gmail.com

Postal Code	State	City	County	Job Category	Job Title	Do you have qPCR experience?	Do you have RNA extraction experience?	Do you have experience working with RNA viruses?	Are authorized to do BSL2 work?	Other skills/experience?	Do you have RNA extraction kits you are willing to donate?
2139	Massachusetts	Cambridge	Middlesex County	Postdoctoral	Postdoc	Yes	Yes	No	Yes		No
2139	Massachusetts	Cambridge	Middlesex County	Graduate Student	graduate student	Yes	Yes	No	Yes	RNA sequencing, Bioinformatics	Maybe
2138	Massachusetts	Cambridge	Middlesex County	Graduate Student	Graduate student	Yes	Yes	No	Yes		No
6511	Connecticut	New Haven	New Haven County	Postdoctoral	Postdoc	Yes	Yes	No	Yes		No
2138	Massachusetts	Cambridge	Middlesex County	Postdoctoral	Postdoc	Yes	Yes	No	Yes		No
90063	California	Los Angeles	Los Angeles County	Graduate Student	Graduate Student	Yes	Yes	No	Yes	Bioinformatics	No
2155	Massachusetts	Medford	Middlesex County	Graduate Student	Graduate Student	Yes	Yes	No	Yes	RNA sequencing	Maybe

Scientists in action fighting COVID-19



Meet the Team



[more ›](#)

Diary of a Database

The official blog of the COVID-19 National Scientist Volunteer Database that covers what we offer, what we have accomplished, and who we are.

[more ›](#)

Access and Opportunities

Looking for ways to get involved? Tired of waiting for us to contact YOU? Want to know who has access to the database?

All these answers and more can be found here.

[more ›](#)

Local Groups

A list of locally organized scientist volunteer groups, plus a guide for team building.

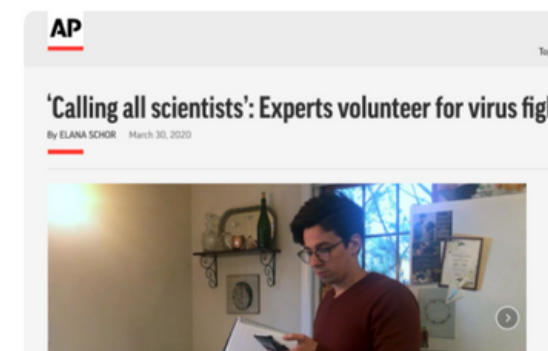
[more ›](#)

External Resources

External initiatives, fact pages, and mental health resources.

[more ›](#)

In the News



[more ›](#)



Alexandra Colón-Rodríguez, PhD

Social Media Lead & Spanish Translator

Postdoctoral Fellow, UC Davis
Alexandra (Alex) Colón-Rodríguez, PhD is a Social Media Coordinator and Spanish Translator at NSVD. She is a postdoctoral fellow at the University of California Davis College of Biological Sciences. Her position involves neuroscience and science communication. Her research work focuses in understanding the effects of single parenting in the amygdala of parents and offspring. Her SciComm work includes developing a SciComm training program for faculty at UC Davis in collaboration with UC San Diego.

Pandemic + misinformation = catastrophe

nature

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nature > career feature > article

CAREER FEATURE · 17 JUNE 2020 · CLARIFICATION 24 JUNE 2020

Coronavirus misinformation, and how scientists can help to fight it

Bogus remedies, myths and fake news about COVID-19 can cost lives. Here's how some scientists are fighting back.

Nic Fleming

Elsevier Public Health Emergency Collection

Public Health Emergency COVID-19 Initiative

Progress in Disaster Science. 2020 Jul 21 : 100119.

PMCID: PMC7373041

doi: [10.1016/j.pdisas.2020.100119](https://doi.org/10.1016/j.pdisas.2020.100119) [Epub ahead of print]

Effects of misinformation on COVID-19 individual responses and recommendations for resilience of disastrous consequences of misinformation

Zapan Barua,^{a,*} Sajib Barua,^a Salma Aktar,^a Najma Kabir,^a and Mingze Li^b

▸ Author information ▸ Article notes ▸ Copyright and License information [Disclaimer](#)

Associated Data

▸ Supplementary Materials

Abstract

Go to:

The proliferation of misinformation on social media platforms is faster than the spread of Corona Virus Diseases (COVID-19) and it can generate hefty deleterious consequences on health amid a disaster like COVID-19. Drawing upon research on the stimulus-response theory (hypodermic needle theory) and the resilience theory, this study tested a conceptual framework considering general misinformation belief, conspiracy belief, and religious misinformation belief as the stimulus; and credibility evaluations as resilience strategy; and their effects on COVID-19 individual responses. Using a self-administered online survey during the COVID-19 pandemic, the study obtained 483 useable responses and after test, finds that all-inclusive, the propagation of misinformation on social media undermines the COVID-19 individual responses. Particularly, credibility evaluation of misinformation strongly predicts the COVID-19 individual responses with positive influences and religious misinformation beliefs as well as conspiracy beliefs and general misinformation beliefs come next and influence negatively. The findings and general recommendations will help the public, in general, to be cautious about misinformation, and the respective authority of a country, in particular, for initiating proper safety measures about disastrous misinformation

'Hundreds dead' because of Covid-19 misinformation

By Alistair Coleman
BBC Monitoring

12 August 2020

Reality Check



At least 800 people may have died around the world because of coronavirus-related misinformation in the first three months of this year, researchers say.

A study published in the *American Journal of Tropical Medicine and Hygiene* also estimates that about 5,800 people were admitted to hospital as a result of false information on social media.

Many died from drinking methanol or alcohol-based cleaning products. They wrongly believing the products to be a cure for the virus.



Immunizing the public against misinformation

25 August 2020

Soon after the world started getting used to the terms coronavirus and COVID-19, WHO coined another word: "infodemic" — an overabundance of information and the rapid spread of misleading or fabricated news, images, and videos. Like the virus, it is highly contagious and grows exponentially. It also complicates COVID-19 pandemic response efforts.

"We're not just battling the virus," said WHO Director-General Tedros Adhanom Ghebreyesus. "We're also battling the trolls and conspiracy theorists that push misinformation and undermine the outbreak response."

Importance of communicating science



PNAS Proceedings of the National Academy of Sciences of the United States of America

Keyword, Author, c

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NEW RESEARCH IN Physical Sciences Social Sciences

INTRODUCTION

The Science of Science Communication III

 Baruch Fischhoff and  Dietram A. Scheufele

PNAS April 16, 2019 116 (16) 7632-7633; first published April 15, 2019 <https://doi.org/10.1073/pnas.1902256116>

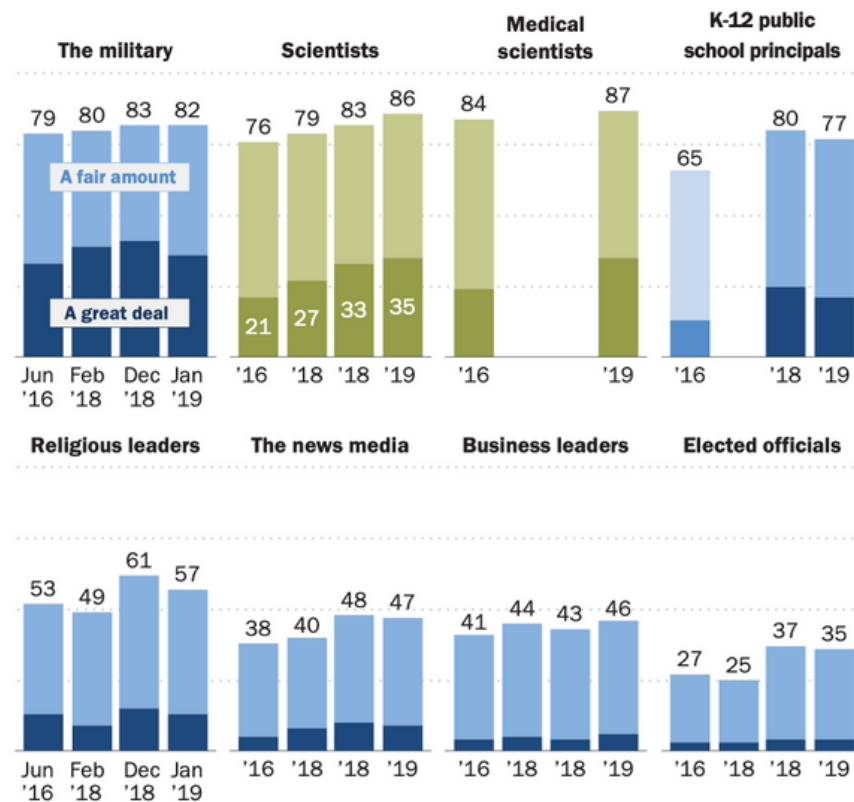
Without effective communication, the scientific community cannot fulfill its promise to society or secure the trust needed to support its enterprise. Because science affects stakeholders with diverse backgrounds, interests, and incentives, that communication requires contributions from across the social, behavioral, and decision sciences.

- Currently, help save lives.
- Effect change.
- Encourage the next generation of scientists and leaders.
- Share the importance of your work.
- Help the scientific enterprise become stronger with our diverse perspectives.

American's confidence in scientists

Americans' confidence that scientists act in the public interest is up since 2016

% of U.S. adults who say they have a great deal or fair amount of confidence in each of the following groups to act in the best interests of the public

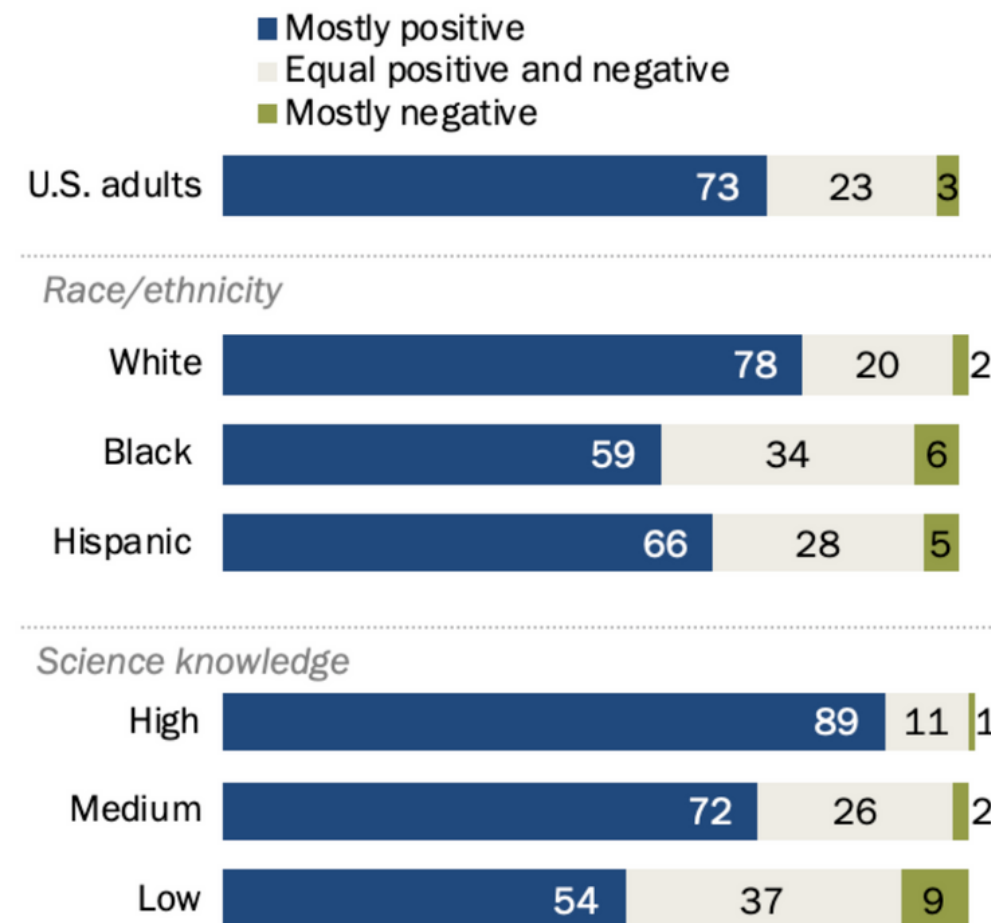


Note: In 2016, question asked about confidence in K-12 public school principals and superintendents. Respondents were randomly assigned to rate either their confidence in "scientists" or "medical scientists" in 2016 and 2019. Respondents who gave other responses or who did not give an answer are not shown.
Source: Survey conducted Jan 7-21, 2019.
"Trust and Mistrust in Americans' Views of Scientific Experts"

PEW RESEARCH CENTER

Majority of Americans say science has a mostly positive impact on society

% of U.S. adults in each group who say science has had a ___ effect on society

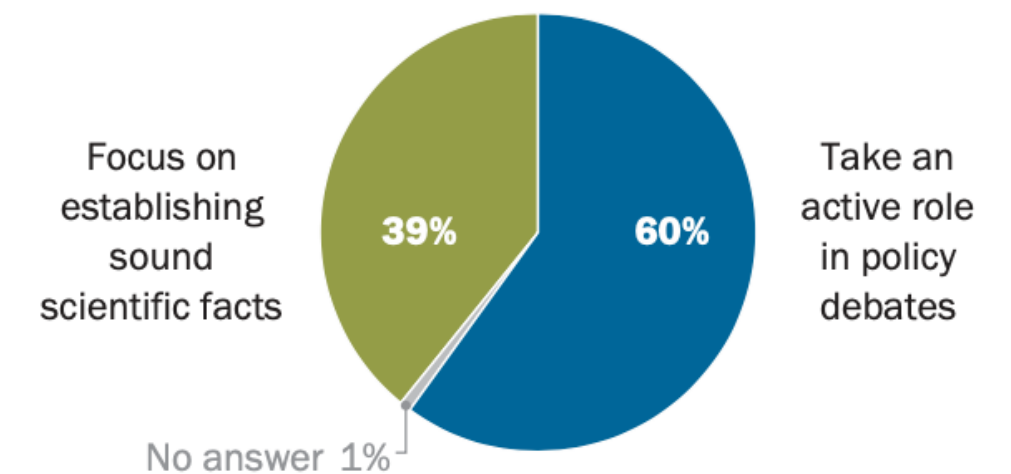


Note: Respondents who did not give an answer are not shown. See Methodology of report for details on index of science knowledge. Whites and blacks include those who report being only one race and are non-Hispanic. Hispanics are of any race.
Source: Survey conducted Jan. 7-21, 2019.
"Trust and Mistrust in Americans' Views of Scientific Experts"

PEW RESEARCH CENTER

Six-in-ten in U.S. say scientists should take an active role in policy debates

% of U.S. adults who say scientists should ___ when it comes to public policy debates about scientific issues



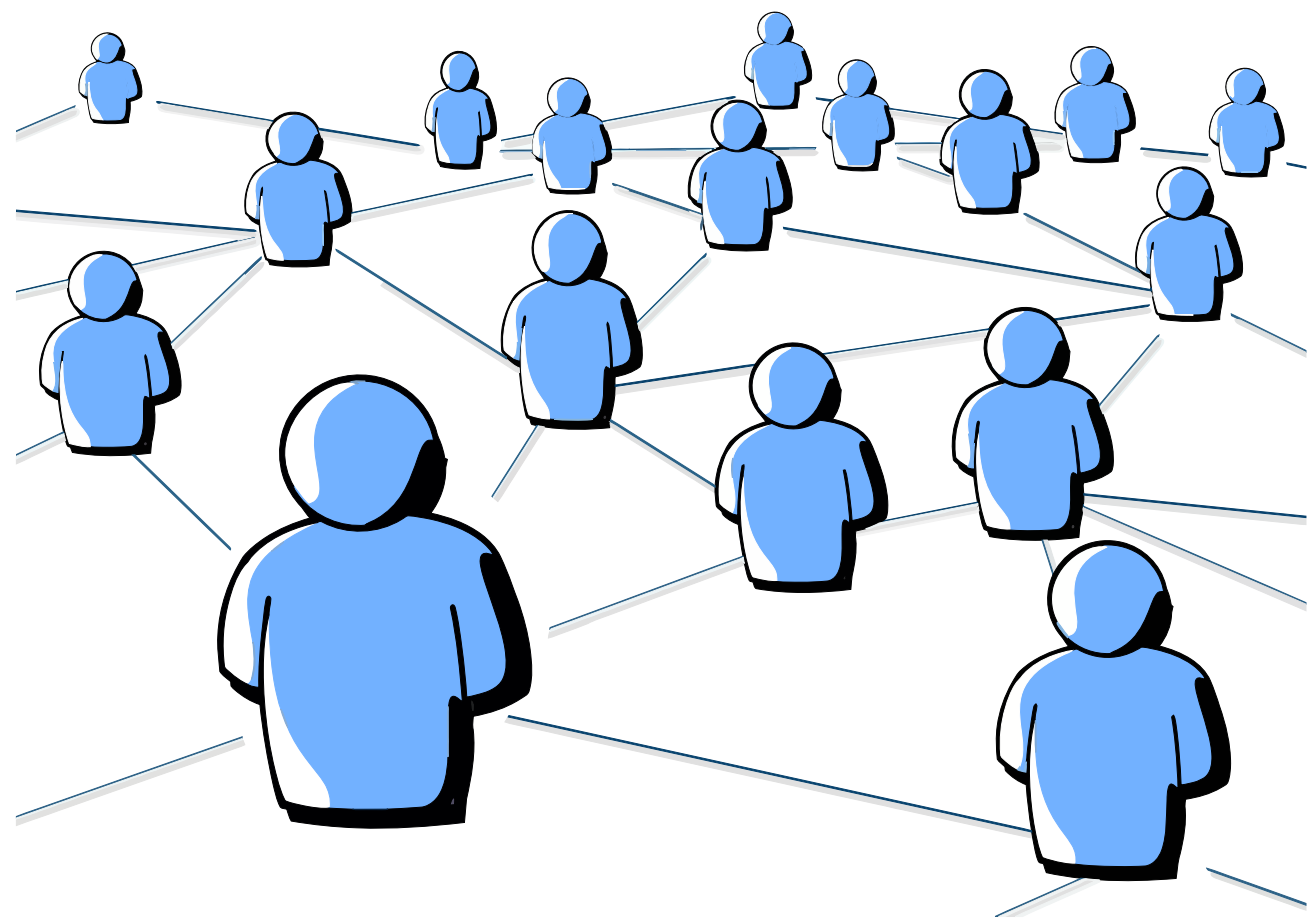
Source: Survey conducted Jan. 7-21, 2019.

"Trust and Mistrust in Americans' Views of Scientific Experts"

PEW RESEARCH CENTER

Many platforms for SciComm





“The goal of
communication is not
about output;
it’s about impact”

– The Master
Communicator’s Handbook

Important steps to get started

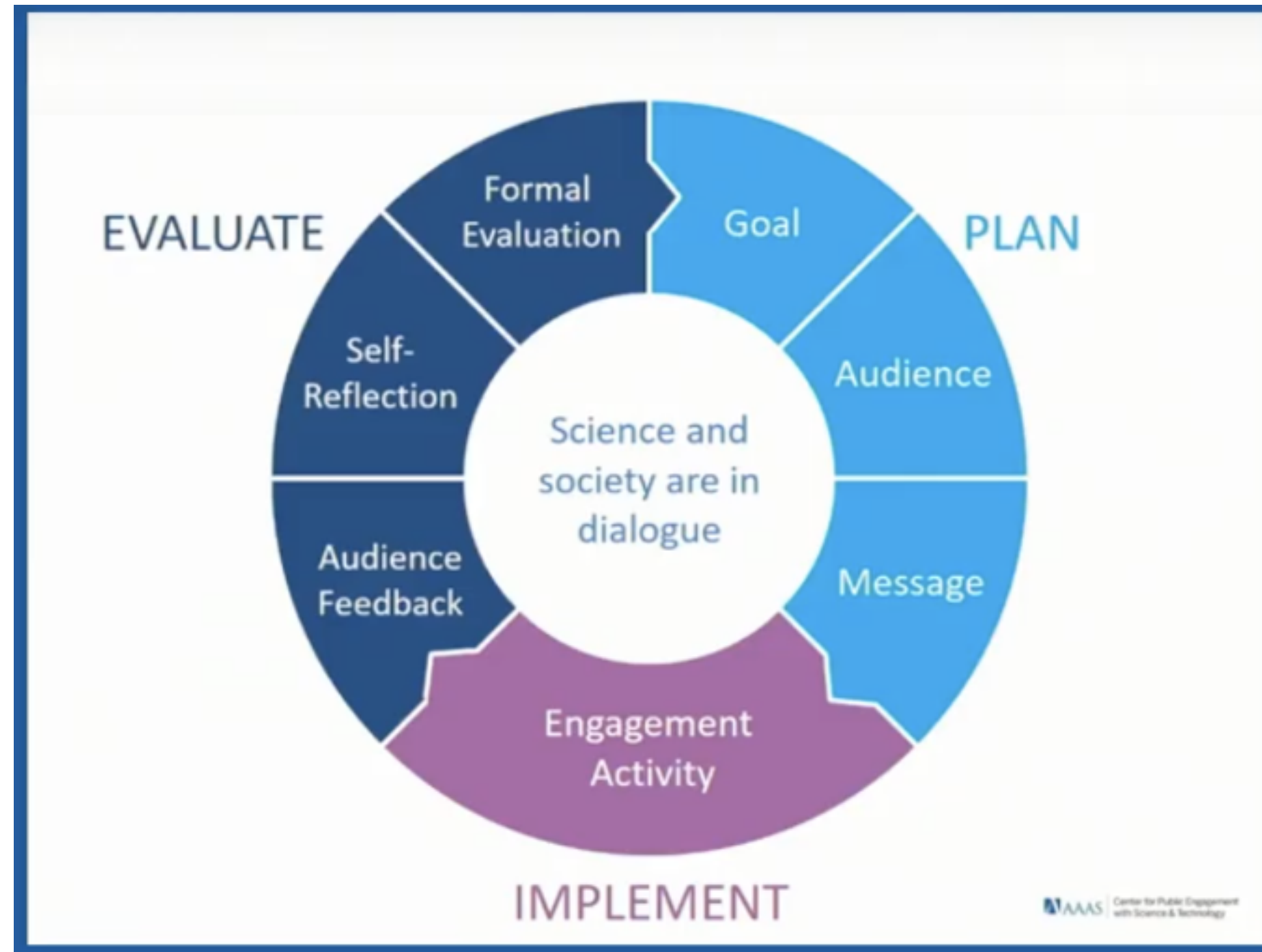


Image from Force for Science Workshop
<https://www.aaas.org/pes/mini-workshops>

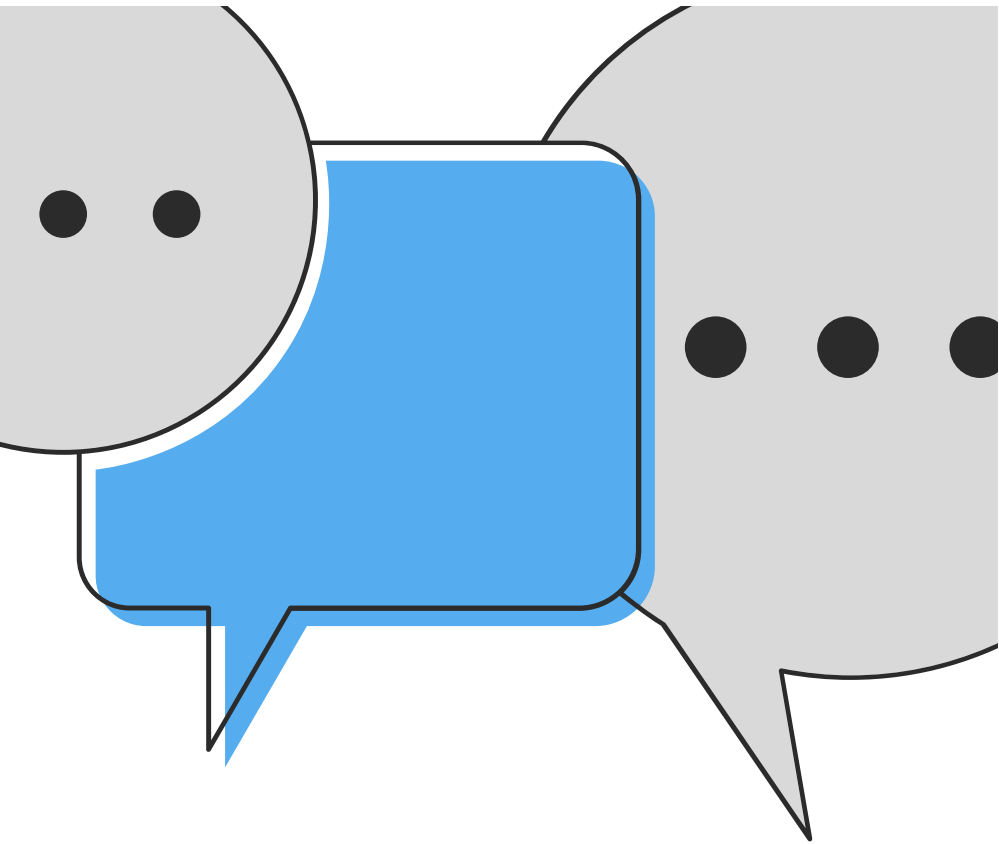
Communicating to engage



Adapted from Nancy Baron's *Escape from the Ivory Tower*  AAAS | Center for Public Engagement with Science & Technology

From: <https://www.rri-tools.eu/-/the-aaas-communication-toolkit-communicating-to-engage>

Crafting strong messages (4 C's)



1. Concise

- Get to the core of your message using simple, easy-to-grasp words and short sentences

2. Concrete

- Use strong, concrete words one can visualize

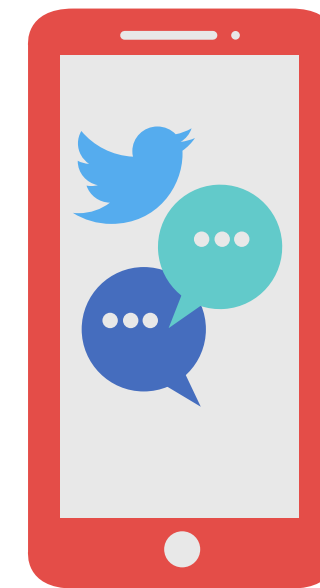
3. Connected

- Communicators are pretty good explaining their idea, why it matters to them, but not so good at explaining why it should matter to others

4. Catchy

- Repetable

What platform would you choose?



Social media_Twitter



Goal

Identify your goal.

When getting started is good to see/identify what others do that works well.

Concise

Twitter message has to be 280 characters max but you can write longer posts as threads. Write it and revise before posting.

Use hashtags

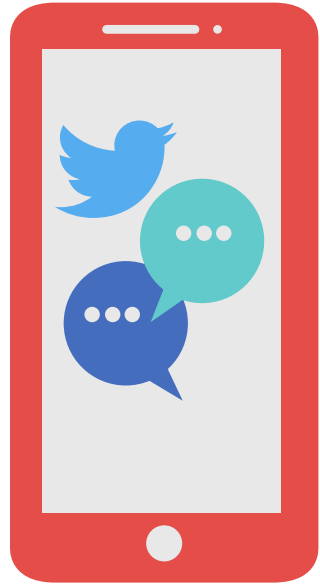
To increase visibility and impact.

Time of post is important

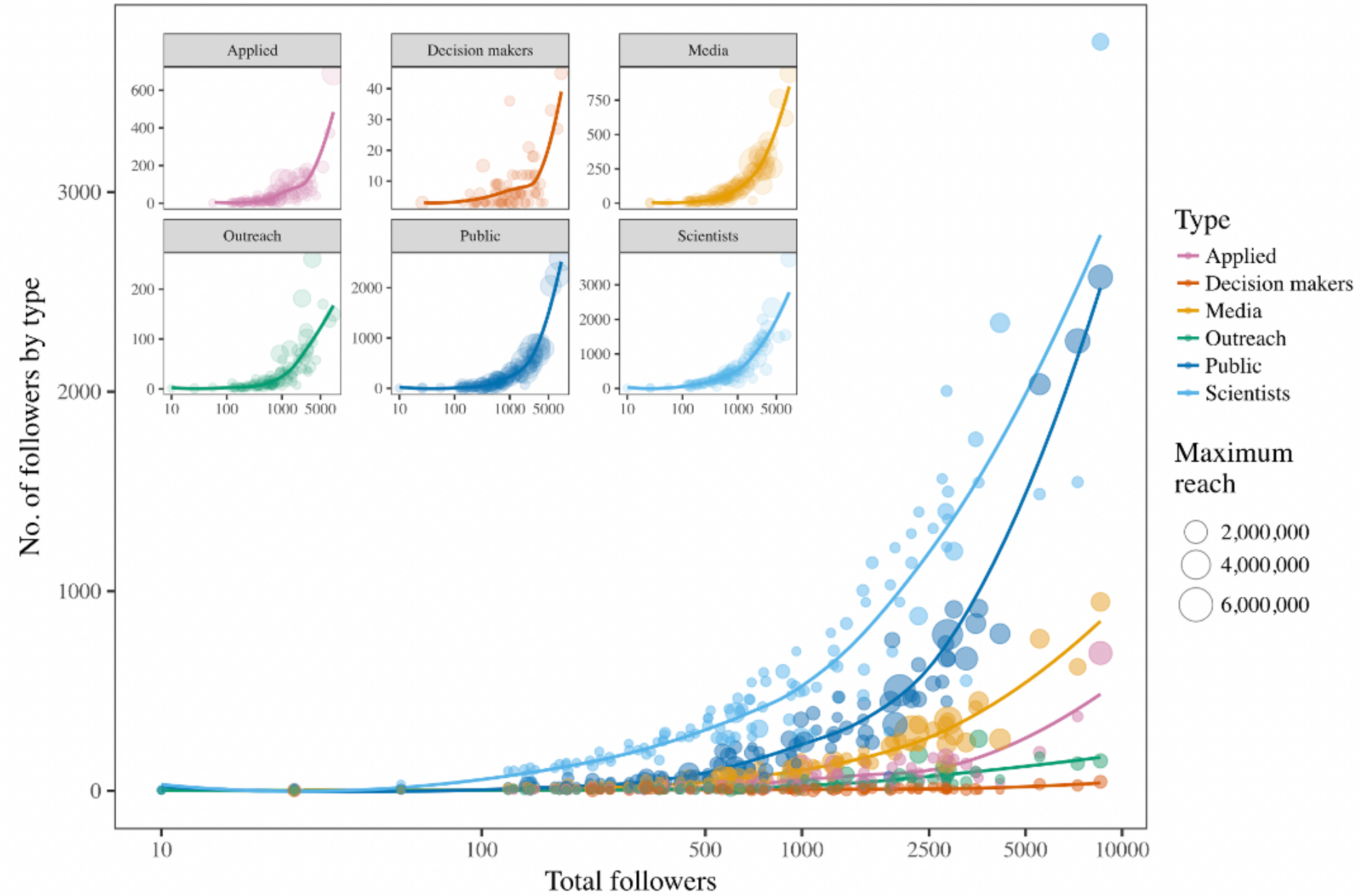
Identify when is "prime time" in your country (in CA I post from 9am - 3pm). Keep consistency in topics and postings.

Follow, like and comment

Having followers is important for impact.



Followers are important for impact?



Coté IM, Darling ES, FACETS, 2018.

Opportunities to get started

covid19sci.org

- Communications team
 - Blogs
 - Social media

Viral Feedback

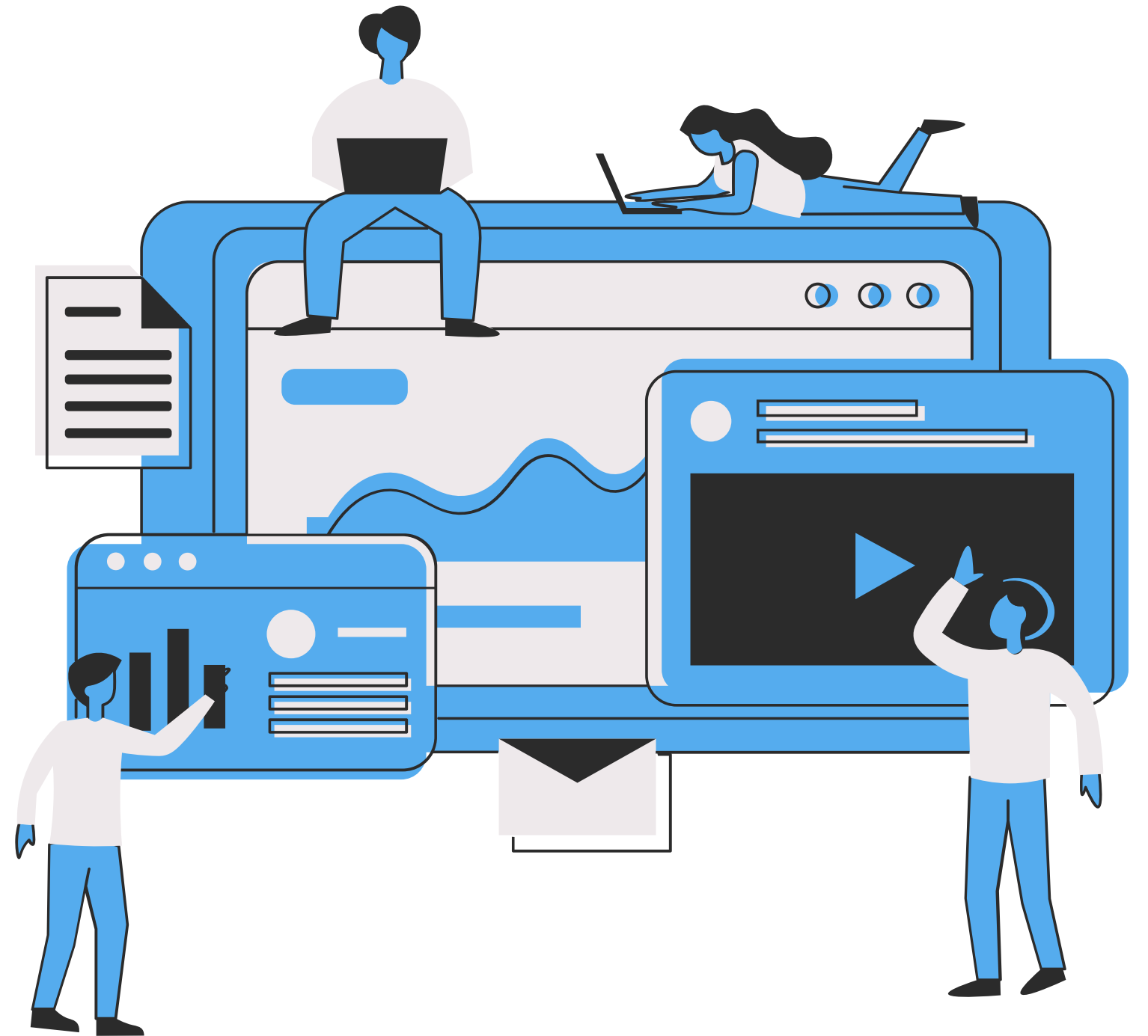
- <https://viralfeedback.org/>
- Fight COVID-19 misinformation

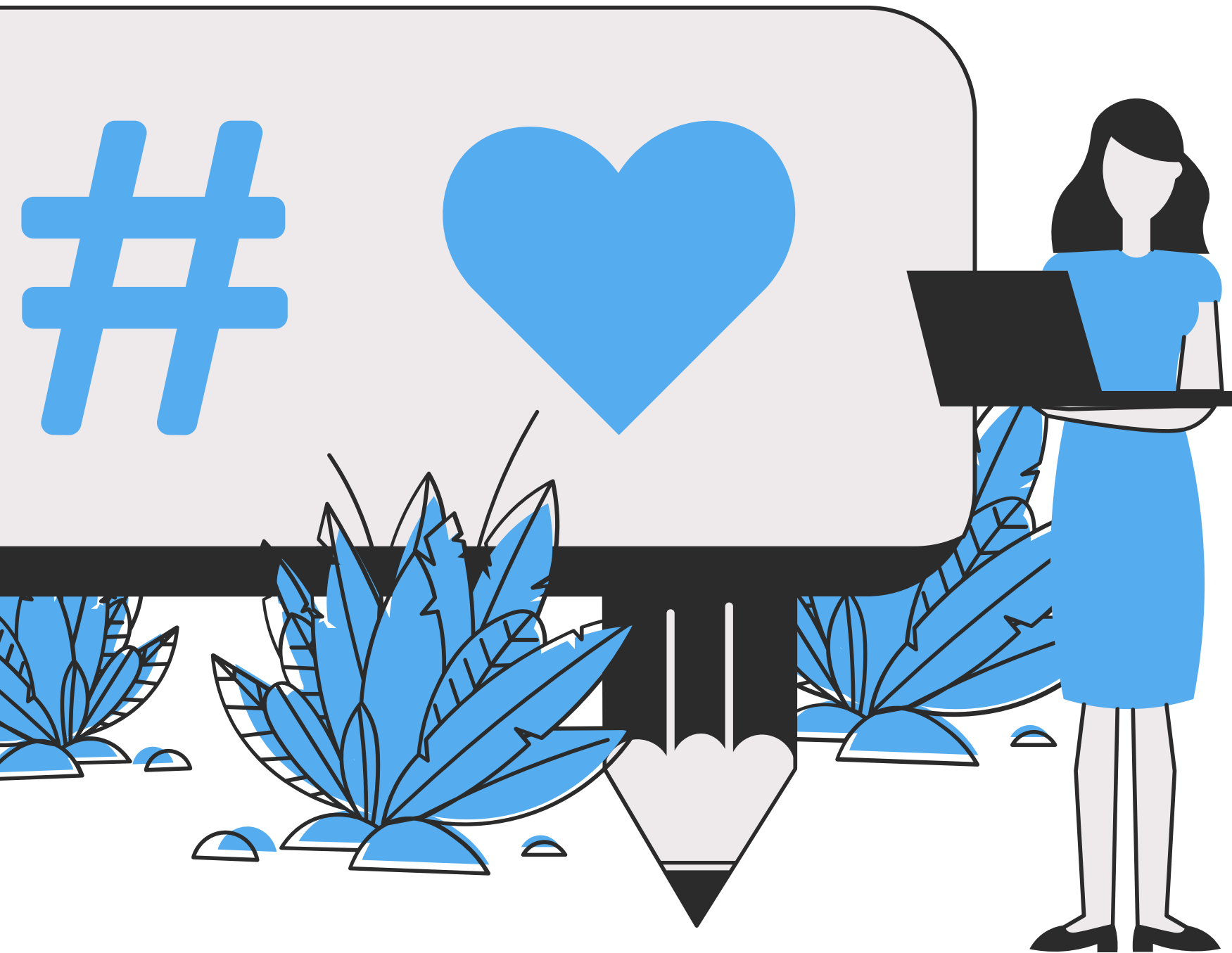
Science writing opportunities

- @Soapboxscience
- National Association of Science Writers
- @Massivesci
- Science/Science careers

Speaking

- Science Café
- Science Pubs
- Nerd Nite





Questions?

Email

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Website

www.alexandracr.com

Twitter

[@alexcr_1](https://twitter.com/alexcr_1)

Resources and references

1. <https://www.aaas.org/resources/communication-toolkit>
2. <http://blogs.nature.com/naturejobs/2015/08/21/science-communication-know-your-audience/>
3. <https://blogs.plos.org/scicomm/2019/10/15/scicomm-at-school/>
4. https://pubs.acs.org/doi/10.1021/acscentsci.9b01273?utm_source=twitter&utm_medium=social-media-organic&utm_campaign=solvingtogether&utm_content=100001098436498#.XhkKfA_SX6l.twitter

Workshops

1. <https://www.aldacenter.org/workshops>
2. <https://www.aaas.org/pes/mini-workshops>

