

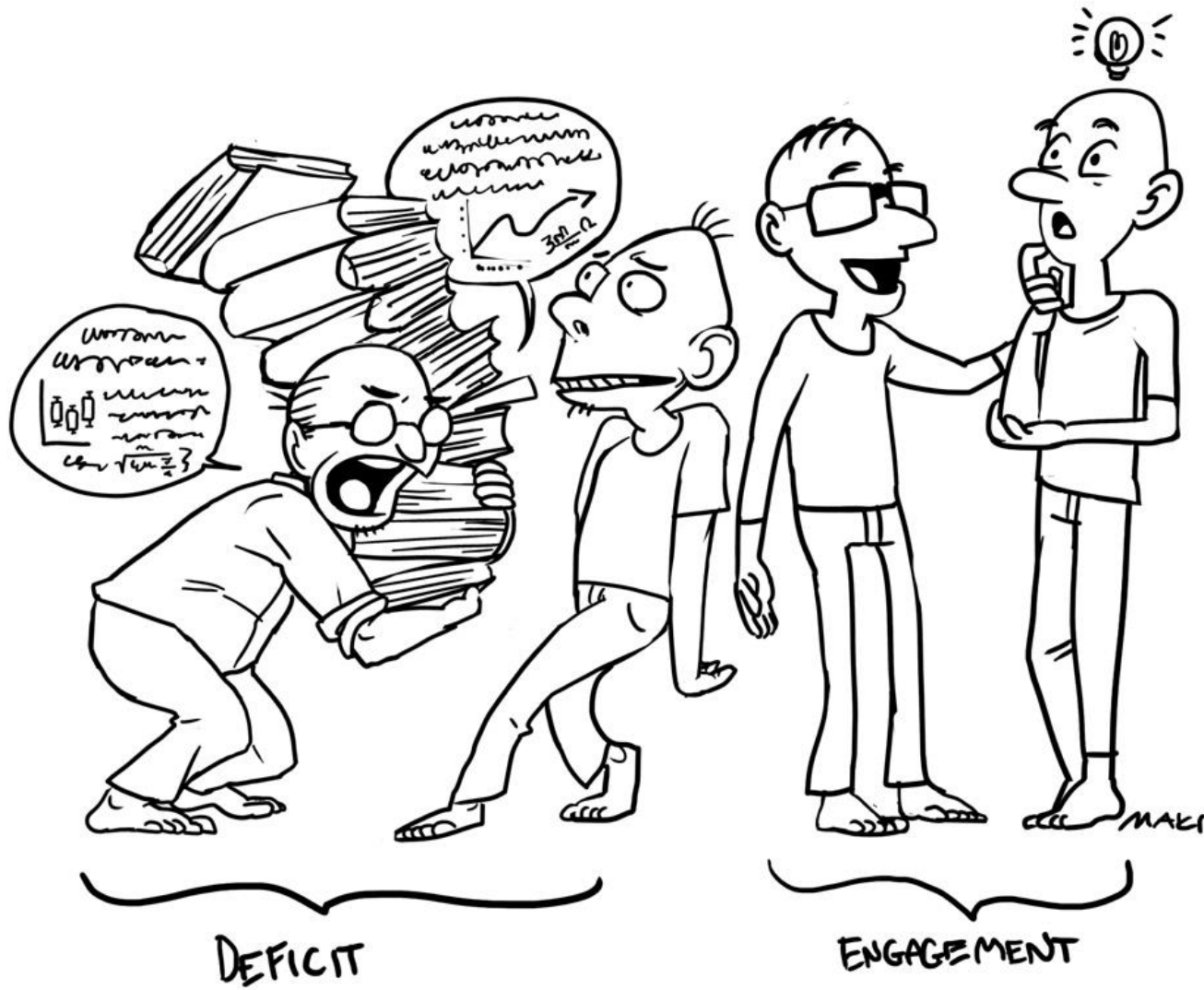
EFFECTIVE STEM COMMUNICATION



PRESENT YOUR PHD
8 NOVEMBER, 2018

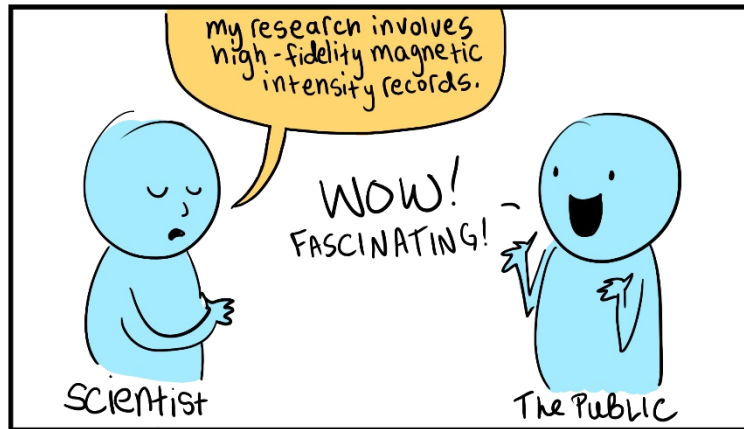
Overview

- Present Your PhD: building outreach and strong communicators
- Why should you want to be a better science communicator?
- **Explain your work to 12-year-old worksheet**
- Mechanisms for science communication (**handout**)
- Creating an online presence
- Common misunderstandings about SciComm
- **Build a science communication plan worksheet**
- Discussion, questions



DEFICIT

ENGAGEMENT



WHAT YOU THINK YOU SOUND LIKE.



WHAT YOU ACTUALLY SOUND LIKE.

Sharing your Science in a Physical Space

From conferences to outreach and why it all matters

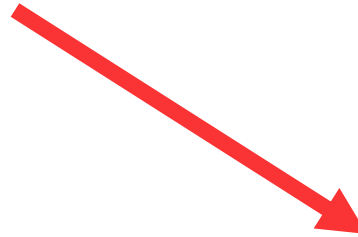
Who ~~What~~ is Present Your PhD?



- Graduate students
- Represent 6+ departments
- Passionate about sharing science
- Share a desire to make an impact in the community

The Problem : Our Mission

Research



How do we do it?

Connect with
collaborators



Share awesome
science!



Understand
their needs and
how we can
help

What is the outcome?



So, what have we learned?



- Collaborations are not a one-model system
- New information \neq altered perceptions (make it matter!)
- Personality \geq knowledge

Why should you want to be a better communicator?



National Institutes
of Health



FUNDING

More reasons for SciComm

- Control the message!
 - Social media, bloggers, and journalists that you may not know are discussing your work with varying levels of accuracy (Peters 2013, PNAS)
- Ensure there *is* a message
 - Nobody *has* to talk about your work. Imagine it falling on deaf ears– you could ensure that doesn't happen
- Talking about science ensures there is a future for science (Groffman, et. al., 2010, ESA)
 - Laws, regulations, public perception, impact on society, reducing skepticism
- Bridges gaps
 - Social, educational, economic, cultural
 - Between scientists
 - Within families

AND IT'S FUN

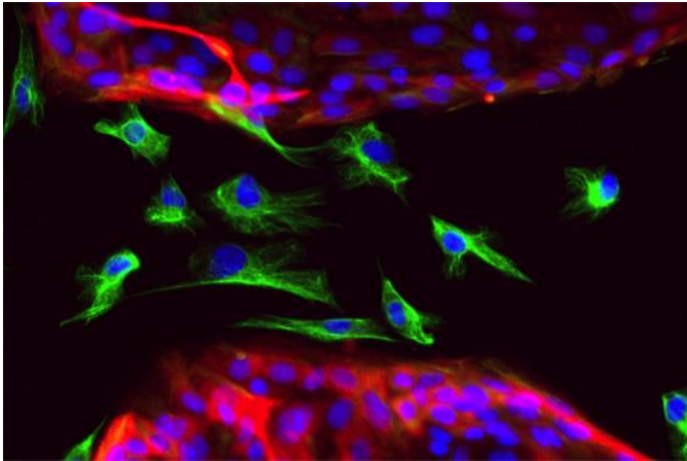


Communicating Science to Young Learners

1 way to do it in 2 minutes or less

Increasing chemosensitivity: microRNA-203 and Ophiobolin A selectively target triple negative breast cancer stem-like cells

Define the key concept you want to convey



Cancer stem cells

Why do we care?

Analogy for understanding

Why are they cool?

How do I study it?

Share your research with 6th graders:

1. What is ONE thing about your research that you would want the young people of the world to know?
2. How will you simplify this for a 12-year-old audience? *Remember, focus on the big picture.* How will you excite them?
3. What are some fun (and realistic) activities you could incorporate?

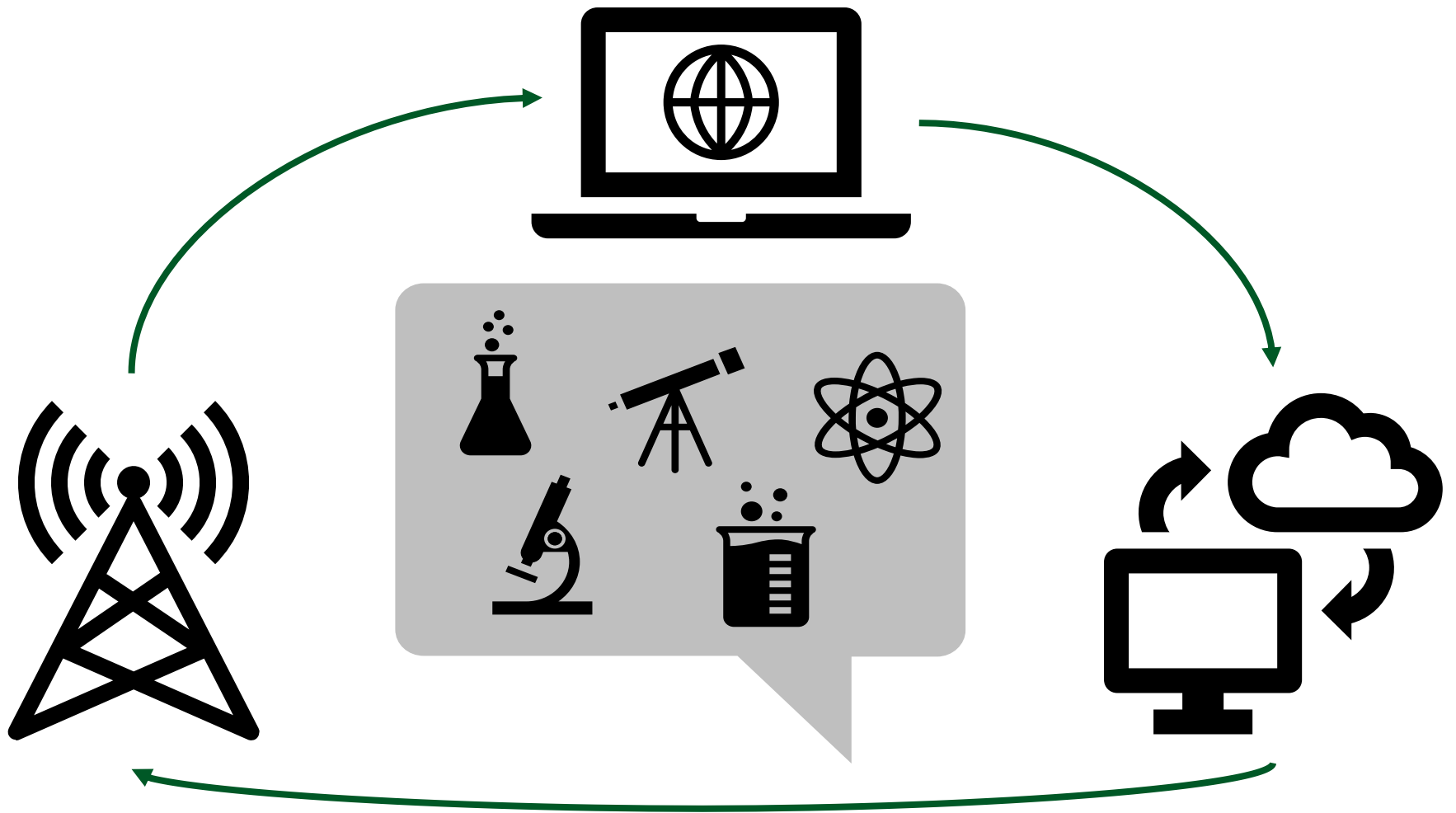
Now it's time to put this into action! Below, plan out 2-3 minutes where you teach something specifically from your research with a target audience of 6th graders. After 5 minutes of planning, pair up and present to each other!



Present Your PhD

Facebook: Present Your PhD

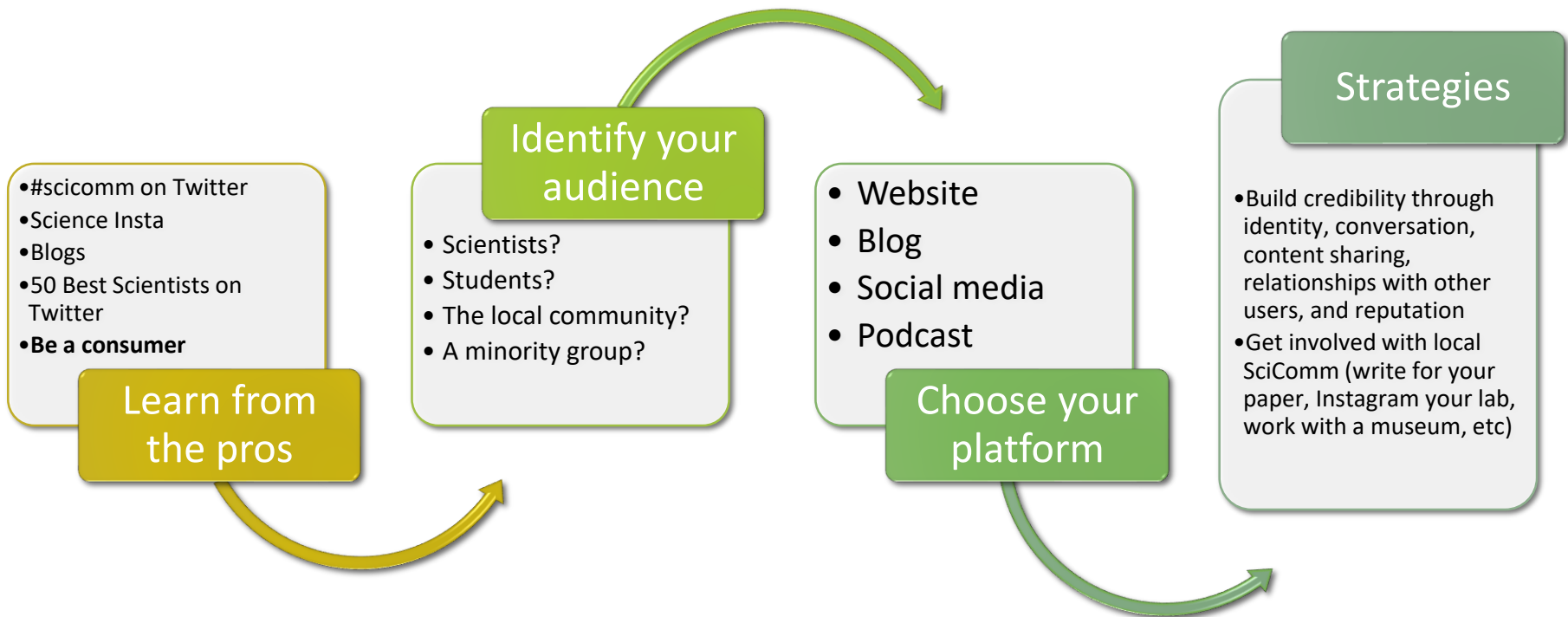
Website: blogs.baylor.edu/presentyourphd/



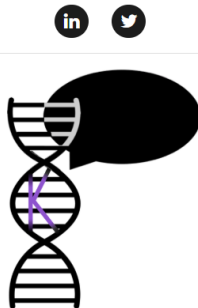
Sharing Science in a Non-Physical Space

How, where, and why to build an online presence

Starting Online SciComm



One Example



Contact

I'd love to hear your feedback, collaborate, or answer any questions. Feel free to send me an email at keighley_reisenauer@baylor.edu, find me on social media, or use the form below.



Contact Me



Hi, I'm Keighley.

Breast cancer graduate student | Budding science communicator

BIOGRAPHY PROJECTS CV CONTACT



<https://sites.baylor.edu/kreisenauer/>

Who is my audience?
> Scientists and the
general public



About Me

Keighley Reisenauer is a PhD candidate studying with Dr. Joseph Taube at Baylor University. Her research interests include cancer stem cells, small-molecule-therapy, and improving science communication.

She is currently evaluating the role of EMT in sensitizing cancer stem cells to small-molecule-driven paraptosis and the effects on metastasis and chemotherapy. You can read a more complete [description of her research projects](#) here.

Keighley is also passionate about outreach and co-founded Present Your PhD in 2017. Since its foundation, Present Your PhD has reached well over 1700 K-12 students in the Waco area and now collaborates with over a dozen schools, museums, and community groups. Through her involvement, Keighley has given several age-appropriate talks about what it means to be a scientist and about her research. You can explore her [work in outreach and science communication](#) here.

Education

- PhD in Biology, In progress
 - Baylor University
- Bachelors of Science in Genetics, 2016
 - Secondary major in Spanish, Honors in Research
 - University of Wisconsin - Madison

Teaching

- Intro Biology Lab (BIO-1105)
 - 2016 Fall, 2017 Fall, 2018 Spring/Summer/Fall

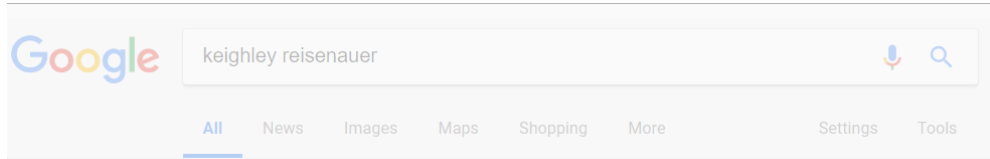
Search ...

Science Tweets

Tweets by @kreisenauer

- Keighley Reisenauer @kreisenauer
Excited for my lab mate Kelsey Johnson to defend her proposal on partial EMT! #phdlife #proposal #breastcancer #gradstudents
- Keighley Reisenauer @kreisenauer
Feeling so "full" right now 🍕
- Keighley Reisenauer @kreisenauer
Alongside the @BU_GradSchool and with #presentyourphd, I am so thankful to be presenting on something I am so passionate about! #scicom #WomeninSTEM @houstonian @baylor

The Goal?



About 1,620 results (0.60 seconds)

Keighley Reisenauer (@knreisenauer) · Twitter
<https://twitter.com/knreisenauer>

Control the message.

Excited for my...
Kelsey Johnson...
proposal...
#breastcancer #gradstudents

@knreisenauer
#planty...
the...
something I am so
passionate about! #scicomm
#WomenInSTEM
#sharingscience #phdlife
#outreach
...
Twitter

→ View on Twitter

Keighley Reisenauer - Graduate Student Researcher - Baylor ...
<https://www.linkedin.com/in/kreisenauer>
View Keighley Reisenauer's profile on LinkedIn, the world's largest professional community. Keighley has 5 jobs listed on their profile. See the complete profile ...

Keighley Reisenauer | Baylor University, TX | BU | Department of Biology
https://www.researchgate.net/profile/Keighley_Reisenauer
I am a graduate student (2021, PhD) in the Biology Department at Baylor University and I work under the mentorship of Dr. Joseph Taube, studying EMT in ...

Keighley Reisenauer - Graduate Student Researcher - Baylor ...
<https://www.linkedin.com/in/kreisenauer>
View Keighley Reisenauer's profile on LinkedIn, the world's largest professional community. Keighley has 5 jobs listed on their profile. See the complete profile ...

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I am a graduate student (2021, PhD) in the Biology Department at Baylor University and I work under the mentorship of Dr. Joseph Taube, studying EMT in ...

Keighley Reisenauer - Facebook
https://www.facebook.com/Keighley_Reisenauer
View the profile of Keighley Reisenauer on Facebook. Share photos and videos with Keighley Reisenauer and others you may know. Facebook gives peo...

Hi, I'm Keighley - Breast cancer graduate student | Budding science ...
https://www.instagram.com/keighley_reisenauer/
Keighley Reisenauer is a graduate student in the Taube Lab at Baylor University. Her research interests include cancer stem cells.

Lab Members | Taube Lab - Sites @ Baylor University
<https://sites.baylor.edu/taubelab/>
Keighley Reisenauer. I just got my MSc in cell biology as a doctoral student in the Taube Lab. She graduated from the University of Wisconsin-Madison with a BS ...
You've visited this page 2 times. Last visit: 6/13/18

Taube Lab | Cancer Biology Research at Baylor University
<https://sites.baylor.edu/taubelab/>
Back: Wezley Griffin (PhD), Dustin Jaoude, Clayton Smith, Keighley Reisenauer, Beatriz Castro-Rodriguez, Alec Ingros, Aadil Sheikh | Front: Tim Philip, Joelle ...
You've visited this page 2 times. Last visit: 10/10/18

You decide your narrative and what you want people to find

Others?

Misconceptions in SciComm

Myth	Truth
Science is “too complicated” for the public to understand	“Giving [the audience] reason to care, process, and understand is precisely the point” (Bogost, 2018, The Atlantic)
Some results are too ‘sensitive’ to be spoken and explained out in the public	Effective science communication can straddle intellectual property/ financial necessity and public education
Scientists have too much on their plate already	True. <i>But</i> , there is no one way to do scicomm. It is varied and flexible.
It is not the scientists’ ‘job’ to communicate to the public	All scientists are dwarves standing on the shoulders of giants. It is our moral and ethical responsibility to share.
It is “demeaning” to discuss science in social media	Science does not exist in a vacuum and there is nothing demeaning about using a tool that makes it easy to reach out to a potentially large audience

DEVELOPING A SCICOMM STRATEGY

Audience types:

Think about who you want to know about your science. Are you only interested in sharing with other academics? Inside or out of your field of research? Do you want to reach your local community? An online community? In defining your target audience, you should consider key elements such as demographics, audience interests and needs, and how those are being addressed currently.

SWOT Analysis:

You can use a SWOT analysis by completing the boxes below to assess your SciComm plan in the current environment in terms of strengths and weaknesses (internal) and opportunities and threats (external).



Contact Us

Email:

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Web:

blogs.baylor.edu/presentyourphd

Social:

facebook.com/presentyourphd

Instagram [@baylorpyphd](https://instagram.com/baylorpyphd)

