



CREATING A MORE ACCESSIBLE RESEARCH GROUP AND DISCIPLINE

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Overview:

- What do we mean by “accessible”?
- Framing the problem.
- Accessible & Inclusive Research Groups.
- Creating a more Accessible & Inclusive discipline.
- Instructions for breakout group activity.

Accessible Means...

- Physically accessible for people with disabilities.
- Financially accessible for a wide range of income levels.
- Culturally & Socially accessible for people from different backgrounds, lifestyles, knowledge systems, etc.



Framing the Problem – Social Models in STEM (1/3)

How we address the lack of diversity depends on how we frame the problem.

The **Pipeline model** is the traditional model for understanding how people move through STEM disciplines. A certain number of people enter a system, and far fewer people reach an identified end point.

- Doesn't accurately reflect the complexities of the problem.
- Offers a passive view of people simply falling out of the system.

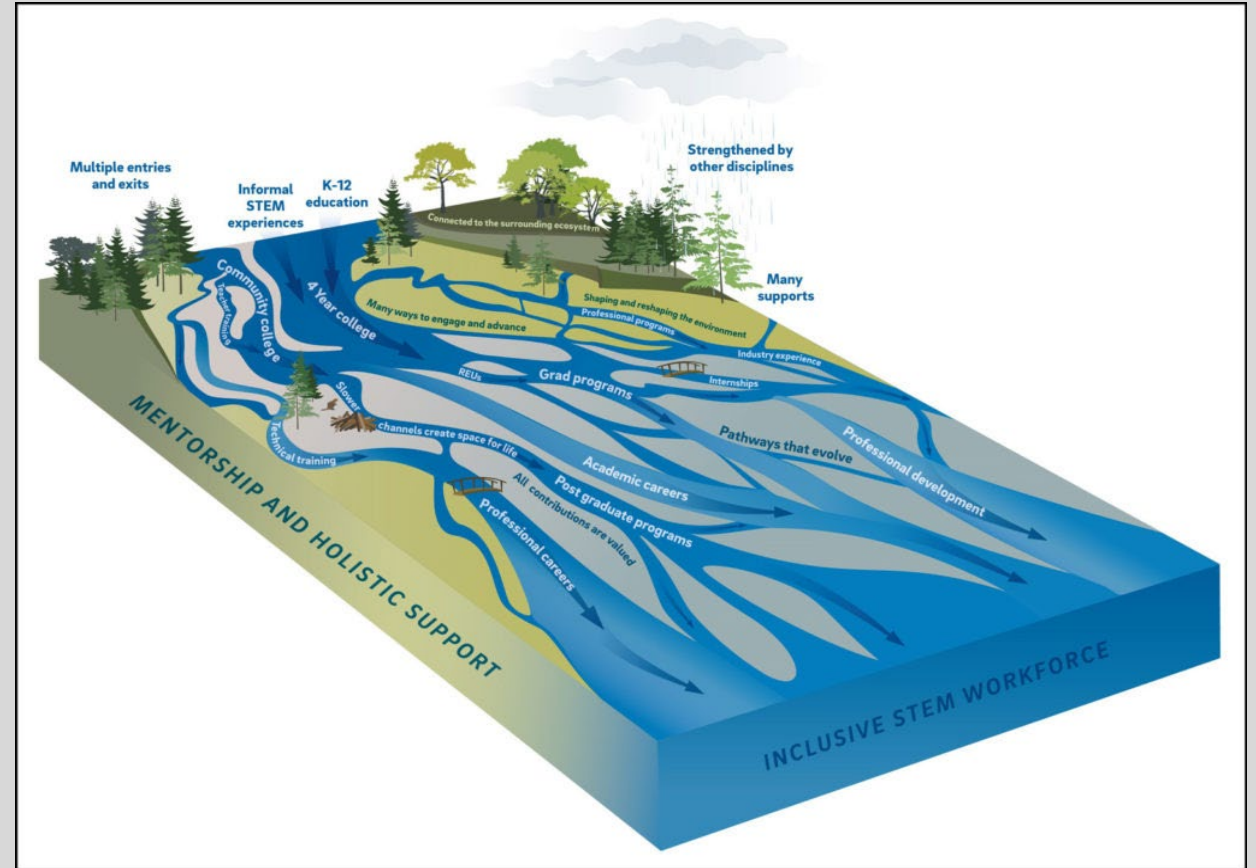


<http://blogs.nature.com/naturejobs/2016/03/23/women-in-science-clogging-the-leaky-pipeline/>

Framing the Problem – Social Models in STEM (2/3)

The braided river model “captures the opportunity, variability, and responsiveness of a modern STEM career; that embraces the diversity and experiences of the people who engage in it; that recognizes the many on-ramps, pathways, and career pivots that real life induces; and that provides a framework in which there is a place in STEM for everyone.”

- The people in the system are actively shaping the pathways & landscape.



Batchelor, R. L., H. Ali, K. G. Gardner-Vandy, A. U. Gold, J. A. MacKinnon, and P. M. Asher (2021), Reimagining STEM workforce development as a braided river, *Eos*, 102, <https://doi.org/10.1029/2021EO157277> . Published on 19 April 2021.

Framing the Problem – Social models in STEM (3/3)

The **Hostile Obstacle Course model** acknowledges that some barriers are intentional - put in place to slow down or exclude certain groups.

- Recognizes that the cultural and structural barriers to participation are not experienced equally.
- Replaces the passive pipeline model with a system intentionally designed and maintained to be exclusive.

Berhe, A.A., Barnes, R.T., Hastings, M.G. et al. Scientists from historically excluded groups face a hostile obstacle course. Nat. Geosci. (2021). <https://doi.org/10.1038/s41561-021-00868-0>



Accessible and Inclusive Research Groups (1/2)

Recruitment

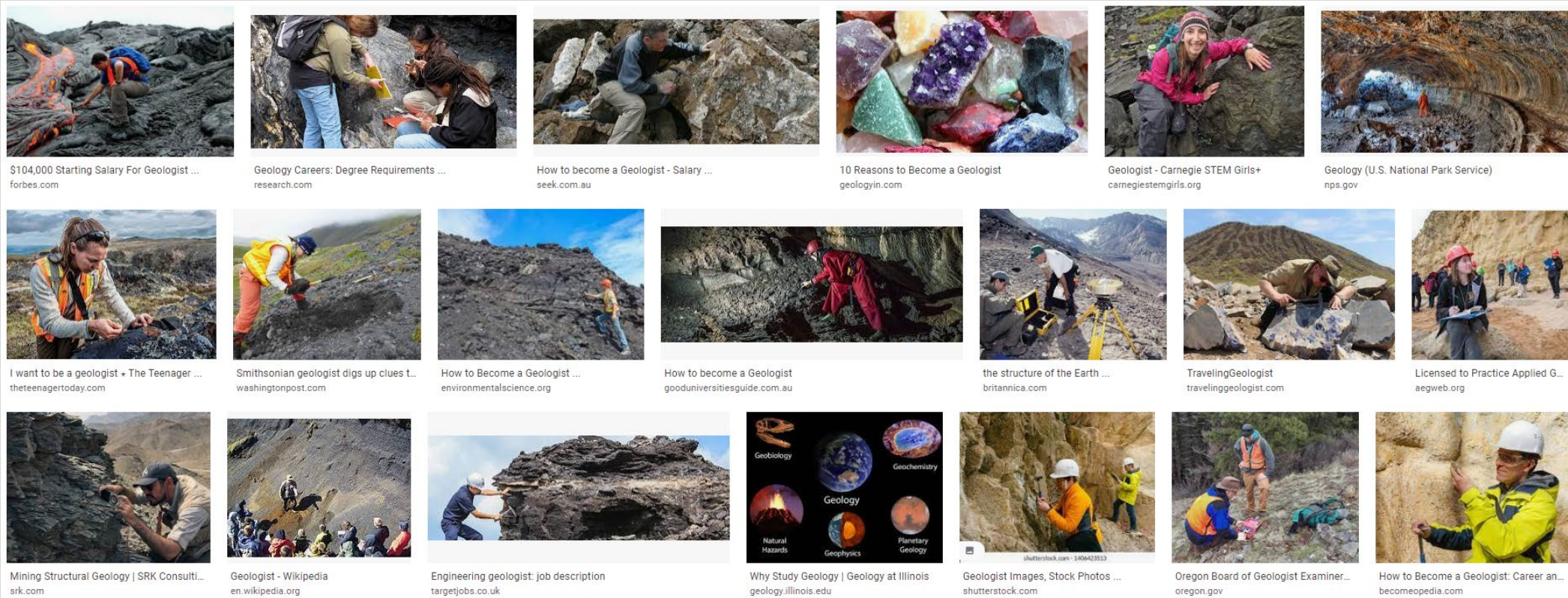
Why aren't people from diverse identities joining our groups?

- Don't know the opportunity exists.
- Inaccessibility and lack of diversity (in both identity and career paths) obvious from recruitment materials.
- Bias in recruitment practices.
- Perceived or actual cultural misalignment.

Accessible and Inclusive Research Groups (1/2)

Recruitment

Example: Google “Geologist”



Accessible and Inclusive Research Groups (1/2)

Recruitment

Example: Google “Hydrologist”



Hydrologist Job Description: Salary ...
thebalancecareers.com



Find Your Path: Hydrologist - YouTube
youtube.com



What Is a Hydrologist and How Can I ...
gcu.edu



Hydrologist: Occupations in Alberta - alis
alis.alberta.ca



Hydrology | National Geographic Society
nationalgeographic.org



Hydrologist | Career Profile ...
agcareers.com



How to Become a Hydrologist in the UK
careeraddict.com



What does a Hydrologist Do and How to ...
yourfreecareertest.com



Hydrologist - Career In STEM®
careerinstem.com



Hydrologists : Occupati...
bls.gov



Hydrologist - Unity College
unity.edu



U.S. Geological Survey
usgs.gov



Hydrology | U.S. Department of the Interior
careers.doi.gov



Water cycle, Problem solving ...
pinterest.ca

Accessible and Inclusive Research Groups (1/2)

Retention

Why don't people from diverse identities want to stay in our research groups?

- Cost of living on low salaries, experiential learning, networking opportunities, conferences, etc.
- Work Culture (drinking, harassment, unequal workloads, glorifying overworking, transient lifestyle of early career stage, etc.)
- Lack of accommodations / flexibility in format and schedule.
- Isolation from cultural values and social support networks.
- Lack of mentoring and guidance.

Accessible and Inclusive Research Groups (1/2)

Retention

Examples:

Codes of Conduct & Structured Guidance

Basin Research Group (BRG) - Code of Conduct

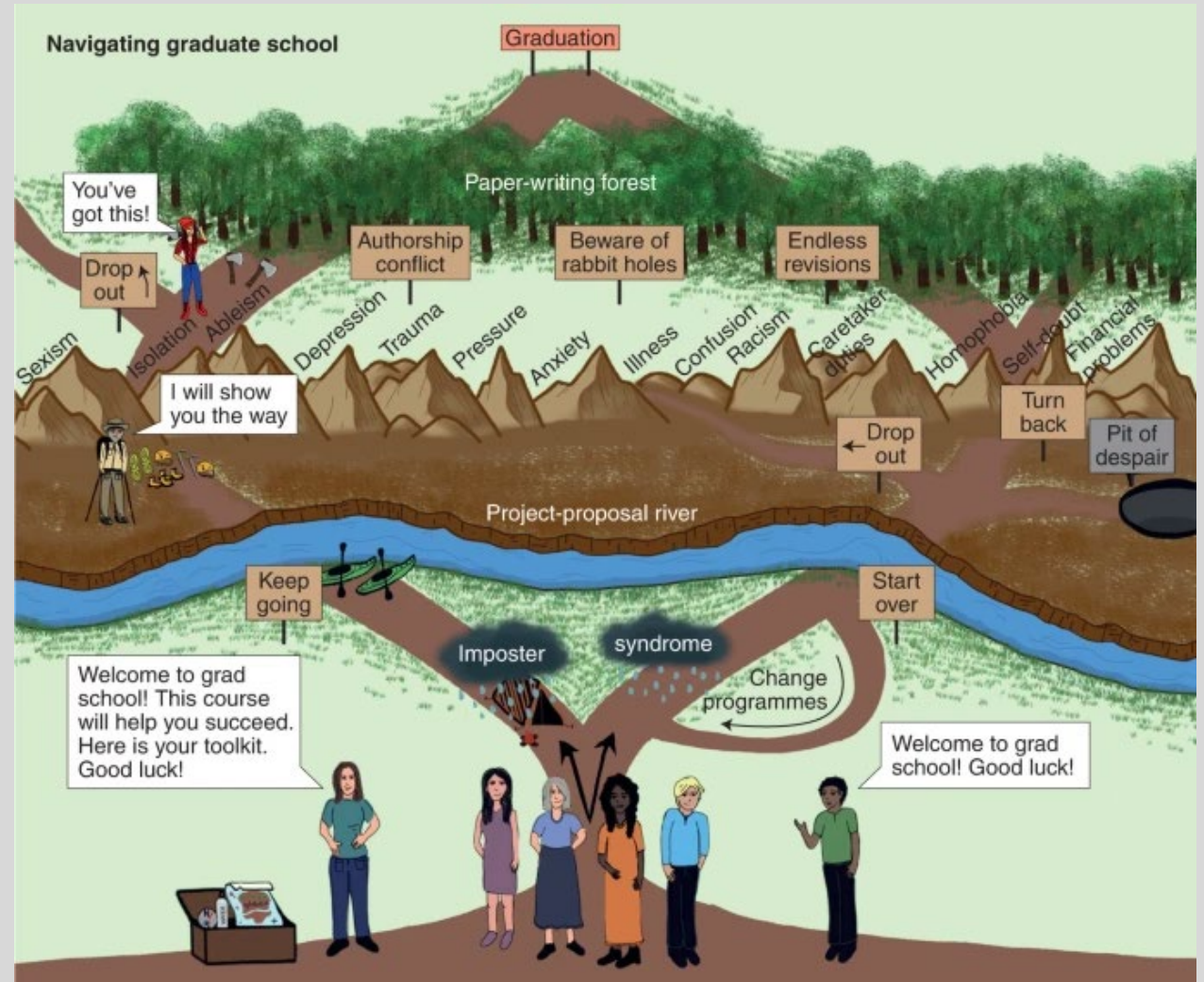
Overview

We value the participation of every member of our community and want to ensure everyone has an enjoyable and fulfilling experience, both professionally and personally. Accordingly, all members of the Basins Research Group (BRG) are expected to show respect and courtesy to others at all times. We create our culture and our culture is inclusive.

Please note that this code of conduct is not a legal document, supplementing, but not trumping, Department- and/or College-level policies for your level of employ or study.

Inclusivity and diversity

Enjoyable, high-quality research can only be conducted when you feel safe, secure, and supported. All group member are thus dedicated to a harassment-free experience for everyone, regardless of gender identity and expression, sexual orientation, disability, physical appearance, body size, race, age, and/or religion. We do not tolerate harassment by and/or of members of our group in any form, and we ask all members of the community to conform to the following Code of Conduct:



Creating a more accessible & inclusive discipline

Some issues go beyond any one research group:

- Low public awareness of the discipline.
- Perceived relevance/usefulness.
- Lack of opportunity to engage with discipline.
- Difference in values regarding success, professionalism, metrics, across the discipline.
 - What behaviors and activities get rewarded?
- Lack of accessible career pathways.
 - Financially, culturally, disability needs, family needs, etc.

Creating a more accessible & inclusive discipline

Examples

Identity-based organizations & Opportunities



Breakout Groups

Let's do something about it. But what?

- Two Rounds of discussion and brainstorming with a table group.
- Each table/topic will have a facilitator to help keep the discussion on track.
- You will have the opportunity to change groups at the halfway point.
- Please identify a note-taker to keep track of your ideas.
- We will have time for a brief report out from tables at the end.

Breakout Groups

Round 1 discussion prompts:

1. What changes can we make in our recruitment or hiring practices to increase diversity?
2. What are ways to increase diversity of individuals in your lab (and thus your department and discipline), and then make for an inclusive environment for those individuals?
3. What mechanisms can be used to build trust and foster retention?
4. What are some suggestions for partnership building with Minority Institutions?
5. How can we ensure such work is recognized, accomplished and/or rewarded financially?

Breakout Groups

Round 2:

- Change tables if you wish.
- If a table is full, please choose a different table so all the topics get equal attention.
- The Goal is to determine how each of these topics applies to the RCN and the planning for Workshop 3 and beyond?
- **Topics:**
 1. Recruitment
 2. Inclusive environments
 3. Retention
 4. Partnerships
 5. Recognition

Breakout Groups

Report Out

What were the best ideas / themes to come out of your second breakout group?

Roughly two minutes per group. Just the best parts, please!