



# Supporting the success of ALL students: Broadening participation of underrepresented groups in the geosciences

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# Workshop goals

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- Discuss how to reach and attract students to the geosciences
- Recognize barriers to inclusivity and assess how we might be excluding students
- Explore strategies to help students thrive
- Develop an action plan for strategies to implement in courses and departments

# Raise your hand

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If you

- Are involved with teaching or outreach
- Work with students in research arenas
- Advise students
- Are an administrator

How diverse do you perceive your department or program to be?



Supporting the  
success of ALL  
students:

Broadening  
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groups in the  
geosciences



# Scenario discussion

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1. Individually, read one of the scenarios
2. As a table, discuss the issues
3. Guided discussion among all



*Photo by Michael Howland-Davis  
with permission from Accelerate New Mexico*

# Broadening Participation: attracting students to the geosciences

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# Implicit bias as a barrier to inclusivity

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Attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner.”

Mental shortcuts that develop “through cultural influences, media and other direct and indirect messages.”

May be “counter to our expressed values and can activate feelings and attitudes about others based on their appearance, race, age and other characteristics.”

# Yes, we have implicit biases, too

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As faculty, “we evaluate students, make judgments, create rules, and often decide who gets to speak and when.”

To create environments where all students have opportunity to thrive

- we must examine our own behaviors
- take steps to interrupt our implicit biases.

# ACT to address implicit bias

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**Acknowledge** that we all have biases

e.g. Project Implicit: <https://implicit.harvard.edu/>

**Counteract**: question stereotypes, provide positive examples, interact with those different from us

**Transform**: introduce procedures to outwit implicit biases

rubrics for grading

mechanisms for facilitating class discussions

not view students names when grading

# Context Diversity: A new dimension of diversity

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- Cultural context is both conscious and unconscious behaviors or beliefs that sets why we do what we do and how we perceive the world around us.
- Different cultures will operate under different cultural contexts; individuals within cultures vary greatly and may operate Multicontextually.

## Low Context, Individuated

Tends to be:

- Private
- Compartmentalized and object focused
- Linear
- Scheduled, and
- Have a contextually independent conception of the world

## High Context, Integrated

Tends to be:

- Interconnected
- Systems and connections focused
- Cyclical and mosaic
- Less schedule sensitive, and
- Have a contextually dependent conception of the world.

# Strategies to support ALL students

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Count off 1-7 at your table. Move to the poster that corresponds with your number.



What resonates with you?

What have you tried?

What questions do you have?

# Reflecting on our instructional choices

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What choices do we make as educators?

Who might our choices exclude?

What will we change?

# Action planning

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- How might you or your department reach and attract students to the geosciences?
- What barriers to participation might you be able to remove?
- What strategies might you use to help students thrive?



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# Traveling Workshop Program

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Opportunities to strengthen courses and programs through campus, regional, and national workshops.

## Traveling Workshop Themes

- Supporting the Success of All Students
- Geoscience and Environmental Science Departments
- Cross-Campus Environmental and Sustainability Programs
- Earth Science in K-8 Teacher Preparation Programs
- Intro and Upper-Level Courses
- Effective and Societally Relevant Courses

# Thank you!

Before you leave,  
please provide your feedback to us and AGU  
on the Workshop Evaluation Form.

**NAGT InTeGrate SAGE 2YC SERC AGU GSA NSF**



## **Our Mission:**

NAGT supports a diverse, inclusive, and thriving community of educators and education researchers to improve teaching and learning about the Earth.

## **Our Goals:**

- To foster improvements in the teaching and learning about Earth as a system at all levels of formal and informal instruction;
- To emphasize the societal relevance of geoscience and its cultural significance for all people;
- To foster and disseminate research in geoscience education;
- To promote the professional growth of our members.

