Exploring Bias


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Goals

1. Gain appreciation of the variations in culture and experiences that are present in the group.

1. Come to shared understanding of expectations in this space

1. Begin to form shared understanding of central language
Diversity Makes Us Smarter

Being around people who are different from us makes us more creative, more diligent, and harder-working. It promotes innovation.

Katherine W. Phillips, Scientific American, October 2014
Diversity Improves Science

STEM-related endeavors are better when they include culturally diverse perspectives and approaches.

*Medin, Lee, & Bang, Scientific American, October 2014*
Shoe Game
Equality

The assumption is that everyone benefits from the same supports. This is equal treatment.

Equity

Everyone gets the supports they need (this is the concept of “affirmative action”), thus producing equity.

Justice

All 3 can see the game without supports or accommodations because the cause(s) of the inequity was addressed. The systemic barrier has been removed.
Equity in science education requires that all students are provided with equitable opportunities to learn science and become engaged in science and engineering practices; with access to quality space, equipment, and teachers to support and motivate that learning and engagement; and adequate time spent on science. In addition, the issue of connecting to students’ interests and experiences is particularly important for broadening participation in science.
Learning as Participation

“...learning is a process of transformation of participation itself...how people develop is a function of their transforming roles and understanding in the activities in which they participate.”

How can I foster curiosity and learning in my classroom? Through talk!

http://STEMteachingtools.org/brief/35
The Path Here - Science Journey Mapping

Individually

- List key events, people or things in your life that have contributed, both negatively or positively, to your involvement in science
Create Your Science Journey Map

- Include people, places, obstacles and opportunities along the way.
- Draw your relationship with school and science at different points
- What worked for you, what didn’t?
- Show feelings, use color and symbols
- Include only things that you wish to share with our learning community.
Break
Gallery Walk

• Place your own map around room
• Silently go around and look at others’ journey maps
  – What trends or outliers are there?
  – What surprises you?
Diverse Experiences

• Violence, loss, & death
• Support, neglect, & exclusion
• Feelings of not belonging
• Fear & uncertainty
• Hope & kindness
• Connections, solidarity, & allyship
Activity Reflection

• How might such activity influence participation in a workshop?

• How might you use these types of activities in a workshop?

• Any cautions or challenges on use?
Mix Up - Central Questions

What are the barriers to participation?

How can we disrupt these barriers?
Bias, Stereotype Threat & Trajectories in Science

- Culture in all activity
- Positionality influences power dynamics
- Microaggressions have real impact on participation and success
- Positive identity is crucial...feeling welcome and valued matters!
- Individual versus structural scales around supports and barriers
Individual Reflection

• Take a minute to yourself
• Keep centered...technology versus paper
• For five minutes, write about....
  – What are you thinking/feeling?
  – What biases might you have?
  – How might you challenge your biases?
  – What resources do you need?
  – What are the barriers to participation?
  – How can we disrupt these barriers?