Stereotype Threat

Overview	This resource explains stereotype threat (the risk that people who fall into identity groups that are often negatively stereotyped may underperform in evaluative settings such as the classroom, as a result of feeling the pressure of the stereotype), provides a few strategies for counteracting stereotype threat and directs instructors toward further resources. While stereotype threat can impact student performance in any course, it is particularly prevalent in STEM courses, thus this resource focuses primarily on the context of STEM courses. For a more extensive definition of stereotype threat and how it impacts student performance, visit the Glossary of Education Reform.
Goals	1) To explain stereotype threat and why it is a crucial concern for inclusive pedagogies. 2) To offer strategies for undermining negative stereotypes and reducing the impact of stereotype threat.
Implementation	The strategies offered in this resource are best implemented during the planning phases of the course and individual lessons. The frequent undermining of stereotypes, the promotion of course skills as learned rather than innate, and the fostering of an inclusive environment is something that is accomplished through intentional and consistent effort on the part of the instructor. After reviewing this resource guide, review our page "Growth Mindset Activity for STEM" for activities you can use in class relating to the topic of stereotype threat.
Challenges	Stereotypes are powerful and deeply ingrained by the time students begin their college education. Instructors have likely internalized many stereotypes and biases themselves, and actively challenging stereotypes will require an active unlearning of dominant narratives on the part of students and instructors.

Stereotype Threat Explanation and Strategies	
What is Stereotype Threat?	**Stereotype threat** "refers to being at risk of confirming, as self-characteristic, a negative stereotype about one's group" (http://www.reducingstereotypethreat.org/). Stereotype threat predicts that if… • You care about success in a particular domain, and… • One of your identities is associated with a negative stereotype about success in that same domain, and… • Elements of the environment make that particular identity salient. …then: • The cognitive energy spent worrying (however unconsciously) that you might fulfill the negative stereotype causes you to underperform in that very setting.
Counteracting Stereotype Threat Through Your Teaching	**Research shows that these instructor strategies can effectively combat achievement gaps in performance on tests and assignments:** • Refer to successful experts from groups who are underrepresented in the field. • Emphasize that achievement on tests and assignments reflects effort and commitment, not intrinsic ability. • Communicate high expectations and believe that all students have the ability to achieve them. Offer clear paths for everyone to meet them. • Remind all students that success can involve struggle (i.e., "successful scientists aren't born, but they are developed through persistent commitment"). Normalize and discuss frustrations or challenges and ways to overcome them. • Provide a range of assignments and assessment opportunities, from low stakes to higher stakes. • Advertise and promote the support available to all students, such as campus resources to support their academic success (e.g., Sweetland Center for Writing or the Science Learning Center). • Build in opportunities for self-affirmation. Studies have shown that the effects of stereotype threat are reduced when students have spent some time writing or talking about their personal values, qualities, or skills. • Remove cues that may trigger stereotype threat (e.g., eliminate requests for demographic information on exams, change objects displayed in the classroom that are considered stereotypical for the field to something less stereotypical) • Help students develop a sense of belonging in the field. Remind them that worrying about belonging is normal for all students.

| Activities to Combat Stereotype Threat | **Sequence of Questions:**
Encourage students to make connections with the material based on their personal experiences and interpretations of data/information.

Essentially, students would receive a graph, figure, or image, and are asked to write their responses to some reflection prompts. These prompts might include ideas such as:

• What patterns do you see?
• What stands out?
• What is one conclusion you draw from looking at this graph?
• How do you think this figure supports or refutes the theory you read about for today?

The students are then asked to discuss their responses with a partner as a way to learn from one another and appreciate the insights from others in the class. Afterward, have a large class conversation about the details from the exercise and connect with the theory/principles students are currently studying.

Values Affirmation:
Miyake et. al's (2010) article in Science highlights a way instructors can use values affirmation statements to encourage student belonging and close performance gaps in Science, Technology, Engineering, and Math (STEM) fields.

Students write on "personally important values" (e.g., relationships with friends and family or learning or gaining knowledge) for about 10-15 mins. Other studies have asked students to rank particular "personal attributes" from a list the instructor generates (e.g., creativity, social skills, sense of humor) and describe in writing why they ranked the highest one as personally valuable and describe a life event when this attribute was important.

These writing activities can be completed at the beginning of the term or prior to exams. In the study, the gender performance gap was reduced for those who participated in the values affirmation writing.

View our "Core Values" activity as an example of how to use values affirmation in your classroom.

Icebreakers:
One barrier to collaboration and creating a sense of belonging in STEM classes is that students often do not know one another, especially in large lecture halls. One strategy is to use an icebreaker that helps students get to know one another or at least helps them see how they are connected with others in the room. Exercises such as "Web of connectedness" help form bonds between students. These may be particularly useful in smaller discussion settings.

View our "Icebreaker Grab Bag" page to find a number of icebreakers you can use in your class. |

Additional Teaching Resources to Support All Students	Eschenbach, Cashman, Virnoche, Lord, Camacho. Special Session: Stereotype Threat and my Students: What can I do about it? *Frontiers in Education*, October 2014, Madrid Reducing Stereotype Threat: http://www.reducingstereotypethreat.org/ Steele, Claude M. Whistling Vivaldi: *How Stereotypes Affect Us and What We Can Do*. New York: W. W. Norton & Co., 2010. Print. UM ecologist Meghan Duffy's blog: https://dynamicecology.wordpress.com/2014/04/29/countering-stereotype-threat/ **Select websites highlighting successful experts that are underrepresented in science:** Modern Examples of Women in Science & Engineering: https://www.edn.com/10-inspirational-women-engineers-and-scientists/ 15 Famous Black Scientists in History: https://www.famousscientists.org/15-famous-black-scientists-in-history/ Famous Hispanic Inventors: http://inventors.about.com/od/hispanicinventors/ Famous Hispanic Scientists: https://www.ranker.com/list/famous-hispanic-scientists/famous-hispanics List of African American inventors and scientists: http://en.wikipedia.org/wiki/List_of_African_American_inventors_and_scientists Queer Scientists of Historical Note: https://www.noglstp.org/publications-documents/queer-scientists-of-historical-note/