

SUPPLEMENTARY MATERIALS FOR

UC SAN DIEGO UNDERGRADUATES AND
THE OCEAN DISCOVERY INSTITUTE COLLABORATE
TO FORM A PILOT PROGRAM IN
CULTURALLY RESPONSIVE MENTORING

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TABLE S1. Sample material from the piloted Culturally Responsive Mentoring course.

TOPIC	SAMPLE PRE-CLASS READINGS AND VIDEOS	SAMPLE WRITTEN REFLECTIONS OR DISCUSSION QUESTIONS
Implicit bias	<p>MENTOR National. 2016. "Mentoring Impact." https://www.mentoring.org/mentoring-impact/</p> <p>Project Implicit. Undated. "Take a Test." https://implicit.harvard.edu/implicit/takeatest.html</p>	<p>What are the impacts of implicit bias on mentoring?</p>
Supportive listening	<p>TED. 2016. "10 ways to have a better conversation." https://www.ted.com/talks/celeste_headlee_10_ways_to_have_a_better_conversation</p> <p>Community Partner Resources</p>	<p>What does the speaker Celeste Headlee mean when she says that we aren't listening to each other anymore?</p>
Intercultural competence	<p>TED. 2009. "The danger of a single story," https://www.ted.com/talks/chimamanda_ngozi_adichie_the_danger_of_a_single_story?language=en</p> <p>TED. 2009. "Weird, or just different?" https://www.ted.com/talks/derek_sivers_weird_or_just_different?language=en</p>	<p>Why is embracing diverse perspectives with intercultural competence so crucial to tackling environmental issues?</p>
Social-emotional learning	<p>Weissberg, P., and J. Cascarino. 2013. Academic learning + social-emotional learning = national priority. <i>Phi Delta Kappan</i> 95(2):8–13, https://doi.org/10.1177/003172171309500203.</p> <p>McCallops, K., T.N. Navelene Barnes, I. Berte, J. Fenniman, I. Jones, R. Navon, and M. Nelson. 2019. Incorporating culturally responsive pedagogy within social-emotional learning interventions in urban schools: An international systematic review. <i>International Journal of Educational Research</i> 94:11–28, https://doi.org/10.1016/j.ijer.2019.02.007.</p>	<p>Describe some characteristics, practices, or skills that a mentor might adopt when practicing "social-emotional learning" mentorship?</p>
Deficit ideology	<p>Gorski, P.C. 2011. Unlearning deficit ideology and the scornful gaze: Thoughts on authenticating the class discourse in education. Pp. 152–173 in <i>Assault on Kids: How Hyper-accountability, Corporatization, Deficit Ideologies, and Ruby Payne are Destroying our Schools</i>. R. Ahlquist, P. Gorski, and T. Montano, eds., Peter Lang Inc., International Academic Publishers.</p>	<p>What happens in the classroom when teachers don't recognize their own scornful gazes?</p> <p>How can we connect this to our own mentoring experiences?</p>
Institutional barriers	<p>NASEM (National Academies of Science, Engineering, and Medicine). 2021. The Science of Effective Mentoring in STEM. Season 1, Episode 6: Institutional Barriers: Implementing Effective Mentoring Practices. https://www.nationalacademies.org/our-work/the-science-of-effective-mentoring-in-stemm</p> <p>NASEM. 2021. The Science of Effective Mentoring in STEM, Season 1, Episode 9: Presence: Never face obstacles alone. https://www.nationalacademies.org/our-work/the-science-of-effective-mentoring-in-stemm</p>	<p>How might you apply the lessons about mentoring from these two podcasts to other spaces and roles you currently occupy or might pursue in the future?</p>
Culturally responsive mentoring and refugee student communities	<p>Refugee & Immigrant Transitions. 2015. Pursuing Dreams: Stories of Refugee and Immigrant Youth in California. https://www.youtube.com/watch?v=Giqy94kYLOM</p> <p>Gay, G. 2002. Preparing for culturally responsive teaching. <i>Journal of Teacher Education</i> 53(2):106–116, https://doi.org/10.1177/0022487102053002003.</p>	<p>How do you balance what you read in the <i>Preparing for Culturally Responsive Teaching</i> article with what we discussed after watching <i>A Single Story</i>?</p>
STEM collaboration and effective use of time and resources in mentoring	<p>Komoroske, L.M., S.O. Hameed, A.I. Szoboszlai, A.J. Newsom, and S.L. Williams. 2015. A scientist's guide to achieving broader impacts through K-12 STEM collaboration. <i>BioScience</i> 65(3):313–322, https://doi.org/10.1093/biosci/biu222.</p>	<p>If resources are limiting, compare the effectiveness of mentoring many students over a short period of time or fewer students over a longer period of time.</p>
Parachute and colonial science in connection to mentoring diverse youth in STEM	<p>Science Friday. 2021. The Problem with "Parachute Science." https://www.sciencefriday.com/segments/parachute-science-problem/</p> <p>Spang, M., and M. Bang. 2014. Implementing meaningful STEM education with Indigenous students & families. STEM Teaching Tool #11, UW Institute for Science + Math Education, https://stemteachingtools.org/assets/landscapes/STEM-Teaching-Tool-11-Meaningful-Indigenous-STEM-Education.pdf.</p> <p>Watson, C. 2021. Parachute science falls to Earth. <i>Nature Index</i>, April 13, 2021, https://www.nature.com/nature-index/news-blog/parachute-science-falls-to-earth.</p>	<p>How does the concept of parachute science relate to mentoring students with diverse backgrounds?</p>

In future iterations of the course, we plan to include the following topics, readings, experiences, and guest speakers.

TOPICS

Equity in STEM learning and Indigenous ways of knowing

EXERCISES/ACTIVITIES

- Modeling a culturally responsive mini-lesson and designing an in-class activity for undergraduates to develop their own culturally responsive mini-lessons with feedback from peers and instructors.
- Incorporating undergraduate visits to community partner's cultural centers and hubs to allow for more in-depth experiential learning about the mentees' communities.

READINGS

Bang, M., B. Brown, A. Calabrese Barton, A.S. Roseberry, and B. Warren. 2017. Toward more equitable learning in science. Pp. 33–58 in *Helping Students Make Sense of the World Using Next Generation Science and Engineering Practices*. C.V. Schwartz, C. Passmore, and B.J. Reiser, eds, National Science Teachers Association, Arlington, VA.

Warren, B., C. Ballenger, M. Ogonowski, A.S. Roseberry, and J. Hudicourt-Barnes. 2001. Rethinking diversity in learning science: The logic of everyday sense-making. *Journal of Research in Science Teaching* 38(5):529–552. <https://doi.org/10.1002/tea.1017>.