

Scientist Spotlights

Goal: Provide all students with opportunities to see someone in geoscience that reflects them in terms of gender/race/ethnicity, and to whom students might personally relate, based on interests and experiences.

Advantages:

- Shows under-represented students that people like them can be scientists.
- Shows majority students that science is a diverse enterprise.



SCIENTIST SPOTLIGHT

Dr Karletta Chief is an assistant professor and extension specialist in the Department of Soil Water and Environmental Science at the University of Arizona. In her extension specialist work she brings relevant science to Native American communities in a culturally sensitive manner by providing hydrology expertise, transferring knowledge, assessing information needs, and developing applied science projects. Dr. Chief is Diné originally from Black Mesa, AZ.

Resources you could use:

- Her web page at the University of Arizona that shows her accomplishments and has links to her work: <https://swes.cals.arizona.edu/people/faculty/karletta-chief>
- One of her links is to the American Indian Science and Education Society: <http://arizonaaises.weebly.com/index.html>
- An 2.5 min video about her pathway of her career and her community involvement: <https://www.youtube.com/watch?v=TxfhVV9YfEo>
- She co-authored guidelines for considering traditional knowledge in climate change initiatives: <https://climatetkw.wordpress.com/guidelines/>

Strategies

Explicitly show diversity in your teaching. Use a diversity of people in the images you include in your presentations. Showcase the work of geoscientists who are women &/or people of color in your courses. Use both historical and modern examples of diverse individuals.

Expose students to geoscientists who represent the human diversity of our world. Invite speakers or arrange a social event. Include young people (recent alumni?) who are working in geoscience. Arrange a visit or field trip to an appropriate place for your class that has a diversity of geoscientists.

Use “Scientist Spotlights” as homework assignments. Feature scientists who, collectively, present diverse examples of who scientists are and how science is done. Match scientist spotlights to the content areas being covered in class. For each homework assignment, have students read an article about the scientist’s research and a resource about the scientist’s personal history. See Schinske et al. (2016) for further details.

References

1. Rodriguez, Sarah L., Kelly Cunningham, and Alec Jordan, 2016. What a Scientist Looks Like: How Community Colleges Can Utilize and Enhance Science Identity Development as a Means to Improve Success for Women of Color, Community College Journal of Research and Practice, DOI: 10.1080/10668926.2016.1251354.
2. Schinske J., Perkins, H., Snyder, A., and Wyer, M. 2016. Scientist Spotlight Homework Assignments Shift Students' Stereotypes of Scientists and Enhance Science Identity in a Diverse Introductory Science Class. CBE - Life Sciences Education 15 (3):1-18.

Implementation

- Use scientist spotlights to add a human dimension to science course topics.
- Weave examples of diverse geoscientists throughout the course, not just as a one-off session.