

## How to Create Identity-Affirming Opportunities in Science Lessons

Learning experiences can be intentionally designed to be more welcoming and affirming for students with social identities that have been marginalized in science and in education. A powerful way to approach this work is by focusing on [creating identity-safe classrooms—spaces of belonging and value for students of all backgrounds](#). This can be done by using instructional materials like [those developed by the Science Education Partnership at Fred Hutch, that explore the intersections of Race, Racism, and Genetics](#).

**First**, students need opportunities to [see individuals with similar identities as their own represented in science](#). **Second**, [science practices such as argumentation rely on risk, vulnerability, and courage](#). An empathetic, trusting, and welcoming culture—where students’ identities are recognized and celebrated—can facilitate such practices. **Finally**, when educators help students understand that [the idea of race is socio-politically constructed and not based in biology](#), it is important to also acknowledge that race is still an important component of students’ individual and community identities, and that it impacts their daily lives.

[Being explicit about race allows educators to center racial justice](#). Focusing on the brilliance of members of racialized groups and recognizing how science has and continues to produce racialized harms disrupts longstanding patterns of racist policies and practices, and facilitates more equitable and just teaching. Educating about the specific scientific practices and knowledges of Black, Brown, and Indigenous/Native communities should be part of what it means to teach science. [Honor](#) and teach these methods [purposefully and with equal importance as western science](#).

Researching and purposefully integrating racialized histories and community cultural lenses on science communicates their value and significance. In science education specifically, students need opportunities to see individuals with similar identities as their own represented in science, in order to understand [the diversity of who does science and how science can be done](#). This is especially important given that professional science has historically been a predominantly white space. Broadening curriculum and instruction allow us to move beyond individual biases and the eclipsing or distorting of the science expertise and histories of other cultures through the privileging of white western patriarchal narratives.

One strategy is to [think globally](#) about race in support of a [sustainability mindset](#). Another strategy is to use following resources to help identify scientists with varied racial identities that can be connected into instruction:

- [Harvard News Gazette](#) — This is What a Scientist Looks Like
- [Project Biodiversify](#) — Tools for Promoting Diversity and Inclusion in Biology Classrooms
- [Scientists Spotlight Initiative](#) — SF State University
- [Live Science](#) — Amazing Black Scientists
- [Blackpast.org](#) — African American and Global African History
- [SACNAS Biography Project](#) — An online archive of first-person stories by and about Chicano/Hispanic and Native American scientists
- Twitter: [@blackinmicro](#), [@blackincancer](#), [#LGBTQIASTEMDAY](#), [#NativeInSTEM](#), [#BlackAFinSTEM](#), and related sites.

Deep explorations of the research and lives of individuals and groups from these sources is the recommended instructional approach—as opposed to quick, superficial references. The goal is to help students develop a rich understanding of science and engineering work conducted by individuals from culturally diverse backgrounds.