
The authors write to dispel the myth that culturally relevant teaching is for the humanities, not the “hard sciences” (2). The authors push against the notion that science is an apolitical and neutral discipline by providing examples of how an instructor might incorporate culturally competent materials into a science classroom. The examples provided are based on the authors’ work with African American students.

To teach a culturally relevant science course, the authors make issues of power, equity, and culture central to the course. The authors define culturally relevant pedagogy as that which “empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes.” In other words, their concern is not just to see that students learn the material, but to ensure that they can make sense of the content in their everyday lives. The authors also suggest that the teachers must be willing to conduct “microethnographies” about the students, gaining understanding about their communities, their families, what they do for fun, or their political views (5). To this extent, teachers must be willing to learn from students as well.

Students were also encouraged to make connections between new information they were introduced to in the classroom with that which they were already familiar. For example, one teacher asked students to find 10 words from the chapter’s vocabulary list about cells and to locate objects with which they could compare them. One student produced the following analogy: The nucleus is like a brain because it controls and coordinates the activities of the whole cell in the same way the brain controls and coordinates activities of the body”(5). Relating new information to what was already known gave students a better handle of scientific terminology in class discussions.

Another instructor had students to watch episodes of CSI to get an idea of how DNA impacts everyday life. Students also researched blood disorders that impact the African American community. By researching the life of Charles Drew, an African American scientist who discovered how to preserve blood, students were asked to explore the irony in his death. Drew died in need of a blood transfusion but could not receive one because he was not permitted into white hospitals.

The final example was from a university freshman biology class. The discussion of the production of melanin in the skin led to discussions of the social construction of race and perceptions of race and beauty based on skin tone. Students also conducted research on Madame CJ Walker, the inventor of the straightening comb.

Each of the examples provided demonstrates that a culturally responsive approach to teaching science:

- examines major scientific concepts
- explores those concepts from vantage points that would engage students’ interest
- makes a connection between science and societal perception
- questions how science, as it is commonly practiced, works in service for and against certain groups and its political implications
- examines counternarratives that offer different perspectives and explanations