Cultural & Religious Sensitivity in the classroom

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1. Intro

Take a moment to think about your students’ general attitude towards different...

➔ **Skin colors**
What does your classroom look like? Do you see or hear students’ behaviors change based on classmates with different skin colors?

➔ **Religious affiliations**
Do most of your students attend the same place of worship? Are there students in your classroom who are treated differently because they attend a different place or do not attend at all?

➔ **Gender identities or sexual preferences**
Do you hear homophobic remarks used as derogatory language? Do you hear or see threats directed towards affectionate students?
How do we combat hate and misunderstanding when our students are still trying to make sense of the world?
Make it personal! The story of you.
Teaching Evolution through Human Examples

The "Teaching Evolution through Human Examples" (TetHE) three-year exploratory research and development project was funded by National Science Foundation Discovery Research K-12 grant #1119468. The project has created four curriculum units for Advanced Placement (AP) Biology classes, aligned to the learning objectives, using human case studies to teach core evolutionary principles. The curriculum units are: (1) Adaptation to Altitude, (2) Malaria, (3) Evolution of Human Skin Color, and (4) What Does It Mean To Be Human? The project has also created a CRS (Cultural and Religious Sensitivity) Teaching Strategy Resource to help teachers create a comfortable and supportive classroom environment.
Teaching Strategies Resource

Walks teachers through two big activities that are aimed at creating an open and safe environment that promotes positive learning experiences.
Outline of content for each slide

3. What Do You Know about Evolution?
   1. Summarize the theory of evolution in three sentences or less.
   2. Are you aware of explanations for the variety of life (including animals, plants, microbes, and other forms of life) found on Earth today, other than the theory of evolution, that are important to you or someone you know? If so, list one or two such explanations along with a one- or two-sentence description of each.
   3. Some people are concerned about studying the theory of evolution. List one or two concerns that you are aware of that others, or you, may have about studying evolution.

4. Ways of Knowing
5. Relating Science to Other Ways of Knowing
   • Religious and cultural traditions, as well as the individual members of these traditions, vary in which ways of knowing they emphasize when thinking about the world. They also vary in their approach to science in general and the theory of evolution in particular. Generally, one of three approaches to relating science to religion is practiced.
   • Conflict, separation, or interaction

6. Relating Science to Other Ways of Knowing
   • A conflict approach to science and

4. Project CRS Master 1.2. Explain to students that you would like them to answer the question individually in their notebooks, then take turns sharing the answers with their small group without debating about which answers are correct. After all members of the group have had a chance to share their responses, the group should once again identify common responses, if they exist, and choose a spokesperson to report these responses back to the whole class. Allow 10 minutes for this activity.

Your role during this discussion is to monitor that students are remaining on task and that each student has a chance to share his or her thoughts without debate from others in their group. As the spokespeople for each group report out how science differs from the other ways of knowing, allow them to use the following slide and diagram as a visual aid.
2. Activities #1 & #2

- **Activity 1.1**
  Establish trust

- **Activity 1.2**
  Set boundaries

- **Activity 1.3**
  Different approaches

- **Activity 1.4**
  Real world examples

- **Activity 2**
  Relate with others
Activity 1.1
What do you already know?

Find misconceptions and concerns right off the back so you know where to start and how to proceed.

https://padlet.com/ariashs/ftklsq1wsncb
“People might feel like you are attacking their beliefs, then not be open to learning about anything else”.
Activity 1.2
Science as a way of knowing

When people think about the world, they often draw on more than one kind of knowledge. Figure 1 suggests three common ways of knowing.

How does science as a way of knowing differ from the other ways of knowing listed in the figure?
Throughout this step, be careful not to favor, or elevate, one way of knowing over another; only emphasize the defining characteristics of science as a way of knowing. The goal is to critique the students’ understanding of the nature of science but not to critique other cultural or religious explanations for the variety of life that were mentioned in previous discussions. You could initiate the discussion by asking which of the key phrases correctly limit science to explaining the natural world through natural causes. Topic 1, the nature of science, in Part 1 provides a description of the nature of science that may be helpful to you for this step:

Science, understood as both a process for learning about the natural world as well as the knowledge about the natural world gained through this process, is “a way of knowing” with a characteristic set of assumptions. These assumptions include the idea that the natural world is understandable, but absolute truth is unobtainable because new observations can lead to new ideas. That said, the process of science overall is more often an exercise in continually refining ideas than outright refuting them. Knowledge about the natural world gained through scientific inquiry, although always open to reinterpretation in light of new evidence, is generally robust. The drivers for science are observations of the natural world and experiments from which explanations for nature or natural processes are proposed. These explanations must be predictive of new observations and therefore testable. Science, by definition, is limited to explaining the natural world through natural causes. …

… science is unable to appeal to forces outside of nature—the supernatural—for explanations. Science involves a specific method of investigation and knowing, useful for obtaining knowledge about the natural world and natural processes.

You may also find it helpful to refer to the University of California Museum of Paleontology’s Understanding Science website, [http://undsci.berkeley.edu](http://undsci.berkeley.edu), which explores the question, “What is science?”
Activity 1.3
Relating Science to Other Ways of Knowing

1. Which statements adopt a conflict, a separation, or an interaction approach to science and religion?

2. Do all scientists take the same approach to relating science and religion?
Statement 1: Clergy Letter Project (2007)—Separation

Statement 2: The Lutheran Church–Missouri Synod, Dr. A. L. Barry, former president (2001)—Conflict

Statement 3: Episcopal Church, General Convention (2006)—Interaction

Statement 4: Council for Democratic and Secular Humanism (1994)—Conflict

Statement 5: Rabbinical Council of America (2005)—Interaction

Statement 6: Tenzin Gyatso, 14th Dalai Lama, Tibetan Buddhist (2005)—Interaction

Statement 7: Varadaraja V. Raman, Hindu physicist (2007)—Separation

Statement 8: Neil deGrasse Tyson, astrophysicist (2007)—Conflict

Statement 9: Francis Collins, physician and geneticist (2000)—Interaction
Activity 1.4
Evolution as a Tool to Understand and Address Human Biological Challenges

What type of data are scientists collecting to answer this question?

“Quick evolution helps Tibetans at high altitude”
(Rachel Bernstein, Los Angeles Times, July 12, 2010)

“Tibetans’ Ability to Live at 13,000 Feet ... New research adds Tibetans to the list of humans who have evolved in the modern era.”
(Brian Resnick, Popular Mechanics, July 13, 2010)

“The Search for Drugs to Fight Malaria”

“The Risk To Light-Skinned People Of Sun Exposure Highlighted By Study Of Young Israelis”
(Hebrew University of Jerusalem, Medical News Today, May 22, 2013)
Activity #2.

HISTORICAL ROLE-PLAY: “How do people think about evolutionary theory”.

Students study Darwin and other historical figures then act out the ways they responded to the publication of Charles Darwin's *On the Origin of Species* with the knowledge from 1859 and with current evidence.
Who is using this stuff?
The Whole Country!

What about LUDA?
Coming soon and is tailored for you!
"This was the first time I have taken class time to address the question "Why study evolution?". In years past, I took for granted that everyone would be on board, and if they were not there was not much I could do about it. I appreciate the way this structured lesson helped me slow down and acknowledge that certain people have doubts about the evidence for evolution. Those doubts should not have to be muffled. There is space for such dialogue, without diminishing the significance of evolution to the study of biology".

teacher

"I really like how the lessons ease you into evolution, the idea of it, because most people are not open to learning it, so it's kind of helping you not to have to be bombarded..."

student

"It was interesting to have to defend a point of view that you might not agree with in your everyday opinions. It just makes you think about the different views and like how you could like see how that could work but from the modern standpoint that we had to do, how it could be wrong."

student
Good luck!

We hope you’ll use these resources and strategies with your classes!

For the free downloadable teaching resource, go to
http://humanorigins.si.edu/education/teaching-evolution-through-human-examples

For a copy of this presentation, please email: ariashs@vestavia.k12.al.us