Climate Change Skepticism in the Classroom

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About Me

- 12 years teaching middle and high school science in a rural suburb of Atlanta
- 10 years teaching AP Environmental Science and Reader for the AP Exam
- Former Georgia High School Science Teacher of the Year and NSTA PASCO STEM Educator Awardee
- Reviewer of climate change curriculum for NSTA
- Frequent conference and webinar presenter in the areas of science pedagogy, environmental science, earth science, and chemistry
- Blogger for the Sustainable Schoolteacher
Why Scientists Disagree About Climate Change

-I received the book from the Heartland Institute in late March 2017 and wrote a detailed rebuttal on my blog to help fellow educators wade through it.

-Was soon featured in articles by the Union of Concerned Scientists, Inside Climate News, NOVA Education, and Huffington Post.

-Personally attacked as an educator and human in my blog comment section and by a climate change denial pages (1, 2).

-Book references were recently discovered in emails to the EPA from Heartland.

-I wrote a follow up article with tips on handling denial in the classroom for WeAreTeachers.
How do I address climate change in my classroom?

- Lead students through a combined weather and climate unit, beginning with weather and atmospheric circulation.

- Increasing understanding of atmospheric phenomenon first helps students engage in climate change ideas more thoughtfully and reduces pushback.

- Begin climate portion of the unit with real data and assign it without prefacing what that they should find—let them make their own observations.

- Do NOT let the students debate* whether climate change is real. The consensus is so high amongst climate scientists that this does a disservice to the children.

*Do we begin our study of the solar system by debating the heliocentric versus geocentric model?
Resources for Real Data

1. Climate Science, Awareness, and Solutions from Columbia University
   - See section “Critical Climate Diagnostics and Feedbacks” for regularly updated sea level, temperature, tornado, precipitation, drought, and wildfire data

2. National Climate Data Sets by Sarah Fick
   - NOAA data prepped for classroom use with tips for using spreadsheets
   - Science Teacher article from October 2017 written on how to use the data in depth with examples of how to utilize it with students
   - Main idea is that minimum temperatures show more predominate change
More Resources for Real Data

3. The Concord Consortium
   - Learning Module What is the Future of Earth’s Climate?
   - Contains models, interactives and questions
   - Can monitor student progress and record results by making a free account

4. Current events that occur during your unit
   - Check NASA Climate or New York Times Climate and Environment daily

*Begin unit with videos for visual impact or a film (Before the Flood)
Why do I teach climate change?

-Culmination of ideas from economics, sociology, ecology, geology, hydrology, and/or meteorology from my course

-Shows importance of taking action to decrease our carbon and ecological footprints

-One of the most talked about current political issues- students need to be aware of the topic so that can be informed voters

-Undecided students that want to “make a difference” choose to seek a career in science and specifically atmospheric science because of the course