



## **Climate and the Carbon Cycle**

Jim Manley

United States (jmanley@coppellisd.com)

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EOS3a Science in tomorrow's classroom

Students, like too much of the American public, are largely unaware or apathetic to the changes in world climate and the impact that these changes have for life on Earth. A study conducted by Michigan State University and published in 2011 by Science Daily titled 'What carbon cycle? College students lack scientific literacy, study finds'. This study relates how 'most college students in the United States do not grasp the scientific basis of the carbon cycle – an essential skill in understanding the causes and consequences of climate change.' The study authors call for a new approach to teaching about climate.

What if teachers better understood vital components of Earth's climate system and were able to impart his understanding to their students? What if students based their responses to the information taught not on emotion, but on a deeper understanding of the forces driving climate change, their analysis of the scientific evidence and in the context of earth system science?

As a Middle School science teacher, I have been given the opportunity to use a new curriculum within TERC's EarthLabs collection, Climate and the Carbon Cycle, to awaken those brains and assist my students in making personal lifestyle choices based on what they had learned. In addition, with support from TERC and The University of Texas Institute for Geophysics I joined others to begin training other teachers on how to implement this curriculum in their classrooms to expose their students to our changing climate.

Through my poster, I will give you (1) a glimpse into the challenges faced by today's science teachers in communicating the complicated, but ever-deepening understanding of the linkages between natural and human-driven factors on climate; (2) introduce you to a new module in the EarthLabs curriculum designed to expose teachers and students to global scientific climate data and instrumentation; and (3) illustrate how student world-views are changed through exposure to the latest in scientific discovery and understanding.