

Project Climate Change

An Inquiry Based Approach to Climate Change Education

Jonathan Ariel Forest Byrne
Instructor, Mad Science of Greater Boston
Waltham, MA

Byrnejonathan12@gmail.com

The media is currently saturated with information regarding the controversial topic of climate change. However this hotly debated topic tends to be sensationalized by extremists, distorted or misrepresented by often well intentioned media icons such as actors and politicians, as even certain aspects of “legitimate scientific data” on climate change remain questionable. Consequently students on both the primary and secondary level exposed to this myriad of information become confused, misled, and even anxious about the possibility of a “grim future for planet earth” etc.. *Project Climate Change* is a guided inquiry into the topic of climate change in which students conduct their own investigation / research and draw their own conclusions. The project culminates with each team presenting / defending their research within a science meeting format. The goals of the project are to 1) promote active / cooperative learning, 2) foster a deeper understanding of climate change and its associated complexities including media distortions, politics, and hyperbole, and 3) foster deeper understanding of the scientific process and the format of a scientific meeting. This project is especially designed for grades 8-12.

Presenter’s Bio

A meteorologist and science teacher, Jonathan was a teacher of physics and earth/space science at the Advanced Math and Science Academy Charter School in Marlborough, MA where he also served as Science Department Co-Chair and member of the Academic Board of Directors. A former student of Arthur Eisenkraft (founder of the *Active Physics* and *Active Chemistry* textbook series) Jonathan is currently entering his thirteenth year of teaching science and math on the secondary level. Jonathan has also written and presented numerous articles and monographs on science education and dynamic meteorology, and was a contributing author to *The Life Cycles of Extratropical Cyclones*, a textbook currently utilized in undergraduate and graduate programs in meteorology and atmospheric science worldwide. Jonathan holds a B.S. in Earth and Atmospheric Science from Boston University, and a M. Ed, in Secondary Science Education from the University of Massachusetts. Jonathan is also a member of the American Meteorological Society.

Jonathan has extensive public lecture experience. He was a guest lecturer in basic topics in astronomy and meteorology at the University of Massachusetts-Boston. He lectured on New England’s historic snow storms at the Blue Hill Weather Observatory in Milton, MA. He has given numerous conference presentations for the American Meteorological Society, including: 75th Symposium on the Life Cycles of Extratropical Storms in Bergen, Norway; 27th and 29th Symposiums on Hurricanes and Tropical Meteorology; and he has been an annual speaker at the Northeast Storms Conference from 1994-present. Jonathan has also presented at Symposiums on Education at the Toronto Science Center, the University of Edinburgh, Scotland, and at AMS Annual Meetings in 1995 and 1997.