



NABT Position Statement: Teaching Climate Change

The teaching of Global Climate Change is necessary for a comprehensive understanding of the natural world. Global citizens must understand the scientific underpinnings of climate change to make well-founded decisions in response to the rapidly altering global environment.

The pursuit of energy from fossil fuels, has transferred large amounts of carbon from underground deposits into the atmosphere in the form of greenhouse gas. This process, combined with deforestation, has raised CO₂ levels from pre-Industrial Revolution concentrations of 280 ppm to over 400 ppm currently, the highest level in human history. The facts and implications of climate change as presented in science classes are not scientifically controversial. The overwhelming preponderance of peer-reviewed studies and the vast majority of climate scientists agree that Earth's atmosphere is warming and climate changes since the beginning of the Industrial Revolution are anthropogenic and due primarily to the burning of fossil fuels and deforestation. Direct measurements and observations show that as average surface temperatures on Earth continue to rise, precipitation patterns are altering, glaciers and ice sheets are melting, sea levels are rising, and species interactions within their ecosystems are shifting. Increased frequency and intensity of extreme weather events are attributed to climate change and are affecting all sectors of the economy and the environment, impacting people where they live and work.

Recognized responses to climate change involve two possible approaches: mitigation and/or adaptation. Mitigation involves reducing and stabilizing the levels of heat-trapping greenhouse gases in the atmosphere. Adaptation involves adjusting to the climate change already in the pipeline. Even if all greenhouse gas emissions were to cease today, global warming and climate change will continue to affect future generations. Continued climate science research, full public access to that research, and robust climate education are a necessity.

Educators should not misrepresent climate science as “controversial.” Climate science is not in need of “critical analysis” or special attention for any supposed “strengths and weaknesses” any more than any other scientific idea. They must teach global climate change in an effective, detailed, and scientifically- and pedagogically-honest manner and work to encourage the development of and support for standards, curricula, textbooks, and other instructional frameworks that prominently include global climate change and reflect current consensus understanding of its mechanisms.

Those frameworks should engage students in classroom discussions and in laboratory investigations that incorporate best practices in inquiry teaching to scaffold students' use of science practices to support the learning of core ideas of climate science and connecting cross-cutting concepts. The instructional outcomes should focus on developing individuals with the capacity to predict the consequences of climate changes for human civilization and provide opportunities for them to propose possible mitigation and adaptation responses.

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