



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2021 Volume IV: The Earth's Greenhouse and Global Warming

Introduction

by Peter Raymond, Professor of Ecosystem Ecology

Climate change is one of the most pressing problems facing society. Educating the public is an important part of the solution to climate change as it encourages people to change their attitude and behavior. There are two major global processes that are critical to understanding the science of planetary warming. The first is the energy, or heat budget of the atmosphere, while the second is the controls on greenhouse gas concentrations in the atmosphere. This seminar for the Yale-New Haven Teachers Institute focused on the dynamics of these two global phenomena in order to provide teachers with an understanding of the science behind climate change to bring to their classrooms.

The individual units in this volume addressed a range of climate change topics. Two units focused on how carbon cycles around the Earth, while another focused on the energy cycle. A second pair of units covered how the changing climate will impact ecosystems. One unit looked at “the other CO₂ problem”, or ocean acidification. One unit took a closer look at the greenhouse gases and how they impact planetary warming. One Fellow used climate change as a way to reinforce math concepts in the classroom, while a final unit discussed potential health impacts of a changing climate.

The units covered a broad range of topics but all aimed to increase climate change literacy in our youth. Collectively we hope this knowledge will help move the earth to a more sustainable climate in the future.

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