Charles Keeling & Measuring Atmospheric CO_2

case study by John Leaf & Douglas Allchin

Overview

The Keeling Curve is now an icon of climate science. This case study considers the origin and development of this famous graph, illustrating how "science-in-the-making" looks very different than it does in retrospect. It follows Keeling from his introduction to measuring carbon dioxide in a strictly geological context through successive stages as the relevant context shifts. The episode also highlights the uncertainty of funding, with five major crises over three decades.

Major NOS features include:

- the role of long-term data
- funding science
- role of measurement (accuracy, precision, calibration of instruments)
- cultural and political contexts of science
- the role of collaboration
- science as a career/human dimension of science

Text, HTML presentation, images, supplemental materials (activity data sheets), and teaching notes available online at:

http://ships.umn.edu/modules/earth/keeling.htm