



# Wisconsin Center for Environmental Education

[www.uwsp.edu/cnr/wcee](http://www.uwsp.edu/cnr/wcee)

## Suggested Web Sites

# CLIMATE CHANGE

### ARM Education Center

<http://education.arm.gov/>

The Atmospheric Radiation Measurement (ARM) Program is an important part of the U.S. Department of Energy's (DOE's) strategy to understand global climate change. ARM scientists gather and use data from several outdoor sites to study the effects of sunlight, radiant energy, and clouds on temperatures, weather, and climate. The education site contains information on global warming for beginning, intermediate, and advanced levels. It also has lesson plans, quizzes, and an "ask the scientist" section.

### Climate Change in Wisconsin

[www.ucsusa.org/greatlakes/glregionwis.html](http://www.ucsusa.org/greatlakes/glregionwis.html)

The Wisconsin section of the Union of Concerned Scientists' Global Environment web site explores what a changing climate could mean for the state. Specifically, it examines how climate is projected to change in Wisconsin; how these changes may impact human health, agriculture, forests and wildlife, water supplies, property and infrastructure, aquatic ecosystems, as well as tourism and recreation; and how Wisconsin residents can help reduce these potential impacts by pursuing several solutions strategies.

### Climate Timeline Information Tool

[www.ngdc.noaa.gov/paleo/ctl/index.html](http://www.ngdc.noaa.gov/paleo/ctl/index.html)

Use powers of ten to track the course of climatic change through history, from today to 100,000 years and beyond. Each section of the timeline provides a summary of that time period, an exploration of the climatic cycles, historical information about the events and human development at that time, and additional resources for exploring climate science and conducting independent inquiry.

### Climate Timeline Information Tool

<http://www.ngdc.noaa.gov/paleo/ctl/>

The Climate Time Line Information Tool (CTL) is currently under development and evaluation by science educators at the University of Colorado and NOAA as a tool for exploring the complex world of climate science and history. The CTL's basic design is an interactive matrix that uses the "powers of ten" approach to frame climatic processes and specific climate events of the past at varying time scales. Each time scale has its own list of sources and links to more information.

### Earth Gauge

[www.earthgauge.net](http://www.earthgauge.net)

Earth Gauge, a program of the National Environmental Education & Training Foundation, is an information service designed to make it easy to explain the environmental impacts of weather events in cities across the U.S. Although the service is originally designed for weathercasters, teachers will find a wealth of "factoids" and tips about storm water and water quality, heat and air quality, and other topics on the Earth Gauge website that will be useful in the classroom. Browse weather/environment information by city, weather type, or environmental topic.

### EPA Global Warming Educator's Site

<http://epa.gov/climatechange/index.html>

EPA's Global Warming Site contains a wealth of materials that educators and outreach professionals can use in presentations and classroom activities on climate change science, potential impacts, and mitigation options. Some of the resources available on this site include kids' pages, climate animations, an online greenhouse gas calculator, outreach materials, and a searchable educators' database.

### **Global Climate Change Research Explorer**

[www.exploratorium.edu/climate/index.html](http://www.exploratorium.edu/climate/index.html)

This site allows students to explore scientific data relating to the atmosphere, the oceans, the areas covered by ice and snow, and the living organisms in all these domains. It gives students a sense of how scientists study natural phenomena by gathering evidence, testing theories, and coming to conclusions. Appropriate for high school students.

### **Global Warming: Early Warning Signs Curriculum Guide**

<http://www.climatehotmap.org/>

The Union of Concerned Scientists (UCS) has developed a world map and accompanying curriculum materials depicting local and regional consequences of global climate change. Intended for biology, environmental science, earth science, geography, and other high school-level courses. Maps can be purchased for \$5 or you can download it for free as a PowerPoint slide presentation.

### **Global Warming Facts and Our Future**

[www.koshlandsciencemuseum.org/exhibitgcc/index.jsp](http://www.koshlandsciencemuseum.org/exhibitgcc/index.jsp)

This interactive web site, developed for middle and high schools students, provides factual evidence behind the conflicting opinions about global warming. The site describes what global warming is, how it can impact life on Earth, and what steps can be taken to minimize its affects. The user can select from such topics as the greenhouse effect, the carbon cycle, and the impacts of climate change. Each of the topics contains internal links with arrow bars that direct the user from one page to another.

### **SciLinks Teachers Guide on Global Warming**

<http://hdgc.epp.cmu.edu/teachersguide/teachersguide.htm>

This brief guide points K-12 educators to the best sites for teaching about climate change: several that offer first rate background material, and others that include detailed lesson plans and experiments. It begins with "Top Ten Things You Need to Know about Global Warming" and a note about why there is so much controversy surrounding this issue.