



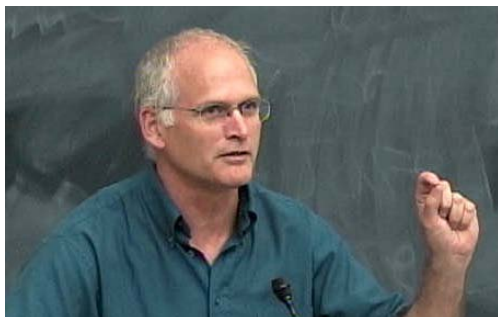
Climate Literacy Ambassadors

A NASA GCCE Project

2/1/10 – 1/31/13



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CLIMATE LITERACY AMBASSADORS

Program Overview



**A three-tiered program to
support G6-12 Teachers as
Ambassadors of Climate Literacy**

- 1) Workshops**
- 2) On-Line Course**
- 3) Ongoing Community
of Climate Change Educators**

200 Educator Stipends for tuition reimbursement
40 additional stipends (or iPad loans) for graduates
who oversee student research projects

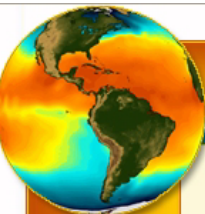


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On-Line Curriculum

<http://cimss.ssec.wisc.edu/climatechange/>



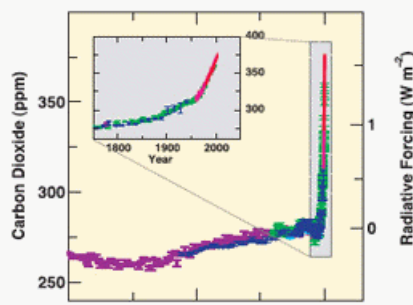
Global and Regional Climate Change

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Clarifying concepts, processes and graphs presented in the summary of the Physical Science Basis of the 2007 IPCC report on Climate Change.

Course Units

- OUR GLOBAL CLIMATE SYSTEM
- OBSERVATIONS OF CLIMATE CHANGE
- GLOBAL CLIMATE CHANGE
- CLIMATE MODELING
- REGIONAL CLIMATE CHANGE



Course content is consistent with *CLIMATE LITERACY: The Essential Principles of Climate Science* and is intended to clarify concepts and graphs in the 2007 Intergovernmental Panel on Climate Change (IPCC) *Summary for Policy Makers*. Developed for G6-12 science teachers, this material is freely accessible to all. Educators can also register through the UW-Madison to earn college credit and receive feedback.



*Updated in 2010 under the auspices of
NASA's Global Climate Change Education program*

- Funded by UW-Madison
- Based on feedback from 2007 teacher summit
- Developed collaboratively by four departments (CIMSS, AOS, Geology, CCR)
- Consistent with Climate Literacy Framework
- Clarifies IPCC report
- Beta version debuted 2008
- NASA 2010 GCCE support for updates, revisions & stipends for 200 teachers
- Credit OR Certificate



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Course Outline

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Course Outline

This course is divided into five units and sixteen lessons. When taking the course for professional development credit, participants are expected to work through two lessons per week.

Our Global Climate System

- 1) Life and Climate
- 2) Energy and Climate
- 3) Climate Regulators

Observations of Climate Change

- 4) Direct Observations of Recent Climate Change
- 5) Paleoclimatic Perspectives on Climate (Indirect Observations)
- 6) Past Climates – Natural Drivers

Global Climate Change

- 7) Human Influences on Climate
- 8) Panels, Protocols and a Common Misconception about Ozone
- 9) Probabilities, Uncertainties and Units used to quantify Climate Change

Climate Modeling and Future Scenarios

- 10) Models as Tools
- 11) Feedback Loops
- 12) Emission Scenarios
- 13) Projections of Future Changes in Climate

Regional Climate Change

- 14) Global Projections for Regional Climate Change
- 15) Climate Change Impacts in the Continental United States
- 16) Regional Mitigation & Adaptation Responses

Required Assignments

G6-12 teachers taking this course for college credit will be required to submit five lesson plans (1 per unit) relating course content to their grade levels using this [template](#).



Anyone who logs on and completes all the activities and quizzes from all 16 lessons can **generate and print a certificate of completion** indicating they spent 20 hours working through this web-based climate course.

5 Units & 16 lessons

- 16 to 25 hours total
- LOTS of activities
- Educators can earn 1 credit at reduced tuition rate

**Anyone can log in,
get a username & password
then print a certificate
of completion when finished
(about 20 hours)
- or- skip the log in to
access material at anytime**

<http://cimss.ssec.wisc.edu/climatechange/>



Spanish Language Version

In 2012 the CIMSS/UW-Madison Global and Regional Climate Change course for G6-12 science teachers was translated to Spanish and can be accessed from a link on the course main page.

Cambio Climático Global y Regional

<http://cimss.ssec.wisc.edu/climatechange/Espanol/>

The translation was done by Juan Botella, a native Spanish speaker who teaches high school science in Wisconsin. Due to time constraints, we needed to strip the audio. And some of the activities are still in English, but all the content that explains the science behind the graphs and tables in the 2007 IPCC Summary for Policy Makers is completely translated. And many significant activities ARE available in Spanish such as the Carbon Projections Applet: (<http://cimss.ssec.wisc.edu/climatechange/Espanol/system/lesson1/CarbonCycleAppletSpanish>) created by Galen A. McKinely & Tommy Jasmin and also translated by Juan.



Cambio Climático Global y Regional

Inicio | Contenido del Curso | Recursos | Lecciones | Sobre Nosotros | English

Clarificando conceptos, procesos y gráficos presentados en el Resumen de las Bases Científicas del reporte del 2007 IPCC sobre Cambio Climático.

Unidades del Curso

- NUESTRO SISTEMA CLIMATICO GLOBAL
- OBSERVACIONES DE CAMBIO CLIMATICO
- CAMBIO CLIMATICO GLOBAL
- MODELACION DEL CLIMA
- CAMBIO CLIMATICO REGIONAL

El contenido del curso es consistente con COMPETENCIA CLIMATICA: Los principios esenciales de la Ciencia sobre el Clima tiene la intención de clarificar los conceptos y gráficos del Resumen ara Responsables de Políticas del Grupo Intergubernamental de Expertos sobre Cambio Climático (IPCC) del 2007. Este material ha sido desarrollado para maestros de ciencias de grados G6-12, y es de acceso gratuito para todos.

Actualizado en el 2010 bajo el auspicio del
NASA's Global Climate Change Education program

*This translation and all other efforts related to this project were made possible from **NASA GCCE award number NNX10AB52A***



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CIMSS iPad Library

In 2012 CIMSS launched a new initiative to engage teachers and students in data acquisition and regional climate studies.

The **CIMSS iPad Library** loans iPads to science teachers for an entire school year! The first units were distributed at the **ESIP Teacher Workshop** where teachers also learned about climate-related Apps, including **SatCam**, an application for iOS devices where users collect observations of cloud and surface conditions coordinated with an overpass of the Terra, Aqua, or Suomi NPP satellite.



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