

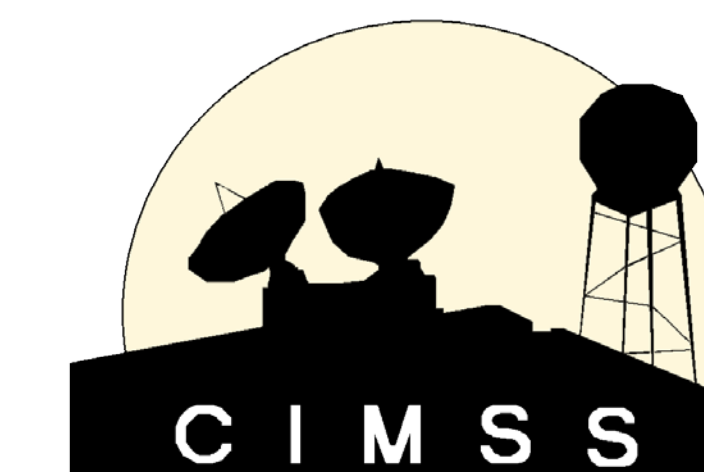


ESIP Teacher Workshops: History, Synergy, Scope and Impact

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With support from NOAA, the Cooperative Institute for Meteorological Satellite Studies (CIMSS) has been organizing workshops for G6-12 science teachers at ESIP summer meetings since 2009. The overall theme of each workshop is Earth science education with an integral strand dedicated to climate literacy. Break-out sessions offer participating teachers a choice of different hands-on demonstrations of how Earth science data can be used in their classrooms. By inviting regional educators to a conference where ESIP members are already gathering, the carbon footprint of each teacher workshop is kept to a minimum. Furthermore, workshop outcomes align with the ESIP Education Committee mission statement as well as NOAA, NASA and CIMSS Education goals. In many ways, ESIP teacher workshops represent the perfect synergy of sponsoring agencies institutional intention, ESIP members efforts to design tools and curriculum that *make data matter*, and teacher professional development needs.



2009 ESIP Teacher Workshop
UCSB Bren School of Environmental Science
- Agenda -

Wednesday July 8th

1:00 - **Welcome, Overview & Introductions**
Margaret Mooney, ESIP Education Chair
1:30 - **Climate Literacy Essential Principles**
Tamara Ledley, Climate Literacy Network/TERC
2:00 - **Activities to incorporate NOAA Weather & Climate Data into the Classroom**
LuAnn Dahlman, NOAA Climate Program Office
3:00 - **Break**
3:30 - **Ocean Temperature, Salinity and Density**
Gregg Foti, NASA PO. DAAC
Annette Decharon, Centers for Ocean Sciences Education Excellence
4:30 - **SEAICEBOX: Exploring Sea Ice in the Arctic and Antarctic Regions**
Annette Schloss, UNH
5:30 - Conference Reception and poster session

Thursday July 9th

9:00 to 10:00 - *Two concurrent sessions*
Satellite Observations in Science Education
Tommy Jasmin, CIMSS/SSEC, UW-Madison
Using the 2008 TerraViva! SEDAC Viewer in the Classroom
Robert R. Downs, CIESIN, Columbia University
10:00 - **Break**
10:30 - *Two concurrent sessions*
KML and Google Earth
Raj Singh, Open Geospatial Consortium
Sampling the Sea
Bruce Caron and Constance Penley
11:30 - *Two concurrent sessions*
World Ocean Atlas (WOA) Data Viewer
Martin Landsfeld, NASA DIAL ACCESS and Bruce Caron
Earth Exploration Toolbook
Tamara Ledley, TERC
12:30 - **Lunch**
2:00 - *Two concurrent sessions*
Climate Change Activities that clarify the 2007 IPCC Report
Margaret Mooney, CIMSS/SSEC, UW-Madison
NWS Education Products & Services for Teachers, Students & the Public
Ron Gird, NWS
3:00 to 3:30 **Break - Reconvene as one group after break**
3:30 - **Overview & Recap of ESIP Educational Resources**
Brian Rogan, ESIP Research and Outreach Coordinator
4:00 to 5:30 - **Shar-a-thon, evaluations, wrap-up**
5:30 **Adjourn**



2010 ESIP Teacher Workshop
University of Tennessee Knoxville
- Agenda -

Tuesday July 20th

8:30 - **NOAA Climate Stewards Meeting**
Peg Steffan, NOAA NOS
Jim Brey, AMS Education
Noon - **Lunch**
1:30 - **Welcome, Overview & Introductions**
Margaret Mooney, ESIP Education Chair
1:40 - **ESIP Overview**
Brian Rogan, Foundation for Earth Science
2:00 - **NOAA NWS Education Products and Services**
Ron Gird, NWS
3:00 - **Break**
3:30 - **Climate Literacy Ambassadors**
Steve Ackerman and Margaret Mooney, CIMSS/UW-Madison
5:30 - **Adjourn**

Wednesday July 21st

8:30 - **ESIP Plenary - Theme: Energy and Climate**
12:00 - **Lunch**
1:15 - **NASA Earth Observatory**
Kevin Ward, NASA
NOAA Climate Portal & Climate Watch Magazine
LuAnn Dahlman, NOAA's Climate Office
2:45 - **Break**
3:15 - **DOE/ORNL Educators Resources**
Linda Holmes, Oak Ridge Associated Universities
4:00 **EPA Resources for Educators**
Ethan McMahon & Lee Pera, EPA
5:00 - **Poster Session and Reception**

Thursday July 22nd

8:30 - *Two concurrent sessions*
Sampling the Sea
Bruce Caron and Becky Reid, UCSB
Discovering Earth Science Data & Services Using NASA's Global Change Master Directory (GCMD): The Value for Earth Science Teachers
Tyler Stevens, NASA GCMD
10:00 - **Break**
10:30 - *Two concurrent sessions*
Digital Earth Watch & Picture Post - Using Cameras for Environmental Monitoring
John Pickle & Annette Schloss, UNH
NEO - NASA Earth Observations
Kevin Ward, NASA
Noon - **Lunch**
1:30 - **Shar-a-thon, evaluations, wrap-up**
3:00 - **Adjourn**



2011 ESIP Teacher Workshop
Santa Fe New Mexico
- Agenda -

Tuesday July 12th

8:30 - Welcome, Overview & Introductions
9:00 - **Climate Change 101 & Climate Knowledge for Action**
Margaret Mooney, CIMSS/SSEC, UW-Madison
10:00 - **Break**
10:30 - **How do we understand climate?**
LuAnn Dahlman, NOAA Climate Program Office
11:15 - **Classroom activities & interactive tools to explore the Carbon Cycle** Tommy Jasmin, CIMSS/SSEC, UW-Madison
12:00 - **Lunch**
1:00 to 1:45 *Two concurrent sessions*
Using SEDAC TerraViva! to Analyze Earth Science Data
Robert R. Downs, CIESIN, Columbia University
Using web GIS tool to explore Bioenergy resources
Ranyee Chiang & Rahul Ramachandran, DOE
1:45 to 2:30 *Two concurrent sessions*
The Climate Literacy and Energy Awareness Network (CLEAN) Pathway Collection and Community
Tamara Ledley, Climate Literacy Network
Finding and using map and data services for data intensive science teaching Karl Benedict, EDAC/University of NM
2:30 **Break**
3:00 to 3:45 - *Two concurrent sessions*
SEAICEBOX Annette Schloss, University of New Hampshire
Real-Time Science Collaboration, Connecting Scientists & Data with Students Rafael Ameller, StormCenter Com., Inc.
3:45 to 4:30 - *Two concurrent sessions*
Observing the Earth and Visualizing the Future
John Moore, Einstein Fellow, NSF Geosciences
Utilizing the Global Change Master Directory (GCMD)
Tyler Stevens, NASA
4:30 - **Adjourn**

Wednesday July 13th

8:30 - **ESIP Overview** Erin Robinson, ESIP
9:00 - **Communicating Climate Change: Perfecting your elevator speech & responding to concerned parents**
Margaret Mooney & LuAnn Dahlman
9:45 - **Break**
10:00 - **Taking it back to the classroom**
(divide into 2 groups, middle & high school)
10:30 - **Report back & General Share-a-thon**
11:15 - **Staying Connected with the ESIP Wiki**
Becky Reid, Santa Barbara School District
11:45 - **Evaluations & wrap-up**
NOON- **Lunch**
AFTERNOON - **ESIP Plenary**
5:00 - **Poster Session & Reception**



The 2012 ESIP summer meeting will take place July 17th - 20th on the University of Wisconsin campus in Madison.

Educators attending the teacher workshop will be eligible for time & travel stipends provided by NOAA.

