



2012 ESIP Teacher Workshop Agenda

UW-Madison Pyle Center 702 Langdon Street



* * * **Tuesday July 17th** * * *

- 8:30 – **Welcome**, Introductions and Teacher Workshop Overview
9:00 – **ESIP Overview** (Federation of Earth Science Information Partners)
9:15 – **Climate Change 101 and the Climate Literacy Ambassadors Community**
Margaret Mooney, CIMSS/SSEC, UW-Madison
10:00 – **Learning and Teaching about Climate and Climate Change: Resources from NOAA**
LuAnn Dahlman, NOAA Climate Program Office
10:45 - Break
11:15 – **CIMSS iPad Library Overview**, Margaret Mooney & LuAnn Dahlman

12:15 – Lunch

- 1:30 – **My NASA Data**, Preston Lewis, NASA Langley
2:15 to 5:00pm - *Two concurrent breakout sessions ...*

Computer Lab 209	Computer Lab 220
2:15 - MY NASA DATA – case study Preston Lewis, NASA Langley	2:15 - Informal iPad discussions & consultations
3:00 Break	3:00 Break
3:30 - The Very Very Simple Climate Model Randy Russell, NCAR	3:30 - OSU Webinar on Great Lakes Climate Education Resources Lyndsey Manzo, OSU
4:15 - Digital Earth Watch Annette Schloss, UNH	4:15 - Satellite Meteorology Resources Patrick Rowley, CIMSS/SSEC

- 5:00 – Adjourn
5:30 – **“Dinner and a Movie”** commencing with cocktails (cash bar) at the University Club
7:30 – **Green Fire: Aldo Leopold and a Land Ethic for our time** (73 minutes) at the Pyle Center

* * * **Wednesday July 18th** * * *

MORNING – ESIP Conference

- 8:30 am Plenary TBD
9:15 am Deborah McGuiness, Tetherless World Constellation, RPI TBD
10:00 am Break
10:30 am Plenary - Innovators Among Us TBD
12:00 pm Lunch, with Lea Shanley, Woodrow Wilson Center, Commons Lab

AFTERNOON – Teacher Workshop

- 1:20 – **iPads revisited: Sat Cam and a few climate apps-** LuAnn Dahlman & Margaret Mooney
2:00 – **Communicating Climate Change: Elevator speeches & Improv exercises**
Margaret Mooney & LuAnn Dahlman
2:40 - **Taking it back to the classroom** (divide into 2 groups, middle & high school)
3:20 - Break
3:50 - **Report back from break-outs & General Share-a-thon**
4:40 - **Staying Connected with the ESIP Wiki**
Becky Reid, Santa Barbara School District
5:00 – **Evaluations and stipend paperwork**
5:20 - adjourn
5:30 – **ESIP Poster Session and Reception**

***** 2012 ESIP Teacher Workshop Session Descriptions *****

Title: ESIP Overview

Presenter: Erin Robinson, ESIP

Description: The Federation of Earth Science Information Partners (ESIP Federation) is a broad-based community comprising researchers and associated groups that produce, interpret and develop applications for Earth and environmental science data. By increasing the use, usability, and value of the world's leading data and tools, the ESIP Federation enables stewardship. This session will provide an overview of the ESIP Federation and the 2012 Summer Conference.

Title: Climate Change 101 and the Climate Literacy Ambassadors Community

Presenter: Margaret Mooney, CIMSS/UW-Madison

Description: Climate change is happening and actions we take today can make a difference for everyone's tomorrow. This session starts with a review of key observations of climate change before providing an overview of NASA, NOAA, & USGCRP resources educators can use to ground their knowledge in science, including a UW-Madison on-line course based on the 2007 IPCC Summary for Policy Makers.

(<http://cimss.ssec.wisc.edu/climatechange/>) With a firm foundation, we'll end with examples of actions individuals can take to mitigate climate change.

Title: Learning and Teaching about Climate and Climate Change: Resources from NOAA

Presenter: LuAnn Dahlman, NOAA Climate Program Office

Description: The National Oceanic and Atmospheric Administration monitors, studies, and makes predictions about climate. This session will provide an overview of information and learning activities to help teachers and students understand these processes and what they tell us about climate. The presentation will feature computer and iPad-accessible resources from NOAA Climate.gov and the Ten Signs of a Warming World poster.

CIMSS iPad Library Overview

Presenters: Margaret Mooney & LuAnn Dahlman

Description: We're pleased to launch the CIMSS iPad Library at the 2012 ESIP Teacher Workshop. Thanks to the NASA Global Climate Change Education program, science teachers will be able to borrow an iPad for the entire 2012-13 school year! In this session we will distribute iPads, provide an overview, demonstrate how to download a free app, and assign app homework. (an app to download overnight)

To enjoy the full range of services Apple offers to iPad users, you'll need to have an Apple ID. This is a password you set up if you've ever purchase anything from Apple, including songs and such from iTunes. If you don't have an Apple ID (or you don't know if you do), please visit <https://appleid.apple.com/>

Title: My NASA Data

Presenter: Preston Lewis, NASA Langley

Description: MY NASA DATA lesson plans provide educators with a variety of ways that authentic satellite data can be integrated into the curriculum. This two-part session will provide a general overview of the resources and lessons plans available on the MY NASA DATA web site before delving into a climate-related "student-directed" case study with an inquiry-based research approach for using authentic data.

Title: Introduction to Great Lakes Climate Education Resources (OSU Webinar)

Presenter: Lyndsey Mazo, Ohio Science Teacher

Description: This webinar presentation in collaboration with the Ohio Sea Grant and the Ohio State Climate Change Outreach Team will introduce an updated Great Lakes Climate Change Curriculum, geared toward science instructors in the Great Lakes region who would like to integrate climate change education into their classroom. Topics will include regionally relevant climate science, climate and Great Lakes literacy principles.

Title: The Very, Very Simple Climate Model (...and Friends!)

Presenter: Randy Russell, National Center for Atmospheric Research (NCAR), Boulder, Colorado

Description: The behaviors of humans, en masse, create the largest source of uncertainty in modeled projections of 21st century climate change. Will people worldwide rapidly adopt "greener" energy sources? Or will we continue to burn large amounts of fossil fuels? The Very, Very Simple Climate Model allows your students to test "what if" scenarios of climate change based on their assumptions about the rate of humanity's future carbon dioxide emissions. I'll also demonstrate an array of supporting resources for teaching about climate and global change.

Title: Digital Earth Watch**Presenter: Annette Schloss, University of New Hampshire**

Description: Digital Earth Watch (DEW) and the Picture Post Network provide resources for middle schools, high schools, self-guided education, and citizen science that support environmental science field studies centered on measuring vegetation health. The key concepts behind DEW are that plants are like "green canaries" and act as sensitive indicators of changing environmental conditions. Free DEW software can be used to analyze color, light, and make measurements in digital images. The software components (Color Basics, Digital Image Basics, and Analyzing Digital Images), together with digital cameras or satellite images, are tools for measuring spatial features, color, and change over time. This workshop will introduce you to ideas for activities and challenge questions for students to 1) Investigate properties of color and light; 2) Learn how to measure the health of plants; 3) Use inexpensive filters to make "plant stress detection glasses"; 4) Use digital images to observe local, regional, and global environmental conditions; and 5) Participate in the Picture Post environmental monitoring network.

Title: Satellite Meteorology Resources**Presenter: Patrick Rowley, CIMSS/SSEC**

Description: This session will showcase three web-based remote sensing resources from the Cooperative Institute for Meteorological Satellite Studies (CIMSS) at the UW-Madison. *Satellite Applications in Geoscience Education* features distance-learning modules for G6-16 educators, *Satellite Meteorology for Grades 7-12* focuses on activities and animations for students, and *Satellite Observations in Science Education* has more advanced content developed for upper level high school and undergraduate educators.

iPads revisited: Sat Cam and a few other climate apps-**Presenters: Margaret Mooney & LuAnn Dahlman****Description**

Sat Cam is an application for iOS devices that allows users to collect observations of local cloud and surface conditions coordinated with an overpass of the Terra, Aqua, or NPP satellites. This session will demonstrate the Sat Cam application (app) and show how students can take observations with the new iPad. We will also discuss and demonstrate a few other climate apps.

Title: Communicating Climate Change**Presenters: LuAnn Dahlman & Margaret Mooney****Description:**

Climate Change is a complicated topic, but your message can be simple if you stick to the facts.

This session will share suggestions about how to communicate climate change such as developing an "elevator speech" and trying some "climate change improv" role playing scenarios to help address concerned parents, doubtful adults, convinced yet pessimistic people or confused and therefore overly cautious citizens.

Title: ESIP Teacher Wiki**Presenter: Becky Reid, Santa Barbara School District****Description:**

Learn about an on-line work space to maintain connections created at ESIP workshops to continue conversations, network, share ideas and resources.

<http://esipteachers.pbworks.com>

For agenda updates and more information please visit:

<http://cimss.ssec.wisc.edu/teacherworkshop/esip/>

For the ESIP conference program please visit:

http://wiki.esipfed.org/index.php/Summer_2012_Program

