

AMS 2014: Teacher Workshop Agenda

Date: Saturday, February 1, 2014

Time: 8:00am – 4:30pm

Location: Omni Hotel at CNN Center

100 CNN Center

Atlanta, Georgia 30303

Register for the One-day Teacher Workshop at: <https://secure.ametsoc.org/meet/atreg/>

Workshop & Share-a-Thon Facilitator:

Michael Passow, Dwight Morrow High School, Englewood, NJ

TIME	ACTIVITIES		NOTES
7:30 am – 8:00 am	Get workshop Badge & Light Breakfast		Please register on-line. On-site registration will not be available.
		Speakers	
8:00 am – 8:10 am	Open Remarks	Marshall Shepherd , President, American Meteorological Society	
8:10 am – 8:15 am	Logistics, Agenda & Present Speakers	Michael Passow	
PRESENTATIONS			
8:15 am – 9:45 am	The System Game	Teresa Eastburn & Robert Henson , UCAR/NCAR	To understand the Earth, its various spheres, and their unique qualities and interdependence, it helps if students understand systems thinking. Unfortunately, most current K-12 science instructional materials do not intentionally target systems and systems thinking ideas, although the Next Generation Science Standards (NGSS) provide performance expectations across grade bands that build an understanding of Earth systems through Grade 12. Nevertheless, it is up to teachers, to bring systems thinking into existing units of instruction. This activity - The Systems Game - does this in a relevant, impactful, fun, and interactive way.
	Hurricanes and Climate		Bob Henson, will talk about the current state of hurricane research and what it's telling us about hurricanes, climate, and the built environment. An activity where educators will be able to see and analyze the data themselves.

9:45 am – 10:45 am	Flood Risks in the Built Environment: Teaching Future Problem Solvers	Dave Chapman , Okemos High School	Dave will present a case study of tropical storm moving into southeast U.S. resulting in flooding with a series of hands-on activities leading to an understanding of how "urbanization" and other factors contribute to flood risk.
10:45 am – 11:15 am	Forecasting Weather, Monitoring Climate with Weather Satellites	Denise Henry , Ball Aerospace & Technologies Corp.	In this activity Teachers will learn the basic understanding of the technology behind the weather science. Following this presentation, Denise will present a "Build-a-Spacecraft Activity" in the share-a-thon. This activity is an effective way to teach kids the ubiquitous elements of all spacecraft and can be tailored for Earth or space science lessons.
11:15am - 1:00pm	SHARE-A-THON		During the lunch period, we will host a variety of organizations simultaneously that will share their educational resources and activities. Workshop attendees are free to browse the various offerings and engage in a variety of STEM activities pertinent to AMS and the Annual Meeting's theme. See list of participating organizations below.
1:00 pm – 1:45 pm	Heat Island effect of Atlanta Georgia: Causes, effects and lessons that can be taught.	Kathleen Murphy , AMS AERA and BOPE Chair & Brian Stone , Georgia Tech	They will provide background on Heat Island effect and share data about, GA., with activities that can be used in the classroom to demonstrate those effects while reinforcing the new Common Core Georgia Performance standards.
1:45 pm – 2:45 pm	NASA Earth Science Education to understand our atmosphere: Observing aerosols and clouds.	Sarah Crecelius , SSAI, NASA LaRC	NASA scientists and educators will discuss the importance of sky observations to better understand our atmosphere. Through participation in NASA education projects (S'COOL, GLOBE, and MY NASA DATA) K-12 students get practice in being scientists by collecting data and conducting their own inquiry investigations. Workshop participants will engage in hands-on activities showcasing how aerosols can impact the color and clarity of the sky. Teachers will explore NASA satellite imagery and data to predict global patterns of aerosols and observe interactions within Earth atmosphere.
2:45 pm – 3:45 pm	How do we measure Earth's climate?	LuAnn Dahlman & Frank Niepold , NOAA Climate Program Office	1) Jigsaw Activity: How do we measure Earth's Climate? 2) Math activity: Averaging weather statistics to understand climate. 3) Map Activity: Participants examine maps of annual global temperature anomalies from the early and late 20th Century, and then compare variability and trends.
3:45 pm – 4:15 pm	Global Connections	Teresa Eastburn & Robert Henson (UCAR/NCAR)	This activity will return us once again to systems thinking of the interconnectedness of our various systems be they physical/natural or social.

4:15 pm – 4:30 pm	Workshop Evaluation and Distribution of Certificates
4:30 pm	END OF WORKSHOP

Share-a-Thon: Participating Organizations		
Weather.gov Climate.gov UCAR/NCAR	SSAI, NASA LaRC Earth2Class Ball Aerospace & Technologies Corp.	... and MORE