



## Norfolk Teacher's Weather Workshop Agenda Wednesday, October 21, 2009 1:30 pm – 6:30 pm



*A hands-on workshop to educate local area teachers (K-12) about weather and weather related resources; to help them inspire and enhance the educational learning process for their students.*

### AGENDA - York Hall (3<sup>rd</sup> Floor)

- **1:30 PM Welcome Remarks**
  - NWA Education Committee
  - Cheryl Nelson, Meteorologist, WAVY-TV 10/WVBT FOX 43, Norfolk/Portsmouth/Hampton/Virginia Beach, VA
- **1:40 PM Keynote Address: Predicting the Weather Is Not A Sport** – Dr. Russell Wright, Master of Professional Studies – Middle Grades Science, George Washington University, Washington, DC

*Learning happens!*

*You remember things you do and see every day. This natural kind of learning requires neither study nor drill—it just happens.*

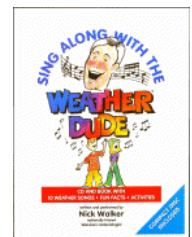
*If you want natural learning to occur in your classroom all you have to do is change your focus. Rather than focusing on the vocabulary you want your students to memorize, focus on engaging them in real activities. Embed vocabulary and skills in those activities and students learn without even knowing what's happening to them.*

*Dr. Russ Wright is the creator of the award-winning, NSF-funded Event-Based Science Project. The lessons he learned in the process have led him to a model for designing engaging science activities he calls Scenario-Based Investigations (SBIs). In his keynote, Dr. Wright will divulge the secret that will allow you to create your own SBIs.*

*You will also learn where to find his free SBIs online. And, you will receive a copy of **Predicting the Weather Is Not a Sport**—an SBI written for the new Pearson Middle School Science program.*

- **2:05 PM The Weather Dude** - Nick Walker, Meteorologist, The Weather Channel, Atlanta, GA (Also at 330 PM for Elementary)

*Nick is an on-camera meteorologist for The Weather Channel and co-anchor of "Weather Center" with meteorologist Vivian Brown. He has been a regular correspondent for The Weather Channel's "Forecast Earth" programs and has hosted several special reports including "Storms of the Century," "Vulnerable Cities," "After the Storm," and the global warming documentary "Hot Planet." Prior to joining The Weather Channel, Nick was at KSTW-TV and KIRO-TV in Seattle. His 25+ years in broadcasting also includes work as a news anchor and reporter at KSNW-TV in Wichita, Kansas, and KVUE-TV in Austin, Texas.*



- **2:10 PM Nauticus** - Jennifer Kodolitsch, School Program Manager, Nauticus, Norfolk, VA

*NAUTICUS inspires and educates with engaging and interactive experiences that celebrate our connections with today's maritime world. Nauticus is a contemporary museum that uses the natural setting of Norfolk's harbor to showcase global maritime commerce and the world's largest Navy.*

- **2:15 PM NASA's Educational Outreach Programs** - Susan W. Moore, SSAI/NASA Langley Research Center, Hampton, VA

*The NASA CERES Students' Cloud Observations On-Line (S'COOL)*

<http://science-edu.larc.nasa.gov/SCOOL/index.php>

and the MY NASA DATA

<http://mynasadata.larc.nasa.gov/>

are two educational outreach programs supported by the NASA Science Mission Directorate.

- **2:20 PM NOAA National Weather Service Education Products and Services** - Ron Gird, National Weather Service Outreach Program Manager, Silver Spring, MD

*The National Oceanic and Atmospheric Administration (NOAA) and the National Weather Service, (NWS) provides severe weather awareness and preparedness material to teachers and students nationwide. Traditionally, this information was provided in the form of publications, posters, hand-outs and school visits. These methods can be both costly and inefficient. New information technologies can make the NWS information to teachers and students more cost-effective and improve the effectiveness of NWS education material.*

- **2:45 PM Lightning Safety For Schools** – William P. Roeder, Meteorologist

*Lightning is the second leading cause of storm deaths in the U.S., killing more than tornadoes or hurricanes each year on average. Lightning also inflicts debilitating injuries on many more than it kills. School activities can inadvertently expose students and staff to lightning danger. This is especially true of outdoor activities like sports, band, etc. Fortunately, lightning safety is easy, quick, and inexpensive, but it is inconvenient. Much of lightning safety is summarized in the following two slogans: 'When Thunder Roars, Go indoors!' and 'Half An Hour Since Thunder Roars, Now It's Safe To Go Outdoors!' This training session will review lightning safety with a special emphasis on how it applies to schools. More information on lightning safety is available at [www.lightningsafety.noaa.gov](http://www.lightningsafety.noaa.gov).*

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**3:15 PM Break (15 Minutes)**

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**3:30 – 6:00 PM - Break Out Sessions** (each presentation is offered up to three times to accommodate the three teacher groups)

- **Geographic Information Systems (GIS) and Meteorology – A Perfect Match!** Keith Stellman, Warning Coordination Meteorologist, NOAA/NWA Shreveport, LA

*In September of 2007, NOAA signed an Enterprise License Agreement with Google allowing all parts of NOAA the use of both the Google Earth and Google Maps API for business purposes. The National Weather Service (NWS) utilized this technology in such a way to not only make a better presentation of its information but also for warning verification, coordination, and collaboration. The use of Google Earth combined with the ability to integrate NWS datasets into Google Earth gives not only NWS forecasters but also the general public the ability to get weather information in real time using a free and easy to use software.*

*The Google software has proved useful in post storm analysis, and in the generation of a wide variety of maps. The software gives everyone the ability to overlay multiple weather data layers, such as radar rainfall estimates, surface observations and the like, on readily available layers such as terrain, river basins, infrastructure, population, etc. The result is improved situational awareness, better weather warnings and decision making. This class will focus on where to find real-time weather data that can be used in Google Earth and how to work with it.*

(MS/HS)

- **Hurricanes** - Dr. Tony Lupo, Chair, Department of Soil, Environmental, and Atmospheric Science, University of Missouri, Columbia, MO and NWA Education Committee member

*This presentation will discuss the basics of tropical storms, including formation, terminology, and safety information. Included will be an analysis of the climatological record for tropical cyclones for the region. Learn more about the historical threat to Norfolk presented by tropical activity based on the number of events that have passed within 250 miles of the area since 1938, including such storms as Isabelle (2003), Ginger (1971), and a tropical storm that formed in February 1952!*

(ALL)

- **Weather at Your Fingertips – Presenting Real Time Weather in Your Classroom** - Eleanor Vallier-Talbot, Meteorologist and Outreach Program Leader, NOAA/National Weather Service, Boston/Taunton, MA and NWA Education Committee Co-Chair

*So, you do a web search for “weather,” and what do you get? You receive literally millions and millions of results from just that one word. But what do you really need to use in your classroom? Do you want to do an in-depth study of weather? Or, do you want to use weather as a catalyst to spark an interest in science for your students and engage them in your curriculum?*

*This presentation will give you a little snippet of current weather information, such as near real time radar and satellite information as well as forecasts, provided by your local National Weather Service forecast office on the Internet. You will see how you can create your own forecast shows, using data you can easily find.*

*Knowing how important it is for you to understand the material that you will present to your students, there is a great website where you can take online classes to learn about a wide variety of weather topics. A listing of websites that will help you bring weather to your classroom will also be provided.*

(ALL)

- **“Professor Weather” Hands on Weather Safety and Education for Schools** - Timothy W. Troutman, Warning Coordination Meteorologist, NOAA/NWS, Knoxville-Tri Cities, TN and Faith Borden, Warning Coordination Meteorologist, NOAA/NWS, Las Vegas, NV and NWA Education Committee member

*Learn through hands-on presentations how wind occurs, how a cloud develops, how hail is created within a thunderstorm, the transition to how a tornado forms within a thunderstorm, and what to do in the event that severe weather occurs.*

*The safety portion of the presentation deals with tornadoes, severe winds and hail, flash flooding and what to do if any of these hazardous weather threats occur. The final hands-on portion of the presentation involving all students deals with how many drops of water does it take for rain to fall out of the bottom of Mr. or Mrs. Cloud?*

*Science is easier to learn when you can touch or see it. Learn different demonstrates that you can do to help your students master science principles.*

(ALL)

- **WEATHER DETECTIVES: Storm Scene Investigation** - Jill F. Hasling, President and Certified Consulting Meteorologist, Weather Research Center, Houston, TX

*Many Certified Consulting Meteorologists are involved in Forensic Meteorology. A demonstration of what a Forensic Meteorologist does and what is involved in a case after a hurricane is used to illustrate how the students can use research and science to hindcast the weather.*

*A client calls after Hurricane Katrina in 2005 and states that all that remains of her Waveland, Mississippi home is a slab with a bathtub on it and a tree. She sends a photo showing the tree. Her insurance company states that the damage was caused by the storm surge so they do not have to pay the claim since her policy only covers wind damage. So the question is - which came first the storm surge or the wind? This exercise takes you through the investigation and shows the tools that can be used to solve the case.*

(MS/HS)

- **Using Current Weather Maps in the Classroom** - Vanessa Myers, NWA Education Committee member, Ravenna, OH

*Few published studies have examined whether K-12 students actually understand and retain information from the different meteorological outreach programs. As outreach activities continue to expand, it is important to assess how students understand and learn weather, so that more effective outreach programs can be created. The goal of this thesis was to evaluate the use of current surface weather map discussions as an aid to students understanding of weather fundamentals. A total of 531 seventh-grade students and 5 teachers from 2 schools in Stark County, Ohio participated in the study. Students were divided into “map” and “no map” groups, with the “map” group receiving the standard textbook curriculum plus daily exposure to current weather map discussions. The students in the “no map” group only received the standard textbook curriculum. The expectation was that while both groups would improve, the map group would improve significantly more. The improvement of the “map” group was not statistically significantly greater than the improvement of the “no map” group. However, when the assessments were broken down by individual questions, there were areas where the “map” group improved more. Findings from this study advanced understanding of how students comprehend weather and provided insight on how to proceed in future studies.*

(MS/HS)

- **Remote Sensing -Radar and Satellite** - Jeffrey Tongue - Science and Operations Officer, NOAA/NWS Upton, NY and NWA Education Committee Co-Chair

*Students see Doppler radar and satellite images on television all the time, but do they know what these are? Get a quick lesson on remote sensing and how you can explain this science to your students.*

(ALL)

- **NOAA Weather Radio** - Bruce Jones – Midland Radio (<http://www.midlandradio.com>), Kansas City, MO.

*Midland Radio Corporation is the number one U.S. manufacturer of Weather Alert radios. A NOAA Weather Alert radio is an important tool in providing you and your family advanced warning of severe weather and all hazards emergency situations, including civil emergencies. NOAA weather radio is the official voice of the National Weather Service (NWS) and broadcasts information on severe weather through a nationwide network of weather radio transmitters.*

**6:00 PM – Preparing Students for the Sciences in College** - Dr. Paul J. Croft – Meteorologist, Department of Geology & Meteorology, College of Natural, Applied, & Health Sciences, Kean University, Union, NJ and NWA Education Committee member. Jeffrey Tongue – Science and Operations Officer, NOAA/NWS Upton, NY and NWA Education Committee Co-Chair

*Are your students fully prepared for college? A brief discussion of on what is expected in the college classroom from the perspective of an atmospheric science college professor and a meteorology professor at a community college teaching non-science majors.*

(ALL)

**6:15 PM** - The NWA Education Grants – Susan Parker, 2008 Grant Recipient, Buckland Elementary School, Gates, NC.

**6:20 PM**

- Closing Remarks
- Door Prizes !!

**6:30 PM The End !**

**\*\* Certificates of Attendance Are Available Outside of York Hall at the End of the Workshop \*\***

### **Elementary Break Out Session: York Hall (3<sup>rd</sup> Floor)**

**330 PM Nick Walker – More from the Weather Dude!**

**345 PM “Professor Weather” Hands on Weather Safety and Education for Schools**

**420 PM NOAA Weather Radio**

**430 PM Break**

**435 PM Remote Sensing -Radar and Satellite**

**455 PM Weather at Your Fingertips – Presenting Real Time Weather in Your Classroom**

**520 PM Hurricanes**

**555 PM Break**

### **Middle School Break Out Session: Brandon (4<sup>th</sup> Floor)**

**330 PM Geographic Information Systems (GIS) and Meteorology – A Perfect Match!**

**355 PM Hurricanes**

**420 PM WEATHER DETECTIVES: Storm Scene Investigation**

**440 PM Break**

**445 PM Using Current Weather Maps in the Classroom**

**500 PM “Professor Weather” Hands on Weather Safety and Education for Schools**

**525 PM Weather at Your Fingertips – Presenting Real Time Weather in Your Classroom**

**540 PM Remote Sensing -Radar and Satellite**

**555 PM Break - Return to Polar Room**

### **High School Break Out Session: Riverwalk (1<sup>st</sup> Floor)**

**330 PM Using Current Weather Maps in the Classroom**

**350 PM Weather at Your Fingertips – Presenting Real Time Weather in Your Classroom**

**415 PM Geographic Information Systems (GIS) and Meteorology – A Perfect Match!**

**440 PM Break**

**445 PM Hurricanes**

**505 PM Remote Sensing -Radar and Satellite**

**520 PM WEATHER DETECTIVES: Storm Scene Investigation**

**540 PM “Professor Weather” Hands on Weather Safety and Education for Schools**

**555 PM Break - Return to Polar Room**

The NWA Teacher’s Weather Workshop was made possible by the members of the NWA Education Committee, the NWA Council and the NWA Corporate Membership. The Education Committee greatly appreciates all the effort that the presenters put forward to making this year’s workshop a reality. We also wish to thank the students from Kean University in Union, NJ, for their assistance with the logistics through this workshop.

Eleanor Vallier-Talbot and Jeffrey Tongue  
Co-Chairs, NWA Education Committee