

## NEWS

### [Celebrate Science!](#)

The 3rd USA Science & Engineering Festival, the largest science festival in the US, features nationwide contests and school programs, including the popular '[Nifty Fifty](#)' science speaker program - presented by InfoComm International. The Festival culminates in a Grand Finale Expo on April 26-27, 2014, with the US News STEM Solutions Conference on April 23-25, and Sneak Peek Friday - presented by the Department of Defense - on April 25. New this year: [X-STEM](#) - presented by Northrop Grumman Foundation and MedImmune - an Extreme STEM Symposium for students on April 24.

### **2014 VAST PDI**

The 2014 VAST PDI will be held in Roanoke, VA this year on November 19-22. This year's theme is [Sparking Innovation: Enhancing Student Learning](#). Teachers will have access to nationally known experts on various topics ranging from [Differentiation with Carol Tomlinson](#) to Flipping the Science Classroom with author Jon Bergman along with many others! Make plans to come early on Thursday to the pre-conference and spend a day learning how to differentiate your science curriculum with Carol Tomlinson, nationally known expert and author! There will also be extended learning opportunities through short courses that will be entirely **free** those who register for the conference! For more information on the 2014 VAST PDI, please visit [www.vast.org](http://www.vast.org) and click on the Annual PDI tab in the top navigation bar.

### **Submit to Present a Workshop at 2014 PDI! NEW DEADLINE!**

VAST needs you! Please consider sharing your work by presenting at this year's PDI. In an effort to get more information out to teachers before they leave for summer break, there is a new deadline for proposals! **Deadline is March 1st!!** To submit a proposal, please go to the vast website at [www.vast.org](http://www.vast.org) and click on the annual PDI link in the navigation. Then click on the link called Presenting at VAST. Proposals are already coming in, so don't wait and miss out on this opportunity to take a leadership role!

### **2014 Legislative Session**

All education legislation can be tracked by accessing [this link](#). This site will provide a focused look at education-related bills in the House and Senate. You can access all bills in [Virginia's Legislative Information System](#).

## Teacher Resources

### [Understanding Science: How Science Really Works](#)

The Understanding Science Website is a resource that would be helpful to any science teacher. It offers a wealth of resources on the nature and process of science. The site has three major components: Understanding Science 101, For Teachers, and a Resource Library. Each component has resources that would be helpful. The Resource Library in particular offers a set of case studies that may be helpful to teachers such as [Cold fusion: A case study for scientific behavior](#).

### **Study Plate Tectonics, Rock Cycle Online**

The Geological Society of London (GSL) offers a pair of online resources for learning about key geoscience topics. Electronic map-based resources are the focus of GSL's Plate Tectonics page (<http://www.geolsoc.org.uk/Plate-Tectonics>). In addition, a site is being launched to accompany GSL's Rock Cycle online module (<http://www.geolsoc.org.uk/rockcycle>).

Founded in 1807, GSL is the oldest geological society in the world. Learn more about GSL, the United Kingdom's national society for geoscience, online (<http://www.geolsoc.org.uk/education>).

## **NOAA Boosts Teaching About Oceans, Atmosphere**

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The U.S. National Oceanic and Atmospheric Administration (NOAA) promotes education about oceanic and atmospheric science - and not just during Earth Science Week. NOAA offers resources and opportunities for students and teachers all year long.

On the NOAA Education Resources site (<http://www.education.noaa.gov/>) you'll find teaching tools and materials on oceans and coasts, climate, weather and atmosphere, marine life, freshwater, and other special topics. A "Climate Science Activity Book," for instance, offers 10 learning activities focusing on essential principles of climate science.

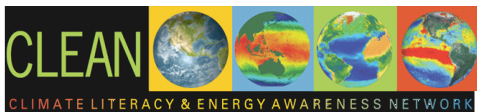
In addition, the portal provides access to multimedia resources, lessons and activities, real-world data, related articles, science career profiles, and other background materials. Whether you're looking for science-based news coverage of recent extreme weather events or a social networking link to reinforce learning activities, NOAA is your source for oceanic and atmospheric science education resources.

## **National Park Service Videos - Explore Climate Change**

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The National Park Service invites you to view videos on a variety of climate change topics, including citizen science, sea-level rise, glaciers, and more! Additional videos, currently in production, will be featured online in the coming months.

Through these educational videos, teachers and students can learn the basics about climate change topics, explore the National Park Service's unique position in responding to climate change, understand the challenges of managing parks in the face of climate change, and find out more about the science behind climate change. See the videos online at <http://www.nps.gov/subjects/climatechange/photosmultimedia.htm> and <http://www.youtube.com/channel/UCAeQ9FnOCPjG-KLXf47Xj9Q>.



The CLEAN has added new peer-reviewed resources for teaching climate and energy topics to our CLEAN collection of videos, activities, and visualizations on climate and energy. These resources are searchable by grade, topic, and resource type, and are peer-reviewed for accuracy and effectiveness.

The [CLEAN website](#) also provides guiding principles for teaching climate and energy, and points to relevant videos, activities, and graphics for each topic. (CLEAN stands for Climate Literacy and Energy Awareness Network).

## **Safety**

### **Council of State Science Supervisors – Science Education Safety Webpage**

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The PDF files below are for science safety guides. The guides are free to schools to download. To read or print the files you will need the Adobe Acrobat Reader installed on your computer.

The guides were published by Council of State Science Supervisors (CSSS) with support from the American Chemical Society, the Eisenhower National Clearinghouse for Mathematics and Science Education, the National Aeronautics and Space Administration, DuPont Corporation, Intel Corporation, American Chemical Society, and the National Institutes of Health. You may print and distribute the booklet to teachers and other educators.

#### **Science Safety Information to Download:**

[Science and Safety, Making the Connection](#) (PDF) - A Secondary Safety Guide

## General Science Safety

[Checklist](#)

[Recommendations](#)

## Safety Web Links

[NSTA Safety in the Science Classroom](#)

[NSTA's Laboratory Science](#)

[Flinn Scientific Safety Pages](#)

[Flinn School Laboratory Safety Courses](#)

## ***Procedure for Requesting a Free Copy of LSI's Model Chemical Hygiene Plan, School/Community College Edition***



The free Model Chemical Hygiene Plan (MCHP) is intended only for schools (K-12) and community colleges (two-year post-secondary academic institutions). As a copyrighted document, it is subject to several important restrictions.

The MCHP may not be duplicated or reproduced in any print or electronic format. Permission is granted to each K-12 school and community college to customize the plan and distribute printed or electronic (intranet) copies within that school or community college. Other schools or community college should request their own free copy from LSI.

Finally, the electronic posting of this MCHP or the revised ones on a website visible on the internet is specifically prohibited. Please see attached flier for more information and contact LSI with specific questions.

## Teacher Opportunities

### ***Teacher-Ranger-Teachers***

Shenandoah National Park is seeking applicants for the 2014 Teacher-Ranger-Teacher (TRT) program. The selected TRT will assist park staff with creating Teacher User Guides for the museum exhibits located in the park's visitor centers. The guides will help students learn about the park's history, natural resources, and recreational activities through self-guided, inquiry-based lessons and activities. Interested teachers should download and complete the TRT application form posted on the Shenandoah National Park web page at <http://www.nps.gov/shen/forteachers/development/trt.htm>

### ***Natural Connections: Interdisciplinary Strategies for Teaching and Learning***

The Virginia Association of Science Teachers (VAST) Region I in partnership with Lewis Ginter Botanical Garden and the VDOE invite interdisciplinary teams of Pre-K through 6<sup>th</sup> educators in Superintendent's Region I to participate in a conference titled ***Natural Connections: Interdisciplinary Strategies for Teaching and Learning*** to be held on Friday, March 28, 2014 for Pre-K – 3 educators and on March 30, 2014 for 4<sup>th</sup> – 6<sup>th</sup> educators. The Conference is being held at Lewis Ginter Botanical Garden in Richmond. Presenters will model strategies to blend science, social studies, language arts, math, the arts, etc. for authentic learning experiences using an interdisciplinary approach for instruction. Please see the attached flyers for details.

### ***Trees-to-Products***

The Trees-to-Products teachers' summer program offers an in-the-field tour of sustainable hardwood forest management techniques and local forest products industries. These forest management practices not only provide raw materials for local mills but also provide wildlife habitat, recreational opportunities, and sustain forest health to maintain the viewshed and water quality. The program links its concepts to the Virginia Standards of Learning and includes training in Project Learning Tree activities ([www.plt.org](http://www.plt.org)). The full schedule and registration information are available at <http://www.anr.ext.vt.edu/enviroandnatres/programs/trees-to-products.html>. Register early, as there was a waiting list in 2013.

### ***Project CRESST: Enhancing Clinical Research Education for Science Students and Teachers Professional Development***

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2014 Academy - July 14 - 18, 2014

Virginia Commonwealth University, Richmond, VA

The CRESST Academy is a Professional Development Academy for Middle and High School Teachers utilizing an innovative curriculum designed to enhance students' research skills and awareness of the importance of healthy lifestyle choices. The Academy combines a week-long summer workshop in the classrooms, labs and facilities of Virginia Commonwealth University with "in your classroom" implementation throughout the fall semester. CRESST is supported by a grant from SEPA (NIH), so there is no registration fee. Participants receive graduate credit or a stipend plus \$250 to purchase program related supplies.

Presenters: VCU faculty, researchers and staff and CRESST Academy Fellows

More information may be found on the [Project CRESST website](#).

### ***Engage your Students through Real-World Learning***

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The Environment-Based Learning program at Mary Baldwin College offers week-long summer graduate courses for educators, designed to make learning more meaningful for K-12 students. The summer 2014 courses are: Nature Journaling, Math in the Garden, and The Intersection of Life and Land. Go to the [MBC website](#) for more information.

### ***CDC 2014 Science Ambassador Workshop***

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The CDC (Centers for Disease Control and Prevention) in Atlanta is announcing the opening of registration for its 2014 Science Ambassador Workshop to be held on its main campus in Atlanta from July 21-15, 2014. Middle and high school science and math teachers (including those associated with health-related career programs) are invited to participate in this week-long workshop. During the workshop, participants will have the opportunity to:

- Attend seminars on current public health topics presented by CDC scientists;
- Collaborate with CDC scientists to develop lessons plans based on public health science topics; these will be published on CDC's website;
- Expand professional networks;
- Enhance your professional network of educators and public health professionals; and
- Tour CDC's state-of-the-art headquarters, including the Emergency Operations Center and the David J. Sencer CDC Museum.

There is no charge or registration fee. However, participants will need to cover their own transportation, lodging and meals. The deadline to register is April 15, 2014. We are applying to award continuing education units to participants. Please check with the website below to check on the status of this. Additional facts about the program and information on how to register may be found at <http://www.cdc.gov/scienceambassador/become.html>. You may also contact us at [scienceambassador@cdc.gov](mailto:scienceambassador@cdc.gov).

### ***Service Learning in the Dynamic Classroom***

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EarthEcho is offering a Google Hangout on Feb. 5th at 1pm titled "Service Learning in the Dynamic Classroom." This is a professional development type hangout, aimed at addressing some of the challenges that educators face while making a shift towards utilizing service learning in the classroom. EarthEcho will also be touching on digital tools that can be helpful when in the process, as February 5th is Digital Learning Day. The hangout will be held as a panel discussion, with sufficient time for Q&A near the end. Any educator who wants to incorporate service learning into their classrooms should consider this Google Hangout. <http://earthecho.org/news/HOA-020514>

### ***Deep-sea Discoveries in the Atlantic Onboard the NOAA Ship Okeanos Explorer:***

***An Online Workshop to Advance Transatlantic Ocean Science Literacy*** - March 3 – April 4, 2014

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Hosted by The National Oceanic and Atmospheric Administration (NOAA)  
Office of Ocean Exploration and Research

In partnership with The College of Exploration

This offering is **free for all participants** and is available 24 hours a day, 7 days a week.

During the 2013 field season, the NOAA Ship Okeanos Explorer explored a variety of seafloor features and biological communities among largely unexplored canyons in the Northeast Atlantic Ocean, providing new information about how these canyons change over time and revealing hot spots for biodiversity. From July to August, an interdisciplinary team of scientists together with ocean educators and the public were able to observe in real time imagery from the deep Atlantic using NOAA's new remotely-operated vehicle Deep Discoverer. This workshop will focus on mission discoveries, including the importance of deepwater canyons, their associated deep-sea corals, newly-discovered cold methane seeps, and Mytilus Seamount. Join keynote speakers, ocean explorers, scientists, ocean science educators and others interested in learning more about the deep Atlantic as you gain access to online teaching resources, ROV highlight videos, multimedia resources and join in conversations with colleagues from around the world.

Participants will have the option to earn [one graduate credit](#) from Ashland University during the first 3 weeks of the workshop. To register, please visit: <http://www.coexploration.org/oe2014/> PDF of workshop flyer attached.

## Student Opportunities

### **Virginia BioGENEius Challenge:**

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The Virginia BioGENEius Challenge is a competition for high school students doing research in biotechnology. Finalists for the Virginia BioGENEius Challenge will be selected to attend the U.S. National BioGENEius Challenge held in San Diego, CA in June 2014. For more information and to apply visit

<http://www.biotechinstitute.org/go.cfm?do=Page.View&pid=54>. Application deadline is April 30, 2014.

### **2014 Craig Tufts' Youth and Nature Essay Contest Now Open.**

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In honor of long-standing employee and naturalist, Craig Tufts, the family of Craig Tufts, Family Summits Inc., and the National Wildlife Federation (NWF) invites youth to enter the 5<sup>th</sup> Annual Craig Tufts Educational Essay Scholarship competition. This competition is open to any young person between the ages of 8 and 18 to submit an essay ([guidelines and requirements](#)). The selected entry will receive a once in a life-time experience to attend a week-long summer outdoor adventure camp with a parent or guardian in Pacific Grove, CA. Entries are due by **March 28th**.

### **Forestry Camp**

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Do you have students aged 13-16 who are interested in natural sciences? Please consider nominating them to attend Holiday Lake Forestry Camp, held June 16-21 at Holiday Lake 4-H Center near Appomattox. Led by natural resource professionals, this residential camp provides field-based learning, skill development, and an introduction to natural resource careers. All campers receive a substantial scholarship, keeping out-of-pocket costs low. The nomination form and information can be found at [www.dof.virginia.gov/camp](http://www.dof.virginia.gov/camp). The nomination deadline is April 11. Please contact Ellen Powell ([ellen.powell@dof.virginia.gov](mailto:ellen.powell@dof.virginia.gov)) if you have questions.

### **Girl Power: A STEM Event for Middle and High School Girls**

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Women are making a difference, changing the world, and transforming the future with science, technology, engineering, and math. Come explore how you can too at this free event. No registration is required.

NEW FORMAT, NEW PRESENTERS!

This event will feature special presentations on women working in aerospace, cyber-situational awareness, as well as college and career presentations and hands-on activities and challenges.

For more information, visit [www.jhuapl.edu/stem](http://www.jhuapl.edu/stem)

## Highlighted Superintendent's Memos

- MEMO #008-14  
[Tracking Legislation During the 2014 General Assembly](#)
- MEMO #007-14  
[Spring Graduate-Level Course for K-12 Educators of English Language Learners \(ELLs\)](#)
- MEMO #004-14  
[2014 National Youth Science Camp \(NYSC\)](#)
- MEMO #002-14  
[Presidential Awards for Excellence in Mathematics and Science Teaching \(PAEMST\) Program](#)
- MEMO #018-14  
[New Digital Learning Resources](#) (Astronomy iTunesU course)
- MEMO #017-14  
[2014 Advanced Placement Exam Fee Reduction Information](#)
- MEMO #034-14  
[Request for Proposals \(RFP\) for 21st Century Community Learning Centers Competitive Grant Program](#) 
- MEMO #032-14 - You may want to consider the focus of a program to be science as a context.  
[Revisions to the List of Substitute Tests Approved for Verified Credit: Effective Beginning with the 2014-2015 School Year](#) 

## Articles

[The Development of a Summer Science and Engineering Workshop for Early Childhood Teachers](#), Eugenia Johnson-Whitt, Debra Bloomquist, Amanda Gilbert, Lacey Strickler, Meredith Reinhart, Charlene Czerniak, Joan Kaderavek, Scott Molitor, ASTE, 2014.

[Nurturing Early Childhood Science - Family Activity Packs](#), Charlene Czerniak, Eugenia Johnson-Whitt, Lacey Strickler, Amanda Gilbert, Debra Bloomquist, Meredith Reinhart, Joan Kaderavek, Scott Molitor, ASTE, 2014.

As always, please contact one of us if you have questions.

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