

## VDOE Science Update

### February 13, 2015

#### NEWS

##### ***BioTeach – Save the Date***

The Virginia BIO Foundation, a not for profit foundation created to connect bioscience companies with teachers and students to stimulate career interest in the biosciences (BioSTEM), is pleased to announce it will be hosting BioTeach events on **March 19, 2015**. The locations will be announced in the near future and will be shared with science educators through the Science Update and TeacherDirect.

##### ***Building Tomorrow's Thinkers***

The VAST Region 3 directors have organized the third annual Region Three Mini Conference featuring Kip Bisignano as the Key Note speaker. The conference will be held at the [University of Mary Washington](#) on **March 14, 2015. New Date!**

Audience - K-8 teachers

Time - 8:30 a.m. – 2:00 p.m.

Registration open to all on the [VAST website](#)

Cost \$25

##### ***Guidelines for the Use of Computer Science Courses to Satisfy Graduation Requirements***

The 2014 General Assembly passed House Bill 1054 (Loupassi), which amended and re-enacted § [22.1-253.13:4](#) of the *Code of Virginia* to allow the use of computer science credits for high school diploma course and credit requirements. The Virginia Board of Education (VBOE) was directed to develop guidelines defining how computer science coursework could satisfy graduation requirements. At its meeting on January 22, 2015, the VBOE approved [Guidelines for the Use of Computer Science Courses to Satisfy Graduation Requirements](#).

The guidelines allow *Advanced Placement Computer Science A* to satisfy mathematics, laboratory science, or career and technical education graduation requirements as a standard credit under certain specified conditions and regardless of the diploma type. These guidelines are effective for the students entering ninth grade for the first time in 2015-2016 and beyond.

##### ***VDOE Nominates Four Virginia Schools for National Green Ribbon School Awards***

The Virginia Department of Education (VDOE) is nominating three public schools and one private school for 2015 national Green Ribbon School awards. The U.S. Department of Education program recognizes energy efficient and environmentally friendly schools that promote environmental awareness, community engagement and student wellness.

The four nominated schools — with highlights from their award applications — are as follows:

- Bassett High School, Henry County
- Coles Elementary School, Prince William County
- Crozet Elementary School, Albemarle County
- Steward School

For more information, visit the [Virginia Green Ribbon Schools](#) website

## Teacher Resources

### ***African-American Scientists and Inventors Series***

The Community Idea Stations is taking the opportunity this February to acknowledge and highlight achievements by black Americans, as society often did not value their genius. Each week, the CIS will offer another article to the series. The following are the articles from their first two weeks.

Week 1 - [Mae Jemison: A Lady Outta This World](#)

Week 2 - [James West-Can You Hear Me Now?](#)

### ***Forest Products Presentation – We All Need Trees***

The *We all Need Trees* presentation, offered during the VAST PDI, has been improved and posted as a PDF on the Virginia PLT website, [www.cnre.vt.edu/plt](http://www.cnre.vt.edu/plt). You will find the link in the first row of headings: *We All Need Trees*. The presentation is intended to support the Science SOL 4.9, but may also be useful for 2.8, 3.10, 3.11, 6.9, LS.11, ES.6, as well as history SOL 2.7, 2.9, VS.10, and CE.12.

### ***Google Earth Pro Is Now Available For Free***

Google has announced that Google Earth Pro is now available for free. Google Earth is a geospatial software application that displays a virtual globe, which offers the ability to analyze and capture geographical data. Google Earth was created after Google acquired CIA-funded Keyhole Inc. in 2004. Under Keyhole, the application was known as EarthViewer 3D. Visit [Google Maps](#) to learn more.

### ***AAAS Science Assessment*** <sup>beta</sup>

The assessment items on this website are the result of more than a decade of research and development by [Project 2061](#), a long-term science education reform initiative of the American Association for the Advancement of Science.

Here you will find free access to more than 600 items. The items:

- Are appropriate for middle and early high school students.
- Test student understanding in the earth, life, physical sciences, and the nature of science.
- Test for common misconceptions as well as correct ideas.

This website also includes:

- Data on how well U.S. students are doing in science and where they are having difficulties, broken out by gender, English language learner status, and whether the students are in middle school or high school.
- “My Item Bank,” a feature that allows you to select, save, and print items and answer keys (requires [site registration](#)).
- A feature that allows you to create and take tests online using items from the item collection (requires [site registration](#)).

Intended primarily for teachers, these assessment items and resources will also be useful to education researchers, test developers, and anyone who is interested in the performance of middle and high school students in science.

## Teacher Opportunities

### *Innovative Technology in Science Inquiry Webinar*

Join the Innovative Technology in Science Inquiry (ITSI) team on **February 17** for an hour of stimulating chat on using ITSI models in science inquiry activities. Members of the Concord Consortium's Professional Learning Community will introduce you to model activities, answer your questions about using the ITSI tools and provide updates on the new HTML5 format. They will share their experiences, favorite models, and hot tips. [Learn more](#) » These are many of the same models you can find correlated to the Virginia Science Standards of Learning on the [Virginia Science Activities, Models, and Simulations](#) web page.



### *Library of Congress Accepting Summer Teacher Institute Applications: Primary Sources in Science*

The application for the Library of Congress Summer Teacher Institute for Primary Sources in Science is now available. This week-long professional development opportunity, taking place **July 20-24, 2015**, is designed for K-12 educators who teach science or collaborate with science teachers. In the Science Institute, participants will explore the benefits of using historical primary sources in the science classroom, particularly around the nature of science, the practices of scientists, and the relationship between science and society. Participants will build skills in teaching effectively with photographs, manuscripts, drawings, maps, and other formats from the Library's collections. [Full article](#)

### *Join the National Park Service in Ringing "Bells across the Land: A Nation Remembers Appomattox"* National Park Services

On April 9, 1865, Union Gen. Ulysses S. Grant met Confederate Gen. Robert E. Lee to set the terms of surrender of Lee's Army of Northern Virginia. In conjunction with a major event at Appomattox Court House National Historical Park, the National Park Service and its partners invite communities across the nation to join in this commemoration. The bells will ring first at Appomattox at 3:00 p.m. on April 9, 2015, coinciding with the moment the historic meeting between Grant and Lee in the McLean House at Appomattox Court House ended. After the ringing at Appomattox, bells will reverberate across the country. Churches, temples, schools, city halls, public buildings, historic sites, and others are invited to ring bells precisely at 3:15 pm for four minutes (each minute symbolic of a year of war). **If you have access to any such organizations, please encourage them to participate.**

Share how you observed it with **#BellsAcrossTheLand2015**. Stories will be compiled in one place to see how each one helps build our national story.

Please join us in the historic commemoration. Let bells ring across the land!

For additional information, please see the attached Press Release and the National Park Services Teacher Resource Packet titled "Bells Across the Land." For further information or additional resources, please contact Amy Bracewell from Cedar Creek/Belle Grove National Historical Park at [amy\\_bracewell@nps.gov](mailto:amy_bracewell@nps.gov).

### *Dominion to Award \$1.2 Million in Environmental Grants*

The Dominion Foundation will award up to \$1.2 million in environmental stewardship grants to nonprofit 501(c)(3) organizations in communities served by Dominion companies (all Virginia localities eligible). The Dominion Foundation will consider grant requests up to \$50,000 that focus on specific,

short-term projects that promise measurable results to improve the environment. The projects should support one or more of the following priorities:

- Protecting and preserving natural habitats
- Monitoring and enhancing water quality
- Preventing pollution and improving open spaces
- Making nature accessible
- Educating the public about environmental stewardship

#### **Application Cycle**

- **March 2** - Applications due by 5 p.m.
- **April 13** - Notification to all applicants
- **April 25** - Public announcements

#### **How to Apply**

To begin your application, first complete the brief [eligibility quiz](#).

#### ***Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) – Nominations Open – Grades 7-12***

The Presidential Awards for Excellence in Mathematics and Science Teaching is pleased to announce that the 2014-2015 cycle for grades 7 – 12 has begun and the nomination process has been opened. Nominations close on **April 1, 2015**.

PAEMST are the nation's highest honors for teachers of mathematics and science (including computer science). Awardees serve as models for their colleagues, inspiration to their communities, and leaders in the improvement of mathematics and science education. Since 1983, more than 4,300 teachers have been recognized for their contributions in the classroom and to their profession. If you know great teachers, nominate them to join this prestigious network of professionals.

Please consider nominating a teacher [here](#).

## **Student Opportunities**

#### ***2015 National Youth Science Camp***

The National Youth Science Camp (NYSC) is an intense month-long camp for young scientists conducted during the summer after they graduate from high school. In a rustic setting in West Virginia, students from around the country are challenged academically in exciting lectures and hands-on studies on current science topics. The program also offers participants the opportunity to experience a wide variety of outdoor activities that have a minimal impact on the environment and are challenging for the experienced but accessible to those who have never participated in outdoor excursions. The NYSC is an all-expenses-paid program. The National Youth Science Foundation will arrange round trip transportation from an airport near the delegate's home to Charleston, West Virginia.

*More information is posted in Supts. memo #008-15 [2015 National Youth Science Camp \(NYSC\)](#)*

#### ***Virginia STEAM Academy***

Virginia Science Technology Engineering and Applied Mathematics (STEAM) Academy is now accepting applications for Summer STEAM 2015.

Summer STEAM is the Virginia STEAM Academy's signature summer offering intended to inspire and expose rising 6th-8th grade students from across the Commonwealth to STEAM content, applied learning, and leadership-developing activities. This is their third year of offerings. There is no cost to attend.

Please visit <http://vasteam.org/summer-steam> to view program offerings and application process.

**Applications are due March 24, 2015.**

***The Virginia Museum of Natural History has an exciting opportunity for middle school students!***

VMNH would like to invite you to register for one of our upcoming Smithsonian Science How live, interactive webcasts. Each webcast will align with the Virginia Science Standards of Learning and will focus on connecting students to scientists, increasing students' understanding of science, and inspiring students about STEM education and careers. To learn more, go to: <http://www.vmnh.net/smithsonian-science-how>

***Sally Ride EarthKAM*** (Earth Knowledge Acquired by Middle school students) is a NASA educational outreach program that enables students, teachers, and the public to learn about Earth from the unique perspective of space. During Sally Ride EarthKAM missions (periods when the Sally Ride EarthKAM camera is operational), middle school students around the world request images of specific locations on Earth. The entire collection of Sally Ride EarthKAM images is available in a searchable Sally Ride EarthKAM image archive. This image collection and accompanying activities are extraordinary resources to engage students in Earth and space science, geography, social studies, mathematics, communications, and art.

To sign up, please visit <https://earthkam.ucsd.edu>. If you have any concerns or questions, please do not hesitate to contact us at [ek-help@earthkam.ucsd.edu](mailto:ek-help@earthkam.ucsd.edu).

***Holiday Lake Forestry Camp***

Do you know students who are interested in natural resources? Please consider nominating them to attend Holiday Lake Forestry Camp, held June 15-20 at Holiday Lake 4-H Center near Appomattox. This residential camp immerses students in field-based learning and introduces them to careers in forestry, wildlife, and related fields. Forestry Camp is open to Virginia residents aged 13-16 who have not attended before. Nominations can be made by any non-related adult and are accepted Jan. 1- April 1. See <http://dof.virginia.gov/forestry/camp> for forms and information.

***2015 BioGenius Challenge***

Applications for the Virginia BioGENEius Challenge are now open. Students can use this link to apply <http://www.biotechinstitute.org/go.cfm?do=Page.View&pid=54>. I have attached a flyer for the Challenge and ask that you please forward the flyer and application link to any teachers or students contacts you feel would be interested in this program.

**Please note new in 2015 there are now 3 Challenge Tracks students can apply to: Medical, Agricultural and Industrial/Environmental Biotechnology.**

- MEMO 011-15  
[Presidential Awards for Excellence in Mathematics and Science Teaching \(PAEMST\) Program](#)
- MEMO 003-15  
[Tracking Legislation During the 2015 General Assembly Session](#)
- MEMO 008-15  
[2015 National Youth Science Camp \(NYSC\)](#)
- MEMO 025-15  
[Request for Proposals \(RFP\) for 21st Century Community Learning Centers Competitive Grant Program](#) 
- MEMO 029-15  
[Mathematics and Science Partnership Competitive Grant Program for 2014-2015 Second Round Proposals](#) 
- MEMO 025-15  
[Request for Proposals \(RFP\) for 21st Century Community Learning Centers Competitive Grant Program](#) 

## Articles

### ***Classroom Observation Protocol: User Guide, AIM: K-8 Science MSP, December 2014.***

AIM: K-8 Science MSP created a classroom observation protocol explicitly tied to research on learning. The protocol was developed to assess student opportunity to develop conceptual understanding of a targeted science idea across all instruction on that idea. This user guide includes an annotated version of the protocol describing how the protocol is intended to be used.

<http://hub.mspnet.org/index.cfm/27866>

### ***AcademyScope: Free National Academies Resources***

[AcademyScope](#) is a visualization of all of the reports that are available on the National Academies Press website, allowing you to browse through the reports of the National Academies by topic area and seeing relationships between titles. Check out resources on the biology, history, the future trends of infectious disease--and the Education section, which contains resources for K–12 teachers.

### ***Assessment as a Positive Influence on 21st Century Teaching and Learning: A Systems Approach to Progress***, James W. Pellegrino, *Psicologia Educativa*, December 2014.

As always, please contact one of VDOE Science Team if you have questions.

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[Science Resources](#)

