

VDOE Science Update

January 15, 2015

NEWS

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 7, 2015.

Audience - K-8 teachers

Time - 8:30 a.m. – 2:00 p.m.

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

Cost \$25

Governor McAuliffe and Virginia Council on Women Announce the 4th Annual STEM Essay Contest

Governor McAuliffe and the Virginia Council on Women have announced the 4th annual STEM (Science, Technology, Engineering, and Math) Essay Contest for high school junior and senior girls.

The Council will award one \$5,000 scholarship to a female junior or senior who will be pursuing a STEM career at an institution of higher education. Other scholarships may be awarded at the discretion of the Council.

The STEM Essay Contest was launched in 2012 with 170 young ladies from across the Commonwealth submitting essays focusing on the student's vision for a future STEM education or career. The Council raised \$10,000 and made three scholarship awards.

Last year, the Council received nearly 300 essay submissions and thanks to the generosity of sponsors, was able to award five scholarships, with the highest award winner receiving a \$10,000 scholarship.

For more information, visit <https://commonwealth.virginia.gov/council-on-women/stem-essay-contest/>.

2015 Virginia General Assembly

The Virginia General Assembly convened this week. The VDOE tracks and reports on proposed legislation, bills, and resolutions of interest to school superintendents and division personnel. The history of any bill or resolution, all amendments, and the text of the legislation are available by clicking on the bill or resolution number on the [Education Legislation](#) webpage.

All legislation becomes effective in July unless otherwise indicated. Any information about actions that may or must be taken by local school boards is included in the summary of each bill.

At the conclusion of the General Assembly, final tracking reports are compiled. These will reflect the final action on education-related legislation tracked by VDOE.

Public Comment Sought on ESEA Waiver Renewal

January 20 is the deadline for [public comment](#) regarding Virginia's Elementary and Secondary Education Act (ESEA) flexibility renewal request. Since 2012, the U.S. Department of Education has granted Virginia

waivers from certain requirements of ESEA. The current waiver request application would be for a four-year renewal through the 2018-2019 school year. Additional [ESEA Flexibility](#) information is available.

Dissecting Science with Nell Greenfieldboyce, NPR Science Correspondent!

You may be interested in viewing a presentation by Nell Greenfieldboyce called "**Dissecting Science**" [Here is a link to the article and video.](#) [Nell Greenfieldboyce](#), NPR Science Correspondent, joined Science Matters on November 12, 2014 at the Community Idea Stations as part of their 50th Anniversary celebration. Ms. Greenfieldboyce engaged, informed, and entertained guests with an informal talk on "[Dissecting Science: Through the Lens of NPR Science Reporting.](#)"

Teacher Resources

NAEP Question Tool

The [NAEP Questions Tool \(NQT\)](#) provides access to over 3,000 released questions from NAEP assessments in all NAEP subject areas. You can see examples of students' actual answers to **constructed-response questions, with scorer comments**. You can also see the percentage of students nationwide who answered each question correctly, and how students' performance on a given question corresponds to their overall scores.

You can bookmark question for later use, and use them to supplement classroom instruction.

For information about using the NQT:

- Watch the [short video showing the features of NQT](#) and how to use them
- Get more details from the [tutorial](#) and the [Quick Reference Guide](#)  (553 KB)
- Investigate the "What can I do here?" link and the Help button that are on every page of the NQT.

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. 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.

Teacher Opportunities

Student and Teacher Scholarships for GSNC 2015

The deadline for the Hansen Family Foundation Scholarships for students and teachers to attend the Green Schools National Conference has been extended until January 23rd. They are for middle/high school students and teachers who would benefit from attending the conference.

The scholarships are for the full registration fee. Applications can be found here:

Students: <https://greenschoolsnationalnetwork.org/conference/hffstudent/>

Teachers: <https://greenschoolsnationalnetwork.org/conference/hffteacher/>

NOAA Climate Stewards Education Project

If you want to do more than just learn about climate science? Join educators who are supporting climate resilience and apply to be a part of the [NOAA Climate Stewards Education Project \(CSEP\) Stewardship Community](#).

In addition to having access to monthly webinars, book club discussions and face-to-face regional workshops, educators accepted into the Stewardship Community will:

- Be eligible for mini-grants support (up to \$2000);
- Be eligible to receive support for travel to attend and present at regional workshops &/or conferences;
- Have access to a community-wide participant-driven email list-serve;
- Receive continuing support for evaluation for their project; and
- Have their completed project highlighted on a NOAA website.

Applicants to the CSEP Stewardship Community will be committing to:

- Develop and implement a climate stewardship action project (definition below)
- Participate in a Stewardship Project Peer Review Group - meetings during evening hours (~ once/month).
- Use a newly developed CSEP Wiki to post stewardship project plans, progress updates, results, share resources, and comments with other CSEP educators.
- Participate in CSEP evaluation efforts i.e. online surveys.

The application for CSEP includes a proposed climate stewardship action project. Applicants will be selected based on the merits of their proposal. If accepted, participants will work with a peer review group and a peer mentor to refine their proposal which may be submitted for funding of up to \$2000.00 during the summer of 2015. Accepted refined proposals will be funded for the 2015/2016 academic year.

Go to <http://goo.gl/jCLVnm> to apply online. The deadline to submit an application is midnight **January 18, 2015**. Accepted educators will be notified by January 30, 2015

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 \(NYSC\)](#)

EarthKAM Mission

Schools and school divisions are invited to take part in the next EarthKAM Mission, scheduled to take place January 27, 2015 through January 30, 2015 (Please keep in mind that dates may be subject to change due to other events on board the International Space Station.)

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.

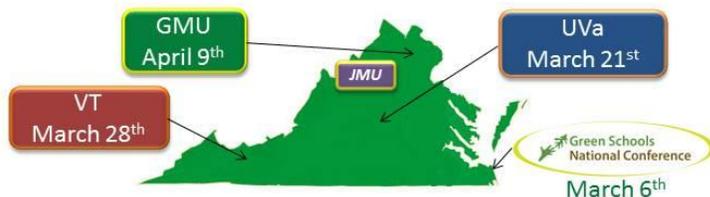
Holiday Lake Forestry Camp

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 VIRGINIA KIDWIND CHALLENGES

The KidWind Challenge is a wind turbine design competition for **teams of middle and high school students**. Students incorporate engineering and science to build powerful small-scale wind turbines and compete with students from around the state to generate the most electricity.

This year we will be holding FOUR Regional Qualifying Challenges leading to the Eastern Finals at JMU on April 25th, 2015!



The top three teams in each division at each Regional Qualifying Challenge will get an invitation to the **Eastern Finals** on **April 25th** at **James Madison University!**

Register at KidWind.org for only \$10!

**When you register at KidWind you will receive a kit with some materials (hubs, generator, etc.) to get your team started. The website also has resources for you and your team including a blog and educational resources.*



- MEMO 003-15
[Tracking Legislation During the 2015 General Assembly Session](#)
- MEMO 008-15
[2015 National Youth Science Camp \(NYSC\)](#)

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.

CEOs Report on Severity of STEM Skills Gap

In December, the Business Roundtable and Change the Equation released results from the 2014 national survey on workforce skills. Of the 126 CEOs who responded, the vast majority agreed that the skills gap is a problematic issue for their companies. Skills in advanced computer/IT and quantitative knowledge present the biggest gap in these companies. According to the CEOs, many of their companies' job applicants and new hires lack basic STEM literacy. When asked what types of activities are most effective at addressing STEM skills shortages, most CEOs ranked internship programs and curriculum development at educational institutions as their top solutions. Read more about the survey's findings [here](#).

Designing for Equitable Learning Across Settings

William Penuel, Tiffany Lee, Bronwyn Bevan, A Research + Practice Collaboratory, April 2014.

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

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[Science Resources](#)