

Pennsylvania

Science Matters e-Blast

October 26, 2016



This issue of the Science Matters eBlast is filled with Pre-K through high school opportunities and resources for both teachers and students. Please share the eBlast with your colleagues. It is also available in the [Science Learning Community](#) of SAS. If you have questions or items for Science Matters, contact Dave Bauman: davbauman@pa.gov

Professional Opportunities

PSTA Annual Conference will be held on November 30 – December 2 at the Penn State in State College. The Advance Program is available on the [PSTA website](#) and in the [SAS Science Learning Community Forum](#). Building on the Leadership Day on Wednesday, additional sessions for PSTA include:

Title: Engaging Students through Modeling

Presenter: Laura Micco

The Next Generation Science Standards call for teachers to do things differently in the classroom, but what does that actually mean in reality? Explore the practice of “developing and using models” in a way that engages students and constructs knowledge over time rather than using models as a one hit wonder. We will walk you through a two-week unit that utilized this practice, show you evidence of the success modeling the NGSS way through a snapshot of a 6th grade classroom and allow you a chance to participate in a mini-modeling activity that you can take back to the classroom.

Title: Implementing Smithsonian Science Education Center Theory of Action: Implications for NGSS

Presenter: Cheryl Rush Dix

This session will focus on the implementation of a K-12 science program based upon NGSS for the Erie School District. Lessons learned will be shared in developing the curriculum, professional development, and implementation of the new curriculum. Come with your questions and curiosity in learning how to implement NGSS in your district.

Title: Developing and implementing Middle School Science Curriculum based on NGSS

Presenter: Brian Suter

Neshaminy School District has spent considerable time in rewriting their middle school science curriculum. In developing the middle school curriculum, A Framework for K-12 Science Education and NGSS were used as the basis for the revised curriculum. Learn more about the process and how the shift in teaching middle school science has progressed with the changes based upon NGSS and A Framework for K-12 Science Education.

Title: Assessing for Mastery, Not Test Scores

Presenter: Juanine Fouche

This session will look at Milton Hershey School's successful school-wide approach to assessment in science. We will discuss the approach, methods, and rationale. Resources will be provided.

Title: Implementing NGSS

This session will focus on districts utilizing NGSS in developing curriculum and implementing their science programs. It will be facilitated by Dave Bauman and will be an informal discussion. If you are utilizing NGSS, please come to share your stories and journey. If you are curious about districts implementing NGSS, come with your questions. This will be a discussion without formal presentations.

PA Science Education Framework

Presenter: Dave Bauman

This session will focus on the development of the K-12 Science Education Framework and how it can be used within school districts to develop a coherent K-12 Science curriculum.

PSTA Leadership Day – A Common Vision of Science Education in Pennsylvania will be held on November 30 at the Penn State, State College. The full day and evening conference will focus on Three Dimensional Teaching and Learning, constructing a coherent K-12 science curricula, implementing a Three Dimensional Learning Model, supporting teachers with high quality professional development, and networking to share resources and expertise. Resource People include Brett Moulding, Peter McLaren, and Carla Zembal-Saul. Participants will receive [A Vision and Plan for Science Teaching and Learning](#). In addition, districts who have been using NGSS and the Three Dimensional Learning Model will be sharing their experiences in implementation of new science curricula. Further in depth sessions will be offered at [PSTA](#) on December 1. The program and registration materials for the Leadership Day are available in the [SAS Science Learning Community](#).

Findings and Recommendations Pursuant to Act 1 of 2016 is a [report](#) that was submitted to the General Assembly of Pennsylvania by PDE. This [report dealing with graduation requirements](#) includes findings and recommendations for graduation from high school in Pennsylvania. It is a report that was required by the General Assembly upon which they will then take into consideration. It only includes recommendations and the General Assembly will need to act to keep or change graduation requirements for students graduating in 2019 and beyond.

The Department of Energy, NOAA, and Smithsonian will be holding a webinar on Tuesday, November 1, at 8:00pm, to focus on resources, tools, classroom materials, and PD opportunities. Space is limited and [registration](#) is needed to ensure you have a seat at the webinar:

<https://attendeegotowebinar.com/register/51347856501675333>

PAEE is currently accepting proposals for workshops for the 2017 Conference. The conference will be held on March 13 and 14 at the McKee Environmental Learning Center. The theme is Deepening Connections, Inspiring Innovation. More [information and proposal forms](#) are available on the [PAEE Website](#).

Engaging English Language Learners in Science – November 14-15 at PaTTAN Harrisburg. It is an interactive [two day workshop](#) offering science teachers of English learners time to delve into combining English language development standards and science practices. Through hands-on experimentation and analysis of language embedded within the content and practices, participants will develop deeper understanding of how to engage English learners having various proficiency levels. The workshop will conclude with participants applying the process to one of their lessons. This is for elementary, middle, or secondary teachers. Registration and more information is at the [ESL Portal](#).

Reminders

The US Department of Education Green Ribbon Schools application is now open and available on [PDE's Green Ribbon School website](#). Applications for GRS are due on December 5, 2016. Download the application to help make submission easier!

STEAM Forward Learning at St. Vincent College in Latrobe is hosting a one day conference on November 16, 9:00am – 3:00pm. More information is located at: <http://www.steamforwardlearning.org/> Hands-on and real-time classroom strategies are the focus of this symposium across all grade bands, PreK – 12. Invited local speakers from the Fred Rogers Center, Flipped Learning Network, Children's Innovation Project, Remake Learning School Districts and many others are planned to help shape this STEAM Forward learning event.

PAESTA Science Conference will be held on Saturday, November 19, at Penn State Brandywine. The [PAESTA Science Conference](#) will have three invited scientists come speak to PAESTA members about the basics of climate science, how scientists are currently studying climate, the climate of Pennsylvania, and the climate and possible habitability of exoplanets. Registration (free) and conference information is located here: <http://www.paesta.psu.edu/2016-paesta-science-conference>. Registration deadline is November 1, 2016.

PA State Parks continue to offer innovative, multi-modal educator workshops across the state. Participants will receive Act 48 credit. Continuous updates of workshops can be found at: <http://pennsylvaniagov.enterprise.localist.com/search/events?search=teacher+workshops>

2016 BioTechnology Workshop – Tuesday, November 22 at Lycoming College. This year's [Biology Teacher Workshop](#) features presenters from HHMI, BioRad, 3D Molecular Designs, Pennsylvania Society for Biomedical Research and the Science National Honor Society. Contact Karen Avery with questions: kavery@montoursville.k12.pa.us

The Every Student Succeeds Act in Pennsylvania: Recommendations From Stakeholder Work Groups and Associated Research is available online at the [PDE website](#).

The Center for Science and the Schools (CSATS) at Penn State has added two additional iSTEAM workshops for this year. Check out the [iSTEAM worksops](#) for the 2016-2017 school year.

Grants, Awards, Contests

NSTA Awards and Recognition Program recognizes exceptional and innovative science educators. The deadline for all awards is December 15, 2016. [NSTA Awards and Recognitions](#).

The Presidential Awards for Excellence in Mathematics and Science Teaching application will be available November 1. [PAEMST](#) is a phenomenal program that recognizes excellence in the teaching of science. By going to the [PAEMST website](#), you can sign up for notification of information regarding the program.

[PA Society for Biomedical Research](#) is announcing their essay and poster contests. The contest is open to students in 7th-12th grades.

Essay Contest: <http://www.psbr.org/programs-18/essay-contest>

Poster Contest: <http://www.psbr.org/programs-18/poster-contest>

DEP Environmental Education Grants have been revamped for the 2017 grant round. More information is on the [DEP Grant webpage](#).

Science Matters Information

If someone sent you this eBlast, you can become a member of Science Matters to receive it directly! Go to: <http://pascience.org/Science-Matters.php>

Science Matters is an initiative of the Pennsylvania Science Teachers Association and the National Science Teachers Association to promote quality science education, through the sharing of information, resources, and professional development opportunities. The Pennsylvania state coordinator is Dave Bauman: davbauman@pa.gov.