Members receiving the Science Matters eBlast: 7,173

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PSTA Conference

PSTA Annual Conference will be held September 30 – October 1, 2018, with the theme of STEM Education: A Pathway to Success. Jeff Remington, national STEM Ambassador and middle school science teacher at Palmyra Area School District, will be the Keynote Speaker. Registration is now open. PSTA Session Proposals can be submitted by accessing the Conference page on the PSTA website.

In the News

Seventy percent of science teachers do not have adequate funding to support science instruction for their students, leading to almost 95% of science teachers spending their own money to support learning in their classroom. Teachers in urban schools receive 2.5 times less funding than science teachers in suburban areas. And, suburban teachers receive 1.3 times more funds than teachers in rural areas. Due to a lack of resources, science teachers report they sometimes conduct less intricate laboratory lessons than if they had adequate funding. If the expectations include teaching the nature of science, then there are significant problems for teachers to have the resources necessary for 3-Dimensional Teaching. A research team from North Carolina State University surveyed middle and high school science teachers to look at how much money teachers spend in their science classrooms. To discuss their research and its implications for science instruction in urban, rural and suburban schools, Emily Cayton (Graduate Research Assistant) and M. Gail Jones (professor of STEM Education) join us to close out season 11 of Lab Out Loud. As the nation wrestles with the issue of making sure teachers are paid adequately, efforts should also be made to secure adequate funds to educate and prepare the next generation of scientists and engineers. If we want a generation of students to move into the STEM fields.

Lab Out Loud is a podcast, hosted by two science teachers, that discusses science news and science education by interviewing leading scientists, researchers, science writers and other important figures in the field.

Colorado has become the 39th state to adopt/use the Next Generation Science Standards. The Denver Post reports on the adoption of the new science standards for Colorado.

Jeff Remington, a national STEM Ambassador tweets out articles for science and STEM on a regular basis. Here are some examples: STEM Education Around the World, Why does a STEM Curriculum need Empathy?, Class of 2018: This year’s grads not seen as a skills gap solution, Is STEM getting ‘IT’ right for female students?, Sign up to follow Jeff for more articles on science education and STEM.
The Claude Worthington Benedum Foundation and Chevron Corp. announced Thursday nearly $175,000 in Innovation Grants to 37 classrooms across southwestern Pennsylvania and northern West Virginia to expand and support cutting-edge education programs. Nearly one-third of that funding — or about $56,600 — is earmarked for schools in Fayette, Greene and Washington counties.

Professional Resources

Tryengineering.org is a resource for students, their parents, their teachers and their school counselors. This is a portal about engineering and engineering careers, and we hope it will help young people understand better what engineering means, and how an engineering career can be made part of their future. Students will find here descriptions of the lifestyles and experiences of engineers, and on the different disciplines within engineering. We provide hands-on experiments and activities, referrals to summer programs and internship opportunities, and search tools for schools that offer engineering programs. Useful tips on course selection, applying to university programs and financial aid are included. Students can also use this portal to browse questions answered by engineering students in universities and practicing engineers. Parents and educators will find here, in addition, teaching resources, information about school accreditation, and description of plans, organizations and programs that can be of help in planning and preparing students to develop a future career in engineering.

Calendar of Events

There are multiple PD opportunities all across Pennsylvania. They are now listed in the table below with links to descriptions. Take advantage of the numerous opportunities available for promoting high quality teaching and learning of science.

<table>
<thead>
<tr>
<th>Pennsylvania State Parks</th>
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<tbody>
<tr>
<td>Advanced Project Wild Workshop: Wildlife Forensics – Act 48; $10</td>
<td>June 28</td>
<td>Trexler Environmental Center</td>
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<tr>
<td>Advanced Project Wild Workshop: Wild About Bears – Act 48</td>
<td>July 10</td>
<td>Elk Country Visitor Center</td>
</tr>
<tr>
<td>Advanced Project Wild Workshop: Wildlife Forensics – Act 48</td>
<td>July 12</td>
<td>Yellow Creek State Park</td>
</tr>
<tr>
<td>Watershed Education (WE) Teacher Workshop – Act 48</td>
<td>July 12 &amp; 26</td>
<td>Moraine State Park</td>
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<tr>
<td>Nature for Little Learners Educator Workshop</td>
<td>July 24</td>
<td>Ricketts Glen State Park Visitor Center</td>
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<tr>
<td>Project WILD Educator Workshop – Act 48; $15</td>
<td>July 24</td>
<td>Tuscarora State Park</td>
</tr>
<tr>
<td>Advanced Tree Measuring Teacher Workshop – Act 48; $75</td>
<td>July 26 &amp; 27</td>
<td>Cook Forest State Park</td>
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<tr>
<td>Project Learning Tree Educator Workshop; Act 48; Free</td>
<td>August 10</td>
<td>Clear Creek State Park</td>
</tr>
<tr>
<td>Advanced Project Wild Workshop: Wild About Animal Sign and Tracking; Act 48; $10</td>
<td>August 7</td>
<td>Kettle Creek Environmental Education Center</td>
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</tbody>
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Calongo@pa.gov

See above for more information.
**Department of Environment and Protection** has numerous workshops for teachers. Act 48 credit is available.

**The Center for Science and the Schools (CSAT) has a calendar** with all the professional development sessions scheduled to date. They are available for teachers of all levels with Act 48 credits.

### Chesapeake Bay Foundation PD Opportunities designed for Pennsylvania Teachers

- **Past to Present: Mapping the Chesapeake Bay**
  - June 25-29
  - Karen Noonan Memorial Environmental Education Program
  - [Information and Registration](#)

- **Full STEAM Ahead: Exploring Biodiversity of the Midstate and the Impacts of Human Development Through a STEAM Lens**
  - June 25-29
  - Pennsylvania
  - [Information and Registration](#)

- **Teachers on the Bay: Marine Ecology**
  - July 9-13
  - CBF's Fox Island Environmental Education Program
  - [Information and Registration](#)

- **Pennsylvania's Waterways: Investigating Water Quality and Recreation in the Cumberland Valley**
  - July 23-25
  - Harrisburg Area
  - [Information and Registration](#)

- **A Sense of Place: Developing Environmental Literacy Through Place-Based Learning**
  - July 23-27
  - CBF's Port Isobel Environmental Education Program
  - [Information and Registration](#)

- **Teachers on the Estuary: A Field-Based Scientific Inquiry**
  - July 30 – August 3
  - CBF's Karen Noonan Memorial Environmental Education Program
  - [Information and Registration](#)

- **A Bird's Eye View of the Chesapeake Bay**
  - August 6-10
  - Port Isabel Island and Fox Island
  - [Information and Registration](#)

### Pennsylvania State Library in Harrisburg - [website](#)

- **Boards and Coding**
  - July 9
  - Harrisburg
  - Ellen Shenk: 717-783-5969 or ellshenk@pa.gov

- **Wildlife Forensics**
  - July 16
  - Harrisburg
  - Ellen Shenk: 717-783-5969 or ellshenk@pa.gov

- **Technology in Teaching Geology and Paleontology**
  - July 23
  - Harrisburg
  - Ellen Shenk: 717-783-5969 or ellshenk@pa.gov

### Lebanon Valley College STEM Course Offerings Summer 2018

- **Making the most out of a Makerspace**
  - Aug 6-10
  - LVC
  - [LVC Master of Science in STEM Website](#)

- **MSE 821 – Exploration of STEM Careers**
  - July 16-20
  - Various Locations
  - [LVC Master of Science in STEM Website](#)

- **Principles of General Science**
  - July 16- August 3
  - LVC
  - [LVC Master of Science in STEM Website](#)
Conferences Calendar

<table>
<thead>
<tr>
<th>PD Opportunity</th>
<th>Date</th>
<th>Location</th>
<th>Information/Register</th>
</tr>
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<tbody>
<tr>
<td>PSTA Annual Conference</td>
<td>Sept 30 – Oct 1</td>
<td>State College</td>
<td>Information – PSTA Website</td>
</tr>
<tr>
<td>NSELA’s Summer Institute</td>
<td>July 9 – 11</td>
<td>Philadelphia</td>
<td>Information and Registration</td>
</tr>
<tr>
<td>NSTA STEM Forum and Expo</td>
<td>July 11 – 13</td>
<td>Philadelphia</td>
<td>NSTA Conference Page</td>
</tr>
<tr>
<td>PCTM</td>
<td>August 6-7</td>
<td>Harrisburg</td>
<td>Information and Registration</td>
</tr>
<tr>
<td>Dive Deeper Summit</td>
<td>September 20</td>
<td>Harrisburg</td>
<td>Conference Website</td>
</tr>
<tr>
<td>Pittcon Science Week</td>
<td>October 20-21</td>
<td>Pittsburgh</td>
<td>Information and Registration</td>
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Opportunities, Grants, Awards, Contests

<table>
<thead>
<tr>
<th>Award/Oportunity</th>
<th>Date / Deadline</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSSA / Keystone Exam Committee</td>
<td>Apply now for 2019</td>
<td>Information and Application</td>
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Science Matters Information

If someone sent you this eBlast, you can become a member of Science Matters to receive it directly! Go to Science Matters website or SAS Science Learning Community. 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. All eBlasts are archived in the Content Repository of the SAS Science Learning Community. The Pennsylvania state coordinator is Dave Bauman: davbauman@pa.gov.

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