



Hello Science Education Leaders,

Here are the latest science education resources and opportunities I've heard about. If you have announcements to share about science or STEM-related professional learning and resources, please send them my way for the next edition. A record of these emails can be found on my website: dpi.wi.gov/science/social-media.

Spread the love,
Kevin

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- [2019 Lake Erie Shipboard Science Workshop](#) - apply by Feb 28
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Details

Learning Opportunities

- Workshop - Satellites, Climate, and Citizen Science - March 11-12

<http://aldoleopoldnaturecenter.org/event/from-local-to-global-satellites-citizen-science-stewardship-and-you-2-3/2019-03-11/> - A workshop for middle and high school educators. Join NOAA Planet Stewards Education Project, NOAA's Cooperative Institute for Meteorological Satellite Studies (CIMSS) and the Aldo Leopold Nature Center (ALNC) for this two day workshop highlighting climate programming and ideas for integrating STEM resources into your classroom or informal science curriculum. Day one will take place at ALNC in Monona. Day two will take place at CIMSS at UW-Madison, the birthplace of satellite meteorology. Participating educators will leave fully equipped to coach their students in a spring 2019 virtual science fair (<http://cimss.ssec.wisc.edu/education/goesr/vsf>) using satellite data to investigate weather and natural hazards. Cost is \$50. Reimbursement of up to \$200 available to support travel and subs.

- 2019 Lake Erie Shipboard Science Workshop - apply by Feb 28

<http://www.cgll.org/opportunities/2019-lake-erie-shipboard-science-workshop/> - The Center for Great Lakes Literacy and Great Lakes Sea Grant Network invite teachers working with 5th-12th grade students in the Great Lakes Basin and informal educators with a Great Lakes focus to apply for a spot on this unique, all expenses-paid, educators' cruise. It's a week-long professional learning opportunity, working side-by-side with scientists on the 180-foot research vessel *Lake Guardian*. Participants board the ship in Cleveland, OH on July 8 and stop at Erie, PA and Put-in-Bay, OH before disembarking in Cleveland, OH on July 14.

- Networking with WI Science Education Leadership Assoc (WSELA) - Feb 26

<https://www.wsst.org/wsela> - This science leadership group meets three times a year to share resources and learn together. On Feb 26th, we'll be meeting at the Hartford School District office in Hartford from 9 to ~3. Anyone is welcome. Kevin A. will share the latest from DPI, and other educators will share work they're doing to implement the WSS/NGSS. First-time attendance is free, and after that it is \$20, which pays for a morning snack/coffee and lunch.

- DPI Science Forward Exam Standards Setting Opportunity – apply by Mar 15

[Submit an online application](#) and email a resume to osamail@dpi.wi.gov by March 15. The purpose of the standard setting is to establish cut scores for the Wisconsin Forward Exam. The standard setting will focus on achievement standards for Science grades 4 and 8. We are looking for 10-12 participants per grade level, aiming for a diverse group of educators from all over Wisconsin (including EL and special education teachers). Applicants must be familiar with the new Wisconsin Science Standards. The review will take place in Madison on May 29 and 30 (7:30 a.m. to 4:30 p.m.). All applicants must be available to participate both days. Overnight accommodations are available to committee members who qualify. Meals not provided at the meeting will be eligible for reimbursement. There will be reimbursement for mileage to and from your home.

- BTC Institute Summer 2019 Biotech Courses in Madison

<https://www.btc.org/k-12-programs/programs-for-teachers/> - Two summer courses are offered in 2019, Biotechnology: The Basics, from July 22-26, and Biotechnology: Beyond the Basics, from July 29 to Aug 2. Recognizing that funds for professional development are limited, there are no course fees and stipends are provided to successful applicants. Stipends are \$100 per day for each course. They view the provision of stipends as a way of furthering collaboration. This financial support is received with the provision that content covered in the course or workshop will subsequently be incorporated into recipients' course materials, shared with students and colleagues, and documented in a report. BTC Institute also offers an [Equipment Loan Program](#) and a listing of [Resources for Biotechnology Education](#).

Resources

- New DPI Science Standards and Assessment Resources

I have developed five new web pages this last month to support understanding and implementation of the new science standards: 1) [general learning such as webinars and modules](#), 2) [scope and sequence](#), 3) [leadership resources](#), 4) [phenomena](#), and 5) [science and engineering practices](#). In case you missed it, there was also a webinar on the new science Forward Exam on Jan 23rd. You can find the recording and related resources at this site: <https://dpi.wi.gov/science/assessment/state-test>.

- Effective Student Feedback w/ Standards-Based Grading in Science

<https://wisdpiscience.blogspot.com/2019/02/guest-post-student-feedback-and.html> - This is a new, guest blog post by Allison Fuelling and Danielle Bendt of the Marshall School District. They describe their work with standards-based grading, particularly how it has improved student feedback. If you're doing interesting work with science standards implementation and are interested in writing it up to share with educators across the state and country, please send me some details!

- Phenomenon-Based Instruction beyond Science - New ideas for integration

<https://wisdpiscience.blogspot.com/2019/02/phenomena-based-instruction-isnt-only.html> - this blog post discusses how phenomenon-based instruction could look in science, social studies, mathematics, and literacy. It emphasizes that similar instructional approaches can be used across disciplines to support effective learning for all students - pushing beyond traditional conceptions of "integrated" instruction. Examples in this blog are mostly elementary, but also go into K-12 ideas.

- K-8 Educator American Geosciences Institute - nominations by mid-March

https://www.americangeosciences.org/sites/default/files/k8_tla_01282019.pdf - The 11th annual American Geosciences Institute (AGI) - ExxonMobil Exploration Teacher Leadership Academies - will be held July 7-12, 2019, in Houston. There are four, week-long academies where educators learn Earth science content, explore hands-on STEM activities, and gain real-world science experiences. Funding from ExxonMobil and AGI covers academy-related costs for the teachers, including travel, meals, lodging, and educational materials. Teachers are encouraged to come as a team of two to four, from one grade level or several across the K-8 range, so that they can continue to support each other when they

return to their local setting. They encourage principals, science coaches, or other administrators to nominate teachers by mid-March, as application reviews begin in April.

- Science Assessment Literacy Resources

This website from the "Strengthening Claims-based Interpretations and Uses of Local and Large-scale Science Assessment Scores" (SCILLSS) project includes NGSS assessment resources and a workbook on assessment literacy (about 3/4 of the way down).

- Step Up 4 Women Physics Initiative - lessons/resources for HS physics

<https://www.aps.org/programs/education/su4w/> - This NSF project aims to get more females interested in physics. Once you register on their site, you can access lessons and other instructional materials that have been created with this purpose in mind.

- Want to Learn to Fly? Or have HS students who may? Aviation scholarships!

<https://www.aopa.org/training-and-safety/students/flight-training-scholarships> - Interested in learning how to fly? The Aircraft Owners and Pilots Association (AOPA) Foundation is offering \$10,000 scholarships to high school students and (new in 2019) teachers to pursue a pilot license. This is a great opportunity for high school students who have been involved in STEM, aviation, or related activities; 80 students will receive scholarships. Teachers must be working in a school or district that has an aviation program; 20 teachers will receive scholarships. Deadline to apply is April 2, 2019.

- New DPI Civic Responsibility Definition - thoughts?

A DPI group has been discussing how civic responsibility connects across subject areas. I think it has important implications for how we teach science, particularly given recent politicization of science ideas. We developed a civic responsibility core statement: "Civic engagement is developing and applying knowledge, skills, and habits in collaboration with diverse individuals within varied communities to address issues, solve problems, or affect change." If you have a minute, let me know how this statement resonates with you and how you engage in this type of work in science.

Student Opportunities

- MASTERS Science and Engineering Fair - Madison - May 12

<https://dpi.wi.gov/science/science-fairs/masters> - The Madison Area Science, Technology, and Engineering All-Stars (MASTERS) program enters its 3rd year engaging middle school students in an opportunity to show their learning. It welcomes students from across the state and will be held from 1 to 4pm in Madison on May 12th. Registration should be completed by the beginning of April. Last year the student who won tested the acoustics of various types of 3D-printed bridges for his violin. It's low-key with free pizza for all. :) Deeper-level projects will ideally be part of WSS-based instruction - invite your students to share theirs! *And, please let me know if you'd like to join a committee to help lead this program.*

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“Science is not a body of facts, [it] is a method for deciding whether what we choose to believe has a basis in the laws of nature or not.” – Marcia McNutt