



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](http://dpi.wi.gov/science/social-media).

Hope you enjoy the holiday break!  
Kevin

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## Details

### Learning Opportunities

- Science Instructional Materials Forum in Mosinee - Dec 13

<https://goo.gl/forms/giHi4GHWePGCbLjh1> - WSST and DPI are partnering on an Instructional Materials Forum on December 13th at Mosinee HS (near Wausau). It will be 9am to 3pm. We'll network around what districts are doing, discuss what's available, and go through resources to review alignment to the new WSS and NGSS. Note: non-WSST members should bring check payment of \$25 on the day of the event or become a member for \$25 before the event.

- WSST/DPI Winter Book Study - first virtual meeting on Jan 7th, 8pm

<https://goo.gl/forms/DJbfPjC0aepqynVI3> - this virtual book study will take place at 8pm on Jan 7th, Feb 4th, and Apr 15th, with an optional in-person meeting at the WSST Conference. We'll be using the new book [Ambitious Science Teaching](#) and related online resources. This book study will also provide mentoring and ideas for those applying for the [Presidential Award for Excellence in Mathematics and Science Teaching](#) (PAEMST). Applicants for PAEMST will receive a free book. The first 30 WSST members who sign up will also receive a free book.

- WSST Conference Registration Open - lots of WSS/NGSS sessions

[www.wsst.org](http://www.wsst.org) - Registration is now open for the 2019 WSST Conference from March 7-9 in Madison. I'll be leading a half-day workshop for administrators on WSS/NGSS implementation. Email me for details on how to get free administrator registration! There will also be WSS/NGSS related sessions on assessment, literacy connections, the new Forward Exam, and instructional materials.

- WSS/NGSS Assessment Workshop at CESA 6 - Feb 7

<https://login.myquickreg.com/register/event/event.cfm?eventid=22423> - In this workshop we'll dig into formative and summative assessments based on the Wisconsin Standards for Science (and NGSS). We'll review and create performance tasks, consider strategic systems of assessment, discuss standards-based grading, and evaluate new Forward Exam items.

### Resources

- New NSTA Elementary Science Position Statement

<https://www.nsta.org/about/positions/elementary.aspx> - this new position statement emphasizes the importance of K-5 science learning. We must all work together "nurturing the wonder, enthusiasm, and curiosity in children of all ages." Some administrators have misguided notions of fidelity to particular instructional materials that cut out the rich learning opportunities that integrating science provides, particularly at grades K-2. Find further elementary resources and ideas on the [DPI Elementary Science website](#).

- New National STEM Education Strategic Plan
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<https://www.whitehouse.gov/wp-content/uploads/2018/12/STEM-Education-Strategic-Plan-2018.pdf> - The White House released a new STEM Education strategic plan last week, emphasizing early STEM literacy, an equity focus in STEM, and preparing tomorrow's STEM workforce. Based on this work, DPI and other partners are beginning work on a draft strategic plan for STEM work across Wisconsin.

- New National Academies Report on Secondary Science and Engineering

<https://www.nap.edu/catalog/25216/science-and-engineering-for-grades-6-12-investigation-and-design> - This report is the updated version of America's Lab Report. It emphasizes the need for inquiry-based instruction in science and opportunities for design-based problem solving -- moving beyond the content focus that sometimes dominates secondary level science.

- KEEP Energy Educator of the Year Nominations

<https://www.uwsp.edu/cnr-ap/KEEP/Pages/Networking/Energy-Award-Info.aspx> - Nominate an Energy Educator of the Year – Deadline February 1. Recognize and reward those who champion energy education and efficiency efforts in your K-12 school community with \$1,000! Nominations are being accepted for the 2019 Energy Educator of the Year awards, sponsored by the Wisconsin K-12 Energy Education Program (KEEP).

- Standards-Based Grading with NGSS/WSS - series of blog posts

<https://wisdpiscience.blogspot.com> - I've continued a series of blog posts on standards-based grading with the WSS/NGSS. The most recent discusses one idea for structuring such a system. Previous topics include: 3) why not to use the NGSS performance expectations as categories, 2) what some districts are doing, 1) why to consider standards-based grading.

- 21st Century Community Learning Center (CCLC) grant application open

<https://dpi.wi.gov/sspw/clc/grant-information> - Interested in starting an after-school science or STEM program? DPI is pleased to announce that applications for 21st Century Community Learning Center (CCLC) grants are now being accepted for the 2019-20 school year. The 21st CCLC grant is a federal grant that funds after school programs across the state of Wisconsin. The purposes of the program are to: 1) Provide opportunities for academic enrichment to help students, particularly students attending low-performing schools, to meet challenging state academic standards; 2) Offer students a broad array of additional services, programs, and activities designed to reinforce and complement the regular academic program of participating students; 3) Offer the families of students served by community learning centers opportunities for active and meaningful engagement in their children's education, including opportunities for literacy and related educational development. Public school districts, private schools, charter schools, and community-based organizations (including faith-based organizations) targeting students enrolled in schools eligible for Title I programs are invited to apply. Applications are due on or before 4:00 PM on February 22, 2019.

- NASA Glenn Engineering Challenges - middle school lessons

<https://www.nasa.gov/glenn-engineering-design-challenges> - engineering-based lessons w/ science linkages from NASA that relate to real challenges that NASA has faced in its work.

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## Student Opportunities

- Wisconsin Youth Institute in Madison and the World Food Prize - April 8

The University of Wisconsin-Madison is hosting the [Wisconsin Youth Institute](#) on April 8, 2019. This is part of programming related to the global event, the [World Food Prize](#), held each fall in Des Moines, IA. This event is open to high school students (and their teachers) in Wisconsin with a passion for change. Students must submit a short paper to attend. All questions and inquiries can be sent to our Wisconsin State Coordinator, Plia Xiong at [plia.xiong@wisc.edu](mailto:plia.xiong@wisc.edu). Deadline to register is March 25, 2019.

- Cubes in Space - grades 6-12

<http://www.cubesinspace.com/> - This is a no cost competition for students 11-18 years old to design and propose experiments to launch into space or near-space on a NASA sounding rocket or zero-pressure scientific balloon. Program registration closes Feb. 8.

- NASA Human Exploration Rover Challenge - HS students

<https://www.nasa.gov/roverchallenge/home/index.html> - competition for HS or college students to design a human-powered rover to explore a simulated other world. Registration deadline of Mar 8.

- NASA Scientist for a Day Essay Contest - grades 5-12

<https://solarsystem.nasa.gov/scientist-for-a-day/home/> - The Scientist for a Day contest challenges students to become NASA scientists studying moons of Jupiter and Saturn. Participants examine three moons and choose the one they think NASA should return to that would yield the best scientific results. This year's topics are Saturn's moons Enceladus and Titan, and Jupiter's moon Europa. After researching the three options, students write an essay under 500 words explaining their choice. Deadline is Feb 8.

- KidWind Contest on Mar 30 and Teacher workshop on Jan 12

<https://www.eventbrite.com/e/kidwind-challenge-wind-workshop-madison-wi-tickets-51617598627> - The free teacher workshop is going to be held Sat. Jan 12th at the Wisconsin Energy Institute at UW-Madison, and the full Challenge where teams will test their turbines will take place Sat. March 30th. More info about the student challenge and registration for it - <https://www.eventbrite.com/e/kidwind-challenge-madison-wi-tickets-51667708507>.

- Wisconsin Regional Middle School Science Bowl - register team by Jan 15

[https://science.energy.gov/wdts/nsb/regional-competitions/middle-school-regionals/wi\\_wisconsin-middle-school-regional-science-bowl/](https://science.energy.gov/wdts/nsb/regional-competitions/middle-school-regionals/wi_wisconsin-middle-school-regional-science-bowl/) - The Science Bowl is free to attend, and teams will receive lunch and t-shirts. Registration is due Jan 15th, and the actual competition will be Feb. 9th at UW-Madison. Contact Matt Bowman for details - [bowman@chem.wisc.edu](mailto:bowman@chem.wisc.edu).

- National Youth Science Camp - application due Feb 28
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<https://nysf.smapply.io/> - This is an experience of a lifetime for two Wisconsin graduating seniors. Students spend 3 weeks in the mountains of West Virginia learning from amazing scientists from around the world, learning from fellow students from across the country and world, and even going to DC to talk with representatives about science policy. Sophia Sun, who went last year, had this to say about the experience, "I had some of the most amazing experiences of my life at NYSC, and many of my favorite memories came from trying things I never would have dreamed of doing. The most memorable parts of NYSC... came from the people. The other delegates came from around the nation and world, and I had an incredible time learning about everyone's cultures, hopes, dreams, and beliefs. We were individuals with drastically differing backgrounds with the same goals of changing the world through science. NYSC was the most welcoming environment I have ever been in. NYSC was one of the most impactful experiences of my life, and I would absolutely recommend any high school senior to attend before starting college!"

- Rube Goldberg Contests for MS and HS - register by Feb 8

<https://www.rubegoldberg.com/hosts/stem-forward-pewaukee-2019/> - High school contest information. Registration deadline is Feb 8, and the contest is March 1st at Waukesha Tech.

<https://www.rubegoldberg.com/hosts/neillsville-high-school-neillsville-2019/> - Neillsville in Northern WI also has a high school competition on Mar 6, limited to 10 teams.

For the middle school division, schools to build the most innovative and functional machine that flips a switch in eight or more steps. There will be two possible events, Waukesha Tech on Apr 12 or MSOE on May 10. It will also take place at Waukesha Tech. The cost to participate is \$50 per school. For details and to sign up, contact Heather Dummer Combs, Program Manager, at [hcombs@stemforward.org](mailto:hcombs@stemforward.org) or (414) 810-7836.

- Engineering Girl Essay Contest - [grades 3-12](#), due Feb 1

<https://www.engineergirl.org/108311/2019-contest> - This contest is open to students in grades 3-12 (diff grades have different requirements and expectations). Students are asked to write a fictional story with a female main character who uses engineering skills to solve a problem.

- Scholarship to Space Camp - due Dec 16

The [Geek Partnership Society](#) (GPS), a non-profit 501(c)3 organization in Minneapolis, Minnesota, is now accepting applications for the [2019 Space Camp Scholarship](#) through December 16, 2018. This allows a student (age 10-14 in the states of Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin) to attend Space Camp in Huntsville, Alabama at no cost (other than transportation to the airport). This year, in addition to a written essay, applicants have the option to present a short video essay. This year's essay theme: "Who is your space industry hero, and how has this person inspired you?"

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“Remember to look up at the stars and not at your feet. Try to make sense of what you see and wonder about what makes the universe exist. Be curious.” – Stephen Hawking