



Hello Science Education Leaders,

Happy New Year! 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. I also try to post events to this STEM PD calendar - <http://www.wistem.org/stem-pd-calendar.html>. Let me know if you'd like to add anything to it!

Cheers,
Kevin

Learning Opportunities

- [Submit a Proposal for the 2017 NSTA Area Conference in MKE](#) - due Jan 17
- [Wisconsin Science Education Leadership Association](#) - Feb 14 meeting
- [Stem Cell Institute for MS Teachers in June](#) - apply by Jan 31
- [WSST/DPI Virtual Book Study and PAEMST applications](#) - starting now!
- [Learn WWII Science at the WWII Museum in New Orleans](#) (free) - apps due Feb 24
- [Collaborate, Inspire, and Innovate Conference this summer](#) - Proposals due Jan 15
- [Summer Workshops at the Center for Biomolecular Modeling in Milwaukee](#)
- [Judges \(still\) Needed for the Regional Science Olympiad in Waunakee](#) - Feb 25

Resources

- [Wisconsin Forward Exam in Science](#) - important details and samples
- ["KOOL" Science Lessons](#) - virtual connection from Kennedy Space Center
- [Wisconsin State ACT Report on Student Interest in STEM Fields](#)
- [NGSS Blog Post by Joe Krajcik and New Books from NSTA](#)

Student Opportunities

- [National Youth Science Camp](#) - applications due Mar 1st
- [NASA Microgravity Diver Challenge](#) - students grades 9-12, due Feb 1
- [3M Young Scientists Challenge](#) - students grades 5-8, due Apr 19

Details

Learning Opportunities

- Submit a Proposal for the 2017 NSTA Area Conference in MKE - due Jan 17

<http://www.nsta.org/conferences/sessions.aspx> (scroll down for details) - An essential part of professional learning is sharing our journey with others! Sign up to share part of your experiences as a science educator - any topic okay! Okay, maybe not *any* topic... This NSTA Area Conference on Nov 9-11 will take the place of the usual WSST conference for 2017-18. Proposals for sessions are due in one week on Tu, Jan 17th.

- Wisconsin Science Education Leadership Association - Feb 14th meeting

Come join other science leaders to network and discuss science education leadership endeavors. The Feb 14th meeting will be from 9 to ~3 at the DeForest Public Library. No cost for first time attendees - lunch and snacks provided. Email Kevin Niemi, UW-Madison, to be placed on the listserv and/or RSVP for the meeting.

- Stem Cell Institute for MS Teachers in June - apply by Jan 31

wku.edu/gifted/nscf - Through a grant from the National Stem Cell Foundation, The Center for Gifted Studies at Western Kentucky University is pleased to offer the NSCF Scholars Program. Ten middle school science teachers will spend June 4 - 10, 2017, at Western Kentucky University in Bowling Green. Each scholar will receive a Chromebook and funding for Challenge Project supplies and materials. NSCF Scholars will share midpoint progress with their colleagues while attending the NSTA annual meeting in March 2018 in Atlanta. Mentoring will be provided throughout the year by Western Kentucky University faculty. All expenses, including travel costs, materials, mentoring and Challenge Project supplies will be covered by a grant from the National Stem Cell Foundation. The application period was extended (suggesting a greater likelihood of being accepted).

- WSST/DPI Virtual Book Study and PAEMST applications - starting now!

<http://bit.ly/2iDeFPY> - These next few months we'll have another WSST and DPI Book Group, this time digging into *Teaching for Conceptual Understanding in Science*. Those who have already started to share thoughts on the book in our Facebook group are saying that it is fantastic! 1 or 2 credits are available. If you begin an application for the [Presidential Award for Excellence in Mathematics and Science Teaching](#) (a great opportunity to reflect on your instruction), you can receive the book for free. WSST members can also receive the book for free. Email me for more details, initial link is to sign up.

- Learn WWII Science at the WWII Museum in New Orleans (free) - apps due Feb 24

<http://www.nationalww2museum.org/learn/education/for-teachers/summer-teacher-seminar.html> - The National WWII Museum is looking for 28 5th-8th grade science teachers from across the country who want to spend a week in New Orleans learning how to teach hands-on minds-on science connected to WWII history. The cohort will spend July 23-28 in New Orleans, with workshops at the Museum, and a day and a half at the University of New Orleans' Advanced Materials Research Institute. Travel, room, and most meals are paid.

- Collaborate, Inspire, and Innovate Conference this summer - Proposals due Jan 15
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<http://www.collaborateinspireinnovate.com/> - this annual Innovation Conference in Ripon, WI is currently seeking session proposals. They're due soon - Jan 15! The conference will be at Ripon HS, July 26-27. George Couros will be the opening keynote, w/ lots of other great speakers lined up.

- Summer Workshops at the Center for Biomolecular Modeling in Milwaukee

<http://cbm.msoe.edu/teacherWorkshops.php> - Modeling the Molecular World, July 24-28, focuses on connecting the macroscopic world in which students live with the world of molecules. There will be a focus on pedagogical tools, including learning how to use 3D models to support learning. Also, 3D Printing for the Bioscience Classroom, July 6-8, focusing on using 3D printing to support student modeling of proteins and other molecular structures.

- Judges (still) Needed for the Regional Science Olympiad in Waunakee - Feb 25

No experience is necessary - this is a great way to learn about Science Olympiad. General information about the types of events students will compete in can be found at: <https://www.soinc.org/2017-division-b-events>. To sign up to help as an Event Supervisor or general volunteer, please complete the form at this link:

<https://goo.gl/forms/GHp3vRQ133CQw5p13>, and/or contact Samara Hamze (hamzes@uwosh.edu, 920-424-7404).

Resources

- Wisconsin Forward Exam in Science - important details

We're in the process of revising the state science assessment. This spring there will be a few new items as part of the test and several items will be piloted. By spring of 2018 we could have an entirely new science assessment! New items at the 4th grade level will align with the WMASS in the K-4 grade band and to the NGSS standards in grade 4 (as most districts are now using the NGSS to some extent). New items at the 8th grade level will align to the WMASS in the 5-8 grade band and the NGSS in the 6-8 grade band. Though they don't do justice to the actual assessment items, I created [a few 4th and 8th grade sample items for your reference](#). We'll provide further samples down the road.

- "KOOL" Science Lessons - virtual connection from Kennedy Space Center

<https://www.kennedyspacecenter.com/camps-and-education/kennedy-online-outreach-and-learning> - KOOL Science workshops combine distance learning with hands-on activities that involve students virtually with a variety of locations in and around the Kennedy Space Center (KSC), exposing students to places like NASA's Vehicle Assembly Building. They connect the KSC with the classroom via Skype TX web-conference, no special videoconferencing equipment is needed. Virtual connections are 45 min, and topics currently include Newton's Laws of Motion, the Earth-Moon-Sun system, maintaining homeostasis in microgravity, luminescence, a guided tour of KSC, and NASA-inspired engineering design challenges. Teacher's guide is provided. Most lessons are geared toward grades 5-8.

- Wisconsin State ACT Report on Student Interest in STEM Fields

http://www.act.org/content/dam/act/unsecured/documents/STEM2016_50_Wisconsin.pdf - interesting statistics on numbers of Wisconsin students interested in STEM fields. It's even broken down by demographics.

- NGSS Blog Post by Joe Krajcik and New Books from NSTA

<http://nstacommunities.org/blog/2016/12/12/whats-so-special-about-disciplinary-core-ideas/> - Check out this blog by Joe Krajcik (NGSS writer) on disciplinary core ideas (DCIs) in science! It connects to a [new book from NSTA Press](#) that he helped edit, which provides further details for all the NGSS DCIs, detailing each by grade band and noting common misconceptions. There's also [another new, excellent book available](#) from NSTA that goes in depth on using the NGSS practices in your instruction.

Student Opportunities

- National Youth Science Camp - applications due Mar 1st

<https://nysc.fluidreview.com/> - Great opportunity for graduating seniors to spend a prestigious three weeks (Jun 14 - Jul 8) with peers from around the country. Each state can send two students to this all-expense-paid science experience, where students learn from top-notch scientists, do science experiments, travel to D.C. to talk science policy w/ politicians, and enjoy some down time. Encourage your seniors to apply!

- NASA Microgravity Diver Challenge - students grades 9-12, due Feb 1

<https://spaceflightsystems.grc.nasa.gov/education-outreach/diver/> - Teams of grade 9-12 students are challenged to design and build diving objects that will submerge in water as far as possible when exposed to microgravity in NASA's 2.2 Second Drop Tower. After student proposals are evaluated, selected teams will compete in the challenge and are expected to present their results at the [American Society for Gravitational and Space Research \(ASGSR\)](#) conference in Seattle, WA in October 2017.

- 3M Young Scientists Challenge - students grades 5-8, due Apr 19

<https://www.youngscientistlab.com/challenge> - students create a 1-2 minute video detailing an innovative way to solve an everyday problem. This contest has a relatively low bar for entry and could connect well to a wide range of science units.

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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