



Hello Science Education Leaders,

I hope the first semester has gone well for you - amazing that the year is already half-way over! Any good news happening at your schools, like these [2021 Aquaculture Challenge honors at Merrill HS featuring teacher Olivia Dachel](#)? Please, share it!

Please, let me know if I can help with some resources or a facilitated discussion, like a brief after-school dig into assessment or instructional materials. Send me an email. I also hope to see you at the [WSST Conference April 7-9](#) in Wausau - come say hello to this masked man in a bowtie!

Below are several science education learning opportunities, resources, and student 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.

Cheers,
Kevin

Learning Opportunities

- Systems Thinking and Crosscutting Concepts Learning - Feb 21 and Apr 8
- WSST Conference on Apr 7-9 and Volunteering for Madison conference in 2023
- WSELA meeting on Feb 23 - RSVP for in-person by Jan 31
- Science Educators for Equity, Diversity, and Social Justice - Conference Jan 28-31
- National STEM Scholars Program - for MS teachers, apply by Feb 1
- Summer Great Lakes Educator Workshops on the Lake Guardian - applications due Jan 31
- National Academies Webinar Series on NGSS Implementation - Feb to Apr
- BTC Institute Summer Biotech Institutes and Virtual Field Trips
- Learn Deep Fellows - Teacher learning/networking cohorts in MKE region

Resources

- Phenomenon - James Webb telescope!
 - Science Friday Podcast – Best of 2021
 - News Literacy Project
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- Recent education articles of note

Student Opportunities

- Capital Science and Engineering Fair - moved to Mar 15, deadline extended
 - WSST Student Essay Contest - entries due Mar 1
 - Annual Physics Video Contest - entries due June 30
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Details

Learning Opportunities

- Systems Thinking and Crosscutting Concepts Learning - Feb 21 and Apr 8

<https://www.drartscience.com/post/systems-thinking-video> - I recently saw this fabulous systems thinking video and thought about how much I like that crosscutting concept (CCC)! Speaking of CCCs, our next crosscutting concept book study will be on Feb 21st at 4pm. National science assessment expert Aneesha Badrinarayan will be joining us. If you aren't already on the list, email me if you'd like to join the discussion (all are welcome). Our final book study meeting on CCCs will be at the WSST conference on April 8th at 2pm, facilitated by Chad Janowski of the [Einstein Project](#).

- WSST Conference on Apr 7-9 and Volunteering for Madison 2023

<https://www.wsst.org/conference-20222> - Registration is now open for the 2022 WSST conference in Wausau April 7-9. **The 2023 Madison conference committee is also already getting ready for next year and looking for volunteers for various committees and committee chair roles. It's a great opportunity to build up a science network and give back to the science community. Email Corinne Michor corinne.michor@gmail.com for more details.

- WSELA meeting on Feb 23 - (RSVP by Jan 31 to join in-person)

I look forward to our WSELA meeting on February 23rd at the DeForest Comfort Inn just off 90/94. We'll meet from 9 to 2ish. Agenda so far is to dig into results of the state science survey and 3D/phenomenon-based assessment. We'll also have a virtual feed. Please, email me by Jan 31 to RSVP for in-person and suggest an agenda item. The meeting will be free this time, including light breakfast and lunch. All science lovers are welcome!

- Science Educators for Equity, Diversity, and Social Justice - Conference Jan 28-31

<https://sefedasj.wildapricot.org/> - This educators group has their [annual conference](#) next weekend with fabulous speakers from across the country - it's all virtual and only \$25, with many sessions on the weekend.

- National STEM Scholars Program - for MS teachers, apply by Feb 1

<https://www.wku.edu/gifted/nss/> - This national program offers middle school teachers an amazing week in Western Kentucky learning from STEM education experts, with ALL expenses paid (including travel). It takes place from May 29 to June 4, with ongoing virtual

mentoring throughout the following year. A couple WI educators have attended in the past and loved it.

- Summer Great Lakes Educator Workshops on the Lake Guardian - applications due Jan 31

https://www.cgll.org/opportunities/lake_guardian_2022/ - Teachers in grades 4-12 and non-formal educators can apply for two trips this summer, June 26-July 2 on Lake Superior and July 8-14 on Lake Huron. Ten educators will set sail aboard the Research Vessel (R/V) Lake Guardian, a vessel owned by the United States Environmental Protection Agency, and conduct research alongside scientists. During the seven day workshop, educators network with one another, scientists, R/V Lake Guardian crew, and Sea Grant staff [I really want to go, but I would too much...].

- National Academies Webinar Series on NGSS Implementation - Feb to Apr

<https://www.nationalacademies.org/our-work/taking-stock-of-ngss-implementation-a-summit> - Scroll down to see this series of webinars on Feb 16, Mar 2, Mar 16, and Apr 6. Topics (in order) include rural science, 3D science in informal science education, 3D instruction, and teacher preparation. All are free and happen at 1, 2, or 5 pm CT.

- BTC Institute Summer Biotech Institutes and Virtual Field Trips

<https://www.btc.org/k-12-programs/virtual-biotechnology-field-trips/> - Biotech field trips can be scheduled this spring for middle and high school students. They are set up as 1 hr Google Meets and are generally \$80 per class. <https://www.btc.org/k-12-programs/programs-for-teachers/> - Teacher biotech institutes are each 1 week in July and offer \$500 stipends for completing the full week.

- Learn Deep Fellows - Teacher learning/networking cohort in MKE region

<https://learndeep.org/programs/fellows-program/> - Learn Deep is recruiting Milwaukee area 5th-12th grade teachers for the second cohort of their Fellows Program. The Fellows Program takes cohorts of educators through a three year journey to develop, pilot, and refine real-world challenges for students. Fellows work in collaboration with community partners from industry, higher-ed, and nonprofits to create interdisciplinary Learning Experiences they will take on over the course of the school year. See the website for further details on the Fellows program and upcoming information sessions. [I've heard it is fabulous learning and support!]

Resources

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- Phenomenon - James Webb telescope!

<https://webb.nasa.gov/content/about/orbit.html> - I loved this graphical explanation from NASA on the timeline, deployment, and orbit of the James Webb telescope. I understand their plan (and Lagrange points) much better now!

- Science Friday Podcast – Best of 2021

<https://www.sciencefriday.com/articles/best-of-science-friday-2021/>

- Science Friday is one of my favorite podcasts for learning a little science each week, particularly related to current news headlines. If I've ever driven out to your district or CESA, I've probably been listening to it!

- News Literacy Project

<https://newslit.org/newslit-nation/> - I appreciate the educator resources on this site to support students in news literacy. How do you detect bias? How do you pull apart the "research" behind reports? The biggest issue I see in science reporting is claiming causal relationships, when the research is really only detailing correlations.

- A few recent articles of note:

<https://www.nature.com/articles/d41586-022-00029-2> - Weaving Indigenous Knowledge Into the Scientific Method (great article, even if I have issues with any claim of a "[scientific method](#)")

<https://www.edutopia.org/article/case-against-zeros-grading> - this is an important step towards more equitable grading practice

<https://www.edutopia.org/article/how-design-better-tests-based-research> - a nice set of research-based ideas on how to improve assessment, like having shorter tests, getting rid of time limits, providing solid feedback, and requiring student corrections.

Student Opportunities

- Capital Science and Engineering Fair - moved to Mar 15, deadline extended

<https://dpi.wi.gov/science/science-fairs/csef> - The Capital Science and Engineering Fair is held in Madison each year and welcomes students from anywhere in the state. The fair has been postponed to March 15th due to COVID, and students can now fill out the [interest form](#) and [official registration forms](#) through March 1st. This [recent article](#) provides some details and structures on how this type of student-centered learning can effectively increase rigor in the classroom.

- WSST Student Essay Contest - entries due Mar 1

[This year's essay contest](#) focuses on Wisconsin's Lakes and Rivers (a nice connection to the [ongoing statewide inquiry focus on water!](#)). Each teacher can submit one entry. There are K-2, 3-5, 6-8, and 9-12 categories with variations in their water-based themes.

- Annual Physics Video Contest - entries due June 30

<https://wonders.physics.wisc.edu/contest2022/> - Students are encouraged to make and submit a physics video, under the supervision of a parent, guardian, or teacher. Teachers and

other educators are also welcome to submit their own video in the teacher category. The video should run about two minutes in length and can be made either as a class project or by an individual student. Students can use materials from around their home or from their school science lab. “The Wonders of Physics” will acknowledge all submitted videos with a certificate. Plaques will be given for the best demonstrations in the various categories. The best clips will be edited into an hour-long video to be shown worldwide.

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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