



Hello Science Educators and Administrators,

I hope you're finding joy with your students in these first days back to school. I remember the stress well, and this year adds multiple new dimensions to that. There is frequent talk of addressing "learning loss," but I hope that your district finds ways to [reframe that conversation](#).

Please, let me know if I can help with some resources or a facilitated discussion, like a brief after-school dig into phenomena-based instruction, assessment, or materials.

Below are a few science education resources 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

- [WSST/DPI Book Study on Crosscutting Concepts](#) - starts Oct 18
- [STEM Forward Conference](#) (planning for in-person this year) - Oct 27
- [NSELA Safety Webinar](#) - Sept 14, 12pm CT
- [WSELA](#) - next meeting on Oct 19, 3:30pm
- [Energy Professional Learning from KEEP](#) - Sept and Oct, K-12

Resources

- [Webinar](#) - Culturally Responsive and Place-Based Science - Sept 10, 11am
- [Phenomenon](#) - melting of the Arctic
- [Free K-2, 3-5, 6-8, and 9-12 Units on COVID and Health Equity](#)
- [Sign-Up to Receive Fish Hotel Resources](#) (science/literacy) for grades 1-5
- [Recent Education Articles of Note](#)

Student/Classroom Opportunities

- [State Water Inquiry Project](#) - ongoing
 - [Not Your Average Science Fairs](#) - many grades 6-12 opportunities
 - [National Virtual STEM Fair "SciFest"](#) - Oct 18-24
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- [Future City Competition](#) - grades 6-8
 - [Virtual MKE Tech Career Fair](#) - Sept 14
 - [Aviation/Astronautics Resources](#) - student contest, scholarships, info day
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Details

Learning Opportunities

- WSST/DPI Virtual Book Study on Crosscutting Concepts - Oct 18 start

<https://forms.gle/oEW6qoR2Nc7ZEEpA7> (sign-up) - We are planning to hold the WSST/DPI Book Study this year on Oct 18, Nov 15, Jan 10, and Feb 21, followed by an optional, in-person connection at the WSST conference (Mar 11-13 in Appleton). We will use the new [NSTA crosscutting concepts book](#). Building on last year, we'll also continue to consider equitable instruction in our discussions. Join your colleagues for a thoughtful and relevant discussion on the least understood dimension of the standards! [Sample chapter for reference.](#)

- STEM Forward's sySTEMnow Conference (likely in-person) - Oct 27

<https://www.stemforward.org/systemnow-conference> - This annual conference is a great way to connect with new STEM ideas and learn from districts doing unique work in STEM education. If you're not familiar with STEM Forward, it is a regional STEM hub/non-profit in Milwaukee, with relevance for work across the state. They'll also be discussing the new Milwaukee area [STEM Ecosystem](#).

- NSELA Safety Webinar - Sept 14 at 12pm CT

<https://nsela.memberclicks.net/september-2021-webinar#/> (registration) - Supervising for Safer Science/STEM Lab Experiences During the Pandemic A key component for supervisors to provide safer teaching/learning experiences in Science/STEM labs is having effective Standard Operating Procedures (SOPs). This Webinar will help supervisors have a better understanding of critical SOPs and how to implement them in their school's labs during the ongoing COVID pandemics. NSELA/NSTA Safety Compliance Officer Dr. Ken Roy will present the program and also provide time for questions from participants. Join on Tuesday, September 14, 2021, from 12:00 PM to 1:00 PM CT. This event is FREE for NSELA members and non-members. The recording will be available for NSELA members only via the NSELA Learning Center.

- WSELA - next meeting on Oct 19 at 3:30pm

<https://www.wsst.org/wesla> - Any educator can join meetings of the Wisconsin Science Education Leadership Association, no membership required. We run a listserv to supported collaborative resource sharing and idea development. The next meeting will again be virtual - Oct 19th at 3:30pm. The first 15 min will be networking, followed by sharing of resources and ideas based on participant topic suggestions. Email me to join the listserv and get further info about the meeting.

- Energy Professional Learning from KEEP - Sept and Oct, K-12

KidWind Educator Workshops – [Sept 18, 9-12 at UW-Madison Arboretum](#) and [Oct 21, 8-11, in Eau Claire](#). Learn how to explore the power of wind and solar with your students in a workshop hosted by The Wisconsin Energy Institute and Wisconsin's K-12 Energy Education Program. Participants will review energy and electricity basics, design and test blades in a wind tunnel, explore an online solar dashboard with inquiry questions, and preview ready-to-use renewable energy curriculum. Works for grades 4-12, cost is \$15.

Discovering Energy in Nature - [Oct 6th at Schmeekle Reserve in Stevens Point](#). This aligns to grades K-6 and substitute stipends are available. You know the benefits of teaching outdoors - but doing it can be daunting. Join the Wisconsin K-12 Energy Education Program (KEEP) to discover energy lessons that can effectively be taught outside. Take temperatures to investigate how shading, coloring, and other factors affect temperature; survey different environments to determine how sunlight, soil moisture, temperature, and wind affect living elements in an ecosystem; and spend time in a beautiful setting while making curriculum connections. Cost is \$25.

Resources

- Webinar - Culturally Responsive and Place-Based Science - Sept 10, 11am

<https://terc.zoom.us/meeting/register/tZctceitpzkoGdNM9cW52JIISwODTKg0Nkj9> - In recent years there has been increased attention paid to the importance of both culturally responsive teaching and place-based learning (PBE). In this "Theme of the Month", the STEM Teacher Leadership Network will make use of a small set of videos to illustrate some recent efforts in these areas. The group of panelists, both researchers and practitioners, will use these artifacts and their own expertise to highlight the power generated at the intersection of culturally responsive teaching and PBE. Free.

- Phenomenon - Melting of the Arctic

<https://www.bbc.com/future/article/20190612-the-poisons-released-by-melting-arctic-ice> - what happens as the permafrost thaws out? This BBC America article shares the multitude of potential and currently happening results. Interesting and a bit scary - notable phenomena.

- Free K-2, 3-5, 6-8, and 9-12 Units on COVID and Health Equity

<https://www.openscienced.org/covid-19-health-equity/> - these units are made by OpenSciEd authors (NGSS gurus). They include teacher guidance and webinars to support implementation.

- Sign-Up to Receive Fish Hotel Resources (science/literacy) for grades 1-5

<https://docs.google.com/forms/d/e/1FAIpQLSeExdBLicQPXQPcNcrUI1HK0z86g2i9D2w-wVpGa9MAHhytwg/viewform> - The Fish Hotel Kit is designed to help children and adults learn about the benefits of leaving trees in lakes. Remarkably, after a tree falls in the lake, it might last another 300 to 600 years in the water. Trees in lakes not only provide areas for fish to spawn, but also offer shelter to help some species protect their incubating brood. The kit includes the Fish Hotel hardcover picture book, 20 student companion books, posters, links to

resources, etc. Fish Hotel Kits are provided by the Center for Land Use Education and the University of Wisconsin-Division of Extension.

- Recent Education Articles of Note - articles I've appreciated lately:

<https://www.edutopia.org/article/how-hidden-classroom-dynamics-can-stymie-girls-stem> - more authentic and relevant science supports marginalized students.

<https://www.kqed.org/mindshift/51186/how-helping-students-to-ask-better-questions-can-transform-classrooms> - helping students ask better questions

<https://www.edweek.org/teaching-learning/opinion-discussing-career-plans-with-students-dont-overlook-the-skilled-trades/2018/06> - importance of including and supporting skilled trades in career conversations

<https://www.edweek.org/leadership/learning-loss-in-general-is-a-misnomer-study-shows-kids-made-progress-during-covid-19/2021/04> - Learning loss is a misnomer

<https://www.edutopia.org/article/why-school-leaders-should-develop-portrait-graduate> - importance of having a vision for students

Student/Classroom Opportunities

- State Water Inquiry Project - ongoing

<https://dpi.wi.gov/science/water> - this ongoing project can engage students in meaningful, local phenomena, and give them an opportunity to make a difference in their communities. Through the GIS project platform, you can share data and information on what you're doing with other across the state. We plan to do further sharing at the WSST conference this year in Wausau in April.

- Not Your Average Science Fairs - many grades 6-12 opportunities

There are countless opportunities to get students engaged in authentic, project-based work this school year - getting them involved in sharing that work afterward adds to the authenticity. I have a listing on <https://dpi.wi.gov/science/science-fairs/opportunities> - structured sharing includes: the [Capital Science and Engineering Fair](#) (says Madison area, but all are welcome), [Junior Science and Humanities Symposium](#), [Badger State Science and Engineering Fair](#) (anyone can submit - no prior win required), etc.

- National Virtual STEM Fair "SciFest" - Oct 18-24

<https://scifest.vfairs.com/en> - SciFest is a free virtual STEM Expo for K-12 Students, Educators, and Families from October 18-24, 2021. There will be Virtual STEM Activities, Interactive Exhibits and Stage Shows, a STEM Scavenger Hunt, Educational Resources and More.

- Future City - Sustainability and City Design Competition for Grades 6-8
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<https://futurecity.org/> - the theme for this year's competition is waste-free cities. There is a \$25/school registration fee - access to teaching materials is included in that. There are virtual and in-person options. Registration closes soon (though exact date is unclear).

- Virtual MKE Tech Career Fair - Sept 14

<https://my.boothcentral.com/v/events/mke-tech-expo> - Register at this site for the first ever MKE Tech Career Expo on Sept 14 from 12 to 6pm to learn about the variety of tech and tech-related opportunities that exist and how best to prepare for them. This free, virtual event is a unique experience that offers tools and resources for kickstarting a tech career with opportunities to engage directly with local employers and tech leaders. Intended for high school and college students.

- Aviation/Astronautics Resources - student contest, scholarships, info day

[Aviation Design Challenge](#) - (starts January 2022; registration open now). Registration is now open for the General Aviation Manufacturers Association (GAMA)'s annual design competition to promote STEM education. The competition is open to the first 150 high schools to register and will include free aviation curricula and software, with winning schools to win an all-expenses paid trip to experience aviation manufacturing firsthand.

Girls in Aviation Day events (weekend of September 25th - 26th). If you know girls and families who are interested in aviation/STEM, please invite them to this year's free Girls in Aviation Day events in Milwaukee and in Madison! Information about the activities is on the [Wisconsin Girls in Aviation Facebook page](#) or pre-register (required) on the [GiAD Milwaukee](#) or [GiAD Madison](#) event pages.

[ASGSR Scholarship](#) for high school students (deadline September 30th) - Applications are now open for the American Society for Gravitational and Space Research (ASGSR)'s award for students interested in space biology. This scholarship is intended for underserved student, particularly those with financial barriers.

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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