



Hello Science Education Colleagues,

First off, if you're a science educator, and whether you're a member or not, [please take a 10 minute survey](#) from the Wisconsin Society of Science Teachers. This survey is going to help the organization better serve the needs of ALL science educators throughout Wisconsin. We need your input!

Below are a few science/STEM education resources I've heard about. If you have announcements to share about 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

- Summer OpenSciEd Training in Green Bay - June 26-29
- Storylines in Science Virtual Network - Jan 25
- Smithsonian Computational Thinking Materials and PD - Elementary!
- Wonders of Physics at UW-Madison - multiple February programs

Resources

- Quick Survey of Culture and Climate in WSST - Please, take 10 min to complete!
- Free Energy Audit Kits - Green Bay and MKE area educators
- Great Lakes Data Hub from NOAA
- Phenomenon – video from Egg to Salamander
- Freshwater Fish and PFAS - phenomenon and real science article
- Free James Webb Telescope Lessons
- Engineering Tomorrow – virtual HS engineering labs w/ live engineers
- How Teachers Center Elementary Students' Voice in Science - EdWeek

Student Opportunities

- National Youth Science Academy – seniors and juniors apply by Feb 28
- WSST Essay Contest for Grades K-12 – submit by Feb 20
- Genes in Space Contest - grades 7-12
- Aquaculture Challenge - high school program w/ educator training

Details

Learning Opportunities

- Summer OpenSciEd Training in Green Bay - June 26-29
-

[Registration link](#) - Are you planning to use or considering using the free [OpenSciEd](#) materials in your classroom? The OpenSciEd Curriculum Launch professional learning immerses you in teaching and learning driven by students making sense of phenomena and developing solutions to problems. You will walk away from these four days prepared to confidently facilitate 3D, phenomenon-based learning in your classroom. In addition, you'll become an expert in navigating all of the resources embedded in the materials so you can maximize your impact on student engagement and learning. Educators will dig into one of the following units: 6.1 Light & Matter, 7.1 Chemical Reactions & Matter, or 8.1 Contact Forces. It takes place June 26-29 from 8am to 4pm at UW-Green Bay, facilitated by Kim Lemberger of the Einstein Project. Registration is \$500/person with lunch included.

- Storylines in Science Virtual Network - Jan 25th

The first meeting of this virtual network will be held via Zoom on Wednesday, January 25, 3:30 – 4:30 pm. This will be an informal setting to discuss using storyline-based resources (OpenSciEd, Illinois Storylines, NetGen Storylines, IHub, etc.). Kim Lemberger, Director of Learning at the Einstein Project, will be facilitating this time for participants to share their personal experiences with the brightspots and bruises that come along with using these materials in the classroom. There will be opportunities to ask questions, brainstorm practical solutions and provide professional support for each other. All are welcome to join in on the conversation. Zoom link: <https://us02web.zoom.us/j/84644175679>

- Smithsonian Computational Thinking Materials and PD - Elementary!

<https://ssec.si.edu/computational-thinking> - Smithsonian Science for Computational Thinking (SSfCT) is a freely available curriculum developed by the Smithsonian Science Education Center. This transdisciplinary curriculum integrates science, technology, engineering, and math (STEM) and computational thinking (CT), and has literacy connections. Using a phenomenon- and problem-driven pedagogy, students work to define and solve real-world problems and/or explain phenomena. Funds awarded from a Department of Defense (DoD) STEM grant is making it possible for 36 classroom teachers (grades 3-5) to be eligible to receive a free kit of hands-on materials and stipend for participating. Virtual professional learning is scheduled for: Grade 3 – Protecting Whales Module– Jan. 31, Feb. 7 & 14, 4:00-6:00pm, and Grade 5 – A Weighty Problem Module – Feb. 2, 9, 16, 4:00-6:00pm. [Apply now](#) - Registration closes soon! Contact Kim Lemberger at Kim@einsteinproject.org if you have any questions.

- Wonders of Physics at UW-Madison - multiple February programs

<https://sprott.physics.wisc.edu/wop.htm> - The 40th Anniversary showing of this family-friendly science event will take place Feb 11, 12, 18, and 19 at UW-Madison in Chamberlin Hall. You need to register beforehand for the free tickets.

Resources

- WSST Culture and Climate Survey - Thank you for 5-10 minutes of your time!

<https://forms.gle/ZyREagVrmRtTQ3gc7> – We are hoping to have **science educators who are not members of WSST and those who are** take this survey. It will help direct the strategic planning of the organization and make sure we are equitably meeting the needs of all science educators across the state. There are fabulous PRIZES for taking the survey including free WSST conference registration, various science education books (like Ambitious Science Teaching), and WSST swag. It takes most people less than 10 minutes to complete (though taking longer is welcome too!).

- Free Energy Audit Kits - Green Bay and MKE area educators
-

https://docs.google.com/drawings/d/1T3NBF4rAJ0sidBx6jpSPxiOSQIDNhG4Ev45mxH1_5no/edit
- Sign up to borrow a kit of classroom materials including watt meters, infrared thermometers, light meters, etc. It's supported by We Energy in GB and WPS in MKE.

- Great Lakes Data Hub from NOAA

Data can make an excellent phenomenon in science and support for claims and argumentation work. NOAA has just released a [website to look at indicators](#) for Great Lakes and Marine Ecosystems. It includes data on temperature, lake ice, etc.

- Phenomenon – video from Egg to Salamander

<https://www.youtube.com/watch?v=SEejivHRlE> - Many biology teachers might already know of embryonic development videos like this one, but I saw a high-quality one for the first a few weeks ago - amazing! The 4 week developmental process of salamanders is fast forwarded to six minutes. This could also make a cool phenomenon!

- Freshwater Fish and PFAS - phenomenon and real science article

<https://www.yahoo.com/news/study-suggests-us-freshwater-fish-050100655.html> - I thought this news story was a bit scary! It suggests that eating freshwater fish (highlighting the Great Lakes) means ingesting PFAS from the environment, with some species of fish having more than others. The more complex science article (likely for HS students to analyze) is located here: <https://www.sciencedirect.com/science/article/pii/S0013935122024926?via%3Dihub>

- Free James Webb Telescope Lessons

<https://activatelearning.com/astronomy-lesson-james-webb-space-telescope-nasa/> - I've been excited about the new learning and images coming from the James Webb telescope. Activate developed some elementary, middle, and high school lessons to understand the telescope and its discoveries.

- Engineering Tomorrow – virtual HS engineering labs w/ live engineers

<https://engineeringtomorrow.org/> - These virtual labs for high school students are supported by live engineers and college students who are in engineering programs. All are free to access and can be done for a little time daily or in one large 4 hour session. They introduce students to a wide range of engineering careers!

- How Teachers Center Elementary Students' Voice in Science - EdWeek

<https://www.edweek.org/teaching-learning/how-these-teachers-center-student-voice-in-science-class/2022/12> - this article shares stories of three elementary teachers and how they've worked to bring their students' voices more fully into science classes. They bring up some great pedagogical ideas for learning in general.

Student Opportunities

- National Youth Science Academy – apply by Feb 28

- <https://www.nysacademy.org/programs/nyscamp/2023-nyscamp/> - Past Wisconsin participants have loved attending this national-level science camp ("academy") in West Virginia from June 19th to July 12th. All travel and living expenses are paid. Students learn from nationally-renowned scientists and take a side trip to DC to connect to science related policy making. Two Wisconsin students can attend. It is open to graduating seniors or juniors, though seniors receive some priority. Application are due by 5pm CT on Feb 28 – [application link](#).

- WSST Essay Contest for Grades K-12 – submit by Feb 20
-

<https://www.wsst.org/science-matters> - Essays are all on a water theme this year and include grades K-1, 2-3, 4-5, 6-8, and 9-12 categories. Teachers may each submit one essay. [More details here.](#)

- Genes in Space Contest - grades 7-12

Have your students ever wondered how astronauts might survive a deep-space mission or how we might be able to use biology to transform new worlds? [Genes in Space](#) is a science contest that challenges students to design original experiments that use biotechnology to explore the real-life challenges and opportunities of space exploration. The contest is free and does not require equipment. The winning experiment is conducted by astronauts aboard the International Space Station! Submission deadline is April 17th, 2023. There are also free tools for bringing modern genetic analysis and space biology into your classroom [HERE](#). Resources include videos, lesson plans, classroom activities, worksheets, and more. Genes in Space is a collaboration between miniPCR bio and Boeing with generous support from the ISS U.S. National Laboratory and New England Biolabs, Inc.

- Aquaculture Challenge - high school program w/ educator training

<https://ncrac-yea.org/aquaculturechallenge.php> - this high school student program engages students in designing a small aquaculture system, monitoring the chemistry of a system, creating a business plan for a system, or doing a culinary project with community outreach. There is a training in the Upper Peninsula Feb 3rd and 4th with a \$500 stipend to cover expenses.

Kevin J. B. Anderson, PhD, NBCT
Wisconsin Department of Public Instruction
Science Education Consultant
dpi.wi.gov/science
kevin.anderson@dpi.wi.gov
(608) 266-3319

“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