



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).

Cheers,  
Kevin

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### Learning Opportunities

- [Workshops on Connections between new Science and Social Studies Standards](#) - July 30 and 31
- [Wisconsin Science Education Leadership Association \(WSELA\)](#) - Aug 13, 14
- [Wisconsin Science Standards \(NGSS\) Deep Dive Workshop](#) - CESA 2 - June 19
- [Wisconsin Science Standards \(NGSS\) Deep Dive Workshops](#) - CESA 6 - June 20, 21
- [Five Tools NGSS Institute](#) - Hartford J1, Aug 12-16
- [Science Instructional Materials Institute](#) - NextGenTIME - June 19-21 or July 31-Aug 2
- [Environmental Education Inquiry Institute](#) - Wisconsin Dells - July 29-31
- [Climate Strong Institute](#) - Integrating Indigenous Knowledge - July 8-12

### Resources

- [New "Challenged Topics" Website](#)
- [Are Your SLOs Meaningful for Science? They Should Be!](#) - new DPI article
- [Do Your Students Truly Get It or Do They Hide Behind Memorized Terms and Definitions](#) - "Illusion of Explanatory Depth" article
- [Madravenspeak Archive](#) - Nature and resources article series by Patricia Rudolph

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### Details

#### Learning Opportunities

- **Workshops on Connections between new Science and Social Studies Standards - July 30, 31**
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Join Kris McDaniel (DPI Social Studies) and Kevin Anderson (DPI Science) for a K-8 workshop on connections between new social studies and science standards, particularly in the inquiry aspects. In each of these new sets of state standards, students are asking questions, designing investigations, evaluating claims, and using evidence. In both, we emphasize inquiry processes where students should be connecting with their local communities. Here's one draft document that teases some of these connections between practices: [https://docs.google.com/document/d/16vBNRrjend1C5NDG44gN-SJkG41dDY\\_v2spj-p5D-E/edit?usp=sharing](https://docs.google.com/document/d/16vBNRrjend1C5NDG44gN-SJkG41dDY_v2spj-p5D-E/edit?usp=sharing)

Registration: Madison Concourse, July  
30 <https://widpi.myquickreg.com/register/event/event.cfm?eventid=14922>

Glacier Canyon, Wisconsin Dells, July  
31 <https://widpi.myquickreg.com/register/event/event.cfm?eventid=14931>

- **Wisconsin Science Education Leadership Association (WSELA) - Aug 13, 14**

All are invited to join the WSELA summer meeting at the Schmeeckle Reserve Visitor Center in Stevens Point. On August 13th we'll have our usual format - networking around current issues in science education and leading that work in schools and districts. On August 14th we'll be planning and organizing the next generation of the Science Futures summer science leadership institute that will take place during the summer of 2020. There is not a registration form, but we do ask that you email Kevin Niemi ([kjniemi@wisc.edu](mailto:kjniemi@wisc.edu)) to RSVP, noting which day(s) you'll attend, so that we have a count for meals/snacks. Please, send agenda ideas as well. Cost is \$20 for the Aug 13 meeting or free for first-time attendees; the Aug 14 planning meeting is free.

- **Wisconsin Science Standards (NGSS) Deep Dive Workshop - CESA 2 - June 19**

Kevin Anderson will lead this one-day workshop, 9 to 3, at the CESA 2 office. We'll begin by digging into an example of what the WSS/NGSS looks like in practice, with opportunities for the group to collaborate around their own lesson/unit creation. We'll layer assessment into that discussion and have supported workgroup time to work in like grade/content groups to create 3D assessments. Finally, we'll discuss connecting classroom, district, and state (Forward/ACT) assessment data for decision making. Contact Mary Jo Ziegler - [maryjo.ziegler@cesa2.org](mailto:maryjo.ziegler@cesa2.org) - to register.

- **Wisconsin Science Standards (NGSS) Workshops - CESA 6 - June 20, 21**

<https://login.myquickreg.com/register/event/event.cfm?eventid=23003> (day 1)  
and <https://login.myquickreg.com/register/event/event.cfm?eventid=23004> (day 2) - Kevin Anderson will lead these two days of workshops, 9 to 3 each day. The first day will be an in-depth overview of WSS/NGSS instruction and assessment. It will be appropriate for beginners or those looking for deeper understanding of the standards. Day 2 (the 21st) will focus more on collaborative creation of assessment tasks. We'll work in like grade/content groups to create 3D assessments and discuss connecting classroom, district, and state (Forward/ACT) assessment data for decision making. Day 2 participants should either attend Day 1 or have attended NGSS/WSS PD in the past.

- **Five Tools NGSS Institute - Hartford J1, Aug 12-16**

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The Five Tools and Processes for Translating the NGSS were designed to help science teacher leaders in curriculum, instruction, and assessment to achieve the vision of the Next Generation Science Standards. At the heart of the Five Tools is the translation of science concepts, practices, and performance expectations into a plan for units of instruction based on the NGSS. This workshop will be led by national leaders from BSCS who developed these materials along with the American Museum of Natural History and WestEd. Registration for the week is \$750 - send participants name, email, and phone number to: [simonson@hartfordjt1.k12.wi.us](mailto:simonson@hartfordjt1.k12.wi.us)

- **Science Instructional Materials Institute - NextGen TIME - June 19-21 or July 31-Aug 2**

[http://einsteinportal.2bsolutions.net/prodev-main/nextgen\\_time/](http://einsteinportal.2bsolutions.net/prodev-main/nextgen_time/) - June 19-21 will be in Port Washington and July 31-Aug 2 will be at UW-Green Bay. These 3-day institutes will help school/district teams to dig into instructional materials for science and learn a high-quality process for selecting materials that are effectively aligned to the NGSS/WSS. Facilitators from the Einstein Project will support teams in using the national Next Gen TIME process - <https://nextgentime.org/>.

- **Environmental Education Inquiry Institute - Wisconsin Dells - July 29-31**

<https://dpi.wi.gov/environmental-ed/events/connect-explore-engage-inquiry-1> - The "Connect, Explore, Engage in Inquiry Summer Institute" will provide attendees the opportunity to dig into a variety of approaches, tools, and lessons that support the implementation of the new DPI Environmental Literacy and Sustainability Standards. A full list of topics and registration is on the website.

- **Climate Strong Institute - Integrating Indigenous Knowledge - July 8-12**

<https://fyi.extension.wisc.edu/nglvc/climate-strong/> - free, week-long educator institute in Ashland, WI to support you to: 1) Weave traditional ecological knowledge (TEK) of the Lake Superior Ojibwe and place-based evidence in your community, with scientific ecological knowledge (SEK) to investigate climate change with students; 2) Build leadership skills, personally and in your students, that integrate Ojibwe and western leadership teachings; 3) Engage your students in culturally relevant climate leadership outreach and community-based action. A stipend is also provided for participation.

## Resources

- **New "Challenged Topics" Website**

<https://dpi.wi.gov/science/challenged-topics> - this new DPI website includes topics that aren't controversial in science, but are challenged for a variety of reasons. It has general resources to support critical thinking and evaluation of sources, as well as specific resources to understand and teach evolution, climate change, and vaccination. Please, suggest other resources you use.

- **Are Your SLOs Meaningful for Science? They Should Be! - new DPI article**

<https://wisdpiscience.blogspot.com/2019/04/making-student-learning-objectives-slos.html> - If your SLOs aren't meaningful for your own learning as a science teacher and your students'

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standards-based learning in science, your program should change. Read this article by Kevin Anderson in collaboration with members of the DPI Educator Effectiveness team.

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- **Do Your Students Truly Get It or Do They Hide Behind Memorized Terms and Definitions - "Illusion of Explanatory Depth" article**

<https://wisdpiscience.blogspot.com/2019/04/students-using-proper-science.html> - traditional science instruction often allows students to hide their lack of understanding behind memorized vocabulary. Phenomenon-based sensemaking and modeling, as suggested in the research behind NGSS/WSS, provides a better way to support deep understanding and scientific reasoning. Some of this research can be found in this new National Academy of Science Report - <https://www.nap.edu/catalog/25216/science-and-engineering-for-grades-6-12-investigation-and-design>

- **Madravenspeak Archive - Nature and resources article series by Patricia Rudolph**

<https://madison.com/ct/> - With a quick search for "Madravenspeak" on the Capital Times website, you can find years of articles documenting natural resources related issues across Wisconsin. Thanks to Patricia Rudolph for this excellent reporting!

