



summer phenomena

Science Update

June 2021

This periodic e-newsletter from the [Minn. Dept. of Education](#) (MDE) is sent to a few email lists, including the [Minn. Science Teachers Assn.](#) (MnSTA) and district/organization contacts. We encourage you to forward this to other teachers and science leaders. Archived editions are at [this MnSTA site](#). See MDE contacts at the end of this document. Frequent updates and new events are posted on the MnSTA Facebook page and Twitter feed @mnsta1.

Note: MDE does not endorse any resource or event that is not conducted by MDE.

* indicates an item that was not in the previous edition or has been substantially updated.

News

*Rulemaking for the Science Standards – Public Comment May 17 – June 17

The Minnesota Department of Education is engaged in the formal rulemaking process for the *Minnesota K-12 Academic Standards in Science*. [The Dual Notice of Adoption was published on Monday, May 17, 2021](#). The department will accept comments and *valid hearing requests* on the proposed rule until *June 17, 2021*. *If the department receives 25 or more valid hearing requests, a virtual rulemaking hearing will be held at 9:30 a.m. on July 23, 2021*. If less than 25 valid hearing requests are received, the department will cancel the virtual rulemaking hearing. For more information about how to submit a comment or a *valid hearing request*, please review the [Dual Notice of Adoption](#). The proposed rule language is posted on the [Science Rulemaking webpage](#). For more information on the work of the science standards committee and the review process, visit the [K-12 Academic Standards in Science webpage](#).

If you want to receive rulemaking updates on this project, please contact the department's rulemaking coordinator, Kerstin Forsythe at mde.govrelations@state.mn.us to be added to the rulemaking notification email list.

Science Standards Implementation Delay

To provide flexibility for districts in implementing new standards as the state emerges from COVID-19, MDE will be delaying the required implementation of the Science standards to the 2024-25 school year. The rulemaking process to allow flexibility for implementation needs. With science in the rulemaking process, MDE will use that opportunity to update the proposed rule language to reflect the new implementation date. Since the MCAs are based on the standards, the Science MCA – IV will be delayed until the spring of 2025 for grades five, eight, and high school. Although districts are not required to begin work to implement the standards, MDE will continue to engage in test specifications and development to be prepared for the MCA – IVs in spring of 2025.

Transition to the new Standards

With the delay of the date for full implementation of the new standards, districts and teachers will need to decide if they want to delay the transition timeline they may have developed. One factor they may be

considering in that the MCA exam will not transition to the new standards until spring 2025. However the new standards and the shifts in pedagogy associated with them are likely to result in improved science learning and it would be wise to give students those opportunities as soon as is feasible. Plus the improved learning may help them perform better on the current MCA. Districts have several factors to consider in their transition plans, including staffing, curriculum materials, and time for planning. [Read John Olson's article](#) about the standards delay and planning for the transition.

Input Needed: Understand Native Minnesota project



In October 2019, the Shakopee Mdewakanton Sioux Community launched [Understand Native Minnesota](#), a campaign to improve the Native American narrative in Minnesota schools. Like with any project, we need to understand where we're at in order to set goals for where we want to be. This means hearing from folks around the state who are engaging in this work to learn what's working, where you need support, and how we can collaborate in the future to make learning better for all students.

We have created three surveys for stakeholders - [educators](#), [curriculum leads](#), and [education groups/non-profits](#). Your thoughtful input is appreciated in any or all surveys as appropriate. All data collected will be kept anonymous and entry to the giveaway at the end of the survey is optional. Surveys will be collected through June 15, 2021. Data collected will be compiled into a final report in Fall 2021 and be used to identify next steps for the campaign.

Teacher Events and Workshops

What IS Social Justice Teaching in the Science Classroom? NSTA virtual Miniseries, June 5, 12, 19, 26



Join NSTA for this special four-part, interactive, virtual miniseries. This miniseries is your source for resources and strategies for motivating and enhancing the participation of traditionally underrepresented students in science through the lens of equity and social justice. All sessions are Saturdays 10:30 – 1:00 Central Time. [Information](#)

- June 5: Designing for Rightful Presence in K-12 Science Teaching and Learning
- June 12: Critical Affinity Spaces for Science Educators
- June 19: Toward Field-Based Science Education that Contributes to Just, Sustainable and Culturally Thriving Worlds
- June 26: Defining Social Justice in our Science Classroom

Compass to Nature: Teaching in the Outdoor Classroom, June 9 – July 21, 2 – 4 PM, webinars

This weekly distance learning series features the innovative [Compass to Nature](#), a proven-effective method to teaching outdoors. Join us as we explore the four cardinal directions for the Compass to Nature: place-based education, phenology, journals, and naturalists, plus the magnetic force of the sense of wonder, through indoor presentations and outdoor field exercises to build or enhance your skills. We will also examine impact to teachers, students, and families; school curriculum and academic standards; and distance education options for outdoor classrooms. The series will culminate with the opportunity to reflect, plan, and share how you can apply the Compass to Nature to your site. Presented by the Prairie Wetland Learning Center in Fergus Falls. [Information and Registration.](#)

Teaching Climate Actions, starting June 14, online

Led by 2811 and Young Innovators Climate-KIC, the [Climate Action Academy](#) is an interactive online certification designed for educators who seek to empower youth with the knowledge and skills to transform climate concern

into action. Participants receive resources about education for climate action, are guided to accelerate climate action in their schools, join an international network of sustainability-minded teachers, and earn a certificate from Climate-KIC. There are 10 hours of online modules over the course of 4 weeks on:

- Understanding the climate crisis globally and locally
- Trends in climate education
- Tools and activities for climate action
- Climate action lessons and project integration

***Hormel Gifted and Talented Education Symposium, June 15-17, Online**



The annual Hormel Foundation Gifted and Talented Education Symposium provides an opportunity for educators, counselors, administrators and parents to gain greater understanding of the unique needs of gifted and high potential learners. Participants attend in-depth sessions focusing on foundational knowledge, creativity, curriculum strategies, and social/emotional needs of gifted and high potential learners provided by the field's finest regionally, nationally and internationally recognized presenters. All are welcome to register and attend the symposium. [Information and Registration](#)

Three-Dimensional Instruction Workshops

These free workshops for Minnesota educators are provided by Activate Learning, a curriculum publisher.

Three-Dimensional Learning to Promote Student Engagement, June 16, 8 – 10 AM, online. Led by Joe Krajcik, Framework writer and IQWST curriculum author. *A Framework for K–12 Science Education* provides a new vision for science teaching and learning that focuses science teaching on helping students figure out phenomena and design solutions to problems. Classrooms incorporating three-dimensional learning will have students build models, design investigations, share ideas, develop explanations, and argue using evidence. Teachers will develop a deeper understanding of three-dimensional learning and the value of figuring out phenomena. [Registration](#)

Implementing Three-Dimensional Learning: A Curriculum Coordinator Viewpoint, June 21, 8:30 – 10 AM, online. Led by Michelle Tindall, K-12 Coordinator for Math and Science. A well-articulated science program that promotes three-dimensional learning and building understanding over time can help transform science instruction and promote students' science understanding. She will share the changes that occurred when teachers incorporated three-dimensional learning into classroom instruction. She will illustrate using a lesson from Activate Learning's IQWST curriculum. [Registration.](#)

Exploring Biotech and Biofuels, June 17-18, NDSU, Grand Forks, in-person

[The Exploring Biotech and Biofuels Nourish the Future](#) workshop introduces teachers to the ways biotech skills are incorporated into agriculture through bioscience and biofuels labs. In this 2-day workshop, participants will:

- create and test biofuels
- learn about plant science and pollination
- examine GMO facts, myths, and modern methods
- perform DNA extraction and PCR
- work through a water quality bioinformatics case study

Day 1 will conclude with a dinner where participants can interact with industry experts to learn more about modern agriculture and its connections to biotech and biofuels. Day 2 includes field trips to National Ag Genotyping Center and Tharaldson Ethanol. Participants will receive \$350 worth of supplies for classroom use. Hotel room and meals will be provided.

***The Water Cycle in Weather, June 21, Online**

Circle of Illumination Science Education invites both 8th grade and 6th grade teachers in Minnesota to participate in a webinar noon – 3 PM that will help deepen their understanding of the water cycle—in particular the processes of condensation and evaporation. They will also learn a simple way to determine the relative humidity of the air, harness the power of some real-time weather web sites and get many ideas for hands-on activities involving data and data manipulation/interpretation. A tool for measuring relative humidity will be sent to participants who successfully complete three problems. [Information and Registration](#)

***Virtual Mississippi River Delta Institute, June 21-23, Online**

This free professional development program from Hamline University combines online and hands-on activities to inspire, educate and prepare 3rd-8th grade teachers to engage students in STEM disciplines through experiential, inquiry-based investigations. It will incorporate expert presentations about Delta environments, rich media resources ready for use with students, community-building with other educators, and independent offline explorations. [Information and Registration.](#)

KidWind Virtual Recharge Academy, June 24, online.

The REcharge Academy is an educator training program focused around renewable energy. The intensive training blends lectures from experts and tours of energy facilities with replicable hands-on K-12 lessons to give educators content as well as context. Everyone participating must attend the virtual launch on Thursday, June 24th. After that, you can choose your own adventure by attending full day elective sessions based on your own interests and availability.



We have lots of scholarships and support for this event so if you are interested apply now! All scholarships will be distributed by May 15th. [Information.](#)



Community Resilience to Climate Change workshop for educators, July 5 – 29

NOAA Planet Stewards, Artist Boat and the NOAA Flower Garden Banks National Marine Sanctuary welcome you to join us during the month of July 2021 from anywhere you can Zoom for an interdisciplinary 70% independent learning/self-paced virtual workshop; The event is meant for all educators. It will focus on climate change impacts to human and natural communities, and the actions you can take to build resilience in light of these impacts. [More Information and Registration](#)

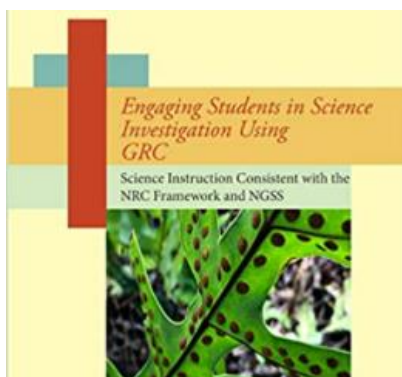
***Great River Educator Workshop, starting July 8, hybrid**

This FREE summer workshop introduces upper elementary teachers in grades 3-6 to the Mississippi River and National Park programs. Connect with the river and our many education programs, and enjoy a ranger-led interpreted kayak paddle on the water. [More information](#)

- Part 1: July 8 10 AM – 12 PM – Online introduction to the river and the park’s many education programs
- Part 2: July 29 or Aug 5 afternoon kayaking session. Part 1 is a prerequisite

Engaging Students in Investigation using GRC, elementary July 12 – 13, secondary July 14-15, online

Join us for two days of professional learning that will model effective science instruction that is consistent with research about how students learn. These sessions, based on the *Gather, Reason, and Communicate* framework, will model effective ways to engage students and teachers in doing science Investigations in person and virtually, which leads to deeper science knowledge using instructional strategies consistent with the new Minnesota Science Education Standards.



Brett Moulding and Peter McLaren, NGSS and Framework writers, will lead this workshop, live online. Participants will receive a copy of the book *Engaging Students in Science Investigation Using GRC* and the materials to do the investigations during the PD. The book describes how to engage students in doing three-dimensional science investigations aligned to standards. The book and professional development provide insights and recommendations for how to effectively use a set of over 360 investigations to teach to the new standards. The investigations were developed by teachers working in collaboration with Brett Moulding and presented in a useful lesson plan format. For background on the GRC framework and to see lessons go to [Phenomenal GRC Lessons](#)

- Elementary: July 12 & 13, Online 8:30 PM – 3:30PM, [Registration](#)
- Secondary: July 14 & 15, Online 8:30 PM – 3:30PM, [Registration](#)
- Fee: \$250 includes workshop investigation materials and a book mailed to you.

Outdoor Classroom Workshops from Jeffers Foundation, in-person

Engage students in science content using 3-dimensional teaching as suggested by state and national standards throughout the year to develop students' ability to observe, investigate, and make claims from evidence, while learning outdoors! [Information.](#)

- Advanced Hands-on, Multidisciplinary Training, July 12 – 13, Savage
- Ecology Institute, June 28-30, Maple Lake
- Patterns in Nature Institute, July 19 – 23, Maple Lake

***Fermilab Teacher Workshops for high school physics teachers, weeks of July 12 & 19, online**

Fermilab's Education and Public Engagement Office is offering online workshops for high school physics teachers the weeks of July 12 and July 19!

- Mechanics: July 12-15
- Electricity & Magnetism: July 19-22

Both workshops are aligned to the NGSS and connect teachers to the science of Fermilab. You will have the opportunity to meet with and ask questions of lab staff and take virtual tours of the Fermilab site. There is a \$50 registration fee, and teachers will receive a kit of materials to assist in completing the investigations in the workshop. [Information.](#)

6th grade Earth Science Professional Development for the new standards, in-person

This will be a one week, bootcamp style, regional workshop that incorporates earth and space science content of the new standards, as well as teach you how to develop three-dimensional units. We'll help you choose phenomena, write storylines and lessons, and walk you through investigations that you can use to engage your students. We will provide ongoing support as you begin your journey and create regional cohorts so you aren't doing it alone.

- Bemidji, July 26-30
- Metro area, August 2 – 6 - Full
- Metro area, August 9 – 13 - Full

The workshop is organized by the Minnesota Science Teachers Association and led by well-known Minnesota earth science teachers and professors. [Article introducing the program.](#) [Workshop Information and application.](#)

For **other workshops and programs** that teach earth science concepts [see this collection.](#)

Mississippi River Institute, July 26-28, Online/hybrid

Join us from home this summer, as the Hamline Center for Global and Environmental Education presents its acclaimed [Mississippi River Institute](#) as a hybrid model combining online content and outdoor hands-on investigations close to home.



The virtual River Institute is a live, interactive three-day professional development opportunity taking place **July 26-28**, with modules online and outside from 8 am - 4 pm. It inspires, educates, and prepares 3rd - 8th grade teachers to engage students in STEM disciplines through experiential, inquiry-based investigations of local watersheds.

Full scholarships are provided for teachers admitted to the program, as well as 18 CEUs, classroom resources, and the option to purchase two graduate-level credits at a reduced rate. [Information and registration.](#)

Summer Institute for Climate Change Education: *Regrounding in Truth*, July 28-30, online



Gain the skills, tools, and resources to teach climate change in all subject areas. This three-day experience from Climate Generation will include networking with a national audience, as well as one full day dedicated to working, planning, and learning with regional cohorts. On-screen time will be segmented, with the opportunity to choose which sessions you would like to attend. [Information and Registration](#)

*A Deep Dive into Shipwrecks and Aquatic Invasive Species, July 28 & Aug 4, Online

Brought to you by the Sea Grant Center for Great Lakes Literacy, take a deep dive this summer and investigate maritime underwater shipwrecks and how aquatic invasive species impact water quality, the food web, and shipwrecks over a two-day workshop series. Take in one or both workshops. [Information and Registration](#)

*MnSTA Conference on Science Education, Oct 28-Nov. 1, Online

A Clear Vision for Science Education: All Students, All Standards, All Voices is the theme for the fall MnCOSE conference, which will once again be virtual. Save the date and plan to share your great ideas. **And...[MnCOSE20's Video Content](#) will REMAIN AVAILABLE** via the Whova app ([Google/Android](#), [Apple](#)) through June 30, 2021! [More Information.](#)



Equity in STEM education professional development

The IDEAL Center at the Science Museum of Minnesota invites school and district leadership teams to apply for the [2021-2022 PAGE District Leadership Program](#), which will be offered virtually this year. PAGE is dedicated to addressing achievement disparities in STEM education on the basis of gender, race, class, ethnicity, disability, language, and sexual orientation at a systems level. PAGE is an 11-day program with a five-day online institute during the summer of 2021, and three two-day online Colloquia during the 2021-2022 school year. [Information and registration](#)

Mexico: Whale Ecology and Marine Research, January 2022

The waters of Baja, Mexico are home to more than a third of the world's marine mammals. Travel to the Gulf of California and the shores of the Pacific to study two of the most charismatic - the grey whale and the humpback. Work with researchers to collect acoustic recordings, DNA samples, and behavioral data on these immense animals.

The course, hosted by Hamline University, will happen during J-term (January) of 2022, but the registration deadline is the end of September 2021. Please visit the [course website](#) and/or reach out to Patty Born, program director, with questions. pselly01@hamline.edu

Teacher and School Awards and Opportunities

Presidential Awards Science Minnesota Finalists Announced

The review of the Minnesota applications for the Presidential Awards for Excellence in Mathematics and Science Teaching for 2021 has been completed. This year the applications were for secondary teachers, and next year will be for elementary teachers. The applications include a video recording and a narrative about the practices in science content, instruction, assessment, reflection and leadership. The applications of the finalists will be judged at the national level and the White House will make the final selection. There will be a Washington, DC celebration, possibly next spring. The Science finalists for this year are:

- **Meagan O'Brien**, Biology teacher, at Washington Technology Magnet in St. Paul, presented an online class on Virology that includes a delivered kit and has students teach someone about viruses.
- **Missie Olson**, biology teacher at Becker Senior High School, presented an online experiment on homeostasis where the students groups directed the experiment.
- **Anne Zielske**, chemistry teacher at Harding High School in St. Paul, presented an online lesson using Lego blocks to model chemical formula ratios.

Planning ahead – Upcoming award programs

- Green Ribbon Schools Award – Get encouragement and recognition for the sustainability efforts of your school. Plan for a fall application at the [MDE Green Ribbon Schools webpage](#).
- MnSTA Science Teaching Award - \$1000 grant for classroom materials. [More Information](#).

Other Awards

Check out information about the following awards programs and consider applying.

- [National Board Certification for Teachers](#)
- [National Science Teachers Assn. Awards](#)
- [National Association of Biology Teachers Awards](#)

School Programs and Resources

*Minnesota Forests: Ojibwe and Dakota PLT lessons

Use Minnesota forests as your "window to the world" to integrate indigenous Ojibwe and Dakota content into your K-8 curriculum. Your students will love the hands-on learning and connections to the real world!

MN Project Learning Tree has developed [seven lessons](#) to help meet Minnesota's academic standards in science, social studies, and ELA, while sharing relevant, place-based knowledge about the people who have inhabited our state for hundreds of years. The webpage also includes important teacher tools for understanding about [Indian lands in Minnesota](#), treaties, [vocabulary and pronunciation guides](#), and more.



*Free resources for teaching how science works

[Decoding Science](#) is a free interactive resource from the National Academies of Sciences, Engineering and medicine. It's all vetted by experts and ready to use in your classroom.

- A 90-second video on how science works
- Clear answers to challenging questions
- Stories from real-life scientists
- And more...

***HS teachers sought for field testing of a Weather and Climate unit**

The UCAR Center for Science Education is recruiting high school science teachers to field test and provide feedback about the NGSS-aligned [Clouds, Weather, and Climate Teaching Box](#) - a new, week-long curriculum designed to build student understanding of the relationships between weather fronts, clouds, and climate.

If you are a high school science teacher who will be instructing at least one section of a class that includes weather and climate topics during the 2021 fall semester and would like to participate, please complete and submit a [Google Form application](#) by June 11, 2021. Each field test teacher will receive a \$200 stipend. [Learn more about this opportunity and sign up here.](#)

Vaccines! How can we use science to make decisions about vaccines?



Utilizing a transdisciplinary approach to learning, the [Smithsonian Science for Global Goals](#) project's newest community response guide, *Vaccines!* features 8 tasks that incorporate investigations and hands-on science to help students discover, understand, and take action. Students learn about the science of vaccines throughout history; understand the science of how vaccines work; learn about how vaccines are developed; examine issues of equity, access, and misinformation; and develop an action plan for addressing vaccine concerns in their communities. .

Working River Online: A Virtual Journey to the Falls

Based on popular school field trips at historic St. Anthony Falls in Minneapolis, and associated with the Mississippi National River and Recreation Area, [Working River Online: A Virtual Journey to the Falls](#) engages students in grades 4 - 6 with four topics deeply associated with the upper Mississippi River: its geology, its role as a transportation corridor, its waterpower, and the continual effort of stewardship. Each topic consist of four sections:

1. National park rangers and park partners introduce each topic through video with related inquiry questions and vocabulary.
2. Learn It: Students explore and learn about the topic through slide decks, videos and readings.
3. Do it: Students work with a hands-on activity, product or project.
4. Know it: A short pre or post-quiz allows students to see what they know about each topic.

STARBASE STEM Kits: Surviving Mars, online and in-person resources

Fifth grade students become Mars explorers as they engage in hands-on STEM lessons to plan and prepare of a mission to Mars. Students experience all area of STEM as the determine the purpose of the mission, design a Mars Base, practice coding, program a robot, design a Mars lander, investigate the vacuum of Space, conduct experiments with a virtual rocket and more! Students will make observations, ask questions, conduct experiments, collect and analyze data, make predictions, and create and analyze designs. Connections to STEM careers are embedded throughout the activities. Free kits are available for each student. [Program preview](#) password: starbase. For information starbase@starbasemn.org



PLT “Explore Your Environment” K-8 Activity Guide Released

Project Learning Tree® (PLT) released a new curriculum guide to engage kindergarten through grade 8 students in exploring their environment. Fifty field-tested, hands-on activities integrate investigations of nature with science, math, English language arts, and social studies.

Educators can obtain a copy of PLT’s [Explore Your Environment: K-8 Activity Guide](#) directly from [PLT’s Shop](#), from Amazon and other places where books are sold, or by attending a local [PLT professional development workshop](#) conducted by PLT’s 50-state network of 75 coordinators and 1,000 facilitators across the country. [Minnesota PLT site](#).

Project Invent

[Project Invent](#) is a national nonprofit empowering high school students to invent for social good. Since 2018, over 50 teachers have completed our fellowship and cultivated young inventors within their classrooms. Our applications are now open for the 2021-2022 school year, and we’re looking for passionate high school educators to apply. Our educators lead their students to use design thinking, engineering, and entrepreneurship to tackle big problems in their communities. As a fellow, you will attend a weeklong summer training in design thinking and invention, receive support throughout the year from expert advisors, and give your students the opportunity to pitch to Silicon Valley investors. [Information and Application](#)

Student Programs, Awards and Competitions

***Explore STEM day camps, Minnesota State Univ. Mankato**

Students entering 6th – 9th grade will engage with university faculty, staff and students to explore the many wondrous parts of STEM. One day of each camp is dedicated to on-site tours at lead companies around Mankato. Each camp costs \$200. [Information and Registration](#).

- July 6-9 Explore STEM – Ideation to Market
- July 26 – 29 Explore STEM + Agriculture – Farm to table
- August 2 – 5 Explore Engineering – Artificial Intelligence

Biochemistry Camp for Young Women, June 15 – 17, in-person, Bethel University

This event is for young women who have finished 10th or 11th grade. The goal of this camp is to encourage young women to be confident in their laboratory experiences and motivate them to pursue a career in the sciences. Most students understand clinical research with humans or even laboratory animals such as mice and rats, but not many have been exposed to cultured cells or plant biochemistry. In a brand new state-of-the-art

science facility, students will perform hands-on experiments such as fluorescence microscopy, ELISA, flow cytometry, and GC/MS. This camp is a day-camp style structure with no overnight component. Cost \$300. [Information and Registration.](#)

Farm-to-Fork Sustainable Agriculture for Healthy Food and Environment, June 15- Aug 15



This program from Minnesota State, Mankato and South Dakota State University provides the following:

- Learn about sustainable agricultural principles and practices.
- Develop skills on how to measure soil health and water quality.
- Farm visits and discussion with the owners of sustainable farms and farm-to-fork establishments.

[Information and Registration](#)

EX.I.T.E Camp for middle school girls, 5 dates July 26-August 5, online

EX.I.T.E. (EXploring Interests in Technology and Engineering) Camp is a free summer STEM camp for middle school girls with disabilities. Camp encourages future engagement with STEM subjects and helps girls discover the range of possibilities that exist through amazing experiments, activities, and mentors. Campers learn how fun these subjects can be and many make friendships that last beyond camp. [Information.](#)



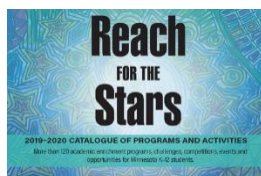
TED talks to watch with Kids

Talks on a variety of topics with many science oriented. [Playlist.](#)

Science and Engineering Competitions

Check out the follow program for your classes and individual students.

- [Science Bowl](#) – middle and high school
- [Minnesota Science Olympiad](#) – middle and high school
- [Science and Engineering Fair](#) – middle and high school
- [FIRST Lego League](#), [FIRST Tech Challenge](#), [FIRST Robotics](#)- All grades
- [Supermileage Challenge](#) - High school
- [Real World Design Challenge](#) - High school
- [Toshiba/NSTA ExploraVision](#) - Classroom based for all grades
- [NSTA Angela Award](#) – girls grades 5 – 8
- [MN Scholars of Distinction](#) – high school
- [National Youth Science Camp](#) – two high school seniors are selected as Minnesota Delegates



Minnesota Programs and Competitions

Many competitions, out-of-school programs and field trip opportunities are listed in the [Reach for the Stars Catalog of Programs and Activities.](#)

MDE Science Contacts:

[John Olson](#), Science Content Specialist,

[Jim Wood](#), Science Assessment Specialist

[Judi Iverson](#), Science Assessment Specialist
[Sarah Carter](#), STEM and Computer Science Specialist
Send submissions for the Science Update to John Olson

Other Minnesota Links:

[Minn. Dept. of Education Science Page](#)

[Minn. Science Teachers Association](#)

[Frameworks for MN Science and Mathematics Standards](#) a.k.a. STEM Teacher Center

[Get – STEM](#) Connections between schools and businesses

[EE Portal @MAEE](#) environmental education resources

[Minnesota Academy of Science](#): Science Fair, Science Bowl and other competitions

[Mn DNR Education website](#): Curriculum, professional development, posters, etc.

[Youth Eco Solutions](#) (YES!) – Statewide, youth-led program for hands-on eco related projects