

Nebraska Science News



Nebraska Academy of Sciences



Nebraska Association of Teachers of Science

Serving Scientists and Science Educators Across the State of Nebraska

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FROM THE NAS PRESIDENT'S DESK

What a year we have endured to date! I know all of us have stories to tell about our experiences; both personal and professional. It is the sharing of those experiences that all of us are missing. The connections we have made professionally can and will help us to move ahead and endure whatever comes next.

The stress that we are feeling about the start of a new semester, as well as not knowing what will occur on our campuses and in our classrooms, is undeniable. I am both fortunate and grateful that I have great colleagues who continue to make me laugh at the times when I really want to cry and give up. I discovered that watching the launch of the Perseverance & Ingenuity to Mars uplifted my spirits as well as the seeing the splashdown of our astronauts in the Gulf of Mexico after a 2 month stay on the ISS.

Nature too, can help us to "recharge" by spending as little as 10-15 minutes taking a walk or sitting in a place that is calming. Spending time in my garden has always been my respite in the summer; this year it has become known as "garden therapy" and I seem to need more of it on a regular basis. When we begin the semester, we should also encourage our students to take time away from all the electronic devices and take a walk or sit in an outdoor quiet place to relax and decrease the stress that they will encounter. If you have not read *Last Child in the Woods*, (2008, Richard Louv), I recommend that you try to do so. It is an insightful and interesting read.

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NATS PRESIDENT NEWS and VIEWS

Teachers, you are creating history! What you are doing matters and even with all the stress and anxiety this year, it will forever be remembered as the year we learned how to teach our students at a distance (in or out of the classroom) and make learning happen! You might not be listed as an essential worker during this pandemic, but you are seen. You are doing something you did not sign up for and you are adapting and learning at the drop of a hat. You are appreciated.

NATS has been trying to make the most of our new virtual space and maintain our commitment to enhancing science education for all Nebraskans and our mission of equity. In June, NATS was able to sponsor Teaching Equity in Science Workshop with Gabriel Tanglao and Ikechukwu Onyema, teachers that are known for their passion for social justice in the classroom. You can find that "Freestyle Conversation" about incorporating conversations on race and equity and the importance of social justice pedagogy in the science, K-12 classroom on our website and below is a list of social justice resources that were recently shared by NSTA.

<https://www.nsta.org/science-teacher/science-teacher-march-2020/social-justice-science-classroom>

<https://www.nsta.org/blog/supporting-equity-classroom>

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NAS continues to be here for you and your students. We hope that you will continue to encourage students to be involved in research projects and that in April 2021 we will be able to learn about their research at the annual Spring Meeting. In addition, if you have not renewed your membership to NAS, we encourage you to do so as soon as possible. Without you, our organization misses a vital link to students and the public. Please encourage your colleagues to join us and spread good news about science through your communities.

Best wishes for a productive semester. Be safe and remember you are not alone in this journey.

Sally Harms, NAS President
Wayne State College

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In July, a lot of NATS members were hard at work virtually for NDE with our State Assessment Task Writing. Information was given about the new timeline for NSCAS Development and Spring Science Field Test information and NSCAS fully operational in 2022! Science Field Test will be administered in the window of March 22nd - May 1st with similar exemptions and details from last year. NDE will provide further details closer to the administration window.

The 2020 NATS Fall Conference is starting to take shape despite the challenges this year has brought. After canceling our contract with the Younes Conference Center in Kearney, NATM and NATS have agreed it would be easiest to host separate conferences this year. NATS has decided to attempt a "hybrid" conference approach. We will be going virtual by using Zoom to broadcast our conference online. We already have an interest in attending our conference from Wisconsin and are hoping for more interest nationwide. However, many people still love the camaraderie one feels when attending a conference in person. It's the conversations between meetings that are often the best or more useful. We have partnered with many ESU's to host watch sites giving teachers the option to gather in smaller numbers using social distancing methods.

The schedule and slate for our conference are still being decided, but we have secured Mark Windschitl from the University of Washington and [Ambitious Science Teaching](#) to be our keynote speaker. Along with our usual slate of presentations by our members, we are actively working on threads related to elementary science, informal education, and equity/racism in science education. There will also be a share-a-thon session for those who just want to share a

quick demonstration or lesson, but they don't have enough to put together a full presentation.

Finally, GOOD LUCK with this 2020-2021 School Year! Remember that no matter how our world of learning has changed or how much content we are getting through, our students are still learning something new. Thank you so much for being there to learn it with them. Stay well, give it your best, and know that you are essential!

Anya Covarrubias, NATS President
Grand Island Public Schools



NJAS NEWS

The Nebraska Junior Academy of Sciences is designed to promote science and technology in

Nebraska by providing incentives for students to apply creativity and critical thought to solutions of science, technology, engineering, mathematics, and engineering problems. It offers an opportunity for students to meet, exchange ideas, and discuss career possibilities with scientists and engineers from colleges and industries.

Students will develop a scientific research project, write an abstract of the project, and give an oral presentation the day of the fairs. Students will compete in two divisions: Grades 6-8 in the Junior Division and Grades 9-12 in the Senior Division. Each Regional Science Research competition will select 6 junior and 6 senior high projects to advance to the State Science Fair. Judges at the State Science Fair will nominate senior division projects to attend the American Junior Academy of Sciences Conference.

Regional Directors:

- Central – Hastings College – Neil Heckman, nheckman@hastings.edu
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- Northeast – Wayne State College – Adam Davis, addavis1@wsc.edu
- Panhandle – ESU #13 – Lisa Myles, lmyles@esu13.org
- Southeast – UNL – Dr. Susan Sheridan, ssheridan2@unl.edu and Dr. Tiffany Heng Moss, thengmoss2@unl.edu
- Western – NCTA – Dr. Brad Ramsdale, bramsdale2@unl.edu

The NJAS State Science Fair will be April 22nd, 2021 at Nebraska Wesleyan University at the Weary Center. For rules and forms visit the NJAS website: www.nebraskajunioracademyofsciences.org.

Randall Lienemann
NJAS President

DATES TO REMEMBER

Click on the date below to learn more

[PIE Grant 4th Quarter Application Deadline – October 5, 2020](#)
[2020 NATS Fall Conference – October 3, 2020](#)

NATS: SIXTY YEARS OF PROMOTING SCIENCE EDUCATION IN NEBRASKA

By Daniel Sitzman, Omaha Public Schools

This year marks the 60th anniversary of the establishment of the Science Teaching Section (STS) of the Nebraska Academy of Sciences (“Academy”). While the Academy was founded in 1880, and pre-collegiate teachers were invited to participate in Academy activities, it was not until 1960 that pre-collegiate teachers formed their own section. Dale Rathe, at the time the in-coming Science Consultant for the Lincoln Public Schools, chaired the first meeting at the College of Agriculture Campus in Lincoln, in conjunction with the annual spring meeting of the Academy in 1961.

By the end of the decade, STS membership swelled to 130, with the STS chair included on the Academy’s Executive Committee during his two-year term. With the larger membership, STS held its first meeting apart from the Annual Meeting of the Academy, a “Fall Campout,” in 1970. Rotating annually through church camps near Hordville and



Maxwell, and the 4H camp at Halsey National Forest, participation varied on either side of 100 people. Inspired by the cat mascot during collaboration with the Kansas Association of Teachers of Science, the STS was renamed in 1979 as the “Greater Nebraska Association of Teachers of Science,” with a gnat mascot sketched by Gary Nickles of Grand Island Public Schools. The same year, with

Dr. Don McCurdy of the University of Nebraska-Lincoln serving as the president of the National Science Teachers Association, GNATS became a chapter of NSTA .

Ruth Green, a teacher at Wake Robin Elementary in the Bellevue Public Schools, became the first female and first elementary teacher to co-chair GNATS in 1984. GNATS leadership structure transitioned to a president and board of directors the following year, with Green serving as the first president of GNATS.



Ruth Green at 1981 GNATS Retreat

The year of 1987 brought three significant moves that provided a foundation for growing the science teacher organization for the next quarter century. First, Jim Woodland, a science teacher at Fremont High School, graduate student at UNL, and the GNATS co-chair in 1983-84, was named the Nebraska Department of Education Science Consultant. As part of his role at NDE until his retirement in 2013, Woodland served as an advisor for the Academy, NATS and the Nebraska Junior Academy of Sciences, as well as the co-founder of Nebraska Science Olympiad. Secondly, with Laurel High School teacher Ed Brogie as president, the GNATS Fall Retreat moved from Halsey to Gretna 4H Center in 1987. The result of the move east was that GNATS Retreat registrations approached 200 for the first time. By 1990, with state legislature Resolution 249 eliminating terms like “greater” and “outstate” in names of state institutions, the organization was rechristened as NATS and settled at Camp Calvin Crest near Fremont for fall conferences and in western Nebraska for spring conferences. Participation at the Fall Conference swelled throughout the next decade, as federal Eisenhower funds for professional development, National Math and Science Initiative workshops, UNL’s Dr. Ron Bonstetter’s teacher education “N.E.R.D.S.” students, and other opportunities drew educators, a US Senator, the Lieutenant Governor, and NSTA leadership to collaborate about the National Science Education Standards and the implementation of the state’s first standards for K-12 Science.

Also in 1987, Dr. Dale Rathe, the first chair of STS, became the first pre-collegiate educator to be elected president of the Academy’s since its founding. By the mid-1990’s, Bob Curtright and James McGahan, serving back-to-back terms as Academy President, provided a framework for pre-collegiate educators to alternate with collegiate professors for presidential terms for the Nebraska Academy of Sciences. Aureitha Hoelsing, an elementary teacher from the Omaha Public Schools who attended her first GNATS Fall Retreat in 1983, was the first person to lead all three of the main organizations for the Academy: NATS (1996-97),

the Academy (2004-05), and, after her retirement, the Nebraska Junior Academy of Sciences (2006-2016).

NATS Fall Conference continued at Camp Calvin Crest through 2016, with the exception of 2006, when NSTA hosted a Regional Conference in Omaha. During this time frame, Nebraska became the first state to join, without money from ExxonMobil Foundation, the “Building A Presence in Science” (BaP) network. The national project with NSTA was part of the oil company’s outreach after the *Exxon Valdez* oil spill. BaP provided professional development for “Key Leaders” in each Educational Service Unit to share with “Points of Contact” at each of the state’s school buildings to enhance science education. Paired with three iterations of a Math Science Partnership grant called KICKS, NATS Fall Conference participation consistently drew over 300 educators during the late 1990’s through the mid-2010’s.

Since 2017, NATS has partnered with the Nebraska Association of Teachers of Mathematics to host a combined fall conference. As NATS continues to expand its digital offerings of professional learning webinars throughout the year, Nebraska’s science educators join a multi-generational network of colleagues from across the state. And, like the mission of the Nebraska Academy of Sciences, NATS is here for educators to better support science learning by all students in the state.

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OCEANIC PRESERVATION SOCIETY (OPS) PROVIDES FREE VIDEOS AND LESSONS

Oceanic Preservation Society (OPS), a team of filmmakers, change agents, and global collaborators committed to the preservation of our oceans and the planet wants to share some of their informational resources that are designed to connect educators and students to the issues facing our planet and inspire action for our collective future. [CLICK HERE](#) to learn more about OPS, their films, classroom lessons, and teaching guides that have been made available to educators.

THE CHILD MIND INSTITUTE ACCEPTING NOMINATIONS FOR 9TH ANNUAL RISING SCIENTIST AWARDS

The Child Mind Institute, a non-profit dedicated to transforming the lives of children with mental health and learning disorders, is accepting nominations from principals, teachers, guidance counselors and other STEM mentors for our 9th annual Rising Scientist Awards. Presented in partnership with Hunter College, the Rising Scientist Awards recognize five students entering their senior year of high school who demonstrate exceptional early achievement in research in the fields of psychology, neuroscience or biomedical engineering.

Nominations must be submitted by August 24th, and winners will be announced on September 11th. For more information or to nominate a student, please [CLICK HERE](#).

SCIFEST ALL ACCESS – A VIRTUAL STEM EXPO

SciFest All Access – a Virtual STEM Expo, is brought to you by the USA Science & Engineering Festival. For the past decade, the USA Science & Engineering Festival has been proud to offer the largest and only national science festival with thousands of hands-on activities, conversations with STEM mentors, and exciting stage shows. While we await the opportunity to bring back our in-person Expo, we hope you will join us this fall for a FREE Virtual Festival – SciFest All Access. [CLICK HERE](#) to learn more and to register!

2020 DALLAS COCKE ESSAY AWARD WINNER ANNOUNCED

The Dallas Cocke Memorial Award recognizes a 2020 AJAS Fellow who exemplifies the enthusiasm and dedication of Dallas Cocke, former AJAS director. This year's winner is Gabrielle Krutsinger from Chase County High School in Imperial, NE. [CLICK HERE](#) to read her award-winning essay. Congratulations, Gabrielle!

PIE GRANTS REPORT

NAS announced that it will receive \$60,580 from the Nebraska Environmental Trust for the "Nebraska Environmental Public Information and Education Minigrant Program". The Trust Board announced funding for the project at its meeting on June 11, 2020 in Lincoln. The project is one of the 118 projects receiving \$20,000,000 in grant awards from the Nebraska Environmental Trust this year.

The Nebraska Environmental Public Information and Education Minigrant Program will award Minigrants of up to \$3,000 each, to support the presentation and dissemination of information and perspectives that will stimulate enhanced environmental stewardship in any category eligible for Nebraska Environmental Trust (NET) funding. These categories are habitat, surface and ground water, waste management, air quality, and soil management. The grants seek to expand dialogue on important current conservation topics and to provide information on emerging or highly useful conservation methods. All Nebraska individuals, private organizations, and public entities are eligible to apply for these funds. This program will be administered by the Nebraska Academy of Sciences.

The Nebraska Legislature created the Nebraska Environmental Trust in 1992. Using revenue from the Nebraska Lottery, the Trust has provided over \$328 million in grants to over 2,300 projects across the state. Anyone – citizens, organizations, communities, farmers and businesses – can apply for funding to protect habitat, improve water quality and establish recycling programs in Nebraska. The Nebraska Environmental Trust works to preserve, protect and restore our natural resources for future generations. <http://www.environmentaltrust.org/>

Nine third quarter 2020 PIE grant applications were received and processed in July. Applicants include the Better Ponca Foundation – Ponca State Park Entrance Project Phase II; Aquatic Society of Omaha – Environmental Education for Community Assisted Living Areas; Habitat for Humanity of Omaha – Habitat ReStore Deconstruction Program Education and Outreach; Asian Community &

Cultural Center – Serving & Supporting Refugees through Natural Experiences; Nebraska Wildlife Encounter – Nebraska Endangered/Threatened Species; Jay Cecrle – Nebraska Middle and Secondary Environmental Research Initiative; National Audubon Society (Rowe Sanctuary) – Fostering Childhood Development with Native Plant Playscapes; The Nature Conservancy – Butterfly Guide to Central Nebraska; and Wachiska Audubon Society – Prairie Discovery Days-2020. Recipients will be selected in September.

Fourth quarter 2020 applications are due October 5, 2020.

Grant forms and information can be found on our website by [CLICKING HERE](#).



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