

Nebraska Science News



Nebraska Academy of Sciences



Nebraska Association of Teachers of Science

Serving Scientists and Science Educators Across the State of Nebraska

Spring, 2013-2014

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FROM THE NAS PRESIDENTS' DESK

What does the Nebraska Academy of Sciences Do – Part 2?

In my last newsletter I started to answer the question “What does the Nebraska Academy of Sciences (NAS) do?” by discussing some of the more prominent activities that NAS is involved in such as the undergraduate experience at the NAS Spring meeting. Part 2 of answering this question will include some numbers detailing the people and the money. NAS consists of an Executive Committee with 11 voting members and three non-voting members. Voting members are the NAS president, NAS president-elect, two past NAS presidents, secretary, treasurer, AAAS representative (also a long term planning committee member), NJAS president, NATS president, NATS president-elect, and past NATS president. Non-voting members include an additional two long range planning committee members and the state department of education science consultant, currently James Blake. We also have a Policy Committee made up of representatives of each higher education institution in the state; a Program Committee consisting of the chairs for the different scientific presentation sessions at the spring annual meeting; and an executive secretary who keeps everything running smoothly. Thanks Cecelia! So there are a quite a few people who donate a lot of their time to making science in Nebraska great.

Financially we consider funding requests from Nebraskans that fall within our objectives (see <http://nebraskaacademyofsciences.wildapricot.org/AboutUs> and give priority to funding requests from Nebraskans for research in the basic sciences, travel to educational and scientific conferences, and formal and informal K-20

science education. To this end NAS uses funds from its private foundation to fund NJAS state science fair winner travel and registration to the American Junior Academy of Sciences annual conference, awards to Presidential Award recipients, honorariums, and grants for science research at a total level averaging \$20,000 to \$25,000 per year. We also award Collegiate scholarships: 2 at \$3000, and High school scholarships: 2 at \$1000, 2 at \$500, 1 - \$300, 1- \$100. NAS also administers about \$51,000/year in the Nebraska Environmental Trust's Public Information and Education (PIE) Mini-Grants. These PIE Grants support the presentation and dissemination of information and perspectives that will stimulate enhanced environmental stewardship. The grant program seeks to expand dialogue on important conservation topics and to provide information on emerging or highly useful conservation methods. Lastly, we also fund areas that we consider high priority opportunities, a recent opportunity will be when Nebraska hosts the 2015 National Science Olympiad, this is a great program and will require a great deal of volunteers as well as money. To this end NAS has pledged \$10,000 to the National Science Olympiad help fund this opportunity. In conclusion I hope that these last two newsletters clearly show that NAS, and its affiliates NATS and NJAS, provide many benefits and opportunities to its members and fulfill our objectives to further the work of and to facilitate cooperation among scientists. Don't forget to register for the [124th Nebraska Academy of Sciences Annual meeting](#), April 11th. I hope to see you all there!

David Peitz, NAS President
Wayne State College

NATS PRESIDENTS REPORT

Greetings NATS Members,

There is a single light of science, and to
brighten it anywhere is to brighten it
everywhere.

Isaac Asimov

I believe that the Nebraska Association of Teachers of science is the spark to that light. Becoming a member and then getting yourself involved in the organization provides the energy. I'd like to share my thoughts/feelings about NATS and what it has meant to me during my nearly 30 years of science teaching and learning. *In my 29 years of teaching, I can honestly say that the biggest "difference maker" for me professionally has been networking, and NATS has been the lifeline. I am so grateful that I chose to get involved with this organization early on in my career. As a result I have built a network of colleagues, collaborators, problem solvers, mentors, advisors, and most importantly friends. NATS has allowed me to build my capacity as a teacher, science coach, and leader at both the district and at the state levels. I would have never experienced the awesome honor of receiving the Presidential Award for Excellence in Math and Science Teaching had I not been encouraged by my NATS mentors, and had I not had the opportunities for involvement in the science education community that NATS has provided. I have many fond memories of attending the yearly fall conference, (both GNATS, for those of us who have been around awhile, and NATS). The opportunities to grow professionally at the conference are abundant and enriching. I have developed skills and knowledge in the areas of science content, best practices and pedagogy, leadership, and appreciation of our Earth. I have attended other statewide and national conferences that offer the dazzle of large city venues and modern conference facilities, and I am thankful for those experiences. However, when I reflect upon those events, the part that was missing was the close-knit community and circle of friends. When you go to NATS, you experience nature, you meet friends, you build community, and you stay connected, and for that I am grateful.*

Recently, the board members met for the winter meeting at Morrill Hall, which provided a backdrop symbolic of the importance and wonder of our mission as science educators and practitioners. During the meeting we began planning the 2014 NATS Fall Conference. We also brainstormed strategies for promoting our organization and increasing membership and involvement. You can take an active part in these endeavors. Visit our webpage

and like us on Facebook. Invite a colleague to attend the fall conference and encourage new teachers (1-3 years) to apply for scholarship funds to offset the cost of attending. Answer the call for presenters. Consider volunteering for a spot on the NATS board. Feel free to contact any of the board to see how you can become an involved member and "brighten the light of science".

Katie Ramsey, NATS President
Grand Island Public Schools

ANNUAL CONFERENCE IN CHICAGO, IL

The location for the 2014 AAAS/NAAS/AJAS Annual Conference was Chicago, IL. As conference attendees, Nebraska Student Delegates were given the opportunity to tour the Argonne National Laboratory, Brookfield Zoo, Fermi lab, Northwestern University, University of Chicago, and the University of Illinois at Chicago.

The Plenary Series included the Dr. Steven Chu lecture, titled "How Discovery and Innovation Can Meet Our Energy Challenge". Dr. Chu served as the 12th U.S. Secretary of Energy between January 2009 and April 2013, and is currently a professor of physics and molecular and cellular physiology at Stanford University. Prior to his post in President Obama's Cabinet, Dr. Chu was the director of Lawrence Berkeley National Laboratory and a professor at University of California, Berkeley. He is the co-recipient of the Nobel Prize for Physics (1997) for his contributions to the laser cooling and trapping of atoms.

Also featured in the Plenary Series was Alan Alda, an actor, writer, director, and visiting professor at the Alan Alda Center for Communication Science a Stony Brook University. Alda's lecture, "Getting Beyond a Blind Date with Science" focused on how he facilitates workshops that use improvisational theater games to help scientists communicate more directly and personally. He and his team are challenging scientists to take part in the 2014 Flame Challenge and answer the question asked by 11-year-olds from around the country. The contest, started by Alda, asks scientists to communicate complex science in ways that would interest and enlighten an 11-year-old. After interviewing hundreds of scientists around the world, he became convinced that many researchers have wonderful stories but need to learn how to voice them better. This inspired the creation of Stony Brook's multidisciplinary Alan Alda Center for Communicating Science in 2009.

Aurietha M. Hoesing, President NJAS

RENEW YOUR MEMBERSHIP FOR 2014

Email membership renewal reminders are being sent as memberships come due. If you believe you have received a reminder when your dues are already paid up please call Cecelia at 402-472-2644. As of last summer NAS has migrated the membership renewals, newsletters, grant reports, etc. to the new website. Some emails are sent out automatically and if there is an error in the database I won't know unless you call me. You can still renew membership and register for meetings by mail if you wish. Just download the membership form from the website or electronic newsletter and mail it in with your check or credit card information. www.neacadsci.org

2014 NJAS STATE SCIENCE COMPETITION

Now is the time to prepare for the NJAS regional and state competitions. The state competition will be at Nebraska Wesleyan University in Lincoln, NE on Friday, April 11, 2014. Information on the regional fairs can be found at the URL below.

<http://nebraskaacademyofsciences.wildapricot.org/NJAS>

Regional NJAS science fair winners can now register on line for the NJAS state science competition using this link.

[NJAS State Science Fair on-line Registration Form](#)

It is important that as science educators we encourage students to persevere in their scientific interest. The objectives should be to help students enhance their science communication skills and to better understand how to prepare for science careers in a global workforce.

2014 MAIBEN LECTURER – TERRY RASMUSSEN

Terry Rasmussen, the Chief Metallurgist at Nucor Steel Nebraska, originates from Yankton, SD. As a child Terry liked to take things apart to see how they worked, so his parents sent him to the South Dakota School of Mines and Technology, in hopes that he would learn how to put those things back together. Upon receiving his Bachelor's Degree in Metallurgical Engineering, he worked at Omaha Steel Castings, which is a mid-sized carbon, alloy and stainless foundry. Looking for bigger challenges and personal growth opportunities, Terry moved to Norfolk, Nebraska and took the position of Melt Shop Metallurgist at Nucor

Steel. Terry enjoys a variety of hobbies such as winemaking, wood working, cheese making, astronomy, boating, hunting and camping – many of which get pushed to the side while he and his wife try to attend the many activities that his three children are involved in. He is also involved in community activities such as the Norfolk Riverfront Development group where he is working with the National Parks Department, local government agencies and private citizens to develop a river trail along the North Fork of the Elkhorn River in Norfolk, Nebraska.



Over the past 22 years, Terry has worked in the areas of process and quality engineering, production, sales and customer service roles within the steel industry.

He has worked on a variety of capital projects including installation of the \$130 million Melt Shop at Nucor Steel with the capability of recycling over 1 million tons of Special Bar Quality steel per year. Currently, Terry is the Chief Metallurgist at Nucor, and has been instrumental in the development of steel making processes and high quality steel grades that have placed Nucor Steel Nebraska as one of the most highly rated Special Bar Quality Steel mills in the United States. Terry will talk about careers and education in engineering and metallurgy, alloys, and how these types of careers and opportunities are available in Nebraska.

124TH NAS ANNUAL MEETING APRIL 11, 2014

Reserve the date now for the next Nebraska Academy of Sciences annual meeting. This will be the 134th anniversary year of the Academy; it is hard to believe we have only missed holding an annual meeting 10 times in 134 years.

Abstracts have been submitted and we are just waiting for your registrations to be completed. If you have any questions about forms, fees, schedules etc. please contact Cecelia Dorn at 402-472-2644 or email to nebacad@unl.edu. If you have specific questions about your presentation section, please contact your section chair. The Program/Section chair contact list and the general registration form are all included in this issue. Information can also be downloaded from the website. <http://nebraskaacademyofsciences.wildapricot.org/Information>

NEW FEATURE ARTICLE – Member Testimonies

NATS: About Us

Section 1: The name of this organization shall be Nebraska Association of Teachers of Science (NATS).

Section 2: It is a chapter of the National Science Teachers Association.

Section 3: It is a division of the Nebraska Academy of Sciences (NAS).

ARTICLE II PURPOSE

Section 1: The purpose of NATS shall be the advancement, stimulation, growth, improvement, and coordination of science teaching in all fields of science and at all educational levels.

Katie Ramsey Testimony – see the NATS President’s message

Joe Myers –

My name is Joe Myers and I am the President-elect of the NATS organization. NATS board members have agreed to share their stories with you about how we became involved in leadership positions so here is mine. Prior to teaching at Norfolk High School where I have taught for the last four years, I taught for two years in Battle Creek. While at Battle Creek, a small school with only two secondary science teachers, I felt isolated and was looking for professional development and connection with the larger science community. I was invited by the ESU to represent the area as a participant in LINKS. LINKS participants are science leaders from around the state who meet annually for professional development and training. The LINKS members then return to their local school districts and ESUs as points of contact for communication purposes and also to provide professional development in their local areas.

Little did I know at the time, but LINKS members are also required to attend the annual NATS fall conference. I had never attended before and boy was I missing out! This was my introduction to the diverse, professional, and highly motivated group of science teachers that call Nebraska home! I was inspired by the enthusiasm in the presentations and by the camaraderie and friendships I observed among those attending. Many life-long friendships begin and grow at NATS. I wanted to be a part of that! At my very first conference, I ran (but wasn’t elected) for a board position. I was encouraged to run again and the next year, I was elected to the board! I served two terms on the board before running for

president-elect and will serve as your next NATS president beginning September 27, 2014.

The next NATS annual conference will be September 25-27, 2014! The focus for this year’s conference is engineering, to highlight the “E” in STEM. I encourage you to attend and bring a fellow science teacher who has never attended or perhaps someone who has just not been able to attend recently. We encourage those attending to consider presenting. If you are currently incorporating engineering concepts into your lessons we would love for you to share what you are doing and how it has impacted student learning and engagement. Other proposals will also be considered.

One other change in the format of the conference that you should be aware of as you make your plans to attend the fall conference has to do with lodging. If you prefer to stay at a hotel, you will need to make those arrangements on your own. We will, however, help you find a place to stay at Camp Calvin Crest on a first-come, first-served basis. Please feel free to contact me at joemyers@npsne.org with your questions or helpful suggestions to make this next conference the best one yet!

KICKS₃ UPDATE

The Nebraska Science KICKS professional development series has been serving K-12 science educators in the state for nearly 9 years. The work of the project is ongoing, however project objectives remain the same:

- Build teacher content knowledge and pedagogical skills
- Integration of inquiry as both an instructional strategy in science as well as one of the four major content areas
- Develop a sustainable statewide network of science educators

Teacher benefits include opportunity to think critically about their own instructional practice. Other benefits include a stipend, lodging (for participants traveling over 75 miles one way), graduate credit, attendance at the NATS Fall Conference, and membership in the Science Matters state and national network.

Summer 2014 marks the third round of the Math Science Partnership Nebraska Science KICKS₃ project. The “look” of the institutes will change somewhat. Two content specific K-12 institutes will be hosted at various locations across the state each summer (2014, 2015, and 2016). Teacher participants would be expected to be in attendance for 8 days of summer institute, 3 days at the NATS Fall Conference, and 12 hours of follow-up peer

coaching. See chart below for KICKS₃ availability in your area.

	East Location	West Location
Summer 2014	Life Sciences	Earth/Space Sciences
Summer 2015	Physical Sciences	Life Sciences
Summer 2016	Earth/Space Sciences	Physical Sciences

Science KICKS₃ content specific institutes will allow for deeper content coverage at all grade levels and, for a more fully developed integration of science (inquiry) and engineering practices. KICKS₃ institutes will allow for extension of teacher content knowledge beyond grade level assignment as well as exploration of how the Nebraska State standards translate into classroom content and practice at the grade band level. Because there is a part to whole and whole to part nature to the structure of the summer workshops and because K-12 teacher participants will be at the same site there will also be opportunity to explore K-12 content progressions in science. Further deepening teacher understanding of science content, particularly as it relates to student readiness, age appropriate content and science curriculum.

One measure of the success of the project is teacher implementation of both grade level appropriate content and content pedagogy. The coaching component of future KICKS₃ workshops provides the necessary reflection, dialogue and feedback to support teacher participants back in their classrooms. Summer 2014 details will be available soon through your local Educational Service unit or at the KICKS₃ website <http://kicks2.org>. You can also contact Project Director Deb Paulman directly at dpaulman@esusixteen.org.

2014 PUBLIC INFORMATION AND EDUCATION GRANT REPORT

The Nebraska Academy of Sciences (NAS) received five applications for the first quarter 2014 PIE migrant program. Applications were received from Loup Basin Conservation and Development, 2014 Loup Basin Recycling Guide; the Middle Niobrara NRD, Nitrate Education: "Test Your Well" Night; Spring Creek Prairie Audubon Center, Expanding Diversity and Community Engagement; The Nature Conservancy in Nebraska, Platte River Prairies Field Days; and Community Crops, Local Food Outreach Program. All five grant applications were funded.

The Nebraska Environmental Public Information and Education MiniGrant Program awards 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 grant expands dialogue on important current conservation topics and provides information on emerging or highly useful conservation methods. All Nebraska individuals, private organizations, and public entities are eligible to apply for these funds.

The Nebraska Legislature created the Nebraska Environmental Trust in 1992. Using revenue from the Nebraska Lottery, the Trust has provided over \$191 million in grants to over 1,400 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/>

Second quarter 2014 applications are due April 4th, 2014.

Grant forms and information can be found on our website, www.neacadsci.org. Click on NAS and then click on Grants and Scholarships.



NEWS FROM THE SPACE PLACE

Surprising Young Stars in the Oldest Places in the Universe

Littered among the stars in our night sky are the famed deep-sky objects. These range from extended spiral and elliptical galaxies millions or even *billions* of light years away to the star clusters, nebulae, and stellar remnants strewn throughout our own galaxy. But there's an intermediate class of objects, too: the *globular star clusters*, self-contained clusters of stars found in spherically-distributed halos around each galaxy.

Back before there were any stars or galaxies in the universe, it was an expanding, cooling sea of matter and radiation containing regions where the matter was slightly more dense in some places than others. While gravity worked to pull more and more matter into these places, the pressure from radiation pushed back, preventing the gravitational collapse of gas clouds below a certain mass.

In the young universe, this meant no clouds smaller than around a few hundred thousand times the mass of our Sun could collapse. This coincides with a globular cluster's typical mass, and their stars are some of the oldest in the universe!

These compact, spherical collections of stars are all less than 100 light-years in radius, but typically have around 100,000 stars inside them, making them nearly 100 times denser than our neighborhood of the Milky Way! The vast majority of globular clusters have extremely few heavy elements (heavier than helium), as little as 1% of what we find in our Sun. There's a good reason for this: our Sun is only 4.5 billion years old and has seen many generations of stars live-and-die, while globular clusters (and the stars inside of them) are often *over 13 billion years old*, or more than 90% the age of the universe! When you look inside one of these cosmic collections, you're looking at some of the oldest stellar swarms in the known universe.

Yet when you look at a high-resolution image of these relics from the early universe, you'll find a sprinkling of hot, massive, apparently *young* blue stars! Is there a stellar fountain of youth inside? Kind of! These massive stellar swarms are so dense -- especially towards the center -- that mergers, mass siphoning and collisions between stars are quite common. When two long-lived, low-mass stars interact in these ways, they produce a hotter, bluer star that will be *much* shorter lived, known as a *blue straggler star*. First discovered by Allan Sandage in 1953, these young-looking stars arise thanks to stellar cannibalism. So enjoy the brightest and bluest stars in these globular clusters, found right alongside the oldest known stars in the universe!

By Dr. Ethan Siegel

Learn about a recent globular cluster discovery here: <http://www.nasa.gov/press/2013/september/hubble-uncovers-largest-known-group-of-star-clusters-clues-to-dark-matter>.

Kids can learn more about how stars work by listening to *The Space Place's* own Dr. Marc: <http://spaceplace.nasa.gov/podcasts/en/#stars>.

The Nebraska Science News is a publication of the Nebraska Academy of Sciences, a private foundation associated with the American Association for the Advancement of Science.
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NATS President: Katie Ramsey
NJAS President: Aurietha Hoelsing
NAS Executive Secretary: Cecelia Dorn
Nebr. Sci. News Editor: Cecelia Dorn
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Website: www.neacadsci.org Donations are tax deductible.



Globular Cluster NGC 6397. Credit: ESA & Francesco Ferraro (Bologna Astronomical Observatory) / NASA, Hubble Space Telescope, WFPC2.

NORTH-CENTRAL GEOLOGICAL SOCIETY OF AMERICA

Exploring Earth Science and Climate Change for Teachers
Workshop
Spring 2014

Date: Saturday, April 26

Location: University of Nebraska, East Campus, Hardin Hall auditorium

Beginning and End Time: 9 am-5 pm

Instructors:

Katherine Lewandowski, Eastern Illinois University, Charleston, IL

Michael Wolf, Augustana College, Rock Island, IL

Susan Kornreich Wolf, Fryxell Geology Museum, Augustana College, Rock Island, IL

Jeffrey Strasser, Augustana College, Rock Island, IL

David Harwood, University of Nebraska, Lincoln, NE

Sponsor: Central Section of the National Association of Geoscience Teachers (NAGT)

Sessions begin at 9:30 a.m. and include Rocks, Minerals and Fossils; ANDRILL, IODP/Deep Earth Academy.

Methods of Instruction used will be: direct instruction, use of short videos, inquiry activities, group work, and discussion.

Learning Objectives: As a result of this workshop, participants will be able to

- 1) Interpret paleoclimatic conditions, given a real dataset collected by ANDRILL/IODP scientists.
- 2) Identify common rocks, minerals and fossils and be able to interpret their significance for the environmental setting.
- 3) Synthesize and apply knowledge about biostratigraphic and paleoenvironmental principles to interpret new seafloor sediment core data.
- 4) Be able to discuss and analyze the history of Earth through information gained by rocks, minerals, fossils and major events in Earth History.
- 5) Evaluate proxies of past climate change in differing situations.

For more information contact:

Katie (Johnson) Lewandowski
Assistant Professor
Eastern Illinois University
Department of Geology-Geography
600 Lincoln Ave
Charleston, IL 61920
217-581-7270
kjlewandowski@eiu.edu

2014 NAS AND NATS REGISTRATION FORMS

Be sure to check out the following pages. Registration for the NAS spring meeting as well as the NATS Fall Conference presenter proposal form and registration are included.



**The Dordt
College
IDEAS
Academic
Camp
will be held
June 16 – 20,
2014**

IDEAS is a five-day college-level exploration in mathematics and science for high school students who will be juniors or seniors in the fall of 2014. Participants should possess a strong interest and aptitude in mathematics or science and should have the desire and ability to work hard and play hard with a like-minded peer group.

Camps will be offered in the following five areas: agriculture, bio-medical sciences/environmental studies, chemistry, computer science, mathematics/statistics/actuarial science, and physics.

Students will get the opportunity to dive into their field of interest, learn about careers in their field of interest and participate in hands-on research.

Please visit our website at www.dordt.edu/ideas for complete information. We invite you to encourage your students to take advantage of this unique learning experience.

NAS SPRING GENERAL REGISTRATION FORM

THE NEBRASKA ACADEMY OF SCIENCES, 124th ANNUAL MEETING AND AWARDS RECEPTION, APRIL 11, 2014
NEBRASKA WESLEYAN UNIVERSITY
50th AND ST. PAUL, LINCOLN, NE

PLEASE: REGISTER BEFORE THE MEETING. WE WOULD LIKE TO SAVE YOU TIME AND
AVOID CONGESTION AT THE REGISTRATION TABLE.

Name _____

Mailing
Address _____

City/State _____ ZIP _____

Area _____ Daytime
Code _____ Phone # _____

E-mail address: _____

REGISTRATION FEE \$ _____

\$ 15 Students w/ ID

\$ 70 Member Registration, includes dues

\$ 25 Members Reg, 2014 dues previously paid

\$ 70 Registration, non-members

\$ 25 Life Members

DUES

\$ 10 Students w/ ID \$ _____

\$ 45 General membership, NOT
attending the meeting

CONTRIBUTION* \$ _____

LUNCH TICKET \$ _____

@ \$ 7.75 each

AWARDS RECEPTION TICKETS \$ _____

@ \$ 15.00 each

TOTAL \$ _____

MAKE CHECKS PAYABLE TO:

THE NEBRASKA ACADEMY OF SCIENCES or NAS

302 MORRILL HALL, 14th and U STREETS

LINCOLN, NE 68588-0339

nebacad@unl.edu

(402) 472-2644

_____ I plan to attend the **MAIBEN MEMORIAL LECTURE**, 11:00
a.m., Olin Auditorium B

_____ I plan to attend the **LUNCH** (use the cafeteria line and pay there
or send in payment and receive a ticket)

_____ I plan to attend the **AWARDS RECEPTION** at 5:45 p.m., April
11, First United Methodist Church, 2723 N 50th St. (The Talent Search
Winners and other Outstanding Science Students from high schools of
Nebraska as well as scholarship winners will receive their awards
during the reception.)

**PLEASE INDICATE WHETHER YOU WISH TO GO
THROUGH THE LUNCH LINE AND/OR ATTEND THE
AWARDS RECEPTION, NO LATER THAN MARCH
28TH.**

*Contributions are tax deductible; dues and registration are not.

To Pay with a Credit Card please complete the following:

Circle: Visa, MC, Discover

Name on Credit Card _____

Credit Card Address if different _____

Credit Card Number _____

Three digit security code _____ Expiration Date _____

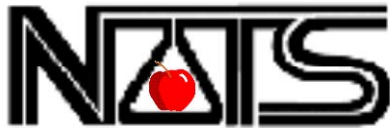
Fax: (402)472-8899



2013-2014 NEBRASKA ACADEMY OF SCIENCES PROGRAM COMMITTEE

Area code 402

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NATS PROGRAM PROPOSAL

2014 Fall Conference
September 25-September 27, 2014

www.neacadsci.org

FOR OFFICE USE ONLY

Session Type
Day
Time Length

NOTE: All Presenters are asked to register for the Conference. Registration fee is \$105, includes membership.

Please complete a registration form and include with your program proposal.

CAMP CALVIN CREST DOES NOT HAVE INTERNET ACCESS. PLEASE PLAN ACCORDINGLY FOR YOUR PRESENTATION

Please Type or Print (legibly in black) Information as You Wish It to Appear in Convention Program

Principal Presenter

Second Presenter

Name, Dept., School/Business, Preferred Mail Address, City, State Zip(+4), Phone: Work Home, Fax, Email

NOTE: For any additional presenters, please include the information requested above on an additional page.

Session Data

Session Title, Brief Description (50 words or less)

State Standard(s) Address in Presentation Please list Standards in the following form: 4.7.4 or 8.2.1 or 12.3.2. It is recommended that in your presentation you include assessment ideas for the standards you address. This is absolutely necessary!

NATS Bookstore Item The NATS bookstore can arrange to sell publications from the NSTA catalog. If appropriate, provide the Title and Author of an NSTA catalog item that closely links to your presentation. Presenters may also sell publications during their presentation time.

I have a publication suggestion for the NATS bookstore that is linked to my presentation. Title: Author(s):

Description of Session Types (Check One that describes your presentation):

- Demonstration: Presenter demonstrates a series of experiments, scientific phenomenon or an apparatus used in science. Limited audience participation. Theater-style setup.
Hands-On Workshop: Presenter involves audience with materials. Classroom-style setup.
Make It Take It: Hands on activities where participants leave with product to take back to classroom. Classroom-style setup.
Field Trip: Can be at Camp Calvin Crest or transported to another site. (Minimum of 2 hours). Include transportation plans.
Contributed Paper: Presenter shares results of research or shares a creative teaching strategy. Theater-style setup.
Short Course: A 2-3 hour session/workshop that may include in depth information on a topic or hands-on experience that requires more than a single session.

Length of Session:

- Three Hour Thursday Afternoon Workshop (1:30 – 4:30)
- One Hour - (the standard length presentation)
- Two Hour –

Please Mark your choice:

- Friday Only
- Saturday Only
- Friday or Saturday

Science Area: (Check only one for listing in final Program.)

- | | | | |
|-----------------------------------------------|---------------------------------------------------|-------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> Biology/Life Science | <input type="checkbox"/> Physics/Physical Science | <input type="checkbox"/> Integrated | <input type="checkbox"/> Elementary |
| <input type="checkbox"/> Chemistry | <input type="checkbox"/> Environmental Science | <input type="checkbox"/> Inquiry | <input type="checkbox"/> Technology |
| <input type="checkbox"/> Earth/Space Science | <input type="checkbox"/> General | <input type="checkbox"/> Assessment | <input type="checkbox"/> Science/Technology/Society |

Intended Audience:

- K-3
- 4-6
- Middle/Junior High
- Senior High
- Post Secondary
- All

Maximum number of participants for your session? (Room assignments based on space availability)

- 15 or fewer
- 16 - 30
- 31 - 50
- No Preference

AV Equipment: (NOTE: Equipment not listed below is to be provided/arranged by the presenter.)

- Screen

Fees may be charged for the cost of materials only. Presenter(s) are responsible for collecting fees for the session.

- The fee for this session is \$_____.
- There is no session fee.

Fee pays for:_____

Repeat Session:

Would you be willing to present your session twice? YES NO

Safety Issues

As a NATS presenter, you must comply with the "Minimum Safety Guidelines to NATS Presenters and Workshop Leaders" and you must agree to comply with the guidelines during your presentation. This compliance form will be sent when we send you the program confirmation letter.

Special Room Arrangements: Normal arrangements will include tables and/or chairs unless otherwise requested. Special set ups dependent on availability of resources. List any special needs you will have:

Only the *principal presenter* will be contacted concerning confirmations. All correspondence will be sent to the email address of the principal presenter. The principal presenter must share information with his/her co-presenter(s).

If you or any member of your team would like an administrator, division chief, etc. notified of your participation post-conference, please indicate below. Use additional sheets if necessary. Be certain to designate which presenter's administrator, etc. matches with which presenter if there is more than one presenter in your group.

Name _____	Name _____
School _____	School _____
Position _____	Position _____
Address _____	Address _____
City _____	City _____
State, Zip (+4) _____	State, Zip (+4) _____

Return one copy of this proposal by August 1, 2014:
(later proposals will be accepted only as space allows)
 NATS
 302 Morrill Hall, 14th and U Streets
 Lincoln, NE 68588-0339
nebacad@unl.edu
 402/472-2644

Photocopy this form as needed



Please TYPE or Print Legibly in INK

This conference is partially supported by NSEA and NSTA <http://www.neacadsci.org/nats/Conferences>

Early Registration, 2014 Conference Dates are Sept 25- Sept 27

Register on line at www.neacadsci.org/ Click on Events

Name	School	ESU
Home Address	School Address	
City	State	Zip
	City	State
		Zip
Email	School Ph	Home Ph

Teaching Assignment Elementary Middle/JR High Senior High College Pre-service

If you received any science teaching awards between November 2013 and September 2014 please list _____

Would you like a copy of *The Yearly Proceedings of NAS*? Yes No

May we use pictures of you taken at Fall Conference in our newsletter, on our website or in publications to promote NATS? Yes No

We would like to forward you information about science opportunities, grants, conferences, camps via email unless you decline. No

CONFERENCE REGISTRATION (Postmarked by September 5)

- \$105 Includes conference & NAS/NATS Memberships
- \$60 Saturday only conference & NAS/NATS Membership
- \$45 Pre-Service Teacher, Student, or Non-teaching spouse

LATE REGISTRATION (On-site or after September 5)

- \$130 Includes conference & NAS/NATS Memberships
- \$70 Saturday only conference & NAS/NATS Membership
- \$55 Pre-Service Teacher, Student or Non-teaching spouse

WORKSHOP REGISTRATION FOR THURSDAY, SEPTEMBER 25th to be posted in August

ACCOMMODATIONS – NATS is only providing lodging at Camp Calvin Crest. Hotel arrangements are on your own!!!

Roommates must submit together!

Camp space is limited, so register early. Camp space is assigned on first come, first reserved basis.

LODGE: Bedding and towels provided.

CABINS: Bring your own bedding and towels.

Hotel arrangements by NATS are no longer an option; you must make your own payment and reservations for a hotel.

**Staying 2 nights? The BEST DEAL
INCLUDES ALL LODGING AND MEALS**

- Lodge \$135 (Bedding and Towels Included)
- Cabin \$ 115 (Bring Your Bedding And Towels)

- Thursday Night Lodge \$ 45
- Thursday Night Cabin \$ 30

For Lodging Assignment Purposes Only
<input type="checkbox"/> Female <input type="checkbox"/> Male

Special accommodations required, handicapped, etc.

Specify _____

**One-night LODGING ONLY
(CHECK THE LODGING YOU WILL NEED)**

- Friday Night Lodge \$ 45
- Friday Night Cabin \$ 30

MEALS ONLY (CHECK THE MEALS YOU WILL NEED)

- Thursday Steak Fry \$14.00
- Friday Dinner \$10.00

- Friday Breakfast \$7.00
- Saturday Breakfast \$7.00

- Friday Lunch \$8.00
- Saturday Lunch \$8.00

Return forms to: nebacad@unl.edu, or NATS, 302 Morrill Hall, 14th and U Street, Lincoln, NE 68588-0339, fax 402-472-8899, questions 402-472-2644

Checks payable to: NATS

Registration Total	\$ _____	Organization to be Billed	_____
Lodging and Meals Total	\$ _____		_____
TOTAL	\$ _____	Do you need a Receipt?	
Amount Enclosed	\$ _____	Yes	No

CREDIT CARD PAYMENT	<input type="checkbox"/> Master Card	<input type="checkbox"/> Visa	<input type="checkbox"/> Discover
Card Number	_____		
3 Digit Security Code (on back of card)	_____	Expiration Date	____/____
Name on card	_____		
Address of cardholder	_____		