

Nebraska Science News



Nebraska Academy of Sciences



Nebraska Association of Teachers of Science

Serving Scientists and Science Educators Across the State of Nebraska

Winter, 2014-2015

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FROM THE NAS PRESIDENTS' DESK

Members of the Nebraska Academy of Sciences look forward to an exciting year in 2015. We will celebrate our 135th anniversary and 125th annual meeting on April 17 at Nebraska Wesleyan University in Lincoln. Based on recent years' attendance, we expect over 375 attendees, including undergraduates and graduates sharing their research. Scholarships for outstanding high school and college aged scientists are awarded annually at our annual meeting. That same day on campus, 60 of the state's top science students in Grades 7-12 will compete in the Nebraska Junior Academy of Sciences state science fair. The Nebraska Academy of Sciences provides financial support to cover most of the non-travel costs for our top Senior Division students to attend the AJAS/AAAS Conference. In 2015, we will have six of these students who qualified in 2014 who will participate in events at AJAS/AAAS in San Jose, California, in February 2015.

Our annual meeting this year will coincide with the third Nebraska Science Festival. NESciFest has expanded to a nine-day menu of events in Omaha, Bellevue, LaVista, Lincoln, Ashland, Wayne, and Kearney, and other sites for the general public to interact with scientists. NESciFest has added two opportunities leading up to the April 10-18 happenings: middle school and high school students are invited to create a 30 second video to explain to a 5th grade audience about "germs." Students in Grades 4-12 are invited to enter an essay about weather, with the top writers from each grade band winning a chance to meet storm chaser Reed Timmer at the Keynote at Omaha's Joslyn Museum on April 10. For more information about these contests, as well as to apply to host an event during the week, visit nescifest.com.

One month after the NAS annual meeting, on May 15-16, the University of Nebraska–Lincoln will host the 31st National Science Olympiad, with teams of middle school and high school students representing 50 states and Japan. The Nebraska Academy of Sciences has provided funding for the planning of this outstanding opportunity for students. Please consider volunteering, from handing out box dinners at the opening ceremonies, to directing traffic, to working behind the scenes. For more information, visit www.scienceolympiad2015.com.

In mid-July, Omaha will host the National Education Conference on Science Education, bringing together 94 chapters and associated groups of the National Science Teachers Association. The Congress meets annually to discuss issues and bring forth recommendations that may be of interest to NSTA and the science education community. Participants also network and attend leadership workshops to enhance their roles as science education leaders. Several NAS Executive Committee members attend Congress each year, so the Academy is honored to see our state hosting this event.

NAS continues to publish an electronic journal, *The Transactions of the Nebraska Academy of Sciences and Affiliated Societies*, which can be found at <http://digitalcommons.unl.edu/tnas/>. You are invited to share your research by submitting a transcript for publication consideration. Submission guidelines and instructions are also found at the digital commons web site.

The Academy recently renewed its partnership with the Nebraska Environmental Trust to administer Public Information and Education mini Grants that are awarded to expand dialogue on important conservation topics and to provide information on emerging or highly useful conservation methods.

Share our passion for scientific research and science education in Nebraska by participating in one or more of these events during 2015.

Dan Sitzman, NAS President

GREETINGS FROM THE NATS PRESIDENT

Over the past three years of my time serving on the NATS board, first as board member (technology), later as president-elect, and now as president, I have really begun to appreciate the hardworking, innovative, and high-quality Science teachers that we have here in the State of Nebraska. Having had the opportunity to network and interact with other state's Science associations and chapters, I believe that NATS has a great thing going! We have a long history of supporting research, collaboration, and professional development that is among the best in the nation. Every teacher seems to know what is at stake. According to STEMcareer.com, not enough students are graduating with STEM backgrounds to fill the open positions in the marketplace. I'm probably "preaching to the choir" but here are some related facts:

- By 2010, if current trends continue, more than 90 percent of all scientists and engineers in the world will be living in Asia.
- More than 50 percent of all engineering doctoral degrees awarded by United States engineering colleges are to foreign nationals.
- During the next decade, the United States demand for scientists and engineers is expected to increase at four times the rate for all other occupations.
- The United States ranks 20th among all nations in the proportion of 24-year-olds who earn degrees in natural science or engineering.
- The United States ranked 28th in math literacy and 24th in science literacy, according to a 2008 report by the Congressional Research Service.
- More than half of teens (55%) would be more interested in STEM simply by having teachers who enjoy the subjects they teach.

As NATS members, we are on the "front lines" in encouraging our students to take more STEM classes, get involved in outside-of-school activities, participating in STEM competitions such as robotics, Science Olympiad, research projects through NJAS, and many other ways to create an opportunity for students to engage in the world around them. Something as simple as showing the student how to become a citizen-scientist through backyard butterfly gardens, building bat boxes, participating in bird counts, or involving them in a conservation project can inspire the next generation of health-care workers, engineers, scientists, or simply enjoy and appreciate nature, the laws of nature, and the universe beyond us. I

know many of you are already doing all of these things and more. Thank you! It was because of a teacher just like you that I am now also teaching Science and hoping to inspire the next generation of thinkers and dreamers, builders, inventors, and problem-solvers.

So, where do we go from here? If we are to truly slow down or even reverse the negative trend facing the STEM fields we have to do more. We need you and all Science advocates to become active in NATS. Consider running for a board position. Share your great ideas with us so that we can improve our organization, Fall Conference, and professional development opportunities. We are only as strong as our members and we can only continue the great traditions we are built upon if each of you participates, has a voice, and encourages others to join as well. Were you once active but no longer attend the Fall Conference? Rejoin the ranks! Looking for somewhere to be rejuvenated, re-charged, and re-connect? Network with your peers through NATS! We are looking for your input on how we can provide these opportunities to you through social networking, mini-conferences, etc. Have you "liked" NATS on Facebook? If not, it is a great way to share ideas, get informed about professional development opportunities, and just stay connected. Need to get information out? Let us know how we can help you spread the word. If you haven't already, consider partnering with your local communities to increase support for STEM in your school or district. Engaging students in STEM requires all constituents to become a team; parents, students, teachers, employers, private and public organizations. Write to your representatives at the state and federal level asking for their support for more funds for teaching, increasing professional development opportunities, and support student learning in the STEM fields. Let them know that we need their help!

Just a few reminders before I sign off. There are several upcoming professional development opportunities in our area to mark your calendars for. First, the NSTA National Conference will be a little closer to home in Chicago, March 12-15, 2015 followed by National Congress on Science Education (NCSE) right here in Omaha the second week of July, 2015! NATS will be looking for all its members to join us in making everyone from around the nation feel welcomed to Nebraska! Finally, consider joining NSTA, NATS, KATS (Kansas), and STOM (Missouri) Associations at the NSTA Kansas City Regional December 3-5, 2015. There will be lots of opportunity to get involved!

On a final note, I wanted to encourage everyone to consider how they can contribute to one or both of the Science Olympiad events this year. The State Science Olympiad events will be held April 25, 2015 followed by Nebraska hosting the National Science Olympiad on May

15-16, 2015. They will need lots of volunteers. I am proud to call myself a Nebraska Science educator and each of you should feel the same! Keep up the good work!

Joe Myers, NATS President



Dr. Jekyll and Mr. Hyde ...the two sides of competition.

Probably most people view science fairs as competitions, not just the parading of achievement. After all, there are all the trappings of competition: Assembling competitors, judging and score keeping, awards and honors for the best. Discussions have been held about whether the external awards (scholarships, honors, cash) are sufficient and relevant to the activities. The major activity and use of funds in our organization is based on promoting and supporting formal competition among students.

But recent events, sometimes dramatic and sometimes of a chronic, low key variety, should goad us all to consider what is the purpose of this competition? My research, (I especially thank a blogger named Dorothy Hart) combined with my experience, reminds me that competition, like so many other phenomena, has multiple characteristics, some inherently invaluable, others, well, not so much.

I suggest we consider it an issue of healthy competition vs. pathological strife. If you happened to watch the series on the Roosevelts, you may have seen that one of our most competitive presidents, one who competed almost with every breath of his life, recognized that need for fair and orderly competition, competition without artificial barriers and deceptive or unfair practices. The goal was that competition benefit society as a whole. The kind of competition that is fair, that provides a level playing field and objective rules promotes a circumstance in which individuals, in this case the student/learners get a chance and acquire the motivation to extend themselves beyond their normal daily exertions, and then get to CELEBRATE, not just their own accomplishments but those of others, and COMMUNICATE their findings with others. In doing so, the experience should provide the student not just with extrinsic rewards, like the ones that concern us, but also intrinsic rewards, ones we cannot provide directly for them, such as building self-confidence, persistence and industry, sense of worth, engaging in exercising methodology organization and sharpening curiosity, and creative and critical thinking. Every student who participates should get these results, regardless of how he or she ranks in the rolls of honor.

There is an unhealthy form of competition that surfaces from time to time, however, and it has appeared occasionally in our organization. Unhealthy competition is excessive strife which devolves into rivalry, unnecessary envy and jealousy, even malice. I'm not talking about students here, I am talking about parents and teachers who believe their children must win, or face some kind of ignominious defeat, about participants who want to bend or challenge rules to benefit some others, who take the focus off celebrating science and inquiry and focus instead on "who's the best"?

It is essential, I think, that we as educators promote the best possible atmosphere in our competitions, one that fosters wonder in the scientific world and expands the potential horizons for our students. We should always to be alert to make sure we are fostering "ambient conditions" that recognize that in a certain sense, every student wins, in so many ways.

Aurietha M. Hoelsing, President/State Director
Nebraska Junior Academy of Sciences

ACADEMY WEB SITE UPDATES

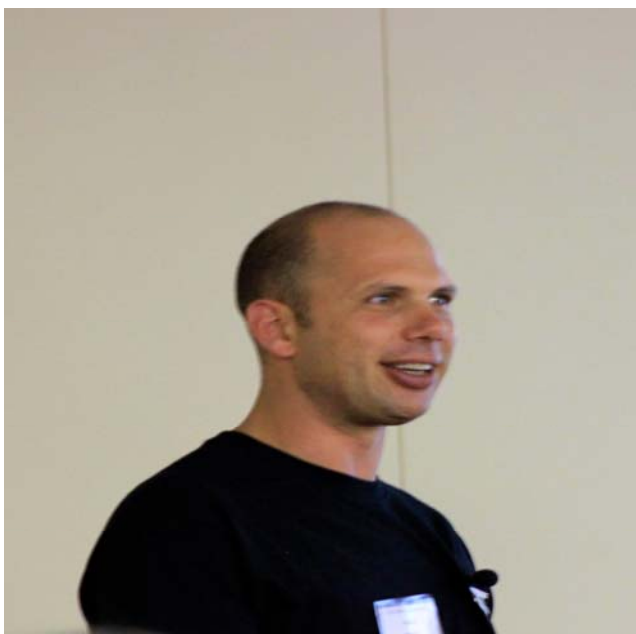
The NAS/NATS/NJAS web site is adding new content all the time.

Our newsletter is available to members and can be downloaded saving money and resources. The Transactions and the Program and Proceedings has been converted to on-line digital copy available through UNL Digital Commons as well as EBSCO Publishing. Publishing digitally allows us to upload research articles as they are submitted resulting in more timely distribution of research information. For information about accessing or submitting Transactions articles go to our website: www.neacadsci.org. Click on NEWS; then click on Publications (found on the left side bar). Proceedings articles will continue to be submitted through section chairs.

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.
NAS President: Dan Sitzman
NATS President: Joe Myers
NJAS President: Aurietha Hoelsing
NAS Executive Secretary: Cecelia Dorn
Nebr. Sci. News Editor: Cecelia Dorn
Membership information can be obtained by writing to P.O. Box 880339, Lincoln, NE 68588-0339
E-mail: nebacad@unl.edu Telephone: (402) 472-2644
Website: www.neacadsci.org Donations are tax deductible.

2014 FALL CONFERENCE – FANTASTIC

The 2014 NATS Fall Conference was a great success. Our speakers were awesome, and there were workshops and sessions available for all grade levels and subject areas. Several awards were presented, we had a successful silent auction. Joe Brogie provided great magical entertainment prior to the steak dinner Thursday evening. If you missed all the fun be sure to put the 2015 dates on your calendar now, September 24 – 26, we will be at Camp Calvin Crest in Fremont again next year. Here are just a few of the highlights in pictures.



Ramsey Musallam, Secondary Science Instructor at Sacred Heart Cathedral, San Francisco



Carolyn Hayes, NSTA President-elect



Ted Willard, NSTA Program Director



Elizabeth Jones, UNL Civil Engineering



Doc Gizmo



Joe Brogie, Magician, Making the Impossible Seem Possible



Phil Arnold, "Doc Gizmo" receives one of the Catalyst Awards



Stephanie Kurz receives the 2014 Nebraska Finalist PAWS award for excellence in Elementary Science Teaching



Kirsten Smith, receives Pinnacle Award from Gary Brown, Kirsten also received the Catalyst Award



Janice Buss and Karen Humphrey received PAWS Honorable Mentions for 2014

INTRODUCING LEE BROGIE – NATS PRESIDENT-ELECT

Hi! My name is Lee Brogie and I am honored to be your NATS President-Elect. As some of you may remember, it's taken me awhile to get here, having lost 2 previous elections to superb candidates. (1999 vs Kim Soper and 2012 vs Jon Pedersen). Coming from a family of NATS Presidents, (husband Ed 1987 and brother-in-law Mark 1993) I may have been destined to follow in their footsteps.

I have to admit, that my first love is the M in STEM. Specifically in the area of Mathematics Diagnosis and Remediation ... utilizing students' strengths to overcome their areas of difficulty in math. This passion led to my receiving Nebraska's first Elementary Education Presidential Award in Mathematics and Science Teaching (1990), serving as the Director of the Nebraska's K-12 Teacher and Curriculum Enhancement Project (1992-1993) and being the first elementary school teacher to serve as President of the Nebraska Association of Teachers of Mathematics (NATM 1994).

My teaching career began in Lincoln, Nebraska (1984) teaching 3rd and 4th grade students at Prescott Elementary School. It didn't take me long to realize that science was the hook to excite and invite students into the wonderful world of learning. To increase my repertoire of science lessons and to enhance my personal understanding of science topics, I began attending NATS Fall Conferences. I will never forget my first polymer session led by Westside's chemistry teacher Ron Crampton (NATS President 1991). At one point Ron asked for the following to be completed: $C = O$ As teachers were filling in the missing atoms I couldn't help but laugh, at which point Ron called on me to share. Reluctantly, I placed a slash through the double bond ($C \neq O$) and stated "C does not equal O." Even at a science conference I was still thinking like a mathematician.

I am now fully immersed in the S of STEM. At the turn of the century I earned my endorsement in middle school science and began teaching 7th and 8th grade science at Wayne Junior Senior High School. In the words of Jim Woodland (NATS President 1984) I "have come over from the dark side." My passion now is independent science research. At Wayne, students conduct their own science research projects in both 7th and 8th grades. They showcase their results in our school science fair and community open house; and compete at the NJAS Northeast Regional Science Fair and the UNMC 8th Grade Science Meet. The pride and sense of accomplishment that students feel when successfully overcoming obstacles as practicing scientists is second to none. They become

experts in their 'field' and gain confidence as they share what they have learned with others.

Thank you for my next adventure ... serving you, the NATS membership, as your president-elect. There are exciting times ahead for us: new scientific discoveries, new innovative technologies, Next Generation Science Standards, and the 2015 NATS Fall Conference (September 24th – 26th) Make plans to attend ... or better yet, make plans to present!

PIE GRANTS UPDATE

The Nebraska Academy of Sciences (NAS) received four applications for the third quarter 2014 PIE minigrant program. Applications were received from Nebraska Art Teachers Association-Retreat Into Art-Naturally; UNL Extension in Lancaster County-Garbology Curriculum Updating; Omaha Children's Museum-Maker Faire; and the Lower Platte South NRD-Lower Platte River Summit. All four grant applications were funded.

Five applications were received for fourth quarter consideration. Recipients will be announced at the December 6th Executive Committee meeting. Applications were received as follows: Pheasants Forever, "Train the Trainer" Prescribed Fire Program; PRRIP & NE Water Leaders Academy, Em2 Geomodel: Experiencing How Rivers Work; Science Olympiad 2015, Engaging Nebraska Students in Environmental Science; Audubon Nebraska, Audubon's Nebraska Crane Festival; and Nebraska Wildlife Federation, Grouse Habitat Guide for Land Owners.

The Public Education and Minigrant program awards up to \$3000 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.

First quarter 2015 PIE grant applications are due January 9, 2015. Grant forms and information can be found on our website, www.neacadsci.org. Click on NAS and then click on Grants and Scholarships.



2015 SCIENCE OLYMPIAD

The 2015 Nebraska Science Olympiad will be held on April 25 at UNL's City Campus as we prepare to host the 2015 national. On May 14-16, UNL will host the National Science Olympiad event, which will bring 3,000 guests to Lincoln

from across all 50 states and Japan. More event information will be available soon, but if you would like to volunteer (we will need approximately 500-600 volunteers), please contact Jon Pedersen at jep@unl.edu. We hope that we can count on the science and science education community to be big supporters of this national event.

4TH ANNUAL THRILLS IN THE HILLS CATAPULT COMPETITION

Arthur County Schools would like to invite you to the 4th Annual Full Scale Catapult Competition on Wednesday, April 29th 2015.

Machine designs for the competition may be of catapult, trebuchet, torsion, tension, or ballista origins. We will not be allowing air cannon designs or centrifugal designs for safety reasons. All participants will be throwing 16 pound bowling balls in the competition as a projectile. The bowling balls will be provided at the competition.

Catapults entered into the competition may not be larger than 25 feet long, 15 feet wide, and 15 feet tall (excluding the lever arm). We will have skid loader available to help teams get their device from the trailer to the shooting range. Teams may consist of any number of students, however, no more than six team members may be involved during the loading and firing stages. Teachers must be present while their team is loading and firing their device, and they are asked to monitor their students while other teams are competing. Absolutely no horseplay will be tolerated in the firing area.

The competition will be based solely on the distance that each team can throw a bowling ball. Each team will be given three trial shots and three competition shots. Teams may choose not to use all of their trial shots. Distances will be measured from the point of impact using a laser rangefinder.

Check-in will begin April 29th at 9:00am MST at the airport in Arthur, Nebraska. The competition will begin at 11:00am MST and run until all teams have competed. There will be an entry fee of \$50 per school, and checks may be made payable to Arthur County Schools. Trophies will be presented to the top three teams in the competition. To ask any questions about the event and to pre-register please email me at joe.kupper@arthurcountywolves.org

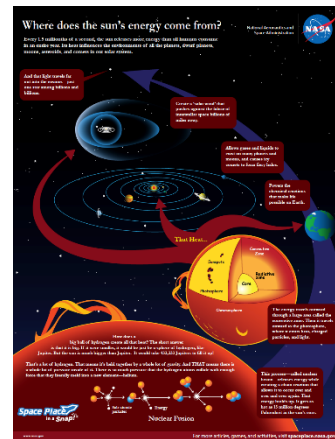
Arthur County Schools is very excited to be hosting this event. We believe that the competition is a fun, motivational learning experience for all students involved. If your school is unable to participate, but would like to

come watch the event, please feel free to do so. We hope to see you there!

Joe Kupper, Science Teacher
Arthur County High School – Arthur, NE
(308) 764-2253

HELIOPHYSICS

The sun is really, really hot. Every 1.5 millionths of a second, it releases more energy than all humans consume in an entire year. But where does all that energy come from? Space Place's animated series "Space Place in a Snap" tackles this important question in its latest episode. Even better, it comes with a sweet poster, too! Check it out at: <http://spaceplace.nasa.gov/sun-heat>.



UNL MAST PROGRAM

The UNL Master of Arts with emphasis in science teaching MAST Program is getting the word out about their teacher certification program. Nebraska needs highly-qualified science teachers. Many science teachers who teach physics do so under a broad field endorsement that only requires that they have taken two undergraduate classes in the subject area. Our program requires that people have at least an undergraduate degree in their content area to become a science teacher. Dr. Beth Lewis directs the program and is the Principal Investigator on a national Science Foundation grant to provide fourteen \$13,000 scholarships annually to science professionals who would like to become science teachers.

Information for science professionals who may be considering a career change and need initial teacher certification through a program such as ours is available on their MAST website. <http://cehs.unl.edu/tlte/masters-degree-teaching-certification#MASt>. If you need more information, please don't hesitate to contact us.

Lyrice Lucas
College of Education and Human Sciences
UNL



THE NEBRASKA ACADEMY OF SCIENCES, INC.
(Founded January 30, 1880)
125th ANNUAL MEETING TO BE HELD
at
NEBRASKA WESLEYAN UNIVERSITY
50TH and ST. PAUL, LINCOLN, NEBRASKA

FRIDAY, APRIL 17th, 2015

"Call for Papers"

**ABSTRACTS, FORM, AND FEES ARE DUE TO SECTION CHAIRPERSONS
FEBRUARY 6, 2015**

INDIVIDUALS ARE INVITED TO SUBMIT AN ABSTRACT OF ORIGINAL RESEARCH OR SYNTHESIS OF PRIMARY RESEARCH/LITERATURE FOR CONSIDERATION BY ONE OF THE SECTIONS FOR INCLUSION IN THE PROGRAM OF THE ANNUAL MEETING OF THE NEBRASKA ACADEMY OF SCIENCES. YOU WILL RECEIVE EMAIL NOTIFICATION OF YOUR ABSTRACT'S STATUS.

Annual Meeting Presenters may also want to consider submitting their complete research articles for review and possible publication in the Transactions of the Nebraska Academy of Sciences. Papers from all sections are eligible. Contact the Academy office for publication information.

SECTION CHAIRPERSONS FORWARD ALL DOCUMENTS TO THE ACADEMY, nebacad@unl.edu BY FEBRUARY 20th. A HARD COPY OF THE ABSTRACT MUST BE INCLUDED WITH THE REGISTRATION FORM. FORMATTING INSTRUCTIONS ARE AVAILABLE ONLINE AT <http://www.neacadsci.org>,

Click on NAS, then Information

OR FROM:

THE NEBRASKA ACADEMY OF SCIENCES
302 MORRILL HALL, 14TH AND 'U' STREETS,
LINCOLN, NE 68588-0339
TELEPHONE (402) 472-2644

1. EACH ABSTRACT MUST BE ACCOMPANIED BY A \$70.00 REGISTRATION FEE (\$15.00 FOR STUDENTS—COPY OF VALID STUDENT ID MUST BE ENCLOSED) FOR THE PERSON PRESENTING THE PAPER. PLEASE COMPLETE CONTACT INFORMATION ON THE REGISTRATION FORM ACCURATELY AND LEGIBLY. FORM IS AVAILABLE ON OUR WEBSITE: <http://www.neacadsci.org>
Click on NAS, then Click on Information

2. MAKE CHECKS PAYABLE TO THE NEBRASKA ACADEMY OF SCIENCES.

3. AUTHORS SUBMITTING MORE THAN ONE ABSTRACT SHOULD PAY ONLY ONCE.



2014-2015 NEBRASKA ACADEMY OF SCIENCES PROGRAM COMMITTEE

Area code 402

Section	Chairperson	Address	unless listed
Program Chairman & Proceedings Editor	Jim Carr	NAS, 302 Morrill Hall, Lincoln, NE 68588-0339 nebacad@unl.edu	472-2644 O
Aeronautics & Space	Scott Tarry Michaela Lucas	NASA NE Space Grant, 6001 Dodge St, CB 041, Omaha 68182-0589 mlucas@unomaha.edu	554-3772 O
Anthropology	Erin Carr	UNL, 816 OLDH, Lincoln 68588-0368 erin.carr05@gmail.com	
Applied Sci & Technol	Mary Ettl	Wayne State College, 1111 Main St, Wayne, 68787 maettell@wsc.edu	375-7342 O
Biological & Medical Sciences	Annemarie Shibata	Creighton Univ, Dept of Biology, Omaha 68178-0103 annemarieshibata@creighton.edu	280-3588 O
General Chemistry	Joshua Darr	UNO, Durham Sci 331, Omaha 68182 jdarr@unomaha.edu	554-2653 O
General Physics	Adam Davis	Wayne State College, 1111 Main St, Wayne, 68787 addavis1@wsc.edu	375-7339 O
Earth Sciences	Chase C Calkins	6100 Vine - C15, Lincoln 68505 ccalkins@live.com	613-7109 O
History & Philosophy of Science	Richard Webb	Union College, Division of Sci & Math, Lincoln 68506 riwebb@ucollege.edu	486-2515 O
Teaching of Science & Mathematics	Josef Kren	Bryan LGH Health Sciences, 5035 Everett, Lincoln 68506 josef.kren@bryanlgh.org	481-4968 O
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Collegiate Academy (Biology Section)	Terry McGinn	NE Wesleyan Univ., 5000 St Paul, Lincoln 68504 tmcginn@nebrwesleyan.edu	465-2457 O
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	Nathaniel Fackler	nfackler@nebrwesleyan.edu	465-2260 O
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Academy Exec Secretary	Cecelia Dorn	302 Morrill Hall, 14th & U St, Lincoln 68588-0339 nebacad@unl.edu	472-2644 O

NAS ANNUAL MEETING, APRIL 17, 2015
NEBRASKA ACADEMY OF SCIENCES ABSTRACT INSTRUCTIONS
ABSTRACTS DUE FEBRUARY 6, 2015 TO YOUR SECTION CHAIR

Email or MAIL TO YOUR SECTION CHAIRPERSON

1. *YOUR ABSTRACT, INCLUDE 1 HARD COPY OR WORD AND PDF ELECTRONIC FILES (so editor can proof scientific notation)*
2. *COMPLETED PRESENTERS REGISTRATION FORM & FEE*

GENERAL INSTRUCTIONS

DEADLINES: ABSTRACTS, REGISTRATION FORM AND FEES must be received by the Section Chairperson(s) on or before **FEBRUARY 6, 2015.**

Late submissions may not appear in the printed program.

PREPARING THE ABSTRACT: Abstracts should be informative condensations of the essential parts of the paper; not merely recitation of the subjects to be covered in the presentation. *Since the abstracts receive international distribution by our utilization of abstracting services and a journal exchange program, please proofread your work carefully.*

Please use Times New Roman, 12 pt. Type single-spaced. Margins should be Top 0.5", Bottom 0.5", Left 1.0", and Right 0.5".

Type the TITLE in CAPITAL LETTERS. Type Name, Department, Institution, City and Address on the line immediately below the Title, indenting 5 spaces (one tab). Leave exactly one line between this material and the BODY of the Abstract. (See sample below.)

CHARACTERIZATION OF THE SITE OF NORA VIRUS REPLICATION IN *DROSOPHILA*
MELANOGASTER

Justin Buchanan, Brad Ericson, Darby Carlson, and Kimberly Carlson, Department of Biology,
University of Nebraska at Kearney, NE 68849

Nora virus is a picorna-like virus that infects *Drosophila melanogaster*, but displays no apparent
pathogenicity. The mode of

Please save your abstract in Microsoft Word and submit it (by email, CD or jump drive), together, with one hard copy of the abstract (or a PDF file), registration form and fee **TO YOUR SECTION CHAIRPERSON.**

PLEASE PROOFREAD YOUR WORK!!

PLEASE NOTE: Each abstract is to be accompanied by a completed registration form and \$70.00 registration fee for the PRIMARY PRESENTER; (includes membership). If there are multiple authors, registration fees are required for only those who attend the Annual Meeting. If the presenter is a student who encloses a copy of his/her current I.D. with the registration, the fee is \$15.00. (If an individual is presenting more than one paper, only one registration form and fee is required.)

PRESENTER'S
REGISTRATION/SECTION FORM
NEBRASKA ACADEMY OF SCIENCES
DUE FEBRUARY 6, 2015 TO SECTION CHAIR
SEND REGISTRATION FORM, PAYMENT AND ABSTRACT TO YOUR SECTION CHAIRPERSON.
REGISTRATION IS REQUIRED OF ALL WHO PRESENT PAPERS OR ATTEND/CHAIR ANY SESSION

REGISTRATION Please print or write legibly

Name _____

Mailing Address _____

Institution _____

E-mail address: _____

Phone Number: _____

Speaker: _____

Time Required: 5-10 min. _____ 10-15 min. _____ 15-20 min. _____

Section in which paper is to be presented (Check one)

- AERONAUTICS & SPACE SCIENCE – mlucas@unomaha.edu
- ANTHROPOLOGY – erin.carr05@gmail.com
- APPLIED SCIENCE & TECHNOLOGY – maattell1@wsc.edu
- BIOLOGICAL & MEDICAL SCIENCES – annemarieshibata@creighton.edu
- CHEMISTRY & PHYSICS
- CHEMISTRY SECTION – jdarr@unomaha.edu
- PHYSICS SECTION – addavis1@wsc.edu

MEMBERSHIP

Student \$10.00 _____
 (with copy of student ID)

REGISTRATION

General & Presenter Registration \$70.00 _____
 (dues included)

Student Presenter Registration \$15.00 _____

Lunch \$ 7.95 _____

Check _____ Cash _____ Credit Card: Visa _____ MC _____ Discover _____

Credit Card Name _____

Credit Card Number _____ 3 digit code _____

Credit Card Address _____ EXP Date _____

TOTAL REGISTRATION + MEMBERSHIP \$ _____

- EARTH SCIENCE – ccalkins@live.com
- HISTORY & PHILOSOPHY OF SCIENCE – riwebb@ucollege.edu
- TEACHING OF SCIENCE & MATHEMATICS – josef.kren@bryanlgh.org
- COLLEGIATE ACADEMY
- BIOLOGY SECTION – mcginn@nebrwesleyan.edu
- CHEMISTRY/PHYSICS SECTION – dat@nebrwesleyan.edu
- NE CHPT NATL COUNCIL FOR GEOGRAPHIC EDUCATION - jarcher1@unl.edu

Plan your AUDIO VISUAL NEEDS carefully and indicate the LENGTH OF TIME REQUIRED for your presentation by circling the appropriate item above. The allotted time is at the discretion of the Section Chairperson, and if a special time slot is needed, be sure to indicate your needs. This is essential for accurate scheduling.

Equipment Provided: PP equipment. Other equipment: Confer w/ your section chair, any special set-up must be completed before the session begins, no additional time between speakers is allotted for set-up.

Questions ??? Contact:
 Nebraska Academy of Sciences
 P.O. Box 880339
 Lincoln, NE 68588-0339
 (402) 472-2644 voice email: nebacad@unl.edu
 (402) 472-8899 fax