2017 ASTE International Conference Announcement

The 2017 ASTE International Conference will be held in Des Moines, Iowa from January 12-14. Conference Co-Chairs Joanne Olson and Jerrid Kruse will share all the details at the 2016 conference in Reno.
President’s Message
Contributed by Lisa Martin-Hansen

I hope everyone has had a great fall semester. We look forward to seeing you at ASTE Reno for our Annual International Conference!

ASTE and NARST at ESERA

This fall (August, 2015), I was invited by the NARST president and former ASTE board member, Valarie Akerson, to present at a symposium of leaders in science education, at the European Science Education Research Association at the National Association for Research in Science Teaching symposium session (http://www.esera2015.org/programme/invited-symposia/narst-on-a-mission-for-scientific-literacy/). The topic was: On A Mission for Scientific Literacy: Current Status and Recommendations for the Future. While at the conference, it was evident that the ASTE membership was well represented by members and leaders from ASTE.

Here are some comments provided by ASTE attendees:

Julie Luft: (Past-ASTE President, University of Georgia): This professional conference has been essential in expanding my understanding of professional development and teacher education. The studies that are shared by the international community often have different research approaches and theoretical orientations. More importantly, there are ample opportunities to discuss the studies with the presenters and other participants. It is during these discussions that I have come away with a better understanding of my field and actual implications for my work with teachers.

Meg Blanchard: Meeting up with colleagues at ESERA made me feel like a representative from ASTE and from the U.S., as we made up only about 10% of the 1100 attendees at the conference. The presentations and conversations with colleagues from Australia, Great Britain, Turkey, and many other countries made me realize that we all are grappling with similar educational problems. If we unite and work together, we can have real impact.
Norm and Judy Lederman (ASTE editors of JSTE, Illinois Institute of Technology): We have been attending ESERA for over 12 years. Given the wide variety of approaches to teacher education globally, we find the ESERA conference particularly useful. The international participation in the conference is far greater than what we currently experience at ASTE. Attending the ESERA conference gives us the opportunity to interact with a wide variety of science teacher educators, many of whom do not attend conferences in North America. This provides us with a more comprehensive view of science teacher education. In addition, given our role as Editors of JSTE, it gives us a unique opportunity to increase international submissions to the journal and membership in ASTE.

Lisa Martin-Hansen (current ASTE President, California State University, Long Beach): ESERA provided space for different perspectives and emphasis on topics compared to what we might typically hear presented in the United States. The first keynote presentation was especially interesting as two science education professors, Marianne Achiamn, Associate Professor at the Department of Science Education, University of Copenhagen and Ilka Parchmann, Professor for Chemistry Education at Kiel University and Head of the Department of Chemistry Education at the Leibniz Institute for Science and Mathematics Education, IPN, in Kiel synthesized, in an interactive format, current research in science education titled: Knowledge to know, knowledge to use, knowledge to teach and learn — Who defines the bodies of knowledge for education? The full conference program is available here. [http://www.esera.org/esera-conference/](http://www.esera.org/esera-conference/)

Photo: (from left, clockwise) Lisa Martin-Hansen, Valarie Akerson, Kathy Cabe Trundle, Meg Blanchard, Geeta Verma.

We who attended ESERA would encourage ASTE members to attend as it was a beneficial experience with very positive reviews.
NSTA Collaboration

As the ASTE liaison to the National Science Teachers Association, I have been working closely with our affiliate groups and with our NSTA liaison (to ASTE), Eric Pyle. We (ASTE Board) proposed that ASTE should be a partner in the development of the SPAs (Specialized Professional Associations) for CAEP (Council for the Accreditation of Educator Preparation) where science teacher preparation is involved. The NSTA Board agreed and has developed a task-force led by Dr. Eric Pyle (ASTE and NSTA member) with me as official ASTE representation as a committee member. There may be additional requests for participation as we will draw upon our experienced membership for specific areas of specialization. We will be working regularly in the development of the standards and will be in communication with ASTE in this effort.

ASTE Position Statements

Lastly, part of the work we do in ASTE includes the revisiting of all ASTE position statements with updates and new positions statements created on an ongoing basis. The most recent review taking place is the Position Statement on Inclusion of Underserved Populations in Science Education. ASTE members who research and work in this area were tapped to begin the review and to make revisions as necessary. Committee members (and links to their scholarly websites) include: Drs. Felicia Moore Mensah https://www.tc.columbia.edu/faculty/fm2140/, Maria Rivera Maulucci https://barnard.edu/profiles/maria-rivera-maulucci, & Christopher Atchison http://cech.uc.edu/education/employees.html?eid=atchiscl&thecomp=uceprof_1.

Thank you to all of our ASTE members who volunteer and serve in many different capacities to strengthen science teacher education.
Contributed by Dave Crowther, Melissa Jurkiewicz & Camille Stegman (Conference Committee)

January 7-9, 2016
Reno, Nevada
Forging New Trails towards 21st Century Science Education

The conference committee welcomes all of you to attend the 2016 International Conference for the Association of Science Teacher Educators (ASTE). Come and join us in Reno, Nevada on the eastern side of the Sierra Nevada Mountains near Lake Tahoe and experience the “Biggest Little City in the World.” The conference is really coming together and we are excited to make this a memorable ASTE! The workshops and sessions review is complete. We hope to have a draft program online in about 2-3 weeks. The conference registration and hotel registration is now open and available on the ASTE website.
The theme of the conference is based upon forging new trails in science education which include Science, STEM, and Engineering and associated disciplines as collaboration for teaching and learning science in the 21st century. Our keynote speakers include Zeb Hogan, National Geographic Monster Fish and Professor of Biology at the University of Nevada, Reno and Joe McDonnell, Desert Research Institute Atmosphere and Environmental Researcher. The Thursday night reception and poster session will be held at the Discovery Museum where the National Geographic Monster Fish exhibit will be premiering. We are providing a shuttle service to and from the museum. Additionally, we have assembled a wonderful program with all of your expertise to engage all participants in advancing science / STEM education in the 21st century.

As you think about making reservations, remember that Reno is a destination for both winter and summer activities. Lake Tahoe is a 30-40 minute drive from the hotel and has over 20 different world class ski resorts, world class dining, and amazing views. You can also visit historic Virginia City that still has boarded sidewalks and is steeped in our western and mining heritage. There is a Car Rental desk in the Peppermill for your convenience! The hotel concierge / activities desk can also help you arrange your own tour or join one of the many tours available from local vendors – including skiing packages. If traveling a short distance is not for you, the Peppermill is a 5 star resort with year round swimming, Day Spa, complete exercise amenities, great dining, nightlife and even gambling if you so desire. Reno proper also has great museums; The Nevada Museum of Art, Harrah’s Antique Automobile Museum, and our showcase Science Center – The Discovery Museum! Additionally, there are great dining, shows, concerts and nightlife all throughout Reno. Come early and stay longer and treat yourself to a working vacation.

The conference leadership personally invites you to attend this conference and experience what Reno and surrounding areas have to offer.
Professional Development Opportunities at the 2016 ASTE Conference
Contributed by Tisha Morrell

The Professional Development Committee is pleased to share with you the listing of Professional Development Opportunities vetted through the Committee that will be offered at the 2016 ASTE Conference in Portland. Workshops are of no cost to the participants, but preregistration is encouraged. Note: The Publications Committee, Equity Committee, and Leadership Board are offering additional workshops!

Preconference Workshops

Wednesday, January 6

Science Writing Tasks that Support Scientific Practices, Sense-making, and Communication – Leah A. Bricker and Amy Deller-Antieau (1:00-4:00)
We will engage workshop participants with sample science writing tasks. Workshop participants will experience sample tasks, accompanying rubrics, and associated student work. We will also hear from secondary science teachers about how they used and adapted the tasks, as well as their reflections on their students’ engagement with the tasks.

Videocase-based, Analysis-of-Practice for Teacher and Student Learning: Structure, Substance, and Findings from 10 Years of Use in Pre-service and In-service Contexts – Connie Hvidsten, Betty Stennett, and Deborah Roberts-Harris (1:00-4:00)
Participants will learn about the design, implementation, and study of videocase, analysis-of-practice programs to prepare pre-service and in-service science teachers to reach the vision of the NGSS. Using program tools, we will engage in video analysis of classroom science teaching and learning, and explore findings from a 10-year line of research.

Incorporating Engineering Education into Science Classrooms – Melissa A. Jurkiewicz, Adam Kirn, and David Crowther (2:00-4:00)
Demands placed on science teacher educators and science teachers have shifted and now include the need to incorporate engineering education. The workshop is for ASTE members who are interested in learning more about implementing engineering into science classrooms.

Real World Computing in K-20 Classrooms though NGSS – Andrea C. Burrows and Mike Borowczak (2:00-5:00)
This workshop uses the NGSS as a frame to understand the Scientific Method, Engineering Design, Computer Science, and Computer Engineering so that pre-service, in-service, and professors/instructors have concrete examples to develop, use, and extend in their classrooms.
Embedded Workshops

Thursday, January 7

Using Hands-on Performance Assessment in K-12 Classrooms: Assessing Student Mastery of Both the Science Practices and DCIs – Deborah Tucker and Grant M. Gardner (8:15-10:15)

Language and Literacy, Multimodality, and STEM – Christine D. Tippett, Todd M. Milford, and Mark A. McDermott (8:45-10:15)
Language in science is of interest to science educators and researchers; a growing emphasis on STEM and engineering shifts our focus to language in STEM. Language, literacy, and STEM will be explored through multimodal reading, writing, and representing activities for Grades 3-12. Science teacher education and research will be discussed.

Engineering an Online Course in Science Education – Jeffery S. Townsend and Jennifer C. Perkins (1:00-3:00)
We will share a fully online MA-level course for engineering in grades K-8. Focus will be on technology and methods used that resulted in its receiving Blackboard Catalyst Exemplary and Director’s Choice Course of Distinction awards. Access to all documents and modules will be provided as presenters give full access to the course.

Friday, January 8

In this workshop participants will examine one scaffold developed to aid secondary science teacher candidates in understanding and completing one component for the edTPA, a performance-based assessment required for teacher certification in NY and other states. Participants will then develop scaffolds for the edTPA commentaries that will be shared.

Using the NSTA Learning Center as an Online Textbook for Teaching Science Pre-service Teachers – Flavio Mendez, Al Byers, Kate Baird, Kathy Sparrow, William Veal, Jacqueline McDonnough, and Meredith Vaughn (1:30-3:30)
Learn about the Learning Center, NSTA’s online portal, and how it can be used to create a customized online textbook to teach science pre-service teachers. Register to the portal, create a course landing page, add resources to your library, and ask questions to professors who are using this platform. Please bring your own Wi-Fi accessible device.
Saturday, January 9

Exploring Racial Consciousness in Science Education – Lisa M. Martin-Hansen, Alberto J. Rodriguez, and Nicole M. Joseph (8:00-10:00)
The workshop focuses upon the experiences of two science education faculty members who teach preservice science teachers to challenge their beliefs and assumptions about their students and colleagues of different races and ethnicities.

Reframing Early Childhood Science Activities to Address the NGSS and STEM Approaches – Christine D. Tippett and Todd M. Milford (8:45-10:15)
This workshop reframes early childhood play-based science activities to meet engineering design standards from NGSS and STEM approaches. Participation will involve hands-on investigations of STEM teaching techniques in the process of developing activities from an existing science curriculum. Handouts provided; Moomaw’s (2013) book Teaching STEM in the Early Years will be available for purchase at a discounted price ($30 instead of $39.95 plus shipping and taxes). Please bring your own Wi-Fi accessible device.

Reno Science Teacher Shuffle
Contributed by Tisha Morrell

Join us for the annual Science Teacher Shuffle, a scenic 3 mile run or 2 mile walk around Virginia Lake Park near the Conference hotel. Participants will meet in the lobby of the Peppermill on Thursday at 6:45 AM to kick off the conference on the “right foot” and make it back in time for breakfast and the first session! There is no better way to start the day than with a little exercise in a non-threatening atmosphere with terrific company.

The race is free! So all you need do is complete the application and email, fax or snail mail it to me OR bring a completed app to the hotel lobby the morning of the race.

The application with numbers/addresses can be downloaded from theaste.org.

Hope you will join us!

Tisha Morrell
morrell@up.edu
WISE Dinner – Reno, NV
January 8, 2016, 6-8pm

Ruby River
steakhouse
2750 S Virginia St, Reno, NV 89502

Starter Salad:
Caesar Salad, Garden-Fresh Salad, Blue Cheese Wedge

Entrees:
*12oz Ribeye 7oz Bacon Wrapped Filet
*8oz BBQ Peppered Salmon *8oz Broiled Salmon
*Raspberry Chicken *Roasted Half Chicken
*Vegetarian Options – Ask server for details

Entrees served with your choice of 2 side items:

Side Choices:
Jacketed Baked Potato, Jacketed Cinnamon Yam, Steamed Vegetables,
Parmesan Crusted Tomatoes, French Fries, Garlic Mashed Potatoes,
Sautéed Mushrooms, Seasoned Rice

Dessert:
Rocky Mountain Mud Pie, Apple Cobbler, Ruby Cookie

*Soft Drinks and Iced Tea Included
ASTE Elections
Contributed by Ian Binns

ASTE elections will run from October 1, 2015 through November 15, 2015. The slate of candidates is listed below. The ballot and candidate background information is available at http://theaste.org/resources/elections/. You must be a 2015 member and logged in to view the information and vote.

**President (1):**
David Crowther
Gillian Roehrig

**Board (2):**
Deborah Hanuscin
David Haury
Stephen Thompson
Wayne Melville

**Elections Committee (3):**
Margaret Blanchard
Ingrid Weiland Carter
S. Maxwell Hines
Paula Magee
Lindsay Wheeler
Brooke Whitworth

Questions should be directed to Ian Binns at ian.binns@uncc.edu. Technical difficulties should go to John Rhea at des@theaste.org.

Regards,

The ASTE Elections Committee
Call for Editorial Review Board Members
Contributed by Gillian Roehrig and Meredith Park-Rogers, Publication Committee Co-Chairs

This is a formal call to members of the Association for Science Teacher Education (ASTE) who would like to serve on the Editorial Review Board for the Journal of Science Teacher Education (JSTE). We are seeking both U.S. and International applicants.

JSTE is the flagship journal of the Association for Science Teacher Education. It serves as a forum for disseminating high quality research and theoretical position papers concerning the preparation and inservice education of teachers of science. The journal publishes eight issues per year, featuring pragmatic articles that offer empirically based ways to improve conditions in classroom teaching and learning, professional development, and teacher recruitment and retention at all grade levels.

Again, we are seeking International applicants as well as U.S. applicants.

Qualifications:

• Competence in research and/or methodology within some aspect of science teacher education.
• Ability to judge the quality of a manuscript within an area of science teacher education.
• Ability to identify particular strengths and weaknesses of a manuscript and, in a professional manner, to offer suggestions for revising manuscripts.
• Established record of publication in peer-reviewed science education and/or related journals.

Duties and Responsibilities:

• Read and evaluate approximately six manuscripts per year.
• Provide written reports on manuscripts reviewed using the criteria and evaluation form provided by the Editor(s).
• Review manuscripts within four weeks of receipt.

To apply, please electronically submit the following materials to Norman and Judith Lederman at ledermann@iit.edu by December 1, 2015:
1. A letter of interest that includes a list of at least four areas of expertise in science teacher education in which you would be comfortable reviewing manuscripts.
2. A two-page vita that emphasizes publications in refereed journals and includes any previous reviewing or editing experience.
Volunteer for an ASTE Committee
Contributed by Bob Hollon

Interested in serving in an ASTE leadership role? Now is a great time to volunteer to serve on an ASTE committee or forum.

The complete list of ASTE committees, leadership roles, and current members can be found at http://theaste.org/wp-content/uploads/2012/09/ASTE-Full-Leadership-may-27-20151.pdf. Descriptions of each committee can be found in the ASTE SOP beginning on page 12.

If you are interested, please contact ASTE President-elect Malcolm Butler at Malcolm.Butler@ucf.edu. Committee rosters will be completed soon so don't wait too long to volunteer!

ASTE 2016 Membership and Conference Registration is Now Live
Contributed by Bob Hollon

Membership and conference registration for 2016 is now live at the following link: http://theaste.org/join-aste/

If you are a returning or current member, just log in first and your membership information will be filled in automatically. PLEASE take a minute to edit and update your profile information, select a region, and make sure that the address information matches your selection of "home" or "institution" as your preferred mailing list, as that field is used to prepare mailing labels. If you need to change emails, contact Bob Hollon (executivedirector@theaste.org) or John Rhea (des@theaste.org).

NEW THIS YEAR: Retired/Emeritus members now can participate in all ASTE activities for $35 - a reduction from the previous $60 rate. Your membership includes JSTE, access to all member resources, and reduced rates for the annual conference and hotel. Other membership rates remain unchanged from last year.

Conference registration and hotel reservations can be completed at the above link, or you can use http://theaste.org/meetings/2016-international-meeting/. You must be a 2016 member in order to receive discounted rates for the conference and hotel so do that part first. You must use the "register for the conference (and hotel)" link near the bottom of the page to access the ASTE reduced rate hotel reservation. The first Peppermill Resort link is just for informational purposes.
The South-West regional conference was held on October 3rd at the University of North Texas, Denton. We had 40 members in attendance with 23 incredible presentations.

Dr. Gil Naizer (Texas A&M Commerce) was elected to the board as our new treasurer.

Dr. Matt Seimears (Emporia State University) transitioned into Past President as Dr. Kelly Feille (University of North Texas) takes over as President. Dr. Michael Odell (University of Texas, Tyler) is our new President-Elect and will host next year’s regional meeting at UT Tyler in early October, 2016.

The conference program and Mailing List Sign-Up can be found here: https://sites.google.com/site/swaste2015/home

We look forward to seeing you all in January at ASTE!
Mid-Atlantic - ASTE News
Contributed by Rommel Miranda, Regional Director
Photos contributed by Ron Hermann

On October 23-24, 2015, the annual meeting of the Mid-Atlantic Association of Science Teacher Education was hosted by Ohio State University and University of Cincinnati. Conference coordinators Karen Irving (Ohio State University), Christopher Atchison (University of Cincinnati), and Donna Farland-Smith (Ohio State University) arranged a wonderful event on the picturesque grounds of the Salt Fork State Park Conference Center and Lodge in Lore City, Ohio.

The 69 attendees, which included 17 graduate students and 2 undergraduate students, had opportunities to participate in 32 paper sessions, and 17 poster sessions. The conference ended with a “Business Meeting” in which our newly elected secretary Paula Magee (Indiana University-Purdue University-Indianapolis) took notes, while our Treasurer Rachel Wilson (Appalachian State University) provided the financial report. Regional Director, Rommel Miranda (Towson University), applauded Aimee Govett (East Tennessee State University), Kerry Cresawn (James Madison University), and Matthew Coppola (Indiana University-Purdue University-Ft. Wayne) for agreeing to coordinate the 2016 Mid-Atlantic Conference near Gatlinburg, Tennessee.
We also awarded our third Graduate Student Presentation Award, which was a peer-reviewed, merit-based honor intended to recognize outstanding contributions to research, as well as delivery of these contributions. The winner, Vinta Tiarani (Ohio State University), presented *Do Eighth Grade Students in an iSTEM Cohort Perceive Science, Math, and the Field of Engineering Differently than Traditional Eighth Grade Students?* As a recipient of this award, she received a certificate and $750 to travel and present her research at the 2016 International ASTE conference in Reno, Nevada. Notification and requirements to apply for the 2016 MA-ASTE Graduate Student Presentation Award will be submitted via the listserv (April 2016).

![Graduate Student Award recipient Vinta Tiarani at the Salt Fork State Park Conference Center and Lodge.](image)

We would like to thank Rommel Miranda (Regional Director), Paula Magee (Secretary) and Rachel Wilson (Treasurer) for their outstanding dedication, commitment to excellence, and service to MA-ASTE. We are also especially grateful and thankful for Jennifer Maeng’s service to MA-ASTE as secretary over the past 3-years.
North-East - ASTE News
Contributed by Jessica Riccio

The Northeast Region’s annual conference kicked off in Westchester, New York at Mercy College, nestled on the banks of the Hudson River. Fittingly, the invited keynote speaker, Dr. Bob Chen’s talk was entitled: ‘The Schmutz of New York,’ which explored chromophoric dissolved organic matter (CDOM) in the local waters. Chen, named ‘Coach, Scientist, or Dude Guy’ by the students he encounters is a self-titled Urban Oceanographer. His interactive presentation embodied the ideal of the ASTE organization – exemplifying hands-on learning with inquiry and bridging the gap between scientists and science education.

Chen began with a simple question, “Does an ice cube melt faster in salt water or in freshwater?” This seemingly simple question led to discussions of diffusion, chemical bonding, arctic ice sheets and road salt, while participants were experimenting! The room was set with tables and each group received ice, cups, freshwater and saltwater to observe. It became clear that while Dr. Chen is an incredibly accomplished scientist (and he did fulfill our curiosity with some high level data and discussion) he is also adept at the art of making complex concepts approachable: His work studying CDOM in the Hudson River became immediately more relatable when he made a simple cup of tea. Tea parallels the mechanisms of CDOM. Just as leaf litter on a river bank can turn the water brown, a tea bag can steep and brew the familiar beverage. Chen has been recognized for his ability to transform complex concepts into relatable units that also map to NGSS standards and cross cutting concepts. He works with teachers, students, community colleges and helps direct curriculum, all while studying rivers and oceans aboard his mobile lab.
During his talk, Dr. Chen shared a quote from Alison Gopnik’s New York Times article. It was so apropos that nearly every audience member took out a cell phone to snap a picture of the screen. The quote read: “Imagine if we taught baseball the way we teach science. Until they were 12, children would read about baseball technique and occasionally hear inspirational stories of the great baseball players. They would answer quizzes about baseball rules... undergraduates might be allowed, under strict supervision to reproduce historic baseball plays. But only in graduate school would they, at last, actually get to play a game...” He went on to share in the audience’s feeling that of course this is absurd, and encourage each one of us to support early science experiences for all learners. As the presentation ended, Dr. Chen handed out resources and inspired a room of Science Teacher Educators to view complicated topics as opportunities for students to freely explore and learn. What could be more inspirational than that?

On Friday, the conference featured 23 paper presentations, 8 workshops and 6 poster presentations in a concurrent session format. These sessions were created as spaces for teachers, teacher educators, teachers in preparation and scientists to interact. We were reminded how important the regional meeting can be to facilitate this exchange. Some testimonial we received in writing sums it nicely.

“I was reminded about the teaching practices that can help my class. I wanted to implement about 5 new practices the next day! Sometimes, in-service teachers need that theoretical reminder and fascination back in their practices. Today, I got both a dosage of theoretical and practical tools.”

“I felt a sense of community today. Thank you.”

“Excellent opportunity for graduate students to present work in progress. This is an excellent chance for peer-peer interaction.”

“The ability to talk about my research with peers was invaluable. Networking, support, friends: these are the reasons why we come to events like this. This was my first conference as a teacher educator instead of as a teacher and it was incredible.”
At the end of the day, we came together to review initiatives and suggestions for next year. We were thrilled to award three $500 graduate student travel awards to the International Conference in Reno. The recipients were Lisa Neeseman, Teachers College, Columbia University, Linda Padwa and Stephanie Wortel, both from Stony Brook University. Please say hello to them if you run into them in Reno! See you soon,

Jessica Riccio and Amanda Gunning

NE-ASTE 2015 Co-Chairs

Left to right: Amanda Gunning, NEASTE Treasurer, Linda Padwa, Lisa Neeseman, Stephaine Wortel, Jessica Riccio, NEASTE Regional Director

Interested in seeing more details?
Visit www.neaste.org or search #neaste2015 on Twitter
The North Central Region of the Association of Science Teacher Education held their annual meeting on October 8-10, 2015, at Bradley University in Peoria, Illinois. Conference attendees participated in interactive paper presentations, paper presentations, round table discussions, practical idea sharing, and an excursion to the Peoria Riverfront Museum. We are grateful to Kevin Finson for unprecedented hospitality and to sponsorships from Bradley University (College of Education and Health Sciences, Department of Teacher Education, and the Center for STEM Education) and surrounding businesses (Caterpillar and Office Depot). Award recipients this year were Cherin Lee (University of Northern Iowa) and Kevin Finson (Bradley University), each receiving a Legacy Award, and Jacob Pleasants (Iowa State University) who was the recipient of the Graduate Student Research Award. We now have an active web presence as a region on the national ASTE web site. Please see http://nc.theaste.org/.

Additionally, we are transitioning to new officers. Jerrid Kruse is our new director and he can be reached by email at jerrid.kruse@drake.edu

At the last meeting, participants were doing “investigations” using a stream table at the Peoria Riverfront Museum.
Preservice Points
Contributed by Jeanelle Day

CAEP-NSTA SPA Coordinator

The baton has been officially shifted to the new CAEP-NSTA SPA Coordinator, Jeanelle Day. I am excited about this new opportunity to serve the science education professional community. My major goal in the next few years is to add new reviewers to our slate of volunteers who make our accreditation process possible to reduce the heavy burden on reviewers and auditors.

Recognition for Science Teacher Preparation Programs

In the academic year 2014-2015, the following institutions were recognized by NSTA as meeting the 2012 NSTA Standards for Science Teacher Preparation. These standards were developed from input from the science educator preparation community and are deemed important by the National Science Teachers Association. The following institutions demonstrated excellence through assessment alignment, data collection, reflection and improvement of programs based on data. Congratulations!

Fall 2014: American University, Andrews University, Arkansas State University, Eastern Connecticut State University, Fordham University, Louisiana State University, Morris College, Sam Houston State University, Southern Illinois University, The Ohio State University, University of Massachusetts Lowell, University of Rochester, University of South Carolina, University of Texas at Arlington, Western Michigan University.

Spring 2015: Cleveland State University, Marshall University, Oklahoma Baptist University, University of Mount Union.

In fall 2014, there were 82 programs in 43 schools reviewed and in spring 2015, there were 64 programs in 32 schools reviewed. Numerous schools were recognized with conditions and few were either recognized with probation or further development required. In these cases, detailed feedback is provided to allow program directors or coordinators to make modifications to assessments in order to move to recognized status. Additional questions may be directed to me at dayj@easternct.edu.
Where do I find more information about being recognized by NSTA?

Information about program recognition may be found at www.nsta.org/preservice.

Reviewer training, which is equally useful for those submitting reports, will occur on Wednesday, March 30, 2016 in advance of the 2016 NSTA Conference. Time and location will be confirmed prior to the end of 2015. If interested in attending this session, please contact me at dayj@easternct.edu to be added to the notification list.

Thank you to Reviewers in Academic Year 2014-2015

The following individuals are to be specially recognized for their work reviewing middle and high school preservice programs. Each reviewer team examined reports from at least four different institutions and evaluated alignment with the 2012 NSTA Standards for Science Teacher Preparation. Their time commitment and careful reviews make it possible to maintain high quality, consistent reviews. Thank you to the following reviewers for their work during AY 2014-2015. April Adams, Deborah Booth, Jacqueline K. Bowman, Ruth S. Burkett, Rene T. Carson, John A. Craven III, Robin Dada, Michael Dias, Gordon L. Eggleton, Lacey Fitts, Catherine M. Gardner, Carl D. Gilbert, Deb Hemler, Courtney A. Howard, Tommye Hutson, Sally M. Jean, Joseph A. Johnson, William Jones, Catherine M. Koehler, Carole Lee, Nidaa Makki, Julie D. McIntosh, Jeffrey A. Nowak, Theodora Pinou, Scott Robinson, Karthigeyan Subramaniam, William R. Veal, Pamela Wash, Starlin D. Weaver, and Joseph Zawicki.

The 2015-2016 Audit Board reviews programs, two auditors audit every program, and the final audit is completed by me at the end of the process. A special thank you to Rene Carson, Michael Dias, Catherine M. Gardner, William Jones, Carole Lee, William R. Veal, Starlin D. Weaver, and Joseph Zawicki for the commitment of your time and expertise used in auditing science programs nationwide.

If you have questions about the NSTA recognition process or would like to become a reviewer, please contact the NSTA Preservice Coordinator, Jeanelle Day at dayj@easternct.edu or visit the web page at www.nsta.org/preservice.
Using the National Science Teachers Association (NSTA) online portal with Pre-Service Teachers
Contributed by Flavio Mendez

What if professors could select from existing collections of interactive web modules, simulations, lesson activities, e-chapters, and podcasts to create an engaging suite of content that is wrapped in an integrated community for sharing, rating, and discourse with badges, points and leader boards to engage pre-service teachers’ learning?

The purpose of the NSTA Learning Center (http://learningcenter.nsta.org) is to enhance the personal learning of teachers by providing a suite of tools, resources, and opportunities to support their individual long-term professional growth based on their unique learning needs and preferences and within a professional learning community.

Over the past few years, professors at over 70 institutions of higher education have opted to use electronic resources from NSTA like journal articles, book chapters, interactive science modules, and lesson plans from the Association’s online portal called the NSTA Learning Center (NSTA LC) as an e-textbook when teaching pre-service teachers courses like elementary and secondary methods and other subject matter courses.

Working with NSTA staff and at no cost to the professors or their institution, course instructors can create a class landing page in the Learning Center and assemble collections of resources from the over 12,000 resources available online. In addition to using the resources in the Learning Center, instructors are able to upload their own resources or URLs from other web sites of interest to share with their students.

To track the student activity in the Learning Center, professors access their class administration dashboard which keeps track of all of their students’ online activity. Here is what professors have said about the NSTA Learning Center:

“One of the main advantages of using the NSTA LC as an e-text for teachers is that they become familiar with this resource and they can subsequently return to and use once they are in their own classrooms during their professional careers.” K. Sparrow

“The department chair told me that the NSTA SciPacks offer more in-depth content than what they had before and the students in this course are scoring about a mean of 18% above his other more traditional course.” K. Miller

Bundled with the e-Textbook is one year student membership to NSTA. The cost of the 1-year e-Textbook subscription and the student membership is $99 per student. Professors may choose instead a six-month e-Textbook subscription option and the student membership for $72 per student.

For more information about this opportunity, visit: http://learningcenter.nsta.org/etextbook
CITE Reviewers and Submissions Needed
Contributed by Theresa Cullen

I am so excited to tell you that CITE Journal Science Education Section is publishing new articles. Look for upcoming articles about iPad use, the Next Generation Science Standards, and serious games! And consider submitting your manuscript at the journal website: http://www.citejournal.org

The CITE Journal – Contemporary Issues in Technology and Teacher Education is one of the oldest Open Source journals and is a collaboration of the leading education organizations in the country. The CITE Science Education Section is a collaboration between ASTE and the Society for information Technology and Teacher Education. We accept manuscripts on science education and technology combined.

We Need Reviewers!!! I need reviewers, we have great reviewers, but we need more! I am especially in need of reviewers with interest in elementary and middle school science education applications and earth science or geological interests. I have some great manuscripts submitted that need your input! Reviewers need to be members of ASTE but this includes graduate students and I try to assign at least one graduate student to each manuscript. If you are interested in reviewing, please email Theresa Cullen, CITE Science Education Section Editor at tacullen@ou.edu and I will walk you through the steps of signing up!

Manuscript Information
Manuscripts should directly address technology within science teacher education. Papers may focus on science teachers at any career stage including pre-service, new, continuing, or teacher leaders and any grade level including college science science teachers. Manuscripts that examine how technologies can improve programs, courses, or professional development as well as collaboration and partnerships are welcome. Papers that describe innovative approaches to technology enhanced science teacher education are specifically encouraged.

Submission Guidelines
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2. Click on Submissions
3. Login with your AACE login information or create a new login.
4. Select ‘submit article’. Be sure to select CITE (science), as the journal.
S. Stratton, R. Hagevik, A. Feldman, M. Bloom (Eds.)

Educating Science Teachers for Sustainability

Series: ASTE Series in Science Education

- Provides science teacher educators with models for incorporating education for sustainability into their practice
- Highlights the successes as well as the barriers to sustainability education
- Provides a global context for incorporating the education of science teachers for sustainability
- Includes up to date research findings on the science teacher education for sustainability
- Discusses the importance of teaching sustainability within the context of K-12 and at the university level for teacher preparation

This volume contains a unique compilation of research and reflections representing multiple vantage points stemming from different parts of the world that can help science educators and teacher educators in finding ways to meaningfully and purposefully embed sustainability into teaching and learning. It is a rich resource for exploring and contextualizing sustainability-oriented science education. At this time we find ourselves in a situation in which the earth’s ecological system is under significant strain as a result of human activity. In the developed world people are asking “How can we maintain our current standard of living” while those in the developing world are asking “How can we increase the quality of our lives?” all while trying to do what is necessary to mitigate the environmental problems. This volume responds to these questions with a focus on educating for sustainability, including historical and philosophical analyses, and pedagogical and practical applications in the context of science teacher preparation. Included are many examples of ways to educate science teachers for sustainability from authors across the globe. This text argues that issues of sustainability are increasingly important to our natural world, built world, national and international economics, and of course the political world. The ideas presented in the book provide examples for original, effective and necessary changes for envisioning educating science teachers for sustainability that will inform policy makers.

2015, XXI, 478 p. 48 illus., 39 illus. In color.

Printed book

Hardcover
- 149.99 € | £135.00 | $199.00
- *164.49 € (D) | 164.99 € (A) | CHF 199.00

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J. McKee, N. Trautmann, M. Barnett (Eds.)
Teaching Science and Investigating Environmental Issues with Geospatial Technology
Designing Effective Professional Development for Teachers

- Defines the field of teacher professional development for teaching science using geospatial technology
- Describes the design and outcomes of specific teacher professional development strategies and relates these to lessons learned
- Provides insights into best practices for preparing teachers to use geospatial technology as they engage students in projects
- that build skills in data analysis, problem solving, and spatial thinking

This book provides research-grounded and practically-minded insights into teacher professional development in support of integrating GIS and other geospatial technologies into K-12 science teaching. In this volume 50 designers, educators and researchers share their experiences, knowledge, and lessons learned from a wide variety of projects. Readers will find a myriad of ideas and perspectives that they can apply to their own teacher professional development projects, as they work to provide students with engaging opportunities for learning science.

Geospatial technologies enable teachers to teach in fundamentally new ways, building student interest and skill through active engagement in critical thinking and project or inquiry-based learning. Students are naturally drawn to looking at landscapes and interpreting features through analysis of both shape and form. Given the chance to manipulate spatial data, students revel in deciphering mysteries, exploring scientific explanations, and linking causes with consequences.

The passion and interest demonstrated by students using geospatial tools has motivated an increasing number of K-12 teachers to embrace the use of these technologies for teaching and learning science. Given the nature and complexity of these tools, high quality professional development is essential for providing teachers with the support and guidance they need to use geospatial technologies effectively.

This book will be of special interest to scientists, geographers, and science educators who are designing or delivering teacher professional development in support of teaching with technology. The case studies make it possible for readers to identify specific paths forward regarding both research and practice.
Recruiting and Educating Future Physics Teachers: Case Studies in Effective Practices
Contributed by Cody Sandifer

The Physics Teacher Education Coalition, the American Physical Society, and the American Association of Physics Teachers are proud to announce the release of a new peer-reviewed book: Recruiting and Educating Future Physics Teachers: Case Studies and Effective Practices, edited by Cody Sandifer and Eric Brewe.

Three years in the making, the book is now freely available for download at: http://www.phystec.org/webdocs/EffectivePracticesBook.cfm.

Recruiting and Educating Future Physics Teachers provides a practical guide to innovative, state-of-the-art programs, and includes papers in the following areas:

- Preparing Future Physics Teachers: Overview and Past History
- Case Studies of Successful Physics Teacher Education Programs
- Recruiting and Retaining Future Physics Teachers
- Structuring Effective Early Teaching Experiences
- Preparation in the Knowledge and Practices of Physics and Physics Teaching
- Mentoring, Collaboration, and Community Building

The intended audience is physics department chairs and faculty, as well as faculty in Colleges of Education who are engaged in physics teacher preparation. The book might also be of interest to teacher educators in other disciplines – particularly chemistry educators, who face a similar national shortage in well-qualified high school teachers.
Birds Without Borders: Investigating Populations, Habitats, and Conservation of Birds in the U.S. and Abroad

by Nancy Traulmann (Cornell Lab of Ornithology) and Jim McKinster (Hobart and William Smith Colleges)

Are you looking for ways to build your students’ quantitative skills, engage them in critical reading and writing, and have them see the relevance of key science concepts in addressing real-world issues?

In Birds Without Borders, students analyze data generated through citizen science and professional science to draw conclusions about habitats, adaptations, population dynamics, and conservation needs of birds in the U.S. and across the Western Hemisphere. Classroom-ready materials include online maps and datasets. Student worksheets can be downloaded for customization and printing.

“Birds Without Borders provides core content knowledge on concepts such as how ecosystems function and why birds matter. The book also provides practical lesson plans, hands-on activities, and resources, focusing unwaveringly on data. Through grappling with data stored in a variety of formats, students learn how to deal with using data and uncertainty in investigations. That practicing classroom educators were involved in creating and testing the activities is evident, because the activities are rich, engaging, and meaningful. They make use of web-based mapping tools and mobile technologies that have become incredibly powerful and yet easy to use, but low-tech options are always included.”

- Joseph Kerski, Education Manager, Esri

Investigation 1. Discovering the Ecological Roles of Birds
Investigation 2. Exploring Habitat Needs of Nesting Birds
Investigation 3. Determining Annual Life Cycles of Local Birds
Investigation 5. Tracking Birds with Citizen Science
Investigation 6. Investigating Bird Biodiversity Across the Americas
Investigation 7. Exploring Bird Conservation Needs at Home and Abroad
Investigation 8. Creating a Conservation Plan


Print Price: $39.99
eBook Price: $19.99
Publication Date: 2/25/15
Pages: 202

Birds Without Borders is a product of the Crossing Boundaries Project, which was originally funded by the National Science Foundation.

http://crossingboundaries.org/bwb.php
New Book Information

Goimg Back to Our Future II: Carrying Forward the Spirit of Pioneers of Science Education

Editors: Jon E. Pedersen, University of Nebraska-Lincoln; Kevin D. Finson, Bradley University; Barbara S. Spector, University of South Florida

A volume in Pioneers of Science Education
Series Editor: Jon E. Pedersen, University of Nebraska-Lincoln

"Who were the pioneers in science education, and what motivated them to do what they did?" This book is the second volume of an attempt to capture and record some of the answers to these questions—either from the pioneers themselves or from those persons who worked most closely with them. As with the first volume, we have attempted to include as many pioneers as possible, but we know that there are still many that are not included in this or the previous volume. As we have posed questions, ruminated through files and oft-neglected books, and probed the memories of many individuals, we have come to realize our list of true pioneers is ever growing.

As we consider our list of pioneers, we know that there are names on the list that most of us readily recognize. We also realize that there are names of whom few of us have heard—yet who were significant in their roles as mentors or idea development and teaching. We continue to be impressed with our science education "family tree" ever branching out to more individuals and connections. The stories in this volume continue to demonstrate how vital this network was in supporting the individual pioneers during their journey in difficult times and continues to be for those of us today in our own enterprise.


For more books in this series visit: http://www.infoagepub.com/series/Pioneers-of-Science-Education

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PHONE: 704-752-9125 FAX: 704-752-9113 URL: WWW.INFOAGEPUB.COM
Reimagining the Science Department
Contributed by Todd Campbell

Reimagining the Science Department (2015), co-authored by Dr. Wayne Melville, Doug Jones, a Lakehead District School Board science department Chair, and Dr. Todd Campbell from the University of Connecticut, is now available in print format and as an e-book.

Posing the question, "What if you could change the department-level factors that don’t support teaching and learning?," Reimagining the Science Department is described by the National Science Teachers Association as a book that offers a rich historical perspective alongside strategies, practitioner vignettes, and related research that can be used immediately by those in science departments.

"We wrote the book to assist science chairs, teachers, and administrators in beginning the task of reimagining the science department as a place where teachers are encouraged to question both their beliefs about science and the teaching and assessment strategies that develop in response to those beliefs. Only when teachers have the freedom and capacity to question their beliefs, and develop their teaching and learning, can real improvements in the teaching of the practices of science be sustained," Dr. Melville said.

The NSTA further notes that the five-chapter book is a "must-read resource for chairs and those who aspire to become chairs, but [is] also useful for school administrators and school board members who are committed to developing a department in which the practices of science are taught for the benefit of all students."

For more information on the book, please click here.
Applications of Visual Data In K-16 Science Classrooms
Contributed by Kevin Finson

This book examines visual data use with students in PK-16 as well as in pre-service and in-service science teacher preparation. Each chapter was written by members of ASTE, and includes discussion about the current state of the art with respect to science classroom application and utilization of the particular visual data targeted by the author(s), discussion and explanation about the targeted visual data as applied by the author in his/her classroom, and of visual data as a diagnostic tool, its use as an assessment tool, and discussion of implications for science teaching and/or science teacher preparation.

For more information on the book, please click here.

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**Newsletter Information**

Published four times a year by the Association for Science Teacher Education.

Issue Items due by

- Summer Aug. 15
- Fall Oct. 15
- Winter Feb. 15
- Spring May 15

All members are invited to submit items.

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