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The 2018 Conference in Baltimore

The Upcoming 2019 Conference in Savannah
President’s Message
Contributed by Tisha Morrell

We had a wonderfully successful meeting in Baltimore. While the temperatures were a bit brisk outdoors, we were having our own “cyclonic bomb” of wonderful presentations, networking, and learning going on! But ASTE is more than an annual meeting. And it’s more than regional meetings. ASTE is a community. And it’s your community. The leadership of ASTE is doing its best to listen and meet your needs.

You asked for a practitioner journal where we could share practical and programmatic ideas. This year marked the first anniversary of Innovations in Science Teacher Education. This publication has been positively received and highly successful!

Some suggested we have more interactive sessions at the annual conference. We responded by including the Reflection Pools and the Fireside Chats. Feedback on both indicate two thumbs up!

The Graduate Student Forum is working to strengthen its voice in the organization. We helped to support the Graduate Student Lunch, incorporated the Three Minute Thesis (3MT) Competition into the conference, and voted to change the role of graduate reps to the committees from ex-officio to voting members.

We instituted a new committee: The Communications Committee. This committee is charged with improving and diversifying our communication networks through both print and social media. They are still coming up with a mission and plan, so if you have thoughts, we’d love to have your input!

These are but a few of the ways ASTE has been responsive to its membership. We hope that you will continue to share your thoughts. What can we do to better meet your needs? Any suggestions for us to consider? We love ‘out of the box’ thinking!!! Your input is a way we can continue to grow and strengthen our organization.

As Gill Roehrig reminded us in her presidential address, we need to be vigilant in how science is being perceived. We need for ASTE to continue to strengthen its presence in policy decisions and for us, as individual members, to speak up when the need arises. Both Malcolm Butler and Valarie Akerson will be representing ASTE at the Council of Society Science Presidents (CSSP), a group
focused on policy issues. ASTE has been working with the National Science Teacher Association to review the preservice science teacher preparation standards—the SPA (Specialized Professional Associations) standards currently used by CAEP for accreditation purposes. We have offered several opportunities for you to comment on our efforts. There is still time for your input if you are interested; just let me know, and I’ll be happy to send you the Committee’s draft.

One issue I would like for you all to consider is our international presence. We have an “international region,” international members, and a formal relationship with the East-Asian Association for Science Education; and, of course, science teacher preparation is of international interest. Different areas may have different specific standards and pathways, but ultimately we all have a pretty similar blueprint for what makes well prepared formal and informal science educators. And no country has a monopoly on good ways to strengthen science teacher education programs. We need to be collaborative to continue to improve our profession. So the question is, how can we better reach across borders? How can we make science teacher educators from all countries (the US included) active members of the ASTE community? How can we better spread the word about ASTE and what we have to offer? Would having a meeting outside the US help? Should we change our regional configuration? Can we find a way to include international members in the annual conference virtually? Strengthening our international presence and growing our membership will be main topics at our summer board meeting, so please send me whatever thoughts you may have on the subject to help us with our conversations.

Here’s to a great 2018!

Tisha Morrell

ASTE President
JSTE Indexed!

Some great news! Taylor and Francis advised us that the *Journal of Science Teacher Education* (JSTE) is now included in the Emerging Sources Citation Index (ESCI). There is a stiff reviewing process to be selected for this Index, so this is an important recognition of the quality of JSTE. Being included in ESCI will make it easier for others to search, find, and cite articles published in JSTE, further enhancing the impact of the journal. Thanks to the Lead Editors, Norm and Judy Lederman, the Editorial staff, Associate Editors, the Publications Committee, our reviewers and, of course, our authors for continuing to make our journal a “go to” read for our profession!

JSTE Editors, Editors-to-be, and Taylor & Francis
Happy New Year! We are pleased to announce that Volume 3, Issue 1 of the *Innovations in Science Teacher Education* journal is now available at:

http://innovations.theaste.org/publication/volume-3-18/issue-1-18/

This issue features an article that describes a four-step strategy used in a professional development program to help elementary science teachers recognize and create lesson plans with coherent conceptual storylines. This issue also contains an article that describes how to design a third space methods course. This issue further has an article which describes an activity that can help preservice science teachers to learn how modeling is a process that requires revision in response to evidence.

We are also extremely thankful for our dedicated editorial review board members who always provide insightful comments and suggestions to authors.

Special thanks to John Rhea, Director of Electronic Services, for his tireless work developing the *Innovations* journal website. In addition to being able to read articles online, John has included an option to view, print, or save articles as a PDF.

Please help us to spread the news about the *Innovations* journal by sharing the URL (http://innovations.theaste.org/) with your colleagues who may not be ASTE members!

Please join our Facebook Group at https://www.facebook.com/ISTEjournal/ so you can receive announcements regarding the *Innovations* journal.

If you have any questions regarding the *Innovations* journal, please contact the editors: Rommel Miranda (Rmiranda@towson.edu) or Ron Hermann (Rhermann@towson.edu).
Call for Manuscripts!

The editors of the science section welcome your manuscripts that showcase a type of technology and teacher education at any level. The Science Section of *Contemporary Issues in Technology and Teacher Education (CITE)* is sponsored by the Association for Science Teacher Education (ASTE). The unique purpose of this journal is to publish peer-reviewed research reports and theoretical articles on the use of innovative technologies in science teacher education. The editors encourage manuscripts that deal with the education of preservice or inservice science teachers as well as college level science faculty. This free, Eric indexed, online journal allows authors to include interactive technologies as part of the manuscript for readers’ direct access to the example technologies. The technologies can include video, audio, animation, and external links. In addition, an extended virtual dialogue is possible, as commentaries on published works are encouraged. Consider submitting your manuscript to *CITE Journal - Science*. Contact the editors with any questions or suitability of a manuscript.

Andrea Burrows - Andrea.Burrows@uwyo.edu  
Tim Slater - TSlater@uwyo.edu
2018 ASTE International Conference Notes
Contributed by Gillian Roehrig

This message, shared by Past-President Dr. Gillian Roehrig during her Presidential Address, was well-received by members in attendance at the awards luncheon. Please contact Gillian (roehr013@umn.edu) directly with any comments.

As I listened to Malcolm’s inspiring address last January in Des Moines, I started to wonder, well worry actually, what I would have to say to you all today. Even before Des Moines, I knew that I would start my term as president a few days before the inauguration of a new United States president. Even as a passionate Bernie supporter, I had thought about being able to talk about gender issues with our first female president in office. But, calamity! I have shared my presidential year with the first year of President Trump.

Just days into office, President Trump’s assault on science came with cuts and censoring of the EPA and on-going climate denial – tweet, by tweet, by painful tweet…. Mid-December came a further assault on science with the Washington Post reporting that the White House had banned the use of seven specific words at the Center for Disease Control and Prevention (CDC): vulnerable, diversity, entitlement, transgender, fetus, evidence-based, and science-based. For our international members, the CDC is a federally funded institute whose job it is to focus national attention on developing and applying disease control and prevention. They research and respond to outbreaks of infectious disease, food borne pathogens, and environmental health threats. The CDC also researches and informs the public about non-infectious diseases such as obesity and diabetes. So think about this for a moment. An institution whose workforce is composed of scientists and doctors, being banned from using the words science-based and evidence-based!

Just to make sure I am not accused of proliferating fake news, it was quickly revealed that the White House had not banned the CDC from using these words. In fact, the CDC had censored themselves in an effort to protect their budgets from the wrath of Republicans. So as you continue to enjoy your desserts, I want us to take some time to consider how important it is that we advocate not just the seven words themselves - diversity, entitlement, evidence-based, fetus, science-based, transgender and vulnerable. But also as scientists and science educators to consider the broader concepts and ideals behind them.

Even if you are not an NGSS state, much of our work as science educators in the U.S. is guided by the Next Generation Science Standards and the supporting Framework for K-12 Science Education. Right on the first page of the frameworks document you will find the following quote - “Science, engineering, and technology permeate nearly every facet of modern life, and they also
hold the key to meeting many of humanity’s most pressing current and future challenges.” The frameworks do not define or list these challenges, but many institutes and think tanks have put out lists of the grand challenges that face humanity. The specific challenges vary to some degree there are common challenges across these lists and most are science-based challenges – challenges that need the full force of the EPA, the CDC, NIH, NSF, NASA, NOAA and other scientific agencies across the globe. This particular list of global challenges includes: misinformation, denial and inertia; energy; environment; food and water; poverty and economic disparity; building human relationships and decreasing conflict; disease and human suffering; education; democracy and human rights; and population.

Given President Trump’s obsession with climate denial and dismantling the EPA, let’s take a closer look at the challenge to the environment. Ninety-seven percent of actively publishing climate scientists agree that climate-warming trends over the past century are extremely likely due to human activities. This consensus is built on scientific evidence, for example:

- Global sea level rose about 17 centimeters in the last century. The rate in the last decade, however, is nearly double that of the last century.
- Most of the warming occurred in the past 35 years, with 15 of the 16 warmest years on record occurring since 2001. The year 2015 was the first time the global average temperatures were 1 degree Celsius or more above the 1880-1899 average.
- Both the extent and thickness of Arctic sea ice has declined rapidly over the last several decades.

Back to the CDC for a moment, one of their missions is to provide information and guidance on the health impacts of climate change. The CDC reports that climate change has negative impacts on food and water supply, on water quality, that it causes increased allergen levels, and increases and changes disease vectors just to name a few. Their report Assessing Health Vulnerability to Climate Change shows disproportionate effects of climate change to more vulnerable populations across the country and the world.

The vulnerability of any given group is a function of its exposure to those risks, its sensitivity to climate change related health risks, and its capacity for responding to or coping with climate variability and change. For example, your exposure to increased flooding due to climate change differs by geographic location. Sensitivity to ozone pollution on extremely hot days is worse for those with conditions like asthma. But other social determinants, such as poverty, also adversely affect the impacts of climate change. For example, people with limited economic resources living in areas with deteriorating infrastructure are more likely to experience disproportionate impacts and are less able to recover following extreme events, increasing their vulnerability to climate-
related health effects. Understanding the role of social determinants of health can help characterize climate change impacts and identify public health interventions or actions to reduce or prevent exposures in populations of concern. In other words, the science-based and evidence-based information that the CDC is charged with collecting and disseminating to protect all of us, but especially more vulnerable populations.

A clear example of these disparities of climate impacts can be seen through the example of hurricanes. Consider Hurricane Katrina in 2005, when at least 1,245 people died in the hurricane and subsequent floods and total property damage was estimated at $108 billion. But Katrina was not an equal opportunity storm. A black homeowner in New Orleans was more than three times as likely to have been flooded as a white homeowner because of racially discriminatory housing practices that meant the high-ground was taken by white homeowners before the banks started loaning money to African Americans who wanted to buy a home. Nor has New Orleans experienced an equal opportunity recovery—in no small part because of the white civic leaders who openly advocated for a whiter, wealthier city, a policy approach then-Congressman Barney Frank described as “ethnic cleansing through inaction.”

I was privileged to visit New Orleans this December for the AGU conference, I know others were there earlier in the month for a regional NSTA meeting. As tourists we saw a complete recovery and enjoy a mint julep and some jazz along Bourbon Street but go to the Seventh Ward, a black working-class community, it is only 60 percent rebuilt a decade after Katrina. That neighborhood is still missing more than half its pre-Katrina population – indeed 1 in 3 African American residents have not returned to New Orleans.

Katrina was 12 years ago so has climate change impacted the frequency or nature of hurricanes? Scientists are uncertain about whether climate change will lead to an increase in the number of hurricanes, but warmer ocean temperatures and higher sea levels are expected to intensify their impacts. For the continental United States in the Atlantic Basin, while models project a decrease in storm frequency they project a 45-87 percent increase in the frequency of Category 4 and 5 hurricanes. These category 4 and 5 storms are the ones we remember. Just this past fall we had a series of significant storms, one after the other - Harvey, Irma and Maria. And just as with Katrina, we saw a disproportinate response in support and aid to our citizens. Almost a week after Hurricane Maria devastated Puerto Rico, the US recovery efforts there were markedly different from the recovery efforts after Hurricane Harvey in Texas and Hurricane Irma in Florida. Fewer FEMA personnel were in place. Grassroots donations from fellow Americans were much smaller. And even now, months later, much of Puerto Rico still remains without power.
As science educators, two of these pressing challenges for humanity are front and center in our work: education and misinformation, denial and inertia. Education falls under the banner of **entitlements** – another of those banned words. **Entitlement** implies that a person has a guarantee of access to benefits based on established rights or by legislation. Federal and state law indeed guarantees access to a free K-12 education for all students. However, as in the case of disparities in climate change effects, we continue to see disparities in learning outcomes and often poor learning outcomes for developing a scientifically literate citizenry.

Let’s not forget that 2017 was also the year of alternative facts. I’m not sure who said there are lies, damn lies, and alternative facts but in the immortal words of George Costanza, “*Jerry, just remember, it’s not a lie if you believe it.*” The 2016 Yale climate survey shows us that the level of climate denial in the Unites States is still alarming high. For example, only 52% of people believe that global warming is mostly caused by human activity. There are clear links between factors such as political affiliation and levels of climate denial with the highest levels of climate denial occur in red states. And unfortunately, this also impacts the potential for education to move the dial on climate denial given the policy decisions in mainly red states that decrease the quality of science education experienced by students.

This year several states considered measures allowing or requiring teachers to present alternatives to widely accepted viewpoints on topics such as climate change. Lawmakers in Alabama and Indiana passed resolutions in support of giving teachers’ latitude in how they help students analyze and critique scientific theories. This suggests to students that theories are not evidence based and brings non-science-based opinions into the science classroom on an equal footing to science. In Florida, lawmakers approved making it easier for people to challenge textbooks as inappropriate. Representative Deirdre Clemons support of this law directly cited the teaching of climate change stating, “In sixth grade science, everyone was required to watch a movie on global warming. The teacher did mention briefly that this is still a theory, but what impression are children left with when they watch a whole movie promoting this idea as fact?” With the help of Clemons and others sharing her views, and with strategic efforts of the conservative Florida Citizens’ Alliance, the state passed a law in June requiring school districts to accommodate residents who seek to challenge instructional materials such as textbooks. Residents feeling curricular materials are unsuitable now have a legal pathway to contest the school’s decisions.

New science education standards were proposed in Idaho in January 2017, but lawmakers demanded the removal of the five sections that referred to climate change. According to Representative Scott Syme, the proposed standards “didn’t seem to present both sides of the
picture.” Syme and others **pushed for the elimination** of climate change language. The hearing on the issue was flooded with proponents of climate change education advocating for the reinstatement of the deleted standards. These advocates were partially successful with the addition of standards that at least **included human impact as a factor in addition to natural causes.** Other states, including Iowa, Oklahoma, South Dakota, and Texas, have tried to pass similar laws. And we can expect this trend to continue, so we need to be vigilant and advocate for science and science education or next news cycle it could be your state or school district making headlines.

I could not resist quoting (the fourth and best) Dr. Who, “*You know the very powerful and the very stupid have one thing in common. They don’t alter their views to fit the facts. They alter the facts to fit the views.*” Not only are facts being changed to fit the views of climate deniers, but they are being packaged to look like facts and be presented in US classrooms. Many of us received one of the 350,000 copies of *Why Scientists Disagree About Global Warming* (Idso, Carter, & Singer, 2016) published by the conservative Heartland Institute. In the words of Jim Lakely, a spokesman for Heartland the purpose was so that “the upcoming generation learn the truth.”

So does this tactic work with science educators? Unfortunately, according to a recent study published in *Science,* the status of climate change education in our K-12 classrooms is not good (Plutzer, McCaffrey, Hannah, Rosenau, Berbeco, & Reid, 2016). Three in four science teachers allocate at least an hour to discussing recent global warming. This includes 70% of middle-school science teachers and 87% of high school biology teachers. So although most students will hear something about climate change in a science class, the median teacher only devotes 1 to 2 hours to the topic. And quality of these 1-2 hours varies. Only a little over half of these teachers present the scientific consensus view of climate change. 15% avoid the topic or deny climate change is occurring and the other third of teachers send mixed messages that human and natural influences play equal roles.

*Inside Climate News* reported on teachers’ responses to the Heartland materials. Some sample quotes:

- Heartland did not provide supporting data beyond opinion.
- I used the Heartland materials “to provide another viewpoint.”
- Educators have a lot of work to do to combat science denialism and cultivate a critical thinking generation.
- I use Heartland materials “mostly as supplemental information.”
- I used the materials as a teaching tool to show students how some climate deniers were attempting to obstruct the teaching of real climate science.
I felt [the materials] didn’t warrant my time, but I did inform the seniors that this propaganda was sweeping the country.

The mailing prompted me to begin a conversation with key individuals in my district. We decided to send a letter to all high school teachers.

These sample quotes show how teachers responded to the Heartland materials. While it is disheartening to hear how these materials are creeping into instruction under the guise of being evidence-based or science-based, we hear some teacher voices stepping up as advocates using the materials to show students how climate deniers operate in the political arena and to develop guidelines for their districts about climate change education.

In these trying times, my challenge to all ASTE members is to be an advocate for science and science education to make sure that all students receive the quality science-based, evidence-based instruction that they are entitled to. Climate change is just one example of how science education is under attack – whatever specific issue drives your passions, I urge you to speak up. As legislative initiatives come up in your state make your voice heard, turn up at legislative hearings, turn up at school board meetings, and support your teachers and teacher candidates.

Marching for Science last April was only the start of making our voices heard – it should not be the end of our protest and advocacy. As individuals we can make a difference, but all of our voices together as an association with our affiliates at NSTA and other partners within the March for Science coalition gives us a bigger voice. We marched together in April – presidents past, current, and future – and as you can see our advocacy for ASTE, science, and science education is going to continue in the strong hands of Tisha Morrel and Val Akerson as I join the ranks of the past ASTE presidents.

Gillian Roehrig, Ph.D.

References


2018 ASTE International Conference Social Collage
More Pictures from Baltimore
2018 ASTE John C. Park NTLI Award
Contributed by Andrea Burrows

Each year one ASTE paper presentation is selected as the John C. Park National Technology Leadership Initiative (NTLI) award winner. This award recognizes an exemplary paper related to technology in science teacher preparation and provides funding to present the paper in an invited session at the annual meeting of SITE.

The NTLI award is sponsored by Vernier Software and Technology and provides up to $1200 toward conference travel and lodging expenses. SITE provides one complimentary conference registration and there is an award luncheon.

The 2018 ASTE John C. Park NTLI Award winners are:

- Alec Bodzin, Lehigh University
- Thomas Hammond - Lehigh University
- Kate Popejoy - Popejoy STEM LLC
- William Farina - Lehigh University
- David Anastasio - Lehigh University
- Breena Holland - Lehigh University
- James Carrigan - Lehigh University
- Scott Rutzmoser - Lehigh University
- Dork Sahagian - Lehigh University

They were recognized for their paper presentation entitled *A Curriculum-linked Professional Development Approach to Support Teachers’ Adoption of Socio-Environmental Science Investigation*.

This presentation was selected based on its innovative technology use of mobile field data collection and Web GIS analysis. The team’s research represents ASTE well as the work demonstrates the power of teachers using current technologies to engage students in authentic data gathering, analysis, and explanations so that the secondary students learn about issues in their own urban environments.

Congratulations to the team and, as SITE’s Science Education SIG chair, I invite you to come and see the presentation in Washington, D.C. in March 2018 at the [SITE Conference](https://www.sitedc.org/).

Feel free to contact me with any questions: Andrea Burrows ([Andrea.Burrows@uwyo.edu](mailto:Andrea.Burrows@uwyo.edu)).
2018 ASTE Graduate Student Forum
Contributed by Jeanna Wieselmann, Shana Lee, and Preethi Titu

Thank you to everyone who supported Graduate Student Forum events at the 2018 ASTE International Conference. We have a couple of highlights to share from this year’s conference in Baltimore.

Annual Business Meeting – We held our annual business meeting and elections on Thursday over the lunch hour and had approximately 50 people in attendance. Thank you to the ASTE Board of Directors for helping to make our Graduate Student Forum Business Luncheon possible! During this meeting, we discussed ways for graduate students to be involved in ASTE and held our elections. Our new President-Elect is Shana Lee, and our new Vice President is Preethi Titu.

Three Minute Thesis® Competition - We held the first annual ASTE Three Minute Thesis® competition on Friday morning, and six graduate student competitors presented their dissertation research in only three minutes each. Thank you to all competitors:

- Lesley Shapiro, Northeastern University
- Jacob Pleasants, Iowa State University
- MilaRosa L. Carden, Kent State University
- Peter Hillman, Teachers College, Columbia University
- Kristina Hopkins, Teachers College, Columbia University
- Jonathan Hall, University of Central Florida

Congratulations to our winner, Lesley Shapiro, and our runner-up, Jacob Pleasants! Their single, static PowerPoint slides are pictured below.
Lesley Shapiro, Northeastern University

High school science teachers’ receptivity to the NGSS: An examination of discipline specific factors.

Jacob Pleasants, Iowa State University

What messages about engineering are being sent to students during design activities?

Thank you to all of the competitors and to our wonderful 3MT® judges: Drs. Jennifer Parrish, Meredith Park Rogers, Ryan Walker, Seema Rivera, and Tisha Morrell. We hope to continue the 3MT® next year!

Thank you to our outgoing Co-Presidents, Andrea Rediske and Karl Jung, for your work in planning and preparing these events.

Make sure you like the ASTE Graduate Student Forum Facebook page and follow us on Twitter (@ASTE_GradForum).

Thank you and we look forward to seeing everyone next year in Savannah!

Jeanna Wieselmann – President, Graduate Student Forum (jeanna@umn.edu)
Shana Lee – President-Elect, Graduate Student Forum (slee@bagley.msstate.edu)
Preethi Titu – Vice President, Graduate Student Forum (titux002@umn.edu)
ASTE Election Committee News – 2017 Results
Contributed by S. Maxwell Hines

Thank you to everyone who voted. Overall, 241 out of 707 (34%) voted in the ASTE 2017 elections. Our newly elected officers and committee members for ASTE are:

President-Elect: Valarie Akerson

Board Members at Large: Ian Binns and Renee Schwarz

Elections Committee: Julie Brown, Erin Peters-Burton, and Stephanie Philipp

These newly elected members began their new terms at the 2018 conference in Baltimore. Thank you again for your participation in the elections process.

Sincerely,
S. Maxwell Hines, Chair
Rachel Wilson, Co-Chair
Meg Blanchard
Paula Magee
Richard Lamb
Rebecca Hite, Equity Committee Member
ASTE Election Committee News – 2018 Nominations
Contributed by Rachel Wilson

The ASTE Elections Committee would like to announce the call for nominees for the following elected positions that will be on the 2018 ballot (number of positions in parentheses):

President (1)
At-Large Board Members (2)
Elections Committee (2)

The deadline for nominations is March 15, 2018.

The following information should be submitted for the nominee:

- Name of Nominee
- Position for which the person is being nominated
- Nominee contact information, including email address

The nominee information should be submitted electronically on the website. You will need to log in as an ASTE member to submit your nomination. Receipt of the nomination will be acknowledged via a reply message.

Once the Elections Committee receives nominations, potential candidates are evaluated based on their service to ASTE through a variety of venues including: service on ASTE committees, service at ASTE conferences, and publications in ASTE related journals. The rubric used to evaluate nominated candidates is found on the nominations page. Please note that prior service experience to ASTE is what is primarily used to evaluate nominees. We encourage anyone interested in more information to contact the co-chairs of the committee.

For more information about the roles and responsibilities of the ASTE Leadership Team positions, please visit the ASTE website. Information about each of the positions may be found on page 4 of the link “Statement of Operating Procedures” found within the “About” tab.

Sincerely,
Rachel Wilson, Chair
Erin Peters-Burton, Co-Chair
Richard Lamb
Stephanie Philipp
Julie Brown
Rebecca Hite, Equity Committee Member
Science & Education Journal News
Contributed by Michael Clough

The journal Science & Education has created a virtual special issue entitled, “Teaching and Learning about the Nature of Science,” edited by Michael P. Clough. The included articles and an Editorial are available (some with free access through the publisher's website). Links to the full-text articles are provided below.

History, philosophy, and science teaching: The present rapprochement by Michael R. Matthews

Science Instruction with a Humanistic Twist: Teachers’ Perception and Practice in Using the History of Science in Their Classrooms by Hsingchi A. Wang & David D. Marsh

Pseudohistory and Pseudoscience by Douglas Allchin

Idealisation and Galileo’s Pendulum Discoveries: Historical, Philosophical and Pedagogical Considerations by Michael R. Matthews

Learners’ Responses to the Demands of Conceptual Change: Considerations for Effective Nature of Science Instruction by Michael P. Clough

A Multi-Year Program Developing an Explicit Reflective Pedagogy for Teaching Pre-service Teachers the Nature of Science by Ostention by Mike U. Smith & Lawrence Scharmann

Seeking historical examples to illustrate key aspects of the nature of science by William F. McComas

History of Science as an Instructional Context: Student Learning in Genetics and Nature of Science by Sun Young Kim & Karen E. Irving

Why Implementing History and Philosophy in School Science Education is a Challenge: An Analysis of Obstacles by Dietmar Höttecke & Cibelle Celestino Silva

A Family Resemblance Approach to the Nature of Science for Science Education by Gürol Irzik & Robert Nola

Teaching With and About Nature of Science, and Science Teacher Knowledge Domains by Fouad Abd-El-Khalick
Future ASTE Awards
Contributed by Lisa Borgerding

Science Education Career Awards (Due June 1)

ASTE makes available three Science Education Career Awards, Award I for Outstanding Science Teacher Educator of the Year, Award II for Outstanding Mentor, and Award III for Honorary Emeritus Membership, that recognize the personal achievements and professional contributions of its members. An ASTE member, who is cognizant of the qualifications of an ASTE member nominee, must submit the nomination. The nominee should be informed about the award nomination and nominators must follow guidelines in preparing nomination materials. The responsibility for the preparation of documentary evidence rests with the nominator.

North-Central – ASTE Meeting News
Contributed by Josh Ellis, Regional Director

We enjoyed a wonderful regional meeting this past October in Rochester, MN that featured many graduate students who shared their work with the region. A number of these students applied for the Davis-Foster Graduate Student Award, which recognizes outstanding graduate students’ research paper submissions. The award includes a monetary prize equal to the student registration fee for the following ASTE national meeting as encouragement for the graduate students to share their work with the organization as a whole. This year, we awarded two graduate students: Jacob Pleasants (Iowa State University) and Mohamed El-Nagdi (University of Minnesota), both of whom presented their work at ASTE 2018. We are looking forward to holding our next regional meeting near South Bend, IN in October 2018!
South-West – ASTE Meeting News
Contributed by Kelly Feille

The South-West region of ASTE was proud to present three graduate student travel awards at ASTE 2018 this January to Morgan Stewart, Stacy Vasquez, and Shelly Wu. All three recipients are PhD students from Texas Christian University under the mentorship of Dr. Molly Weinburgh.

Pictured: Suzanne Nesmith, President (Baylor University), Shelly Wu (Texas Christian University), Morgan Stewart (Texas Christian University), Stacy Vasquez (Texas Christian University), & Gil Naizer, Treasurer (Texas A&M, Commerce)

The 2018 SW-ASTE regional conference will be in Norman, Oklahoma on the beautiful University of Oklahoma campus on October 12th and 13th. Details and upcoming proposal and registration information can be found on our website.

South-West ASTE Regional Meeting at ASTE 2018. Representatives from states pictured: Colorado, Kansas, Oklahoma, Texas, and Arkansas.
Newsletter Information

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

Issue Items due by

Summer Aug. 15
Autumn Oct. 15
Winter Feb. 15
Spring May 15

All members are invited to submit items.

Editors: Ian Binns and Mark Bloom
Email: ian.binns@uncc.edu or markb@dbu.edu

Newsletter Sleuth Challenge: Use the clue below to locate the ‘easter egg’ to become a Newsletter Sleuth! Remember to click on it.

Clue: Our new President, Tisha Morrell, seemed to be ‘fluttering by’ all over the place in Baltimore. She’s also represented in a number of places in this issue of the Newsletter. Find the right one, click on it, and you’ll be on your way to earning the title of Newsletter Sleuth!

P.S. It’s NOT a real egg! You know who you are.