“When Marshall McLuhan coined the phrase “the medium is the message” in 1964, personal computers were unknown, mobile phones were science fiction, and the Internet did not exist. Today we understand what great foresight he had in predicting how our thinking is influenced by the digital age.”

-David McCasland
Greetings Fellow Science Teacher Educators,

The aforementioned quote was part of my reading last week. With technology being almost ubiquitous (for example, one of my former students called me on his cell phone from a rural village in Kenya where there is no running water!), I wonder if I can become influenced more by the medium than the message. Does having the coolest and latest tech gadget imply a positive message? Is the lack of technology a negative?

In thinking about our work as a community of science educators and researchers, I pondered how often we get caught in putting the emphasis on information gathering rather than information processing. There seems to be an ongoing challenge to disconnect and re-connect. We even have to issue an alert on email that we are going to be “out of reach” for a period of time, so our contacts will not expect a quick response to any message or request.

We can take advantage of technologies to better understand our world. After all, science thrives on claims based on evidence through reasoning. And certainly technology assists in our efforts to make sound claims through the collection of evidence. Yet sometimes we must quiet ourselves to be able to process information in a way that moves us toward understanding. And we have to teach teachers and students how to make time for reflection and restoration, which may mean disconnecting and relaxing, even if we use our digital reading device while doing so! I hope each of you has taken time over the past few months to refresh and replenish.

As we prepare for our annual international conference in Des Moines, Iowa, in five short months, I know that lots of people are connecting, communicating, and working diligently to ensure a successful event. I look forward to connecting and re-connecting with you while we are there. Who knows, maybe we can take a selfie together!

Malcolm B. Butler, Ph.D.
A Statement from the ASTE Leadership Team

What is the role of science teacher education in times such as these?

August 15, 2016

“Injustice anywhere is a threat to justice everywhere. We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly.”
- Dr. Martin Luther King, Jr.

Over the last few months, there have been many troubling events around the globe, with several of these disasters resulting in the loss of lives and loved ones. We know that members of our Association are impacted by these atrocities, directly, indirectly and vicariously. Collectively and individually, we must continue to function in a world that is constantly in flux, dealing with the good and the bad from nature and fellow humans. We are not isolated in our environs as we acknowledge the correlations and causations in daily lives.

As educators of science, we can relate to the idea that objects and organisms are interrelated and interdependent. When it comes to the work we do in our professional lives, the interconnectedness of humanity can be easily overlooked. However, for the teachers, students, administrators, parents, children and other stakeholders with whom we interact, we must think about how we make sense of sometimes senseless events. We can support others in seeing how science can help make sense of these events. But our work must not lose the humaneness in our mission to “advance[s] practice and policy through scholarship, collaboration, and innovation in science teacher education.” We are engaging youth and adults in science, which necessitates an awareness of the person. ASTE will continue to promote science teacher education as a profession that celebrates our global tethers, while working diligently to make the world a better place for all. As ASTE members, we can promote an understanding and appreciation for our colleagues and collaborators who are facing challenges that may be beyond our individual experiences. Dr. King's aforementioned quote suggests such an awareness. We must seek out and take advantage of every opportunity to improve society through science, no matter how difficult or insurmountable the task may seem. Our elders and ancestors expect and deserve nothing less.
## 2016 ASTE Leadership Team

### Board Members

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>President*</td>
<td>Malcolm B. Butler</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>President Elect*</td>
<td>Gillian Roehrig</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>Past President*</td>
<td>Lisa Martin-Hansen</td>
<td>California State University, Long Beach</td>
</tr>
<tr>
<td>Senior Board Member*</td>
<td>Sherri Brown</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>Senior Board Member*</td>
<td>Michael Clough</td>
<td>Iowa State University</td>
</tr>
<tr>
<td>At large Board Member</td>
<td>Gil Naizer</td>
<td>Texas A&amp;M University-Commerce</td>
</tr>
<tr>
<td>At large Board Member</td>
<td>Meredith Park Rogers</td>
<td>Indiana University, Bloomington</td>
</tr>
<tr>
<td>At large Board Member</td>
<td>David Haury</td>
<td>The Ohio State University</td>
</tr>
<tr>
<td>At large Board Member</td>
<td>Debi Hanuscin</td>
<td>University of Missouri</td>
</tr>
<tr>
<td>Senior Regional Representative*</td>
<td>Vanessa Dodo Seriki</td>
<td>Loyola University</td>
</tr>
<tr>
<td>Regional Representative</td>
<td>Jessica Riccio</td>
<td>Columbia University</td>
</tr>
<tr>
<td>Regional Representative</td>
<td>Young-Shin Park</td>
<td>Chosun University (Korea)</td>
</tr>
<tr>
<td>NSTA Director of Preservice Teacher Education</td>
<td>Eric Pyle</td>
<td>James Madison University</td>
</tr>
</tbody>
</table>

* indicates membership on the Executive Committee
Executive Director’s Report
Contributed by Bob Hollon

August brings the start of another academic year for most ASTE members, and thus the start of another activity cycle here at ASTE. We're getting ready for elections, membership drives and final planning for Des Moines, Iowa annual conference coming up January 12-14, 2017. Please read and respond to requests to vote, renew membership, and provide the board with feedback about issues facing the organization. Now is also the time to consider serving in a leadership role within ASTE by volunteering for a committee, helping with the annual conference, or working to introduce colleagues to the organization.

Fall is also the time when many regions hold their annual meetings – they are a great tool to spread the word about ASTE and help new colleagues feel more comfortable joining the organization. If you are new to an area, you can look up the contact information for ASTE regional directors on the ASTE web site under the “about” tab.

Membership

Over the past five years, ASTE membership has generally increased from about 660 people to over 700. However, this year numbers are down a bit. On August 15, 2016 our membership profile included the following:

<table>
<thead>
<tr>
<th>Membership Type</th>
<th>2015 Number</th>
<th>2016 Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>International</td>
<td>21</td>
<td>20</td>
</tr>
<tr>
<td>Retired</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Student</td>
<td>175</td>
<td>141</td>
</tr>
<tr>
<td>U.S.</td>
<td>491</td>
<td>463</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>715</strong></td>
<td><strong>655</strong></td>
</tr>
</tbody>
</table>

The membership and participation committee is working with the regions and through direct contacts to recruit new and former members. Share ASTE with new colleagues on your campus, send out the Newsletter, let people know about our journals and the ASTE web site, and bring an extra colleague (or two) to the 2017 annual meeting in Des Moines, Iowa – a place described as cooler than Portland!
Please remember that ASTE membership operates on a calendar year. Thus, you must be a 2016 member to vote in the upcoming Fall elections. You must have a 2017 membership to receive discounted rates for the 2017 annual conference.

Membership rates for 2016 remained the same as 2015. U.S., Canadian, and International memberships were $100, student memberships were $60, and retired memberships were $35. All membership categories include full access to the Journal of Science Teacher Education, Innovations in Science Teacher Education, access to all online resources and reduced rates for the annual conference.

Where do your Membership Dollars Go?

ASTE operates with fixed and variable expenses. Fixed expenses are those items that are independent of member activity. Some examples include stipends for editors, the Director of Services, and the Executive Director. Variable expenses fluctuate with membership each year, such as fees for JSTE, Science Education, and financial service fees. Actual amounts in each group can still vary a bit from year to year. For example, the budget for each summer board meeting is fixed – there is a specific dollar amount set aside each year to cover travel, hotel, and per diems. The actual amount spent changes from year to year based on hotel charges, member proximity to the meeting site, and actual attendance.

So, where do your membership dollars go? The table below summarizes ASTE annual expenses as a percentage of the total budget. Each ASTE budget expense line was placed into one of the groups listed below. Individual lines were then summed to produce the totals listed for each group. The table does not include activities related to the annual conference since they are part of a separate budget. Since these values are based on the 2016 budget, the amount for Scholarly Products is significantly higher than in other years since it includes start-up programming for Innovations in Science Teacher Education. Functionally, the categories are not mutually exclusive. For example, the ASTE president’s participation in NSTA or CSSP is a Board Activity required as part of our Affiliation agreement, but it is also public relations.

<table>
<thead>
<tr>
<th>Category</th>
<th>Per Cent</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarly Products</td>
<td>53.2</td>
<td>All editor contracts, programming, stipends, travel</td>
</tr>
<tr>
<td>Board Activities</td>
<td>16.2</td>
<td>SOP required memberships, summer meeting, travel</td>
</tr>
<tr>
<td>Administrative</td>
<td>19.2</td>
<td>Executive Director, Dir. of Elec. Services, office, travel. Legal and financial services</td>
</tr>
<tr>
<td>Online/Web/ programming</td>
<td>2.4</td>
<td>Hosting fees, general programming, maintenance, region support</td>
</tr>
<tr>
<td>Public Relations</td>
<td>9.0</td>
<td>Awards, publicity materials, activities in related organizations</td>
</tr>
</tbody>
</table>
It is important to keep in mind that your membership fees do not completely fund ASTE operations. Membership revenue generates about 41% of our operating revenue. Journal sales contribute about 32% and conference revenues add another 16% - 20% each year with the remaining revenues coming from donations, advertising and miscellaneous sources.

**ASTE Finances**

Through careful management, increases in journal sales and memberships, plus continued strong conference performance, ASTE now has approximately $275,000 in reserves. The ASTE operating budget for 2016 and beyond requires about $55,000 per year to meet our contractual commitments for administrative positions, editors, and miscellaneous expenses such as web services, programming, and financial reporting. In addition, our contractual obligations to conference hotels range from $80,000 - $100,000 in any single year. So, we are close to the goal of having operating expenses for three years in reserve. The ASTE Executive Committee decided not to invest any reserves until the financial market becomes more predictable. Thus, our returns are minimal, but we haven’t lost any reserve funds to market fluctuation.

**Looking Ahead**

2017 membership and conference registration for Des Moines, Iowa will open around October 5, 2016. Details will be available on the ASTE web site. The conference team is working hard to build an outstanding program with a full range of activities and field trips. Space will be limited for the Diane Ravitch session, so be sure to renew your membership and register early for the conference. You must be a 2017 member to receive the discounted rates.

Conference rates will remain unchanged – we haven’t needed an increase since 2013. Early bird rates are $225 for regular members and $95 for students. It is a significant discount from the onsite rates of $300/regular and $160/student and non-member rates of $410. So, get an early start on your year by renewing your ASTE membership and registering for the conference.
Come join us in Des Moines, Iowa for ASTE in 2017. Take advantage of Des Moines—a big city feel with small city advantages. Accessible. Easy. Enjoy the free shuttle service to/from the airport, 24/7 access to our extensive skywalk system, and a catered reception at the World Food Prize Hall of Laureates with interactive exhibits. We’ll be staying at the Des Moines Marriott Hotel, which provides extensive space, beautiful views of the river, and a wonderful atmosphere. Expand your horizons with great sessions, top-notch keynote speakers including Diane Ravitch, and live entertainment. Des Moines International Airport has 120 domestic flights daily and is within driving distance of many US cities—at the intersection of interstates 80 and 35.

We’ll be staying at the Des Moines Marriott Downtown Hotel, which provides extensive space, beautiful views of the river, and a wonderful atmosphere. Please use the phone number below to make your reservation at the Des Moines Marriott Downtown (Group Rate: $109.00 USD per night; Address: 700 Grand Avenue, Des Moines, IA 50309; Phone: 515-245-5500).

Downtown Des Moines offers many opportunities for off-site entertainment including: fine restaurants, microbreweries, live music venues, the Science Center of Iowa, outdoor ice skating just a few blocks away at Brenton Skating Plaza, live performance opportunities at the Des Moines Performing Arts Center, a brand new YMCA, and shopping in the eclectic East Village. While many downtown venues are accessible via skywalk, you can venture a bit further into Des Moines to visit the botanical center, Blank Park Zoo, the Des Moines Art Center, or Living History Farms. Any part of the Des Moines metro is a short taxi or Uber ride away!

Proposals are currently under review. Look for your notification of acceptance soon! For more information, please go to the ASTE website at http://theaste.org/meetings/2017-international-meeting/. Find us on Facebook by searching “ASTE Des Moines 2017”. If you have questions, please contact the conference co-chairs, Joanne Olson and Jerrid Kruse at conferencechairs@theaste.org.
2017 ASTE Conference App: Guidebook
Contributed by Gil Naizer

While we have used conference apps for the last few conferences, for the 2017 conference, the plan is to more fully incorporate the features of a conference app, Guidebook, features of which were used nominally in 2016. Guidebook offers iOS and Android based apps that can all be used offline as well as a web based version.

Guidebook ASTE 2017 should allow you to view the conference schedule by time slot, thread or speaker and will include abstracts of each session. Also included will be maps of the meeting rooms, general conference and Des Moines information as well as some advanced features such as individualized scheduling, to-do lists, integrated social media, live polling, and the ability to upload presentation materials.

Click here for a short video about the app.
We are pleased to announce that the inaugural issue is now available at http://innovations.theaste.org/publication/volume-1/issue-1-16/. The inaugural issue features an idea for the first day of a methods class that helps preservice teachers realize how their expertise in an area of their life outside of science can help them embrace the idea that becoming an expert science teacher is an ongoing process. This issue also contains an article on how three instructors who taught science prior to the adoption of the Next Generation Science Standards modified their science methods instruction to align with NGSS.

We would like to thank 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 inaugural issue of the Innovations journal by sharing the URL with your colleagues who may not be ASTE members!

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

If you have any questions regarding the Innovations journal, please contact Rommel Miranda (Rmiranda@towson.edu) or Ron Hermann (Rhermann@towson.edu).
ASTE elections will run from October 1, 2016 through November 15, 2016. 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 2016 member and logged in to view the information and vote.

President
Patricia Morrell
Gil Naizer

Board Member at Large
Lisa Borgerding
Catherine Martin-Dunlop
Wayne Melville
David Slykhuis

Elections Committee
Stacey Britton
Richard Lamb
Rhea Miles
Rachel Wilson
Brooke Whitworth

Questions should be directed to Tina Cartwright at tina.cartwright@marshall.edu. Technical difficulties should go to John Rhea at des@theaste.org.

Regards,

The ASTE Elections Committee
Mid-Atlantic - ASTE Meeting News
Contributed by Rommel Miranda, Regional Director
Conference flyer contributed by Aimee Govett

Please mark your calendars to attend the 2016 MA-ASTE Regional Conference next September 22-24 at Edgewater Hotel and Conference Center in Gatlinburg, Tennessee. The conference committee is also accepting late registrations. Please click on the following link to find out how you can make your reservation TODAY for a lodge room: http://ma.theaste.org/meetings/2016-mid-atlantic-aste-regional-conference/

Special thanks go out to our 2016 regional conference planning team: Aimee Govett (East Tennessee State University), Paula Magee (Indiana University – Purdue University Indianapolis), Kerry Cresawn (James Madison University), and Matthew Perkins Coppola (Indiana University – Purdue University Fort Wayne)!

Please click on the following link to join our MA-ASTE Facebook group page: https://www.facebook.com/groups/1400991133530421/ This Facebook group page was created for the exchange of ideas and promotion of high-quality science teacher education, both pre-service and in-service. Special thanks go out to Eric Pyle and Christopher Atchison for volunteering to moderate our Facebook group page!

Lastly, if you are a graduate student planning to attend the 2016 MA-ASTE conference, please click on the following link for information regarding the 4th annual MA-ASTE Graduate Student Presentation Award at http://ma.theaste.org/mid-atlantic-aste-graduate-student-research-presentation-award/
2016 MID-ATLANTIC ASTE REGIONAL CONFERENCE
JOIN US IN GATLINBURG, TENNESSEE ON SEPTEMBER 22-24, 2016

We have reserved a block of rooms on 9/22, 9/23, and 9/24 at the Edgewater Hotel & Conference Center. You can call and make a reservation NOW to reserve a lodge room. Please call 1-800-423-9382 for reservations, at which time a deposit equal to the first night’s lodging ($109.00) plus tax (13.75%) will be due. Please say you are with the Mid-Atlantic Association for Science Teacher Education.

We represent a regional member subset of the International Association for Science Teacher Education (ASTE). Our Mid-Atlantic region officially includes the District of Columbia and the following states: Delaware, Kentucky, Maryland, North Carolina, Ohio, Tennessee, Virginia and West Virginia. However, we welcome any science teacher educator outside of those specified areas.

As an active region, we meet each fall for a 2-day conference to promote leadership and support for professionals involved in the education and development of teachers of science at all levels. During the conference, we encourage initial work of graduate students, provide a collegial atmosphere for potential collaborations, and share ongoing scholarship/research endeavors. As of 2013, we support a Graduate Student Research award.

HOTEL INFORMATION:
EDGewater HOTEL & CONFERENCE CENTER
402 RIVER ROAD, GATLINBURG, TN 37738

CONTACT DR. AIMEE L. COYETT,
QUILLEN CHAIR OF EXCELLENCE IN EDUCATION
QUILLENCHAIR@ETSU.EDU
North-East - ASTE Meeting News
Contributed by Jessica Riccio, Regional Director

ANNOUNCEMENT & CALL FOR PROPOSALS
Northeast ASTE Regional Meeting
October 13th and 14th, 2016

Theme: Identifying Innovators in Science Education
In partnership with Regeneron and Teachers College

NE-ASTE is pleased to announce our annual conference, hosted in NY this year. We will be welcoming attendees on Thursday, October 13th with a poster session and community panel discussion at Regeneron Biotechnology Labs in Tarrytown, NY. Friday, October 14th will feature a keynote and concurrent sessions hosted by Teachers College, Columbia University. We hope northeast science community members and science teacher educators will join us for a robust exploration of partnering with the community and industry at this year’s conference.

$2000 in Travel Scholarships for the 2017 International ASTE Conference in Des Moines, IA will be awarded to Faculty, Graduate Student or Community Leaders who apply!

Please visit neaste.org for more information.
Proposals Due: September 19, 2016
Please email questions to Jessica Riccio Riccio@tc.edu, NE-ASTE Regional Director

Regeneron is Proud to be the New Sponsor of the Science Talent Search

#RegeneronSTS

Teachers College
Columbia University
South-West - ASTE News
Contributed by Michael Odell, Conference Chair

SW-ASTE Regional Conference October 7-8th, 2016

The 2016 SW-ASTE Regional Conference will be hosted by the University of Texas at Tyler in beautiful Tyler, TX. The conference submission site is open. Deadline for submitting a proposal is September 2, 2016. We encourage ASTE Members, Higher Education Faculty, and Graduate students to submit proposals. There are a number of session types available including paper and poster presentations. Come share your research with your colleagues across the region.

There will be Preconference Experiences on Friday October 7th. Experiences will include a tour of the UT Tyler Innovation Academy in Tyler, TX. The Innovation Academy is a University Charter Lab School and is designated a T-STEM Academy by the Texas Education Agency. Participants will be immersed into the school and have the opportunity to observe and interact with Teachers and Administrators. There will also be a panel of students, panel of teachers, and time with Administration. The UT Tyler UTeach program and the UT Tyler Teacher Residence program are also housed at the Innovation Academy.

The conference will begin on October 8th. The conference will be hosted at the Discovery Science Place Annex. The Discovery Science Place is a hands-on Children’s Science Museum and is managed by the Ingenuity Center at UT Tyler. In addition to being the conference site, attendees will be able to explore the museum and take a behind the scenes tour.

Hotel and other information can be found on the conference website. Join us for what should be a great experience.

For more information:
https://sites.google.com/site/southwestaste/
Michael Odell, Ph.D. modell@uttyler.edu
Are you Inventing Next Generation STEM Teacher Preparation?
Contributed by Paul Kuerbis

Ed Geary, Director of STEM Education at Western Washington University, and I are co-leading a pre-conference workshop at the annual AAC&U STEM conference (see adjacent announcement) building on the vision that Washington state’s community colleges and public and private colleges and universities are developing. The statewide goal (K-18) is to develop STEM teachers for 2030 who are competitively trained in STEM disciplines, culturally responsive and liberally educated.

2016 Transforming Undergraduate STEM Education: Implications for 21st-Century Society

Are you or your state involved in strategizing ways to invigorate STEM teacher preparation for the next generation of K-12 students? Please consider submitting (pkuerbis@coloradocollege.edu) a brief description of your institution's (or your state's) efforts as we compile a resource for participants in the November 3rd afternoon workshop.

Thanks in advance for your help!

Paul Kuerbis, ASTE Past President ('95-'97)
Interim Chair, PKAL Advisory Board, AAC&U
The College of Education had a wonderful retirement reception for Dr. Ed Marek on Friday, April 22. The University of Oklahoma University Club was filled with many family members, colleagues, and former and current students all of whom are considered friends. In addition to celebrating Ed's "50-year love affair with OU," we also announced the establishment of the "Edmund A. Marek Endowed Scholarship". Through this endowed scholarship, Ed's legacy will last forever by providing scholarships for undergraduate or graduate students who are studying science education, who have a 3.0 GPA, who have demonstrated financial need, and who are not a contributor to the fund or are a family member of a contributor. If you would like to make a financial contribution to this endowment fund and help continue Ed Marek's legacy, then please click the following link
https://giving.oufoundation.org/.../OnlineGiving/Ed ucation. In the "Comments" section, please include "for the Edmund A. Marek Scholarship."
Professors at dozens of colleges and universities have opted to use NSTA professional learning resources and the NSTA Learning Center portal (NSTA LC) as their online textbook when teaching science pre-service teachers. The NSTA online textbook option is a class bundle that consists of a personal NSTA LC subscription and a 1-year NSTA student membership.

“I have been using this portal for a number of years and believe it is an exceptional value and unparalleled in quality. The NSTA Learning Center makes individualizing instruction effortless because of the sheer number of learning opportunities that are available within the site. Because the Learning Center account extends beyond the semester, I have found it to be an effective induction tool as well as an effective way to get and keep teachers connected in the profession and growing.”

J. Metty

How Does it Work?

Professors create collections of learning resources combining NSTA resources and their own. NSTA resources available include interactive web modules (Science Objects and SciPacks), journal articles, web seminar archives, e-book chapters, podcasts, conference materials, and symposia archives. Professors’ resources may include Word documents, PowerPoint presentations, PDF files, images, and/or URLs from other web sites. The Instructor then shares her class collections with her students via the class landing page, the class private forum, a university system page (like Blackboard), or via e-mail.
In addition to gaining access to a suite of NSTA’s fee-based resources, students benefit from participating in the integrated online community that is the Learning Center by creating and sharing collections, engaging in discourse and networking with other professional educators, attending web seminars, and reviewing and rating resources. They also use professional learning tools to personalize, diagnose, and document their growth. While working on class assignments and projects, students build a professional persona (*My Profile*) that serves as evidence of their work during the academic semester and beyond. While other textbooks are returned to the bookstore for a refund, the students’ Learning Center account and the resources they add to their library are available for use beyond the course.

Furthermore, activity points, badges, and class leader boards provide immediate recognition and affirmation to students for their learning. The class landing page receives a unique URL, is branded with a university banner, and its text may be customized by the professor. For the professor, an Admin Area is provided where she can track her students’ work and assessments’ scores for grading purposes.

“Test-drive” the Learning Center Today!

Professors can create a class landing page in the NSTA LC to “test-drive” the portal and explore the resources. This zero-risk opportunity gives professors to determine their course of action. After creating the class landing page, an NSTA staff approves it and contacts the professor to answer her questions, to share useful strategies, and to gauge her interest regarding future use.

What is the Cost to Students?

There are two different price points for the NSTA class bundle. The professor selects one price point for all the students in the class.

- ($99) Per student, for a 1-year NSTA LC subscription and a 1-year NSTA student membership
- ($72) Per student, for a 6-month NSTA LC subscription and a 1-year NSTA student membership

*Students purchase the class bundle online with a credit card. Optional: Students may purchase the class bundle at the university bookstore using financial aid funds, check, or cash. Students redeem their purchase online.*
What Professors Say?

“All my students have found the Learning Center to be an invaluable resource in supporting content knowledge, pedagogical strategies, and as a source of lesson ideas.” M. Vaughn

“The courses prior to this were considered courses from “Hell” by our students. Now the science faculty is having fun teaching. 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. He is sold. So am I.” K. Miller

“Instead of an expensive and outdated science methods books, my students now have the latest and greatest information and resources to use.” V. Massey

“Components in the NSTA Learning Center allow me to provide consistent and accurate content for my students while at the same time allowing them to tailor aspects to their individual needs and meet the need for differentiated instruction.” C. Royce

Useful URLs:

- NSTA Learning Center home
  - http://learningcenter.nsta.org
- Creating an account in the Learning Center (it is free and NSTA membership is not required):
- Creating a class landing page to use as an online textbook (professor must be logged-in):
  - http://learningcenter.nsta.org/group/manage

Questions?

Contact Flavio Mendez, Sr. Director, at 703-312-9250 or via e-mail at (fmendez@nsta.org).
American Association of Colleges for Teacher Education (AACTE), Association of Teacher Educators (ATE), and GLSEN (Gay, Lesbian & Straight Education Network) have developed a survey to help learn about the practices, preparation, and needs of our nation's teacher educators. They would love your help to give voice to teacher educators in your network. The results from this survey will be shared widely and will be used to create resources and supports to help teacher educators in their work.

By offering your insights, you will help to improve supports for your work with teacher candidates in preparing them to teach all students. Teacher educators who complete the survey will have a chance to enter a drawing for one of five $100 Amazon.com gift cards or one free registration to the AACTE conference in 2017.

Go here to take the survey: [www.teacheredsurvey.org](http://www.teacheredsurvey.org)

More about the survey: The National Survey of Teacher Educators is a first-of-its kind national survey of teacher educators and the only national survey that specifically examines the state of teacher education on lesbian, gay, bisexual, and transgender (LGBT) issues. It also provides an important opportunity for teacher educators to speak out about the perspectives and experiences of teacher education professionals (faculty, deans, program coordinators, etc.) regarding their curriculum and pedagogy. The survey conducted through a partnership between the American Association of Colleges for Teacher Education (AACTE), Association of Teacher Educators (ATE), and GLSEN. The survey was developed and reviewed by experts in the field of teacher education, including teacher educators themselves. We are in the process of contacting organizations that may be able to help us the spread the word about the online survey.
Reason Racer is an online, rate-based, multiplayer game that applies specific game features in order to engage middle school students in introductory knowledge of and thinking related to scientific argumentation. Game features include rapid and competitive play, timed performance, immediate feedback, and high rates of response across many game-play sessions and science scenarios. The areas of argumentation addressed in the game include understanding a claim, judging evidence about a claim based on type (fact, opinion) and quality, determining the reasoning applied to the claim (authority, theory, or logic), considering counterarguments and rebuttals, and making judgments. These skills have been identified as important by previous research. At the end of the game the players engage in online discourse about the science addressed in one of over 40 scenarios. Students who played the game at least 10 times improved in every aspect of argumentation skill and judgment. Students who played the game also reported an increase in confidence and motivation to engage in science compared to students who did not play the game (Ault, Craig-Hare, Frey, Ellis, & Bulgren, 2015).

The ability to engage middle school students in meaningful conversations in an environment that is increasing ubiquitous to their lives is important because, as Vygotsky (1978) argued, “interpersonal” discourse with peers or mentors is a necessary process to move learners toward higher-level cognition through their own “intrapersonal” (intrinsic) speech (p. 56). Vygotsky claimed that all learning is social and for a 21st century student, being social means being online.

Both a teacher and student portals are located at http://www.reasonracer.com/. Teachers are able to set up classes, assign students to games, and monitor performance for each student and the whole class.


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Enhancing Professional Knowledge of Pre-Service Science Teacher Education by Self-Study Research

Turning a Critical Eye on Our Practice

Series: ASTE Series in Science Education

- Compiles self-studies in science teacher education highlighting methods, content, and doctoral level courses to foster discussion on complexities of science teacher education
- Analyses the current and potential impact that self-study research makes and can make on the field of science teacher education
- Shares implications for future research in science teacher education using self study

Self-study research is making an impact on the field of science education. University researchers employ these methods to improve their instruction, develop as instructors, and ultimately, impact their students’ learning. This volume provides an introduction to self-study research in science education, followed by manuscripts of self-studies undertaken by university faculty and those becoming university faculty members in science teacher education. Chapter authors range from those new to the field to established researchers, highlighting the value of self-study research in science teacher education for every career rank. The fifteen self-studies provided in this book support and extend this contemporary work in science teacher education. They, and the subsequent reflections on professional knowledge, are organized into four sections: content courses for preservice teachers, elementary methods courses, secondary methods courses, and preparation of future teacher educators. Respondents from various locations around the globe share their reflections on these sections. A culminating reflection of the findings of these studies is provided at the end of the book that provides an overview of what we have learned from these chapters, as well as a reflection on the role of self-study research in the future of science teacher education.
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