President’s Message Summer 2020

ASTE 2021 Virtual

We probably all knew this was coming, but regrettably, the ASTE Board has made the difficult decision to cancel the in-person conference in Salt Lake City in January. In making this decision, ASTE considered feedback from members (see survey results below), taking into account guidance from the Centers for Disease Control and Prevention and the World Health Organization. This decision was made for the health and safety of our attendees, exhibitors, presenters, and volunteers.

The format of our virtual conference is still to be determined. The Board is working with the Conference Committee and is considering various options. The proposal review process is currently wrapping up and presenters will be notified soon. Although the format of the 2021 conference is not yet determined, we will gather additional information from authors of accepted proposals regarding their preferred method of presenting virtually. Preferences will not be guaranteed, but the data will be used in planning and decision making.

Questions to be considered (with potential discussion comments):

-What are the financial impacts of not holding a conference? Although our hotel contract had a pandemic clause and we are not committed to paying hotel expenses, there are other potential costs to holding a virtual conference. What is a fair registration cost for a virtual conference? Would we need to use a virtual conference company to facilitate, or can we do this on our own?

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-Synchronous, Asynchronous, or Mixed? Should we post videos of presentations that we can watch live and/or later? How about an NSF-type virtual poster session for all presentations? Are we getting “ZOOMed out” and unwilling to participate in a regular multi-day conference format? Do we hold plenary sessions? How about the Presidential welcome and address? In what format should our bylaws and required business meeting be conducted?

-How do we facilitate networking, discussion, sharing? We know that in addition to sharing our research and practices, networking with colleagues is a key feature of the conference. Is this possible with a virtual conference? What else can we do to connect and keep members connected beyond the conference?

Thanks in advance for the work our Conference Committee and Board will put into meeting our members’ professional needs, and their continued guidance as we re-envision the conference as a virtual experience in January. Thank you ASTE members for your continued understanding and support while we navigate these unprecedented and challenging times.

Survey Results:

We know that a lot remains uncertain regarding the pandemic; the responses were made considering each respondent’s available information at the time, and results could be different if they were answering later.

As of August 6th, the Conference Contingency part 2 survey had 234 responses – a vast majority of those came in the first day or two of releasing the survey; the few that continued to trickle in did not meaningfully change the results. There were also 76 open-ended comments.

Over 53 percent of respondents supported changing the conference to a virtual conference to be held in January; almost 16% suggested postponing to later in the year, over 17% selected “cancel the meeting,” and 8.5% selected “hold the meeting as planned.”

Results from the question relating to intended participation are below.

Open-ended responses bemoaned not being able to meet in person, but consistently indicated it was not safe to travel and their universities or states were not allowing travel. While multiple respondents indicated lack of willingness to spend a day or days on ZOOM, others cited interest in hearing from their colleagues.

I challenge you to find ways to stay connected with your ASTE colleagues even though we will not be together in January. As always, feel free to reach out to me with your thoughts, ideas, concerns, etc.

Stay tuned and stay safe!

Gil
gilbert.naizer@tamuc.edu.
Most students’ exposure to science tends to be dry and removed from their lived experiences. As a science teacher, I instinctively ignored this tradition and pointedly tailored my curriculum to deal with issues of health disparity in the community, history of structural racism and science, and socio-scientific issues. I took advantage of the lack of attention my administration placed on middle school science. Although the only Black woman on the teaching staff, I unknowingly discovered a way of teaching that fit into a long history of Black women teachers who use their classroom to “uplift the race.” In my first couple of years of teaching science, I chose to tailor my science teaching mostly around research projects and performance tasks that dealt with issues of systemic racism as it pertains to health equity, redlining, and food deserts; the US’s handling of climate change and fracking and its effect on other countries; and critical issues in the science community such as stem cell research, cortisol, and racial health disparities in the Black and Brown community.

My science classroom could not just be about the differences between ecosystems or how the cardiovascular and digestive system work together; instead we also needed to discuss human impact on bee pollination and how the lack of access to healthy foods in poorer neighborhoods leads to high cardiovascular issues and death, for example. Ignoring the realities of my students’ lived experiences and the history of their community would never have worked for me. My science classroom needed to provide a space for students to think critically about their world and communities similar to theirs, create a place where students took risks and saw themselves as capable of fighting for themselves by first getting equipped with the tools of knowledge no matter if they chose to pursue a science major in college or not, they would make that decision for themselves.

Eventually I moved to a school with more established structures and curricular guidelines. The burden of being the only Black woman science teacher in conjunction with feeling stifled by my newly provided curriculum led to my eventual departure from the classroom. My students deserved more from me, and I had run out of the fumes of inspiration that had inspired me to teach in my truth and integrity years prior. I could no longer thrive as a teacher in solitude; I needed community, challenge, and support. I needed communal healing with others who shared in my experience. I needed professional development that embraced and pushed my pedagogical beliefs from people I trusted. I needed to know if I was alone in this journey. Would my teaching experiences and ultimately the experiences of my students have fared differently if I had been in community with other Black women science teachers?
365). As theoretical perspectives, womanism and Black feminist thought draw on the “critical thoughts and activism regarding oppression and resistance to oppression” that teachers of today use as a pillar of pedagogy development (Johnson, 2017). In fact, all science students would benefit from this pedagogical approach! Tragically, today Black women make up only 5% of the teaching force (Hill-Jackson, 2017). There is limited research that details if the historical traditions of Black women’s pedagogical practices have sustained in the few science classrooms that are led by them (McMath, 2015). In order to support the retention and promotion of Black women science teachers, the research must catch up to what Black women science teachers and their students are experiencing daily. By creating a space where Black women science teachers can come together and build, a goal of my research is to increase teachers’ staying power in schools as they lead the charge toward more liberating instructional practices that extend beyond the classroom.

As a science teacher educator and emerging scholar, I have had the opportunity to teach younger Black women science teachers who find themselves continuously left in the margins within science teacher education and at their school sites. Their instinctual approach to a scientific concept is ignored or considered “extra” or unnecessary, irrelevant and/or over the top. When a Black woman science teacher moves beyond the curriculum, the effectiveness is immediately questioned (Acosta, 2019; Agee, 2004; Farinde, Allen & Lewis, 2016; Olitsky, 2019). When schools can’t assess the socio-political consciousness that a student is gaining in their science classroom, they choose to ignore it. Black women science teachers need the space to work together to help identify how we approach science teaching and learning, while also healing from the burdens of being alone when we return to our school sites.

Womanist caring centers the way that Black women have developed their teaching pedagogy to eradicate racist, educational practices that negatively affected their students (Beauboeuf-Lafontant, 2002). “Politicized womanist care is rooted in the mothering tradition of Black women teachers who took responsibility for the lives and education of their students while maintaining high expectations” (Watson, 2018, p. 4). One of the goals of this dissertation is to explore what it means for a Black woman to have political clarity, an ethic of risk, and the fortitude to embrace the maternal within the context of the science classroom.

My dissertation aims to share the narratives of Black women science teachers with various teaching expertise to allow their narratives to be in conversation with each other in order to build shared and collective knowledge for healing and change. While situating the current pedagogical practices of Black women science teachers within the larger tradition of Black women teaching practices, this study is heavily informed by the work of Beauboeuf-Lafontant (2002). There is an “ideology of Whiteness applied to science” that must be confronted by Black women entering and transforming this space (Mensah & Jackson, 2017, p. 4). One of the goals of this dissertation is to explore what it means for a Black woman to have political clarity, an ethic of risk, and the fortitude to embrace the maternal within the context of the science classroom.

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I am sharing my current doctoral study with the ASTE community in an effort to spark a conversation about the intersection of Black feminist and womanist epistemologies and science teaching and learning. I hope readers consider affinity spaces as an approach for Black teachers that can lead to longevity in the teaching world.

Alexis Riley (ar3774@tc.columbia.edu) is currently a doctoral candidate at Teachers College, Columbia University. She is interested in critical race theory and Black feminist thought, racial literacy in science teacher education, and enhancing culturally relevant practice in science classrooms and instruction.

Continue the conversation using the hashtag #TheASTEOpEd on Twitter, Facebook, and the Listserv.

Have a topic you are passionate about and want to bring to the attention of the ASTE community?

Submit it to us via the Newsletter@theaste.org.
Southwest Region (SWASTE)

The Southwest Region of ASTE is carefully considering plans for our Fall annual conference October 9-10. As we make the likely shift to an online format, we welcome ideas and feedback from membership for what might be the most valuable of our limited time together. Please connect and stay up to date with our fall conference plans at https://sw.theaste.org/

Contributed by Kelly Feille

Southeastern Region (SASTE)

The Southeast regional meeting will be held virtually on Saturday, October 3rd. The conference theme is "STEM in the Community." Due to the virtual format, registration fees have been reduced to $20 for faculty and $0 for students. Please visit the SASTE website to register:

https://se.theaste.org/annual-meetingconference-registration/

We are still accepting award nominations, including faculty and student position papers. Award nominations should be submitted to Dr. Gina Childers, SASTE president (Gina.Childers@ttu.edu). The deadline for nominations is Monday, September 14th. Details about each award can be found here:

https://se.theaste.org/awards/

Contributed by Jennifer Mesa

International Region

The International Region of ASTE is hoping to participate in EASE 2020, which has been rescheduled for February 3-6, 2021 and will take place at Kyungpook National University in Daegu, Korea. The theme of the conference is 'Challenges of emerging technologies in science education' and the keynote speaker will be Marina Milner-Bolotin from the University of British Columbia. For more information about the conference, visit http://www.ease2020.kr

If you would be able to attend the EASE conference and are interested in participating in an ASTE International Region symposium, please contact Chris Tippett at ctippett@uottawa.ca and indicate your preference for one or more of these themes: a) climate change education (although framed more generally), b) standards based science teaching, or c) science identities.

Contributed by Jennifer Mesa
North East Region (NEASTE)

The Northeast region is busy gearing up for our Oct. 2 virtual conference! We hope Northeast-region faculty, graduate students, and teachers will join us for a program of traditional paper presentations, roundtable discussions, poster session and plenary – online. The theme this year is *STEM Teaching and Learning in a Climate of Uncertainty and Unrest*. We are excited to announce our keynote speaker, Ana Fernandez-Sesma, PhD. Dr. Fernandez-Sesma is a Professor of Microbiology at Icahn School of Medicine at Mount Sinai. Her group studies the modulation of innate immunity by viruses of human health interests. She currently participates in several multi-investigator projects to study immune responses to viral infections and will address the current pandemic. We invite you to not only register, but also to submit a proposal to present your work. We look forward to welcoming the Northeast region in October!

**NEASTE Website:** [www.neaste.org](http://www.neaste.org)

Contributed by Amanda M. Gunning, PhD

North West Region (NWASTE)

The North West region will be holding a virtual meeting September 16th from 4-6PM Mountain (3-5 PM Pacific) to discuss plans for an upcoming conference, monograph, and website.

The North West region will be holding a virtual extended meeting and conference November 20th - open to any and all science educators (irrespective of current ASTE membership or location)

We would also like to encourage you to sign up for our listserv. Sign up at [http://bit.ly/nw-aste-list](http://bit.ly/nw-aste-list)

Contributed by Mike Borowczak

For updates check the regional websites [here](#)
ASTE Graduate Student Forum Updates

Three Minute Thesis® Competition
The ASTE Graduate Student Forum is excited to announce the second annual ASTE Three Minute Thesis® competition to take place at the 2021 International Conference in Salt Lake City! 3MT® competitors must effectively explain their dissertation research in only three minutes using a single, static slide. This is a great opportunity to learn about the wide range of research being conducted by ASTE graduate student members, and we are seeking both competitors and judges for this event.

Competitors: Ph.D. and Ed.D. candidates who will be defending their dissertations between January 1, 2021, and January 30, 2022, are eligible to participate in the 2021 ASTE 3MT® competition. Click here for more information about competing and to sign up.

Judges: ASTE members who have completed a terminal degree are eligible to serve as judges. Click here for more information about judging and to sign up or by contacting Leiflyn Gamborg at lgambo1@lsu.edu.

3MT® registration closes on October 15, 2020 so we can avoid scheduling conflicts with your other ASTE commitments. The competition will be limited to the first 10 submissions.

Graduate Student Mentoring Poster Session
This year, we are excited to host a poster session for graduate student members! Those accepted will be paired with an experienced mentor and required to submit a 10-15 page manuscript for feedback in addition to their presented poster.

Poster submissions will be accepted here, until 8/20.

Mentors: If you, or someone you know, would like to serve as a mentor for our talented graduate students please complete the following Google form by 11/1/2020 or by contacting Leiflyn Gamborg at lgambo1@lsu.edu.

Graduate Student Recognition
Congratulations Chelsea Sexton!
Chelsea was awarded the 2020 Alumni Award for the Mary Francis Early College of Education at University of Georgia. It recognizes a graduate in the first ten years of their career who has made significant achievements as a practitioner in their field. Chelsea was also awarded the Georgia High School Science Teacher of the Year for 2019! Way to go Chelsea!

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Graduate Student Recognition (continued)

Shout out to Dr. Melanie Kinskey and Dr. Shana Lee! Their hard work and dedication last year built the groundwork for our upcoming Graduate Student Poster session! Thank you both!

Have you or a graduate student you mentor reached a significant milestone this year? We want to recognize the important work being done by ASTE’s graduate student members. Being accepted to present at a conference for the first time, passing preliminary exams, publishing, having a successful defense… we want to hear it all! Share these graduate student achievements for inclusion in future newsletters using this form or using the ASTE website.

Thank you for supporting ASTE graduate students!

Make sure to like the ASTE_Graduate_Student_Forum_Facebook_Page and follow us on Twitter (@ASTE_GradForum).

Leiflyn Gamborg - President, Graduate Student Forum (lgambo1@lsu.edu)
Regina McCurdy - President-Elect, Graduate Student Forum (regina.mccurdy@ucf.edu)
Heather Lavender - Vice-President, Graduate Student Forum (heatherl@lsu.edu)
Katie Green - Graduate Student Board Member (kegreen4@ncsu.edu)

New Resource

Open source textbook: https://open.oregonstate.education/physicsforteachers/

Exploring Physical Phenomena: What Happens When Light from the Sun Shines on the Earth?
by Emily van Zee and Elizabeth Gire

This open source textbook is intended for use in laboratory-centered physics courses for elementary and middle school teachers. Emphasis is upon questioning, predicting, exploring, observing, discussing, reading, and writing about what one thinks and why. This textbook also is appropriate for use in general science courses that explore some of the physical phenomena underlying global climate change. Organizations such as museums, youth groups, or senior citizen programs may find portions feasible for workshops, special events or on-going exhibits. Explorations mostly use everyday equipment available in homes, schools and offices. Supplementary materials include an equipment list suitable for remote learning contexts.

After exploring light and thermal phenomena in units 1 and 2, participants consider the influence of these phenomena on local weather in unit 3 and on global climate change in unit 4. In unit 5, they observe the sun, moon, and stars and develop explanatory models for day and night, the phases of the moon, and the earth's seasons. Each unit ends by making connections to the Next Generation Science Standards (NGSS Lead States, 2013).

Submitted by Emily van Zee, vanzeee@oregonstate.edu
ASTE Elections Committee

Contributed by Rita Hagevik and Amanda Glaze-Crampes

ASTE elections will run from October 1, 2020 through November 15, 2020.

The slate of candidates is listed below. The ballot and candidate background information are available at [https://theaste.org/members/elections/](https://theaste.org/members/elections/). You must be a 2020 member and logged in to view the information and to vote. All members please be sure to vote - **YOUR vote counts**!

**President (1)**
Ian Binns
Rommel Miranda

**Board Member at Large (2)**
Xavier Fazio
Allan Feldman
Vanashri Nargund-Joshi
William Veal

**Elections Committee (2)**
Matthew Perkins Coppola
Helen Meyer
Cassie Quigley
Jeanna Wieselmann

**Graduate Student on the Board (1)**
Leiflyn Gamborg
Alexis Riley

Questions should be directed to the chair, Rita Hagevik at rita.hagevik@uncp.edu or chair-elect, Amanda Glaze-Crampes at aglaze@georgiasouthern.edu. Technical difficulties should go to John Rhea at des@theaste.org.

Happy voting!
The ASTE Elections Committee
CITE Journal Science Wants Your Science Education/Technology Related ASTE Papers for Publication

**Consider submitting a paper for consideration in CITE Journal Science**

- How was your experience with teaching science online?
- What support did you offer to your pre-service teachers as they moved to remote instruction?
- How are your pre- and in-service teachers making use of digital resources to support remote and blended instruction?

This year has brought so many questions about teaching and learning science and its intersection with technological tools.

CITE Science is the perfect place to share your research, completed and emerging, with the others as we all stretch our teaching and research into new areas.

We ask that the authors check for a clear connection to science education and technology (e.g., pre or in-service teacher education or college-level faculty). Additionally, we encourage authors to embed interactive technology in the manuscript (e.g., links, video, audio, animation).

This journal is sponsored by ASTE, and we would like to feature ASTE members' work!

**Link:** [https://citejournal.org/category/science/](https://citejournal.org/category/science/)
Follow the Submissions tab at the top right of the page.

Contact the Co-Editors with any questions:
Andrea Burrows - Andrea.Burrows@uwyo.edu
Helen Meyer - Helen.Meyer@uc.edu
We are pleased to announce that Volume 5, Issue 3 of the Innovations in Science Teacher Education journal is now available at: https://innovations.theaste.org/publication/volume-5/issues-3-20/

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

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

For author guidelines for submitting a manuscript to the Innovations journal, please visit the following webpage: https://innovations.theaste.org/submit/instructions-to-authors/

If you have any questions regarding the Innovations journal, please contact the editors: Rommel Miranda (Rmiranda@towson.edu) or Ron Hermann (Rhermann@towson.edu).
Phone-a-friend Facebook Questions

- Does anyone have robust samples of rubrics for science labs for college level? Specifically, I am trying to find samples that the TAs in Physics and Biology labs could use. Asked by: Sandy Lampley

- Hello Colleagues! Quick question - with most K-12 schools moving to virtual learning (at least in MD) what are you all planning for science methods field experiences? Thanks! Asked by: Vanessa Cross Dodo-Seriki

- Hello ASTE family, does anyone have a project summary sample for NOYCE NSF that you would be willing to share with me? Writing my first NOYCE. Asked by: Amanda Lee Crampes

- Fellow Science Teacher Educators... I want to expand the reading list for my grad-level elementary school science curriculum course this semester. What do you feel are the "must reads" related to constructing the historical context of elementary science curriculum and teaching? (Appropriate for masters and doc level students). Asked by: Kelly Feille

- At the San Antonio conference someone mentioned some free software they were using to give feedback (and possible coding too) on a video observation at key event times. I am hoping they are in this group and can point me in the right direction. Any recommendations would be wonderful as budgets are obviously tight right now. Asked by: Kathy Eaton

- Seeking ideas for alternative assessments. Examples include models, brochures, blogs and comics. What others do you know? Asked by: Josh Apple

- Hello colleagues! What validated observation protocols are folks incorporating these days? Looking for something to add into a grant focusing on outdoor instruction tied to NGSS/3D instruction. Any suggestions? Asked by: Kelly Feille

Interesting Links or Announcements

Call for Proposals!
STEMteachersNYC, STEMteachersNWA, STEMteachersPHX, and our network of teacher-led professional learning communities are excited to announce the First Annual STEMteachersEXPO, which will be held online, from October 23-25, 2020!
Posted by: Juliette Guarino Berg
https://stemteachersnyc.org/expo/

Lisa Rosati and Laine Farber shared this useful link!
https://www.naturenerdswithlaine.com/

Hello everyone! Debi Hanuscin and I have each been developing approaches to partner preservice elementary teachers with K-5 students preparing projects for school science fairs. If you are interested in or been doing this kind of work, we would love to talk and invite you to collaborate with us. Fill out the Google form to join us:
https://forms.gle/mhoRePWWQP1KiZh96
Posted by: Matthew Perkins Coppola
Hello all! We are excited to publish our third newsletter (we promise to stop counting after this!) and we hope you find it informational and entertaining!

Please feel free to contact us at any time if you have items that you feel are good for the newsletter or if you have any suggestions on how we may improve it. We love being able to serve you all, the members and organization of ASTE, through the newsletter. Here's to the coming years, may they be newsworthy!

Issue items due by:

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

All members are invited to submit items.

Editors: Jennifer Oramous and Amity Gann
Email: newsletter@theaste.org

Newsletter Co-editors, Amity (left) and Jennifer (right)

This summer we have been enjoying our gardens.

What has been your favorite summer activity?

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

Clue: What a QWERTY!!

Community Engagement Challenge: Share a picture of something science-related you participated in during quarantine- no description, just caption:

Science in the age of COVID #ASTENewsletter