

MSTA 68th Annual Conference

**we** **RISE**

Re-imagine Innovative Science Education

**2021 MSTA Virtual  
Annual Conference**

SATURDAYS, FEBRUARY 27 & MARCH 6



# MICHIGAN SCIENCE TEACHERS ASSOCIATION 68TH ANNUAL CONFERENCE

TO BE HELD VIRTUALLY SATURDAY, FEBRUARY 27 AND SATURDAY, MARCH 6

Register today to join your fellow Science Teachers across the state as our organization comes together to live our mission: *to stimulate, support and provide leadership for the improvement of science education throughout Michigan*. At this year's virtual conference, attendees will have unique opportunities to learn new science education strategies from the comfort of their homes as well as exchange ideas and discuss current trends with education industry leaders in the virtual exhibit hall.

Let's be honest – 2020 took a toll on teachers. Let's reinvest in our students – and ourselves – and start 2021 with a revitalized commitment to continuing education! Because we're not meeting in person this year, we're not constrained by traditional event location logistics and can best accommodate the schedules of our member teachers by meeting on two consecutive Saturdays, February 27 and March 6.

## CONFERENCE BENEFITS WILL INCLUDE:

- Trending topics and new strategies for science education from Kindergarten through High School for General Science, Biology, Physics, Chemistry and Earth Science.
- Virtual attendance at the Virtual attendance at the MSTA Board Meet and Greet.
- Networking with colleagues in real time using the conference chat feature.
- Opportunities to explore education-focused products and services from our vendors and sponsors in the virtual exhibit hall.
- Session topics covering Virtual Learning Techniques, Strategies to Decrease Stress, Tips for Cultivating Stronger Student Discussions and more!

## CONFIRMED KEYNOTE SPEAKERS

Saturday, February 27 at 8:00 am Keynote, Christopher Wright, PhD, presenting on:  
**Re-imagining Our Roles: Dreamspaces in Science & Engineering**



Christopher G. Wright is an Assistant Professor in the Department of Teaching, Learning, & Curriculum in Drexel University's School of Education and co-Director of the In/Formal Learning Linking Engineering, Science, & Technology (ILLEST) Lab at the ExCITE Center. His research deploys critical perspectives while engaging in design-based research that looks to enhance learning and identity development opportunities in k-12 engineering and science learning environments. This work investigates the cultural and political elements within informal and formal learning spaces that could potentially impact the experiences of and learning opportunities afforded to those from historically excluded communities in STEM. Understanding how intersections of race, class, gender, & language can impact learning opportunities, this work looks to reimagine engineering & science learning environments as opportunities for affirming, cultivating, and building upon the intellectual & linguistic resources that research partners bring to the context. Dr. Wright is a 2019 recipient of the Presidential Early Career Award for Scientists and Engineers (PECASE).

Saturday, February 27 at 12:15 pm Keynote, Desmond Murray, PhD, presenting on:  
**These Two Things I Do: Early Research and Public Science**



Desmond Hartwell Murray is Associate Professor of Chemistry at Andrews University, Chemistry Instructor for Berrien County Math Science Center, Founder of Building Excellence in Science and Technology, Lead Editor for and Chapter Author in the 2016 American Chemical Society Symposium book - [The Power and Promise of Early Research](#), Editor and Columnist for [Benton Spirit Community Newspaper](#), Academic Partner with the State of Michigan's Office of Clean Water Public Advocate and past Chair of Andrews University Community Engagement Council.

He earned a BSc in Chemistry from Andrews University in 1985, a PhD in Chemistry from Wayne State University in 1992, and was a postdoctoral fellow in chemistry at Harvard University from 1992 to 1994. In 1995 he became the first black professor of chemistry at his alma mater, Andrews University, teaching and researching in the very building that was dedicated in 1974 by the late Dr. Eric E. Williams, the first Prime Minister of the country of his birth, the twin island nation of Trinidad and Tobago. He was honored by the Michigan Science Teachers Association (MSTA) in 2012 with the College Science Teacher of the Year Award.

## CONFIRMED KEYNOTE SPEAKERS

Saturday, March 6 at 8:00 am Keynote, Gloria Ladson-Billings, PhD., presenting on:  
***Pandemic Pedagogy: How Good Science Teaching Can Make It Better.***



Gloria Ladson-Billings is Professor Emerita and former Kellner Family Distinguished Professor in Urban Education in the Department of Curriculum & Instruction and was Faculty Affiliate in the Departments of Educational Policy Studies, Educational Leadership & Policy Analysis and Afro American Studies at the University of Wisconsin-Madison. She is the current President of the National Academy of Education. She was the 2005-2006 president of the American Educational Research Association. She is a 2020-2021 Hagler Institute Fellow at Texas A&M University. She is a Fellow in the American Academy of Arts & Sciences. Ladson-Billings' research examines the pedagogical practices of teachers who are successful with African American students. She also investigates Critical Race Theory applications to education.

Saturday, March 6 at 12:45 pm Keynote, Theanne Griffith, PhD., presenting on:  
***Cultivating Curious Minds with Creative Thinking Skills***



Dr. Theanne Griffith is a neuroscientist and children's book author. Since she was a little girl, she's loved both storytelling and science. Her books blend these two passions, taking young readers on out of this world science adventures they'll never forget. Her debut chapter book series, *The Magnificent Makers*, was published this year by Random House Children's Books. Theanne received her BA in neuroscience and Spanish from Smith College and earned her doctorate in neuroscience from Northwestern University. She is an Assistant Professor at the University of California Davis, where she investigates how our nervous system encodes bodily sensations like temperature and pain. She lives in Northern California with her partner, two beautiful daughters, and three cats.

Your discounted rate for attending the MSTa Annual Conference is a benefit of your membership you don't want to waste. Be a part of this virtual idea exchange and become a true catalyst for inspiration in science education. [Register today!](#)





# MSTA ANNUAL VIRTUAL CONFERENCE AGENDA



## SATURDAY, FEBRUARY 27

7:30 -8:00 AM	Virtual Exhibit Hall Opens
8:00-9:00 AM	<p>Welcome and Keynote</p> <p><i>Re-imagining Our Roles: Dreamspaces in Science &amp; Engineering - Dr. Christopher Wright</i></p>
9:00 - 9:15 AM	Brain Break and Virtual Exhibit Hall
9:15 - 10:00 AM	Breakout 1
	<p><b><u>Session 1: K-2 Teachers</u></b></p> <p><i>Building on Young Children’s Curiosity: Lessons from the SOLID Start Project - Dr. Amelia Gotwals, Dr. Tanya Wright</i></p> <p><b><u>Session 2: 3-5 Teachers</u></b></p> <p><i>Connecting with Nature in a Virtual World: Leveraging Citizen Science Projects to Get Your Students Outside - Erin Parker, Claire Lannoye-Hall</i></p> <p><b><u>Session 3: Middle School</u></b></p> <p><i>Mi-STAR Information Session: Navigating 2021 and Beyond Stephanie Tubman, Marianne Semones</i></p>
10:00 -10:15 AM	Brain Break and Virtual Exhibit Hall
10:15-11:00 AM	Breakout 2
	<p><b><u>Session 5: K-2 Teachers</u></b></p> <p><i>NSTA Session</i></p> <p><b><u>Session 6: 3-5 Teachers</u></b></p> <p><i>Virtual Journaling the Natural World - Jonathan Massung, Craig Kasmer</i></p>



# MSTA ANNUAL VIRTUAL CONFERENCE AGENDA



**SATURDAY, FEBRUARY 27**

**Session 7: Middle School**

*Developing Language for English Learners - **Wendi Vogel, Christi Gilbert***

**Session 8: General Science K-8**

*Engaging Students in Asking Questions with Virtual Driving Question Boards - **Cory Susanne Miller, Consuelo Morales***

**11:00-11:15 AM**

**Brain Break and Virtual Exhibit Hall**

**11:15 - 12:00 PM**

**Breakout 3**

**Session 9: K-2 Teachers**

*Kitchen STEM for Remote Learners - **Diana Matthews, Lisa Morgan***

**Session 10: 3-5 Teachers**

*Make Time for Science with Project-Based Learning  
**Terra Tarango***

**Session 11: Middle School**

*Engineer a Collaborative Classroom - **Lucinda Martinelli***

**Session 12: General Science K-8**

*Hands-on Science in a Virtual Environment! - **Cory Kavanaugh, Ben Talsma***

**12:15-1:00 PM**

**Keynote**

*These Two Things I Do: Early Research and Public Science - **Desmond Murray, PhD***

## SATURDAY, FEBRUARY 27

1:00 - 1:30 PM	MSTA Board Meet and Greet and Annual Meeting
1:30-1:45 PM	Brain Break and Virtual Exhibit Hall
1:45 - 2:30 PM	Breakout 4
	<p><b><u>Session 1: Biology</u></b></p> <p><i>Teaching HS Biology (using Carbon TIME) for Virtual Student Engagement &amp; Success - <b>Gabrielle Schuitema, Michelle Evans</b></i></p> <p><b><u>Session 2: Physics</u></b></p> <p><i>Challenges and Insights Introducing Computation in Freshman Physics - <b>Mark Hiske, James Gell</b></i></p> <p><b><u>Session 3: Chemistry</u></b></p> <p><i>Remote Engagement in Chemistry- <b>Matthew Flessner, Jessica Flessner</b></i></p> <p><b><u>Session 4: Earth Science</u></b></p> <p><i>Building Civic and Environmental Connections to Increase Student Interest in Science - <b>Erin Gallay</b></i></p>
2:30 -2:45 PM	Brain Break and Virtual Exhibit Hall
2:45-3:30 PM	Breakout 5
	<p><b><u>Session 5: Biology</u></b></p> <p><i>Genetics Storyline: Lil Bub The Instagram Famous Cat <b>Chandler Missig</b></i></p> <p><b><u>Session 6: Physics</u></b></p> <p><i>STEP UP Careers in Physics - <b>Nicole Murawski, Laura Sloma</b></i></p>

## SATURDAY, FEBRUARY 27

### Session 7: Chemistry

*Designing and Creating a Video Library for Virtual Science Courses - **Scott Hanson***

### Session 8: General Science

*Strategies for Lab Experiences in the Time of COVID-19  
**Jordan Smith***

**3:30 -3:45 PM**

**Brain Break and Virtual Exhibit Hall**

**3:45-4:30 PM**

**Breakout 6**

### Session 9: General Science

*Engaging HS Students in Asking Questions with Virtual Driving Question Boards - **Angela Kolonich, Israel Tuitou***

### Session 10: Physics

*Integrating Computation in Science Across Michigan  
**Daniel Weller***

### Session 11: Chemistry

*Using Virtual Learning to Foster Creativity in Green Chemistry  
**Erika Fatura, Jennifer Sherburn***

### Session 12: Earth Science

*Teaching Climate Change as a High School Class  
**Timothy Muhich***

**4:30-5:00 PM**

**Networking Celebration: *Chemistry Mocktails***

**6:30-7:30 PM**

**MSTA Awards Ceremony**



## SATURDAY, MARCH 6

7:30-8:00 AM	Virtual Exhibit Hall Open
8:00-9:00 AM	<p>Welcome and Keynote</p> <p><i>Pandemic Pedagogy: How Good Science Teaching Can Make it Better - <b>Gloria Ladson-Billings, PhD.</b></i></p>
9:00-9:15 AM	Brain Break and Virtual Exhibit Hall
9:00-10:00 AM	Breakout 1
	<p><b><u>Session 1: Biology</u></b></p> <p><i>Stand Back! I'm Going to Try Science...From Home</i> <b>Fred Hingst</b></p> <p><b><u>Session 2: General Science</u></b></p> <p><i>Sick of Missing Assignments? Standards Based Grading 101</i> <b>Vanessa Wentzloff</b></p> <p><b><u>Session 3: Chemistry</u></b></p> <p><i>How Our Brains Learn Science - <b>Scott Milam</b></i></p> <p><b><u>Session 4: General Science</u></b></p> <p><i>Science Idea Slam! - <b>Linnea Gibson</b></i></p>
10:00 - 10:15 AM	Brain Break and Virtual Exhibit Hall
10:15 -11:00 AM	Breakout 2
	<p><b><u>Session 5: General Science</u></b></p> <p><i>Teaching HS Biology (using Carbon TIME) for Virtual Student Engagement &amp; Success - <b>Gabrielle Schuitema, Michelle Evans</b></i></p> <p><b><u>Session 6: General Science</u></b></p> <p><i>The Debate Around Energy! - <b>Wendy Johnson, Kristin Mayer</b></i></p>



# MSTA ANNUAL VIRTUAL CONFERENCE AGENDA



## SATURDAY, MARCH 6

### Session 7: General Science

*Do Less to Be More! Strategies to Decrease Stress, Increase Productivity, and Avoid Burnout - Dawn McCotter*

### Session 8: General Science

*Supporting English Learners in Science Using the SIOP Model  
Lisa Ogiemwonyi, Kalyn Wulatin*

11:00-11:15 AM

Brain Break and Virtual Exhibit Hall

11:15-12:00 PM

Breakout 3

### Session 9: General Science

*Aquaculture: Fish and Fun in the Classroom! - Elliot Nelson*

### Session 10: General Science

*The Question Formulation Technique: Teaching Students to Formulate Their Own Questions - Mina Turrell, Megan Coonan*

### Session 11: Chemistry

*Reviewing for a Chemistry Test - Scott Milam*

### Session 12: Earth Science

*Connecting Environmental Literacy with Next Generation Science Standards - Dave Chapman, Erin Gallay*

12:00 - 12:30 PM

Lunch Break and Virtual Exhibit Hall

12:45 -1:30 PM

Keynote

*Cultivating Curious Minds with Creative Thinking Skills  
Theanne Griffith, PhD.*

## SATURDAY, MARCH 6

1:45 - 2:30 PM	Breakout 4
	<p><b><u>Session 1: K-2 Teachers</u></b></p> <p><i>Using Phenomena in Science to Integrate the Literacy Essentials - <b>Mary Burke, Megan Coonan</b></i></p> <p><b><u>Session 2: 3-5 Teachers</u></b></p> <p><i>The Science Crisis: How Did We Get Here and What Do We Do Now? - <b>Linnea Gibson, Wendi Vogel</b></i></p> <p><b><u>Session 4: General Science K-8</u></b></p> <p><i>Low Stakes, High Value Science Assessments <b>Heather Rottermond, Lisa Ogiemwonyi</b></i></p>
2:30 - 2:45 PM	Brain Break and Virtual Exhibit Hall
2:45 -3:30 PM	Breakout 5
	<p><b><u>Session 5: K-2 Teachers</u></b></p> <p><i>Poison Ivy, Insects, and Kids, Oh My! Removing Barriers for Your Outdoor Classroom - <b>Rebecca Durling, Natalie Elkins</b></i></p> <p><b><u>Session 6: 3-5 Teachers</u></b></p> <p><i>The Question Formulation Technique: Teaching Students to Formulate Their Own Questions - <b>Mina Turrell, Megan Coonan</b></i></p> <p><b><u>Session 7: Middle School</u></b></p> <p><i>A COVID Computational Thinking Model- <b>Linnea Gibson, Wendi Vogel</b></i></p> <p><b><u>Session 8: General Science K-12</u></b></p> <p><i>Leading with Science: Selecting NGSS-Aligned Read Alouds <b>Mary Starr, Katherine Pfeiffer</b></i></p>

## SATURDAY, MARCH 6

3:30-3:45 PM	Brain Break and Virtual Exhibit Hall
3:45 -4:30 PM	Breakout 6
	<p><b><u>Session 9: K-2 Teachers</u></b></p> <p><i>My Journey Through Disciplinary Literacy Essentials Deeper Dive: How Can We Leverage Disciplinary Literacy for all Student? - <b>Wanda Bryant</b></i></p> <p><b><u>Session 10: Middle School</u></b></p> <p><i>Making Connections and Celebrating Students Virtually <b>Darci Merillat, Lorie Hurley</b></i></p> <p><b><u>Session 11: Middle School</u></b></p> <p><i>Human Impacts: Data-Rich Lessons for Middle School <b>Janet Vail, Amanda Syers</b></i></p> <p><b><u>Session 12: General Science K-8</u></b></p> <p><i>Lessons from K-12 NGSS Curriculum Review Teams <b>Holly Hereau, Jeanane Charara, Minna Turrell and Megan Coonan</b></i></p>
4:30 - 5:00 PM	Networking Celebration: <i>Chemistry Mocktails</i>
6:30 -7:30 PM	MSTA Awards Ceremony

**Register Now!**

<https://www.msta-mich.org/page/annual-conference>