

## President's Welcome Address

Tonight we celebrate excellence. In diverse ways, from many perspectives, the educators we honor have supported scientific literacy and those who nurture learners. The awards we confer this evening represent not only the respect of peers but the appreciation of all of those who value what you do to build a better future.



NSTA's mission is "to promote excellence and innovation in science teaching and learning for all." On the stage this evening you will see science educators who have done just that. They have made outstanding contributions to learners and to the future. Some have been members for many years; others are relatively new to our profession. But they share common goals and common devotion. They have advocated for literacy and growth, for common wisdom and common sense. They support the "practices of science" as tools for empowerment.

The NSTA awards program is made possible by the generous support of many sponsors who provide the funding and resources necessary to make this program a success. The NSTA Board of Directors, Council, and Alliance of Affiliates thank each of these sponsors for their generosity and commitment to recognizing exemplary science educators. Together, we not only acknowledge excellence but chart a path for the future.

It is a true pleasure to share this evening with the awardees, their sponsors and members of the NSTA community. Thank you to everyone—awardees, sponsors, NSTA governance and other stakeholders in our future!

Sincerely,

A handwritten signature in cursive script that reads "Mary Gromko".

Mary Gromko  
NSTA President 2016-17



## PROGRAM

6:00	Call to Seating and Welcome, Emcee – Mark Moseley
6:03	President's Welcome
6:05	Presentation of Presidential Citation
6:10	Dinner
6:35	Open the Gala, Emcee – Mark Moseley
6:45	Presentation of Teacher Awards
8:00	Presentation of Robert H. Carleton Award
8:15	Presentation of Gavel
8:25	Closing Remarks by Mary Gromko

## 2016–2017 TEACHER AWARDS & RECOGNITIONS COMMITTEE

Sheila Smith, chairperson

Chris Campbell

Olga Hunt

Ana Lopez

Mary Maddox

Ruth Ruud

Anne Tweed

Lesley Urasky

Pam Vaughan

Diana Wiig

John Olson, board liaison

## 2016–2017 SHELL SCIENCE TEACHING AWARD JUDGING PANEL

Peggy Carlisle, chairperson

Alicia Conerly

John Jackson

Gary Koppelman

J. Carrie Launius

Gary Pinkall

Kristen Poindexter

Karen Nesbit, awards committee liaison

Amanda Upton, NSTA Staff Liaison

## SPECIAL GUESTS

**Mary Gromko**, NSTA President, accompanied by Dr. Nancy Kellogg

**Carolyn Hayes**, NSTA Retiring President, accompanied by Michael Hayes, and Monica Ellis, Past President HASTI (Hoosier Association of Science Teachers, Inc.)

**David Crowther**, NSTA President-Elect, accompanied by Tammi Crowther

**Christine Royce**, NSTA President-Elect Elect, accompanied by Steve Rich

**Moirá Fathy-Baker**, NSTA Deputy Executive Director and CFO, accompanied by Martin Baker

**Tim Williamson**, Conference Chairperson, Instructor and Science Credential Coordinator, California State University, Long Beach, Long Beach, CA

**Therese Shanahan**, Program Coordinator, Lecturer, School of Education, University of California, Irvine, Irvine, CA

**Susan Gomez Zwiep**, Local Arrangements Coordinator, Professor, California State University, Long Beach, Long Beach, CA

## MENU

### PLATED DINNER

#### Starters

Dinner Rolls & Lavash served with Butter

Farmer's Harvest Salad

Baby Spinach, Radicchio, Curly Endive

Maple Roasted Squash, Dill Potatoes, Grilled Asparagus, Rainbow Carrots,  
Dry Jack Cheese, Sea Salt Pepitas, Lemon-Thyme Vinaigrette

#### Entree

Tuscan Chicken

Oregano & Olive Oil Marinated, Artichoke-Fingerling Potato Medley,

Haricot Verts

Lemon Scented Jus Lie

#### Dessert

Hazelnut Cake

Praline Milk Chocolate Mousse and Salted Carmel Sauce

#### Beverages

Century Cellars by BV, Cabernet Sauvignon and Chardonnay 2009

Coffee and Tea

Vegetarian or gluten free option upon request



## NSTA AWARD SPONSORS

### **U.S. Army Educational Outreach Program (AEOP)**

#### **Bio-Rad**

Bryony Ruegg, Director  
Biotechnology Explorer Program  
Bio-Rad Laboratories

### **Carolina Biological Supply Company**

Jim Parrish, President and Chief  
Executive Officer

#### **DuPont**

P. Jeanette (P.J.) Simon, K – 12  
Academic Outreach Manager,  
DuPont Center for Philanthropy  
and Education  
Robin Greubel, Academic Outreach  
Manager, DuPont Pioneer  
Henri Moore, Global Leader –  
DuPont Center for Philanthropy  
and Education

#### **Gerry Wheeler**

NSTA Executive Director Emeritus

### **Phil and Amy Mickelson Foundation**

### **Northrop Grumman Foundation**

Sandra J. Evers-Manly, President  
Carleen Beste, Manager

### **PASCO scientific**

Paul Stokstad, President and CEO  
Rich Briscoe, Director of Domestic  
Sales  
Sandy Brooks, National K-12  
Education Manager

#### **Robert E. Yager**

NSTA Past President, 1982–1983

### **SeaWorld Parks and Entertainment**

Bill Street, Corporate Curator of  
Conservation and Education,  
SeaWorld Parks and Entertainment  
Ann Quinn, Director of Education  
& Conservation, SeaWorld San  
Antonio  
Laura Slanec, Director of Education  
& Conservation, SeaWorld San  
Diego

#### **Shell**

Frazier Wilson, Vice President, Shell  
Karen Labat, Manager Social  
Investments

#### **Sylvia Shugrue**

NSTA Past President, 1976–1977

### **Vernier Software & Technology**

Christine Vernier, President/owner  
David Vernier, Chief Executive  
Officer/owner

## NSTA PRESIDENTIAL CITATION

*This award honors a person or organization that has significantly promoted science education through extraordinary contributions. The citation is given at the discretion of the NSTA President and may not be given each year.*



### **Marie Sullivan**

Gifted and Talented Education Science Teacher  
Sabin Junior High School  
Colorado Springs, CO

Marie Sullivan, a retired middle school science teacher in Colorado Springs, was the first science teacher in the Colorado to receive the 1983 Presidential Award for Excellence in Science Teaching. There was never any doubt about who should and would be the first to receive this prestigious award. Teachers celebrated the national committee's decision throughout the state because they all knew that she truly was the state's most qualified and most respected science teacher. As a classroom science teacher for 40 years, Sullivan has inspired and cultivated the love of science in countless middle school students. There was a waiting list of preservice teachers from the local colleges and universities who requested that she be their mentor teacher—the standing joke was that the preservice teachers needed roller skates to keep up with her. In all her science classes, student teams were working together on various projects, activities, and science lessons, with never a worksheet to be seen. Sullivan has three master's degrees and has received the national Milken Award for Outstanding Secondary Educator. Well into her 80s, Sullivan still volunteers for her school district on the Senior Sounding Board, checks out the regional science fair each year held in the spring, and is a mentor to any and all science teachers she has the opportunity to meet and greet along the way.



## RON MARDIGIAN MEMORIAL BIOTECHNOLOGY EXPLORER AWARD

*Sponsored by Bio-Rad Laboratories*

*This award recognizes an outstanding high school teacher who has made biotechnology learning accessible to the classroom.*

*The award consists of \$750 in Bio-Rad products, and \$1000 to attend the NSTA National Conference on Science Education.*



### **Ben Johnston**

Science Teacher  
Bob Jones High School  
Athens, AL

The 2016 recipient of the National Association of Biology Teachers Outstanding Biology Teacher Award, Ben Johnston has incorporated biotechnology labs and applications into his classes (from Environmental Science to AP Biology) for the past 20 years. “Mr. Johnston infuses biotechnology into much of his curriculum, encouraging his students to use biotech tools to answer challenging biological questions,” says Madelene Loftin, Educator Development Lead, HudsonAlpha Institute for Biotechnology. While at the Biotech Academy, Johnston has students do a DNA Barcoding Project, which exposes students to current DNA techniques and raises community awareness of the tremendous biodiversity in Alabama. Students collect DNA samples from plants and animals, use PCR to amplify specific stretches of DNA, have Genewiz sequence the amplicons, then upload this data to DNA Subway to identify the species. Biotech Academy students were excited to author a plant native only to Alabama. “Building positive relationships with the students while focusing on local and global science issues, Mr. Johnston motivates his students with community experiences as he has partnered with HudsonAlpha and the Biotech Academy lab opportunities. He shares his passion for biological issues and scientific research with the students and works alongside the students to research and try to solve issues in our environment,” says Sylvia Lambert, Principal, Bob Jones High School.

## THE DUPONT CHALLENGE® SCIENCE WRITING COMPETITION

*Sponsored by The DuPont Company in collaboration with  
Britannica Digital Learning, the National Science Teachers Association (NSTA),  
Turnitin, and A+ Media.*

The *DuPont Challenge*® Science Writing Competition, created to honor the memory of the heroes of the 1986 Challenger space shuttle, is true to the flight's educational mission to “touch the future.”

### **Elementary Division**

The DuPont Challenge® has also introduced a division for grades K-5 that motivates classrooms and small groups to craft a presentation on a science topic of special interest to them. Besides winning an expenses-paid trip to NSTA's National Conference, the grand prize winners in each grade level also win a “Science Is Fun Day” and free subscriptions to Britannica Kids & Britannica Online Encyclopedias for their schools.



**Rebecca Kurson**  
Elementary Teacher  
Golda Och Academy  
West Orange, NJ



**Sarah Pucci**  
First Grade Teacher  
Lordship Elementary  
Stratford, CT

THE DUPONT CHALLENGE®  
SCIENCE WRITING COMPETITION

**Elementary Division**



**Jennifer Domo**  
SCOPES Academy Director  
Unioto Elementary School  
Chillicothe, OH



**Jaimee Jenkins**  
Pre-Service Teacher  
Ohio University/Union-Scioto  
Elementary School  
Chillicothe, OH



**Brandi Leggett**  
Instructional Coach  
Rosehill Elementary  
Lenexa, Kansas



**Travis Myers**  
Elementary Teacher  
Rosehill Elementary  
Lenexa, Kansas

THE DUPONT CHALLENGE®  
SCIENCE WRITING COMPETITION

**Elementary Division**



**Donna Chaback**  
Elementary Teacher  
Allendale Columbia School  
Rochester, NY



**Brianne Prickett**  
5th Grade Teacher  
Harloe Elementary School  
Arroyo Grande, CA

## THE DUPONT CHALLENGE® SCIENCE WRITING COMPETITION

### **Junior and Senior Divisions**

The competition for grades 6-12, now celebrating its 31st anniversary, has inspired more than 250,000 students to research STEM-oriented developments and to communicate their ideas and personal insights in a compelling essay. Each year, we receive nearly 10,000 entries from the United States, Canada, and their territories.

The sponsoring teachers of the first-place student essayists in the Junior and Senior Divisions are awarded an expenses-paid awards trip to THE WALT DISNEY WORLD® RESORT, a V.I.P. awards luncheon and exclusive tour of Kennedy Space Center—plus an expenses-paid trip to NSTA's National Conference.

As has been true for more than 200 years, DuPont continues to proudly recognize the invaluable role of teachers. Congratulations to the winners of The DuPont Challenge!



#### **Middle Division**

**Kelli Iannacone**

7th and 8th Grade  
Pre-Engineering Teacher  
Timberlane Middle School  
Pennington, NJ



#### **Senior Division**

**Jennifer Seavey**

Teacher  
Thomas Jefferson High School  
for Science Technology  
Alexandria, VA

## DUPONT PIONEER EXCELLENCE IN AGRICULTURAL SCIENCE EDUCATION AWARD

*Sponsored by DuPont Pioneer*

*This award recognizes excellence and innovation in the field of agricultural science education.*

*The award consists of a \$2,500 grant for the teacher's classroom/program, paid travel expenses to attend the NSTA national conference on science education, mentoring with a DuPont Pioneer scientist, classroom resources from DuPont Pioneer, and access to a DuPont Pioneer product plant or research facility.*



### ***Middle School Level***

**Heather Grabarski**

**Science Teacher**

**Adams-Friendship Elementary School**

**Friendship, WI**

A 2016 recipient of the Outstanding Teacher Award from Wisconsin Farm Bureau's Ag in the Classroom program, Heather Grabarski goes above and beyond while incorporating agriculture, agricultural science,

and agriculture literacy activities in her curriculum. Rick Waski, District Administrator, Adams-Friendship Area School District, states, "Ms. Grabarski has a passion for agriscience and agricultural education and that is evident through her instructional practices. Ms. Grabarski initiates challenging, inquiry-based lessons in science that engage the learners and help build their critical-thinking skills. She effectively integrates instructional technology into her instruction and she serves as a resource to her colleagues in creating meaningful personalized learning experiences for our students. Ms. Grabarski not only believes in empowering students to pursue their passions, but she provides them with the leadership and mentoring skills to make these explorations possible." This award will be used to create interdisciplinary units around the Pillars of Agricultural Literacy, which help students understand the intersection and relationships between agriculture and society. The main goal of Grabarski's programming is to help students become informed consumers. Biotechnology is a growing industry and students need to learn about the misconceptions of genetically modified crops and seed hybrids. This award will also fund a biotechnology lab where students extract the DNA from strawberries and blueberries to learn how DNA works and how science is used in agriculture.

## DUPONT PIONEER EXCELLENCE IN AGRICULTURAL SCIENCE EDUCATION AWARD

*Sponsored by DuPont Pioneer*



### ***High School Level***

**Vincent Newman**

**Agricultural Science Teacher**

**McArthur High School**

**Hollywood, FL**

People can't start their day without engaging in some form of agriculture, whether eating animal or plant-based foods. Vincent Newman's students become more aware of where their food comes through various organizations that relate well to agriculture. Cindy Griffin, Curriculum Facilitator for Agriscience for the Broward County Public Schools, says, "I have witnessed firsthand Mr. Newman and his students at McArthur High flourish as they chartered the first FFA [Future Farmers of America] chapter in many years in Broward County. It has been exciting to watch his students participate in the Florida Farm Bureau speech contest, state Florida Nursery Growers and Landscape Association events and perform at the Tropical Plant and Industry Exhibition, to name just a few events." Newman says he would benefit from being a part of Agriscience Education Leadership Program by being exposed to other leaders in Agriscience education, learning from other professionals in this competency that would benefit students. He would also learn Agriculture Technology as well as the combination of STEM and incorporate Agriculture and Agriscience into the alliance that would eventually become STEAM.

## FARADAY SCIENCE COMMUNICATOR AWARD

*This award is named in honor of Michael Faraday (1791–1867), the English chemist and physicist known for his pioneering experiments in electricity and magnetism. This award recognizes an individual or organization that has inspired and elevated the public's interest in and appreciation of science.*

*The awardee will receive a check for \$2,500 in expenses to attend the NSTA National Conference.*



**Paul Adams, Director**

FHSU Science and Mathematics Education Institute  
Fort Hays State University  
Hays, KS

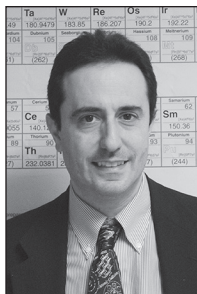
The Science and Mathematics Education Institute (SMEI) strives to inform, reform, and improve science and mathematics education, awareness, and appreciation in K–12 schools, Fort Hays State University, and western Kansas. SMEI provides professional development in science and mathematics content, strengthening subject matter knowledge and developing pedagogical skills. Recent workshops include the High Altitude Balloon Workshop, Robotics Workshop, Modeling Workshop, and the 3D Printing Workshop. SMEI has also provided monthly Science Café programs where university faculty and community members watch informal presentations on STEM topics—ranging from the Large Hadron Collider to worm farming—followed with open discussion. The cafés are held at a local restaurant to encourage participation by anyone interested in how STEM plays in daily life. Through summer camps, SMEI also offers a variety of opportunities for youth in grades 2–8 to see how mathematics and science are at work in everyday life. The institute also sponsors the Regional Science Fair and the LEGO Robotics Competition. Cheryl Shepherd-Adams, Chair, Science Department Hays High School shares that “My high school students have had little exposure to people and cultures outside our state. SMEI has provided our students with connections to students in Toulouse, France, and Guadalajara, Mexico, to discuss research in earth systems science topics. The Science and Mathematics Education Institute at Fort Hays State University has made it possible for students and teachers in our area to become more effective communicators of science.”



## WENDELL G. MOHLING OUTSTANDING AEROSPACE EDUCATOR AWARD

*This award recognizes excellence in the field of aerospace education as outlined in the NSTA Position Statement on Aerospace Education.*

*The awardee receives a check for \$3000, and \$2000 toward expenses to attend the NSTA National Conference.*



### **Gary Garber**

Science Instructor  
Boston University Academy  
Boston, MA

Gary Garber creates an active learning environment where students collaborate to explore ideas, design solutions to problems, and share results. Michelle M. Cannon, Assistant Head of School at Boston University Academy, says, “Gary Garber is dynamic in the classroom, innovative with his lab, and dedicated to providing as many opportunities as possible to get his students involved in science. He teaches his labs in such a way that students engage actively with the concepts at hand. Students admire him because he holds high standards for them, and they achieve them. He is unique among his colleagues in our humanities-based curriculum in that Mr. Garber has incorporated web-based assignments, YouTube videos and blog posts into his daily homework routines.” A leader in the science teaching community, Garber has lead over 85 workshops, oral presentations, panel discussions, demonstrations, and webinars in the past 20 years. As president of the local section of the American Association of Physics teachers he has reorganized and revitalized the section, and co-chaired several local physics teaching conferences. Cannon also states, “Mr. Garber has a phenomenal energy that has created several important initiatives at the Academy: a Junior Science Seminar, FIRST Robotics team, Science team, and numerous electives in Astronomy, Engineering, and Photonics. Each of these initiatives allows for students to pursue their passions (and learn of new ones) in all of the sciences.”

## NORTHROP GRUMMAN FOUNDATION EXCELLENCE IN ENGINEERING EDUCATION AWARD

*sponsored by Northrop Grumman Foundation*

*This award is to recognize excellence in the field of engineering education as outlined in the NSTA Position Statement on the Next Generation Science Standards (NGSS), Section II Conceptual Shifts in the NGSS. The award consists of \$5000 for classroom materials and equipment, a cash prize of \$3000, and \$2000 to attend the NSTA National Conference.*



### **Mariel Kolker**

Science Teacher  
Morristown High School  
Morristown, NJ

Mariel Kolker teaches engineering in both pre-engineering electives and in physics. While teaching Principles of Engineering at Morristown High School (MHS), Kolker created and taught MHS's first all-girls engineering class. Kolker created the annual Tweentech workshop day for NJ middle school girls and started both a Girls in STEM club and a Girls Who Code club, introducing girls to professional women in the fields of engineering or computer science. Kolker has researched the root causes of girls' reluctance to pursue engineering and is completing a dissertation in educating K12 teachers to help understand and combat the gender gap in engineering and coding professions. Kolker also writes and delivers professional development for K12 educators for both nanoscience and engineering. New Jersey public schools have been severely limited in recent years by a reduction in state funds. The physics labs are not well stocked for the requirements of the NGSS. The award's funds will help Kolker introduce topics in higher-level chemical engineering, and fund nanoparticle and electromagnetic waves lab equipment. "Mariel is a master teacher with tremendous enthusiasm for engineering education. Teaching students to be resilient in the face of initial failure and to persevere in the pursuit of a solution—a fundamental part of the engineering design process—is something she infuses into every physics class," says Brian Young, STEM Director at Morristown High School.

## PASCO STEM EDUCATOR AWARDS

*Sponsored by PASCO scientific*

*This award recognizes excellence and innovation in the field of STEM education at the middle and high school levels. PASCO scientific gives a total of three awards, one for a middle level teacher, and two for high school level teachers.*

*Each awardee receives \$5,000 in PASCO products, \$1,000 toward expenses to attend the NSTA National Conference, and a check for \$500.*

### Middle Level



#### **Brian Soash**

Science Teacher and STEM Program Coordinator  
Lee County Middle School West  
Leesburg, GA

Early in his career Brian Soash decided that his STEM program would involve the community and real solutions to real problems. Each of his units is designed as a project-based learning experience where the students are working for a specific “client” and purpose in mind. This has led students to undertake all sorts of scientific endeavors including exploring bird strikes by creating simulated robins launched at windows to determine the force upon impact and testing soil on a local golf course to make recommendations on the type of turf that should be used. The list goes on and on, but one thing remains the same in Soash’s classes: Everything students do is with a purpose to collect data, isolate variables, refine, and re-test. Creative students have something to run wild with, analytical students have numbers to crunch, and competitive students have the chance to create the real-world solutions to best fit the needs of society. As students improve, they’re able to keep pace with the changes in their future careers by preparing with critical-thinking skills shared by the same experts they hope to someday become. “In his first year alone he was named Georgia STEM Teacher of the Year, and he hasn’t slowed down since bringing in thousands of dollars in grants, new technology, and even creating a new system of classes, which almost entirely revolve around STEM,” says John Savelle, Lee County Middle School Principal.

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### High School Level



**Shannon Sahabi**

Science Teacher  
Tom C. Clark High School  
San Antonio, TX

According to Karen Petersen, Principal Northside Alternative Middle Schools, “Shannon values a learning culture that is rich and rigorous. To that end, she believes in a cohesive team, challenging work, engaging instruction, and interactive learning environment.... Shannon works incredibly hard at her job, always tweaking and perfecting her work, always trying to find the best way to reach her students.” Shannon Sahabi’s students never have to ask, “How is this relevant?” or “Why do I need to know this?” The geosciences are part of everyday life and Sahabi relates topics to real-world issues, current events, and future concerns. In facilitating science education, her goals are to create significant and authentic learning experiences that connect to the students through technology, inquiry-based labs, project-based learning, argument-driven inquiry, global collaborations, and development of 21st-century skills such as critical thinking, creativity, collaboration, and communication. Jerry Woods, Principal, Tom C. Clark High School, says “When it comes to innovation and technology in the classroom, Mrs. Sahabi is an excellent role model. Whether it is research or lab experiments, her application of technology in the classroom has allowed her students to gain knowledge and have unique opportunities.” Shannon is currently a doctoral candidate for her Ph.D. in Curriculum and Instruction–STEM Education.

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### High School Level



#### **Steve Sogo**

Chemistry Teacher  
Laguna Beach High School  
Laguna Beach, CA

Steve Sogo has been an innovative chemistry teacher for 26 years. In 2006 he initiated a unique program entitled Advanced Chemical Research (ACR) that has become a model for project-based STEM education. ACR engages 11th- and 12th-grade students in authentic research projects on the cutting-edge of science. The program has been honored with a Golden Bell Award by the California School Boards Association. ACR provides students with hands-on learning experiences incorporating technology on a daily basis. Besides ACR, Sogo teaches a STEM-infused chemistry course with a curriculum that includes teacher-created assignments that are rich in scientific inquiry, featuring weekly labs in which students apply science to solve hands-on, real-world problems. Students are inspired by the open-ended nature of experimentation encouraged in the class. "Since graduating from Laguna Beach High School I have had the privilege of visiting Mr. Sogo's classroom four times to present my current research, and I am always impressed by the quality of the questions posed by his students. Almost every student in the class will ask me at least one question during my presentation. Although it has been years since I was one of Mr. Sogo's students, I still count him as a mentor. I use the critical-thinking skills I learned from his classes every day in my graduate work," says Samantha Piskiewicz, PhD Candidate, Pielak Lab Chemistry Department, University of North Carolina at Chapel Hill.

## SEAWORLD ENVIRONMENTAL EDUCATOR OF THE YEAR AWARD

*Sponsored by SeaWorld Parks and Entertainment*

*This award recognizes and rewards one outstanding teacher of the next generation conservation leaders. Since 1993, SeaWorld Parks & Entertainment has recognized the outstanding efforts of students and teachers across the country who is working at the grassroots level to protect and preserve the environment. The SeaWorld & Busch Gardens Environmental Excellence Awards provides national recognition, funding and a big “thank you” to the efforts of this next generation of conservation leaders.*

*The awardee receives \$10,000 and an expense-paid trip to attend the NSTA National Conference.*



**Marguerite Murphy**

Science Teacher

Camden Hills Regional High School

Rockport, ME

A major interest and focus for Marguerite Murphy has been to understand content and concepts that students will need to be active participants in our changing world. She has worked on state and national standards efforts,

created partnerships that connect students with projects that are focused on awareness and action to solve real issues, and used her voice and experience to influence how students engage in their learning. She is co-advisor to the school's Windplanners project, which is a student-led, multi-generational (12 years) high school group moving Camden Hills Regional High School toward becoming a carbon-neutral campus. This work has focused on reducing energy consumption, solid waste, developing on-campus renewable energy resources and a variety of other projects that reduce the energy and resource demand within the school community. The school has become a model for surrounding towns and schools to improve their own energy efficiency and carbon footprint. Students have built a diverse and important set of skills through their involvement with Windplanners with each year's skills being different based on project goals. Windplanners will use a portion of the award's funds to provide matching incentives to foundations and local businesses as the school enters into a new period of fundraising with the goal of the direct purchase solar panels in 2021. Funds will also support projects and events that have built the group's capacity to influence behavior change.

## SHELL SCIENCE TEACHING AWARD

*Sponsored by Shell*

*This award recognizes one outstanding classroom science teacher (K–12) who has had a positive impact on his or her students, school, and community through exemplary classroom science teaching.*

*The three finalists receive a citation and travel expenses to attend the NSTA National Conference. In addition to travel expenses, the awardee receives a check for \$10,000, formal citation, and commemorative clock.*

**2017 Shell Science Teaching Award recipient****Joel Truesdell**

Chemistry Teacher  
Kamehameha Schools  
Keaau, HI

Joel Truesdell believes that, “If students are excited about the topic and recognize its relevance to them, they will take the topic to a greater depth. The real secret is to build on students’ prior knowledge and to weave each topic into more complex activities.” During 30 years of classroom teaching, he has evolved from a traditional lecturer to a culture-based teacher, including aspects of Hawaiian culture in lessons and labs. He created his Hawaiian culture-based curriculum because the proper educational tool did not exist. “If a tool is not available, I create one!” says Truesdell. Kanoe Wilson, education officer, Kauhale Kipaipai, Community Education Kamehameha Schools, sees “the direct impacts his work has had on his students. Our action research project data findings demonstrate that his teaching practices have shown increase in student engagement, environmental and community advocacy, and in particular, the American Chemical Society Final Exam where we saw students increase in their test scores from 70% to 83% due to his innovative practices.” Truesdell has learned that “the best way to teach science is the way that it has been taught for thousands of years: with culture and relevance first and being project based, inquiry based, and student driven. Recognizing my learning style has helped to shape my teaching method, which has been based on relevance, multistep logic, rigor, passion, and fun.”

## SHELL SCIENCE TEACHING AWARD

*Sponsored by Shell*

*The two finalists receive a citation and travel expenses to attend the NSTA National Conference.*

### 2017 Shell Science Teaching Award Finalist



#### **John Gensic**

Science Teacher  
Penn High School  
Mishawaka, IN

A student's science future (and therefore our country's science future) is based on relationships between students, teachers, parents, scientists, and content. John Gensic's goal is to increase the number of those positive relationships by making connections between concepts and disciplines that involves practicing scientific skills of critical thinking and collaboration on a regular basis. These skills better serve students and our society throughout their lives. Now more than ever, as citizens are inundated with information from reliable and unreliable sources, they need science skills to better interpret data and function at their highest levels. Gensic believes in authentic experiences for students: gathering data at the St. Joseph River and in Lake Michigan, and conducting inquiry-based labs, which opens up the door to students experimenting with their own selected variables so children can connect with nature. This helps them connect to science in ways they cherish, remember, learn from, and are inspired by. According to Susan Feldt, Biology B.S. Class of 2018, Indiana University Bloomington, "He always goes above and beyond to find new ways to innovate in and out of the classroom and provide new opportunities for students to learn. A growing generation of students has left his class with a new perspective not only on biology and science, but on the world around them and their role within it."



## SHELL SCIENCE TEACHING AWARD

*Sponsored by Shell*

*The two finalists receive a citation and travel expenses to attend the NSTA National Conference.*

### 2017 Shell Science Teaching Award Finalist



**Ryan Monger**

Biology and Sustainable Design Teacher  
Sultan High School  
Sultan, WA

Ryan Monger believes that science education should introduce a way of life that can help people better understand the world around them. In his classroom, students learn by doing and by solving problems that directly affect their daily lives. Many of Monger's students come from a long line of fishermen, loggers, and hunters so they have a unique perspective and connection with local forests and rivers. To make science real for his students, they study these rivers and forests and use them to make connections to biology topics. For example, when students learn about ecology, they take inventory of the trees in the forest; watch salmon spawn in the local river; and measure the nitrate, phosphate, and dissolved oxygen levels to ensure those salmon are spawning in healthy conditions. Students appreciate the connection that is made between biology and their lives and the school's state standardized test scores have improved because of it. Monger also believes students should see that science is an important part of their community. Several guest speakers have visited the classroom, including a hatchery manager, shellfish farmer, wildlife biologist, civil engineer, and many members of the Snohomish Conservation District. "I have never met a teacher who is so passionately and genuinely connected to our local environment. Because of his passion, enrollment in our Sustainable Green Design course quadrupled and has been sustained ever since," says Tami Nesting, Principal, Sultan High School.

## SHELL SCIENCE LAB CHALLENGE

*Sponsored by Shell  
Outfitted by Carolina Biological Supply Company*

*This award recognizes outstanding middle and high school programs for their exemplary approaches to science lab instruction utilizing limited school and laboratory resources. One Grand Prize Winning School wins a lab makeover of \$20,000, four national finalist schools win lab makeovers of \$8,500, and 13 regional winner schools win lab makeovers of \$3,000. Outfitted by Carolina Biological Supply Company*

### 2017 Shell Science Lab Challenge Grand Prize Winner



#### **Aja Brown**

Representing District IV  
The Metropolitan Soundview High School  
Bronx, New York

Aja Brown's teaching philosophy is that you learn science best by experiencing it through conducting investigations. Her current science lab equipment is limited and outdated, while the technological resources are restricted to a shared, grade-level computer cart. This school year Brown had to borrow dissecting tools from her college instructor so students could dissect a fetal pig. During the dissection students were enthusiastic about the hands-on experience and able to make connections to content previously taught. Brown wants to provide her students with these learning opportunities consistently and not be concerned with how to obtain the materials. She wants to acquire project-based kits that incorporate inquiry-based activities and critical-thinking skills to create a strong foundation for active learning.

## SHELL SCIENCE LAB CHALLENGE

*Sponsored by Shell  
Outfitted by Carolina Biological Supply Company*

*This award recognizes outstanding middle and high school programs for their exemplary approaches to science lab instruction utilizing limited school and laboratory resources.*

### 2017 Shell Science Lab Challenge National Finalists



**Maria-Rose Cain**  
Representing District III  
St. Martin's School  
Gaithersburg, MD

Maria-Rose Cain's educational philosophy is that education is DOING. Even with limited equipment and resources, Cain provides the students with multiple inquiry activities for each topic to engage them in the discovery of science. When there is not enough lab equipment, she increases the size of the lab teams, creates team demos, or has students rotate through a lab station in small groups. Funding for renovation of the room would allow the school to purchase lab stations, which are much more conducive for lab work than desks and gives students space for labs. Also, having enough equipment for teams of two students is preferable to the current larger groups and engages more students in discovery.

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### 2017 Shell Science Lab Challenge National Finalist



#### **Kassie Cusachs**

Representing District VII  
Kenner Discovery Health Sciences Academy  
Metairie, LA

Kassie Cusachs is a founding faculty member of Kenner Discovery Health Sciences Academy, which provides a rigorous learning environment where students achieve academically, develop intellectual curiosity, and practice environmental responsibility while exploring health science topics and careers. When Cusachs plans a lesson for her students, she includes three main strategies: a real-world connection to objectives, a literacy activity, and an opportunity for students to investigate objectives through hands-on inquiry. With funding the school would be able to build a biology/health sciences laboratory, which would allow the laboratories to become more content specific. Having this additional lab space to specifically cultivate these programs is essential to the mission and vision of the school.

## SHELL SCIENCE LAB CHALLENGE

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Outfitted by Carolina Biological Supply Company*

*This award recognizes outstanding middle and high school programs for their exemplary approaches to science lab instruction utilizing limited school and laboratory resources.*

### 2017 Shell Science Lab Challenge National Finalist



**Rene Corrales**

Representing District XIV  
STAR Academic Center  
Tucson, AZ

To instill curiosity is key to helping young students develop the desire to connect with science. Rene Corrales motivates students to be curious by first exposing them to hands-on experiences from which they then create inquiry questions, as opposed to setting up the inquiry questions for them beforehand. This opens up student minds to curiosity instead of students simply expecting a science connection to reality. A previous award has provided some updates, but the classroom still needs proper lab stools with backs, more sinks, a safety shower (an outdoor hose currently serves in an emergency), supplies for the one hoodless hood, and proper (true) exhaust hoods.

## SHELL SCIENCE LAB CHALLENGE

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Outfitted by Carolina Biological Supply Company*

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### 2017 Shell Science Lab Challenge National Finalist



**Nicole Anthony**

Representing District XVIII  
John Polanyi Collegiate Institute  
Toronto, Ontario Canada

Nicole Anthony believes that her role is to harness and nurture students' natural sense of curiosity about the world. She does this through a framework of pedagogy that uses evidence-based, high-yield strategies; is interdisciplinary in depth and breadth to reflect the interconnectedness of STEM disciplines; and supports the development of critical thinkers and problem solvers. With the exception of a few microscopes, data collection devices, and old chemistry apparatus, the science department is greatly lacking in equipment necessary to provide engaging, inquiry-based learning. While the use of virtual simulations can meet curriculum expectations for some lab-based components, the school's information technology infrastructure is limited. A lab upgrade would support Anthony's ability to enhance the learning experience in an interdisciplinary STEM course that she teaches.

## SHELL URBAN SCIENCE EDUCATOR DEVELOPMENT AWARD

*Sponsored by Shell*

*This award provides support to outstanding diverse educators in pursuit of professional development with active participation at the NSTA National Conference on Science Education and serves to increase the science educator talent pool of minority educators to meet the education workforce challenge of the future.*

*The award consists of \$1800 to be used to attend the annual NSTA National Conference on Science Education. Recipients will be invited to attend a variety of workshops and presentations that are of particular interest to urban teachers at the annual National Conference. Up to seven awards will be given.*



**Melissa Collins**

Science Teacher  
John P. Freeman Optional School  
Memphis, TN



**Karis Jackson**

Science Teacher  
Hazelwood Central Middle School  
St. Louis, MO



**Julio Mendez**

Science Teacher  
Perspectives Charter School  
Chicago, IL



**Arlene Ramos**

Science Teacher  
High School for Health Professions  
and Human Services  
New York, NY

SHELL URBAN SCIENCE EDUCATOR  
DEVELOPMENT AWARD

*Sponsored by Shell*



**Sarah Tazghini**  
Science Teacher  
Khalil Gibran International  
Academy  
Brooklyn, NY



**Alexandra Valdes**  
Science Teacher  
LEAD Public Schools  
Nashville, TN



**Crystal Velez**  
Science Teacher  
John F. Kennedy High School  
Waterbury, CT



## SYLVIA SHUGRUE AWARD FOR ELEMENTARY SCHOOL TEACHERS

*This award honors an elementary school teacher who has established (or is establishing) an interdisciplinary, inquiry-based lesson plan. The lesson plan will fully reference sources of information and any relevant National Science Education Standards and benchmarks found in the Atlas of Science Literacy.*

*The awardee receives \$1,000 and up to \$500 to attend the NSTA National Conference on Science Education.*



### **Gary Koppelman**

Elementary Science Teacher  
Blissfield Elementary School  
Blissfield, MI

Gary Koppelman believes that the development of community relationships and making positive decisions impacting the world begins in the classroom where students learn truths as owners of their community and the environment around them. The teacher allows students to find solutions and experience imaginative possibilities, generating autonomous thinkers. Students learning creative classroom solutions can find answers to world problems. Koppelman takes a “hands-on, minds-on” approach to teaching and experiential learning. His classroom has various creative biomes, taking students around the world daily. The BELL, connected to his classroom, is a climatically controlled greenhouse at the cutting edge of life-science investigation. It is furnished with various habitats for observation and experimentation as students research and examine plants and animals. Allowing students to experience science in a cross-curricular manner builds self-confidence in social and academic areas, making connections and learning in unique ways. Jerry Johnson, Superintendent of Blissfield Community Schools, says, “Mr. Koppelman is a recognized leader within our district and throughout the region, lending his skills and knowledge as a Master Teacher, Curriculum Leader, and guest speaker. He has traveled abroad, spoken to world leaders, and been recognized with multiple awards and recognitions such as the Shell Science Teaching Award and the Presidential Award for Excellence in Mathematics and Science Teaching.”

## VERNIER TECHNOLOGY AWARDS

*Sponsored by Vernier Software & Technology*

*This award recognizes the innovative use of data collection technology using a computer, graphing calculator, or other handheld in the science classroom.*

*Each awardee receives a check for \$1,000 and up to \$1,500 toward expenses to attend the NSTA National Conference. In addition, the awardee receives \$3,000 in Vernier products.*

### Elementary Level



#### **Kathryn Eyolfson**

STEM Teacher

Coyote Hills Elementary School

Aurora, CO

Kathryn Eyolfson believes that real-world application is the best way to intrinsically motivate young students. Her goal as an educator is to coach students how to work collaboratively, think for themselves, and make connections to their prior knowledge. “Kathryn is constantly researching and implementing new and innovative ways to help students stay engaged and excel,” says Michelle Colton, Assistant Principal, Coyote Hills Elementary. Eyolfson wants students to be aware of renewable and nonrenewable energy resources, and they should also be prepared to cite information that supports renewable resources and have an understanding that nonrenewable resources can be exhausted. With good resources, children can be fully immersed in a problem-based learning unit. Students will be using the KidWind Advanced Wind Turbine and the Solar Energy Exploration Kit to take data and better understand the idea of energy transfer. Students will learn about renewable and nonrenewable energy resources and evaluate their advantages and disadvantages. Paul Cribari, Coyote Hills Elementary teacher, says, “What really distinguishes Kathryn from other elementary science teachers I have known is her passion for delving into the data and helping the students to make meaningful connections.”

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### Middle Level



#### **Carrie Herndon**

Science Teacher

Metro East Montessori School

Granite City, IL

Carrie Herndon believes that there is, or at least should be, a beautiful marriage between math and science. Data collection is the tie that binds this marriage together.

Students, through the use of Vernier probeware, can benefit from this marriage by actively engaging in the process of learning. Herndon empowers her students to find ways to investigate their observations, to make measurements, and analyze data. Whether students are using motion detectors to determine how quickly drones fly, using force plates to determine how much honey is in their bee hives, or using differential voltage probes to determine the amount of electricity being generated by their solar panels, students can all actively learn from data collection. Students may learn that the data they collect is inaccurate or that the defined variables are functions of each other. Herndon's job as an educator is not to tell students what they will learn, rather her mission is to provide learning opportunities for students to investigate. Her innovative teaching style can be seen in a farm-based science and math program that she designed. "Her innovative and ambitious STEM ideas and projects have excited and inspired the students to learn more about the world around them and how it works. She is an extraordinary STEM teacher with a love and passion for what she teaches, and her innovative ideas repeatedly impress me and as well as those around her," says Stacie Mize, Metro East Montessori School Board Member.

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**Middle Level****Terra McMillan**

Science Teacher  
Thomson Middle School  
Centerville, GA

Proficiency in Georgia's new science standards will require students to effectively collect, organize, and analyze data in addition to learning basic content. Vernier probes and technology are excellent resources to achieve this goal. Terra McMillan's school has a partnership with a STEM business partner, Flint Energies, and received a solar array and access to its monitoring database. Winning the Vernier grant would provide a plethora of data collection tools to use with this solar array and gain in-depth knowledge about renewable energy resources. Students will be able to implement inquiry-based, data collection labs across all three grade levels. For example, in sixth-grade Earth science, students could use the Vernier temperature probes to collect temperature data and compare it to the energy output of the solar array during different times of the year. In seventh-grade life science, students could use CO<sub>2</sub> probes to analyze how plants act like solar panels during photosynthesis. In eighth-grade physical science, students could analyze the efficiency of the solar array by using the irradiance Vernier probes. Walter E. Stephens, Principal, Thomson Middle School, says McMillan "approaches her responsibilities with enthusiasm and is quick to create a vision that is both realistic and achievable. Her dedication to teaching and learning is inspiring."

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### High School Level



#### **Rene Corrales**

Science Teacher  
STAR Academic Center  
Tucson, AZ

René Corrales, having many years of research and university teaching experience, chose to transition to teaching chemistry, physics, and biology at the high school level to help young minds seek careers in STEM fields. His goal is to inspire curiosity in young students to develop their desire to connect with science. Corrales motivates students to be curious by first exposing them to hands-on experiences from which they then create the inquiry questions. He strongly believes that an effective science teacher must provide an array of teaching methods that account for student diversity that comes in the form of their ethnic inspirations, cultural upbringings, religious practices, economic status, and educational backgrounds. “Dr. Corrales exemplifies the spirit of lifelong learning, giving back generously to his community through his work. He is purposeful and determined in his quest to improve STEM education for the children he serves,” says Etta Kralovec, Associate Professor Teacher Education, University of Arizona South. Corrales has his physics students study electric and magnetic field lines with hands-on activities to learn how those fields interact. During this laboratory activity, students are introduced to a novel approach to mapping out electric field lines and equipotential surfaces using a capacitor made of aluminum foil electrodes, water as a dielectric medium, and voltage probes.

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### High School Level



#### **Hannah Erickson**

Science Teacher

Boston Day and Evening Academy

Roxbury, MA

Hannah Erickson has found that one of the most important factors when it comes to engaging students is relevance. She has used a variety of teaching methods, including inquiry-based activities, project-based learning, and creating lessons in which opportunities are provided for students to scientifically examine their local communities. Data collection technology is a highly effective method for creating this type of experience. Through the use of Vernier data collection technology, students could be given the chance to gather information about atmospheric CO<sub>2</sub> levels nearby and in a variety of neighborhoods throughout Boston as a way to connect chemistry concepts and a higher-than-average asthma rate to the experiences of their daily lives. They would then analyze this data, write a formal lab report, write a letter to a local elected official illustrating their data collection/analysis methods, and offer possible next steps and solutions to the problem of disproportionate access to clean air. Alison Hramiec, Head of School, Boston Day and Evening Academy, says, "Hannah is a natural teacher. She cleverly weaves her deep understanding of science into lessons, discussions, and activities. I have witnessed her effortlessly check for understanding as she introduces complex learning activities, pushing students to think, reflect, and apply their learning. Her instructional delivery inspires the most challenging and disengaged of students."

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**High School Level****Amy Melby**

Science Instructor  
Yuma High School  
Yuma, CO

Amy Melby “has the unique ability to make learning about science not only incredibly fun, but she gives it a distinct value, a way that resonates with her students.

Truly her greatest accomplishment as a teacher is her ability to teach advanced concepts with simple lessons,” says Weston Walter, Senior 2016, Yuma High School. Melby wants to involve her students in a local environmental issue concerning the greater prairie-chicken, which has an elaborate mating courtship ritual that it performs every spring in the Yuma area. This area is also a prime location for wind energy development. Through this project, students will be analyzing and comparing the vocalizations of the Greater Prairie-Chicken to the sounds created by a wind turbine. This may provide some insight as to whether wind turbines could potentially interfere with greater prairie-chicken communication. This project allows an opportunity for physics students, who typically spend little time outdoors, to be exposed to nature and to apply physics concepts in a real-world application. They will not only be observing nature firsthand but also collecting data and analyzing their data and observations. According to Jodene Boerner, Principal, Yuma High School, “Amy does what she can instructionally to provide real-world experiences with limited resources. By providing engaging lessons to her students, she exhibits her knowledge of how her students learn by targeting all learners whether auditory, visual, or kinesthetic.”

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### College Level



**Donald Carpenetti**

Chemistry Instructor  
Craven Community College  
New Bern, NC

Donald Carpenetti's general philosophy is to involve students in a project that matches a personal interest of theirs. Involving students in the process of designing a project makes them a stakeholder in the project's success.

Students are more motivated to come to lab, willingly spend more time and effort on the project, and engage in library research outside of class. Students become decision makers in the lab, moving beyond following directions in a lab manual and beginning to design procedures themselves. Through these interactions Carpenetti is able to develop more of a mentoring relationship with each student in the class and get to know more about their career goals and interests. According to Quent Elliott Lupton, biology instructor, Craven Community College, Carpenetti's "continued achievements, both in and out of the classroom, are directly and indirectly contributing to the success of individual students, and improving STEM education as whole." Considering the limitations in equipment at the community college level, the projects that have been undertaken would not be possible without Vernier data collection. The variety of different sensors available and their compact size make it possible for several groups of students to be working on very different projects side by side in the same room.



## MAITLAND P. SIMMONS MEMORIAL AWARD FOR NEW TEACHERS OF SCIENCE

*This award provides selected K–12 teachers in their first five years of teaching with funds to attend the NSTA National Conference on Science Education. Award recipients will be mentored, tracked, and provided with continuing opportunities for meaningful involvement with NSTA and its activities.*

*For this scholarship a teacher must have taught less than five years full-time at the time of application and be an NSTA member in good standing. To the extent possible, recipients must have been a student member of NSTA as a pre-service teacher.*

*This award consists of up to \$1,000 to be used to attend the NSTA National Conference. Recipients will be invited to attend a variety of workshops and presentations that are of particular interest to new teachers at the NSTA National Conference.*



**Courtney Asaro**

JJ Flynn Elementary School  
Burlington, VT



**Kristen N Austion**

Memphis School of Excellence  
Memphis, TN

MAITLAND P. SIMMONS MEMORIAL AWARD  
FOR NEW TEACHERS OF SCIENCE



**Kristen Barnes**  
Lanier High School  
Jackson, MS



**Stephanie Bender**  
Durant Road Middle School  
Raleigh, NC



**Genevive Bjorn**  
Eastlake High School  
Chula Vista, CA



**Alexis Daniels**  
Port Allen High School  
Port Allen, LA



**Kristen Fleury**  
Pierce Middle School  
Milton, MA



**Carrie Fong**  
Rio Mesa High School  
Oxnard, CA

MAITLAND P. SIMMONS MEMORIAL AWARD  
FOR NEW TEACHERS OF SCIENCE



**Hannah Hannah**  
Rock Ridge High School  
Ashburn, VA



**Rachel M. Hess**  
Bridgewater-Raritan School District  
Bridgewater, NJ



**Brooke Holloway**  
Pinckney Community  
High School  
Pinckney, MI



**Robert A. Jackson**  
Glen Burnie High School  
Anne Arundel County, MD



**Jayne Kerner**  
E.A. Day Middle School  
Newtonville, MA



**Catherine Krygeris**  
Mardela Middle/High School  
Mardela Springs, MD

MAITLAND P. SIMMONS MEMORIAL AWARD  
FOR NEW TEACHERS OF SCIENCE



**Katie Lee**  
Sequoyah Middle School  
Broken Arrow, OK



**Vanessa Logan**  
Avondale High School  
Auburn Hills, MI



**DeAndra Meshell Fortenberry**  
Madison Central High School  
Madison, MS



**Cori Nelson**  
Winfield Central School  
Winfield, IL



**Cindy Ok**  
Manual Arts School  
Los Angeles, CA



**Paul Orbe**  
Academy for Enrichment and  
Advancement  
Union City, NJ

MAITLAND P. SIMMONS MEMORIAL AWARD  
FOR NEW TEACHERS OF SCIENCE



**Jennifer Parr**

Milwaukee Community  
Cyber High School  
Milwaukee, WI



**Brianna Reilly**

Melvin H. Kreps Middle School  
East Windsor, NJ



**Alexandra N. Schoessler**

River Trail Middle School  
Johns Creek, GA



**Allycia Uhrhan**

Truman Middle School  
St. Louis, MO



**Sabrina Zahran**

Garland High School  
Garland, TX

## eCYBERMISSION TEAM ADVISOR NATIONAL RECOGNITION

*Sponsored by the U.S. Army Educational Outreach Program*

*eCYBERMISSION is a web-based STEM competition for students in grades six through nine that promotes self-discovery and enables all students to recognize the real-life applications of STEM. Teams of three or four students, led by Team Advisors, are instructed to ask questions (for science) or define problems (for engineering), and then construct explanations (for science) or design solutions (for engineering) based on identified problems in their community. Students compete for State, Regional, and National Awards. This is one of the U.S. Army Educational Outreach Programs. This Recognition includes all expenses paid to attend the NSTA National Conference on Science Education.*



**Ingrid Rapatz-Roettger**

6th Grade

Ramey Unit School, DoDEA  
Aguadilla, PR



**Laura Wilbanks**

7th Grade

Science Rocks U-STEM Enrichment Club  
Dora High School  
Dora, New Mexico



**Dr. Bhagyashri Chander**

8th Grade

Academic Center of Sciences  
Frisco, TX



**Laura Tenorio**

9th Grade

Taos High School  
Taos, New Mexico

## NSTA FELLOW AWARD

*This award recognizes extraordinary contributions to science education through personal commitment to education, specifically science teaching or science; educational endeavors and original work that position recipients as exemplary leaders in their field; significant contributions to the profession that reflect dedication to NSTA as well the entire educational community.*

*The NSTA Fellow Award is a prestigious award that recognizes an NSTA member for long standing service to science education at the local, state, and national level. The NSTA Fellow is recognized as an ambassador for the advancement of science and science education for students, teachers, and the community at large. Awardees will receive a formal citation and a commemorative pin designed to signify the importance of this award and will be honored at the NSTA National Conference.*



**Kathleen B. Horstmeyer**

Society of Elementary Presidential Awardees President  
Chester, CT

Kathleen Horstmeyer consistently seeks science education knowledge through advanced degrees in education and continuous professional development opportunities as both a learner and a leader. She is recognized as a trustworthy, passionate, and considerate leader who helps to raise the science teaching profession to high levels. Horstmeyer has served on committees, panels, and boards making innovative and effective contributions in the service of the teaching profession. She worked with her district science committee to develop a K–12 spiraled science curriculum. At the state level she worked to develop hands-on science assessments. As Preschool Elementary Director, she created visibility for elementary teachers to be active at NSTA conferences. With board members and colleagues, Horstmeyer developed plans for utilizing STEM and integrated science projects and organized national conferences to bring presidential awardees together focusing on STEM. She networks across many levels encouraging colleagues to seek opportunities, take responsibility for learning, participate in conferences, and share resources. She facilitates networking sharing ideas, developing national projects with educators, presenting workshops, and hosting town hall meetings across the nation. According to Steven Barbato Executive Director/CEO ITEEA, “Kathy epitomizes the consummate professional educator for science and STEM education. She constantly demonstrates a strong drive and desire to find innovative ways to lead colleagues in teaching and learning that are contagious to everyone she encounters.”

## NSTA FELLOW AWARD

**Julie A. Luft**

Athletic Association Professor of Mathematics  
and Science Education  
University of Georgia  
Athens, Georgia

Through 30 years in science education, Julie Luft has shown her dedication to the belief that *all* students can learn science. Her professional outreach to fellow teachers, administrators, and the science education community has made an impact at local, state, and national levels. Luft consistently seeks science education knowledge through advanced degrees in education and continuous professional development opportunities as a researcher, a learner, and a leader. In leadership roles, she has collaborated and supported the efforts of others to improve science education at many levels, her schools, her state, within NSTA as well as within other organizations such as NSELA and NARST. “A brief review of Julie’s vita brings to mind the word ‘superwoman,’ as it is hard to imagine doing all she has accomplished in her career; however, Julie’s leadership inspires leadership in others—because she makes difficult things look possible,” says Deborah Hanuscin, Professor of Science Education and Physics, University of Missouri. According to Joseph Krajcik, Director, CREATE for STEM Institute, Michigan State University, “Throughout her career she has done an excellent job of promoting science teacher learning by serving as an ambassador who bridges the world of science teaching practice and research. She has demonstrated personal commitment to improving science teaching, has engaged in original work that has pushed science teaching and learning forward and that has made significant contributions to the science education and to NSTA.”



## NSTA FELLOW AWARD



### **Victor Sampson**

Associate Professor of STEM Education and  
Director, Center for STEM Education  
University of Texas  
Austin, Texas

Victor Sampson has made a significant contribution to the advancement of science education by conducting research with the intention of improving educational practice by collaborating with researchers and teachers. Sampson also encourages others to conduct research and communicates findings through multiple outlets to reach a wide audience. He has authored 42 articles and 5 books. Sampson has given numerous presentations at national and regional NSTA conferences, and designed/facilitated over 50 professional development workshops for inservice science teachers. Ashley Murphy, STEM Education Doctoral Student, The University of Texas at Austin, says, “I know no other person whose professional development sessions are so highly regarded by those who attend them. Dr. Sampson is patient, encouraging, and respectful of the educators who attend his sessions. He is receptive to the ideas and opinions of his colleagues and communicates his research and instructional methods in ways that are understandable, accessible, and unintimidating.” His career demonstrates how research about teaching, learning, and assessment are essential aspects of an excellent educator. “Teaching science can seem a daunting task, but with the help of Dr. Sampson, anyone can teach science and more importantly, any student can learn science,” says Carlos R. Villa, K–12 Education Outreach Coordinator, National High Magnetic Field Laboratory. “He is an incredibly talented teacher, a wonderful leader/supervisor and truly makes a difference in the lives of those he reaches.”

## DISTINGUISHED INFORMAL SCIENCE EDUCATION AWARD

*Partially sponsored by AEOP*

*This award honors NSTA members who are not classroom teachers and who teach science in an informal setting (i.e., museum, science-technology center, or community science center) and who have made extraordinary contributions to the advancement of science education in an informal or nontraditional school setting.*



**Elizabeth Mulkerrin**

Director of Education  
Omaha's Henry Doorly Zoo  
Omaha, NE

Elizabeth Mulkerrin's decades-long career as an informal science educator are certainly a sign of unwavering dedication, but her work during that time sets her service apart from her colleagues. The breadth of her efforts has played a key role in science education at the local, state, and national levels. Nationally, Mulkerrin has served in a number of roles within NSTA and the National Science Education Leadership Association (NSELA) where she is the association's retiring president. Within NSTA, those roles include the NSTA Board of Directors Informal Science Education director and chair of NSTA's Informal Science Education Committee; she has served on the five different NSTA task forces/committees, including her current role on the Science Teacher Journal Advisory Committee. At the state and local level, Mulkerrin has worked closely with universities, school districts, and informal science organizations. Dennis Schatz, Senior Advisor, Pacific Science Center, says, "I discovered the depth and breadth of her involvement in STEM education and as a champion for informal science education. When you talk with her colleagues in Nebraska, you find out how her abundance of energy allows her to be active in STEM education activities across the state, including the Science Olympiad and Junior Academy of Sciences. All of these volunteer positions that advance STEM education make one wonder how she can accomplish her 'day job' at the Omaha Zoo."

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### **Jerry D. Valadez**

Executive Director  
SAM Academy and Sanger Community  
Science Workshop  
Fresno, CA

Dr. Jerry D. Valadez is an advocate for underserved youth, a Maker, President of the Community Science Workshop Network and Co-Founder and CEO of the SAM Academy and the Mobile Science Workshop – all non-profits created to bring underserved youth in isolated, rural communities high-quality out-of-school STEM and arts experiences.

Throughout his career, Valadez has been involved at the state and national levels on issues related to formal and informal STEM education, Environmental and Maker education.

Valadez has served on commissions and national advisory boards such as the 2012 California Science Expert Panel for NGSS, 2011 National Academy Successful STEM Schools Advisory Committee and the 2004 Congressional Commission on STEM Education for the 21st Century.

An active member of the National Science Teachers Association, Valadez has volunteered his time and expertise to serve on many NSTA task forces and committees including Chair of the 2011 National Conference on Science Education and currently as the Director of the Multicultural/Equity in Science Education Division on the NSTA Board as Directors.

“Dr. Jerry Valadez is a true leader in science education and the students and teachers of the Central Valley are better off because of his efforts.” says James E. Marshall, Dean, Research and Graduate Studies, California State University Fresno.

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**Janet Yamaguchi**

Vice President of Education

Discovery Cube

Santa Ana, CA

For over 35 years, Janet Yamaguchi has been an educational leader in Southern California, spending four years as a high school science teacher and 31 years in the field of informal science education. She has led

Discovery Cube's Education team for the past 23 years, helping the nonprofit organization grow from a mall storefront to three physical locations in Orange and Los Angeles counties with outreach programs in five counties. Throughout her tenure with the Cube, Yamaguchi has created the educational content for exhibits and programs, including the Discovery Market and Eco Challenge (which led to the Cube being awarded the National Medal for Museum and Library Service), the Inspector Training Course (which won a Themed Entertainment Association award), and the parent-only early learner's program Futuros Radiantes/Bright Futures. Yamaguchi was also invited to speak at IEEE's special conference in South Africa on the promotion of STEM education through affordable international exhibits. She regularly meets with local educational leaders and financial supporters to advance STEM education in Southern California. According to Mark Ellis, NBCT Professor, California State University Fullerton, Yamaguchi "brings a deep passion to the work of science education and teacher professional development. She has a remarkable capacity to put principles into action through exemplary pedagogical/leadership practices that inspire people—from elementary school learners to veteran teachers—to collaboratively grow in their understanding of science and how to better support others in learning science."

## DISTINGUISHED SERVICE TO SCIENCE EDUCATION AWARD

*Partially sponsored by AEOP*

*This award honors NSTA members who through active leadership and scholarly endeavor over a significant period of time have made extraordinary contributions to the advancement of education in the sciences and science teaching.*

*The awardees receive a formal citation, three nights' hotel accommodation, and \$500 toward expenses to attend the NSTA National Conference.*



### **Cherry Brewton**

Executive Director  
Evans County Community Center  
Statesboro, GA

Cherry Brewton served as a science educator in Georgia for 41 years, teaching life, Earth, and physical science and biology in middle and high schools and as a university professor teaching science methods courses and supervising student teachers. An NSTA member since 1995, Brewton has contributed extensively to the association providing leadership for multicultural/equity science education efforts. “Cherry Brewton’s multiple contributions to AMSE and NSTA; to middle grades and secondary science education; to the inservice and preservice population; and to her home community presents a solid case for her active leadership and for her dedication to science education,” says Robert Ferguson, Associate Professor Science Education, Cleveland State University. “Cherry Brewton is a very conscientious and dedicated science educator. She has successfully demonstrated on a local level and on a national level, the qualities for an individual who merits the Distinguished Service Award. Her capacity to work at all levels, from mentoring precollege students to community outreach and organizations to leading AMSE and AOA reflect the range and talents she brings to all of her work in science education,” says Patricia Simmons NSTA President, 2011–12. “Brewton demonstrates how she takes her insights about teaching and learning combined with her expertise in science education scholarship (specifically equity and multicultural science education) to make a difference for science teachers, their students, and the larger community of stakeholders.”

## DISTINGUISHED SERVICE TO SCIENCE EDUCATION AWARD

*Partially sponsored by AEOP*



**Susan Koba**

Science Education Consultant  
Omaha, NE

For over 40 years Susan Koba has dedicated herself to NSTA and science education, approaching her life as one of service to students, teachers, leaders, and the profession. In her early career she was recognized for excellence in multiple ways, including the Presidential Award for Excellence in Science Teaching. She became active at the state level, working on state department task forces and in leadership of the Nebraska Association of Teachers of Science. She served on the National Science Education Leadership Association (NSELA) board, as NSELA president, and as Interim Executive Director. Koba continues to serve NSELA on committees and task forces. An annual presenter at NSTA conferences, her first official NSTA position was Director of Coordination and Supervision on the board. Koba has served on at least 20 different NSTA task forces, advisories and committees; she served as chairperson for at least five of these groups. Koba serves nationally on many advisories, publishes, and consults for school districts and NSTA. But she focuses her life of service on NSTA, working diligently to support efforts to make it the strongest possible organization so it might best serve the science teachers and leaders of this country. Harold Pratt President of Educational Consultants and NSTA President 2001–02, says, “Her positions and roles illustrate the comprehensive quality of her work. The breadth of her skills and contribution is incredibly rare and has amplified her impact on science education.”

## DISTINGUISHED SERVICE TO SCIENCE EDUCATION AWARD

*Partially sponsored by AEOP*



### **Norman G. Lederman**

Distinguished Professor  
Illinois Institute of Technology  
Chicago, IL

Norman Lederman's name is associated with a line of studies exploring how the nature of science is taught, the challenges the topic poses for teachers, how nature of science is assessed, and its implications for the curriculum. His studies of preservice and inservice teachers' knowledge structures of subject matter, pedagogy, pedagogical content knowledge, and teachers' concerns and beliefs have all made significant contributions to knowledge. Through his passion, he has established a program of research and made a major contribution to positioning the focus of his research a central concern for scholarship in science education. His work, consisting of over 200 articles in leading journals, is widely cited. Lederman's leadership has been outstanding, mentoring a large number of doctoral students and playing a major role in NARST as a member of its Board and then as its President. He has also been the President of AETS (now ASTE). Lederman has also served on NSTA's Board of Directors two times. In addition, he has edited the Handbook of Research in Science Education, served on numerous Editorial Boards and Boards of Directors, and participated in the international science education community. "I know of no one who is better qualified to be selected for recognition due to active leadership and scholarly endeavors over a significant period of time while making extraordinary contributions to the advancement of science education," says Linda Froschauer, Editor, Science and Children and NSTA President 2006–07.

## DISTINGUISHED SERVICE TO SCIENCE EDUCATION AWARD

*Partially sponsored by AEOP*



### **Patricia Simmons**

NSTA Past President 2011–12

Policy Fellow

AAAS S&T

Arlington, VA

Patricia Simmons's academic positions included Professor and Head of the Department of STEM Education at NC State University, the Orthwein Professorship of Life-long Learning in the Sciences at the UM-St. Louis, Professor at the University of Georgia, and High School Science Teacher in Missouri. Much of her scholarship focused on the role of technology in science education, and more recently on policy in science and in STEM education. She has published her work in premiere research and practitioner journals, and given 146 presentations and keynote addresses at international and national meetings in STEM education. Simmons was awarded over \$50 million in externally funded federal and private grants for research, teacher education, and education projects. She received awards for excellence in teaching and in science education at UGA (Lily Teaching Fellowship), UMSL (Outstanding Faculty), AETS (Outstanding Science Teacher Educator), and NSTA (two Gustav Ohaus Awards for Outstanding College Science Teaching). Simmons served as President of the National Science Teachers Association (2011–12) and as the 2014 Chair of the Council of Scientific Society Presidents. "She has had a substantive positive impact on the field of science education through the students she has mentored, through her scholarship, and through her important professional service and leadership in schools, universities, and professional organizations," says Vincent N. Lunetta, Emeritus Professor, Penn State University.



## DISTINGUISHED SERVICE TO SCIENCE EDUCATION AWARD

*Partially sponsored by AEOP*



### **P. John Whitsett**

NSTA Past President 2007–08

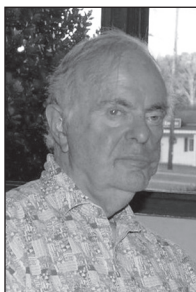
Science Education Consultant

Oshkosh, WI

Two things have been guiding principles for P. John Whitsett's entire career. First, in the current world of the internet and databases, teaching pure science content is far from effective and it's much more important to teach skills and practices of science as outlined in the NGSS science and engineering practices. The second principle is his career-long belief that effective science begins in the early grades and the educational system must provide effective science experiences for children in the very earliest grades. Whitsett has maintained an active role in both the Wisconsin Society of Science Teachers and the National Science Teachers Association, serving as president of both organizations. Since his retirement, he has continued to be involved in activities that are focused around the two guiding principles of his career. According to Bill Badders Director (Retired), Cleveland Mathematics and Science Partnership and NSTA Past President 2013–2014, "Although his many achievements, awards, and qualifications alone make John an outstanding choice for the Distinguished Service to Science Education Award, it is equally as significant and important to recognize the respect that he has for teachers, both preservice and inservice. He holds teachers in the highest esteem. Anyone who has ever worked with him can attest to the fact that he considers himself not at a level above teachers, but as a collaborative peer with one goal—improving opportunities for both teachers and students in schools."

## DISTINGUISHED SERVICE TO SCIENCE EDUCATION AWARD

*Partially sponsored by AEOP*



### **Morton Sternheim**

Professor

University of Massachusetts  
Amherst, MA

Morton Sternheim is a well-known, unique STEM educator whose career spans almost seven decades. He is a Professor of Physics Emeritus at UMass and the Director of its STEM Education Institute. “He stepped away from a successful career as a physicist ... to devote his time and energy to improve the teaching and learning of preK–16 science. While it could be argued that if he didn’t do all of this, someone else would have, the fact is that there was very little else in the way of outreach in the STEM disciplines to the local school districts during all the years that Prof. Sternheim has been leading this effort,” says Allan Feldman, Professor of Science Education, University of South Florida. Combining the knowledge of the University’s best scientists and assisted by K–12 teachers, Sternheim’s summer classes, Saturday Seminars, and STEM Tuesday talks all include a modeling of best practices: relevant lectures followed by hands-on labs, rich teacher discussions, and a constant infusion of methodology for teachers. In his 80s, he still works every day, writing grants, updating multiple STEM websites, attending meetings with other higher education STEM professionals, and sending STEM announcements to thousands of teachers in the United States. Sternheim’s greatest strength is his ability to select and collaborate with other STEM professionals, all with the goal of increasing interest in STEM fields and supporting science teachers locally and nationally.

## DISTINGUISHED TEACHING AWARD

*This award honors NSTA members who are classroom teachers at the elementary, middle school, high school, and undergraduate levels and who have made extraordinary contributions to the field of science teaching.*

*Partially sponsored by AEOP*

*The awardee receives a formal citation, three nights' hotel accommodation, and \$500 toward expenses to attend the NSTA National Conference.*



**Micah Lauer**

Science Teacher  
Heritage Middle School  
Meridian, ID

Micah Lauer's approach to planning demonstrates how educators can implement the NGSS by apprenticing students in the central moves of the discipline. Students should learn by doing what scientists do in the real world. This shift away from a curriculum-centered model to a teaching/learning-centered model drives his instruction. Students develop threshold knowledge about science through the application of skills. Lauer also highly values socio-cultural learning. His students inquire collaboratively as they take on real problems and questions, partnering with universities, government agencies, and informal educators. Distinguished teaching happens when creativity, experience, and growth mindset intersects teacher leadership. According to Jeffrey Wilhelm, Distinguished Professor of English Education Director of the Boise State Writing Project, "Micah is an incredible teacher, a wonderful community member and collaborator, and a model of how to continually learn from our students in order to refine and improve our teaching in highly creative and progressive ways that engage students and meet the next generation of standards to boot. He is also an exemplary and tireless thinking partner with other teachers, always working to create conversations and opportunities to explore best practices in teaching science."

## DISTINGUISHED TEACHING AWARD

*Partially sponsored by AEOP*



### **Jean Tushie**

Science Teacher  
Eden Prairie High School  
Eden Prairie, MN

Jean Tushie says that being a distinguished teacher means more than simply having years of experience—it means being a teacher who constantly reflects on her own progress and strives continuously to develop her teaching skills. Being a lifelong learner has been her professional touchstone. By incorporating both technology and the NGSS science practices into her lessons during the past several years, Tushie has made the greatest strides in her teaching that have resulted in increasing students' engagement. With the integration of MacBooks in her classroom, her job has changed to facilitating and challenging students' thinking. Since winning the Presidential Award in 1994, Tushie has considered it a mission to give back to the teaching profession by actively participating in leadership roles in my district and state, and at the national level. According to Carolyn Hayes, NSTA Retiring President, "Students are the source of her inspiration and she wants to share her passion for science teaching through her leadership, support for NSTA, and professional development opportunities at state and national conferences. She is a great role model regarding what it means to be a professional, a leader, and a lifelong learner."

## ANGELA AWARD

*This award honors one female student in grades 5-8, who is involved in or has a strong connection to science. The award has been established in honor of Gerry Wheeler and his outstanding dedication to NSTA and lifelong commitment to science education.*

*The awardee receives a \$1,000 US EE Savings Bond or Canada Savings Bond purchased for the equivalent issue price. The President will present her award at the awardees' school each spring.*

**Catherine Tomasello**

Science Student  
Homeschool  
Land O Lakes, FL

Catherine Tomasello has participated in many STEM competitions over the past seven years, enjoying discovery through hands-on investigation. She has actively participated in STEM research by entering and winning several competitions and science fairs at the national level, such as the Toshiba/NSTA ExploraVision competition (four-time national winner), the Bright Schools competition (second place), and recently the National Academy of Engineering's Engineering For You film competition. Tomasello designed and produced a two-minute animated film about wave wings, a source of renewable energy, winning first prize in the nation for grades K–8. Although still in middle school, Catie is enrolled in high school Physical Science Honors and is maintaining a high “A” average. Alyse De Witt Buckalew, science teacher at Pine View Middle School, says, “Her passion and interest in science motivates those around her, helping to create an atmosphere of inquiry and discovery. She performs at the highest level on traditional tasks, but truly excels in problem-based, hands-on exploration. Catie is exceptionally involved in, and has a strong passion for science. She is one of our leaders, our innovators of tomorrow. She is why I’m still in the classroom after 25 years.” When Tomasello grows up, she would love to have a career teaching science, whether in the classroom or educating through film/digital media.

## ROBERT E. YAGER EXCELLENCE IN TEACHING AWARDS

*This award recognizes excellence and innovation in the field of science education. This award acknowledges teachers who share Robert Yager's passion for education and continued professional development. This award also honors Robert Yager's effort to make excellent science education accessible to students of the 21st century and beyond. Awardees will have exhibited excellence and innovation in the field of science education, and embody the mission statement of NSTA. Six awardees will be selected annually.*

*The individual awardees will receive a \$1,000 award, up to \$1,000 for travel expenses to attend the NSTA National Congress on Science Education, and a plaque. They will be asked to present at the NSTA National Congress on Science Education, with their presentation videotaped for future use. The awards will be presented during the NSTA National Congress on Science Education, held each summer. An identified Yager Scholar from the six awardees will be given additional support up to \$1,500, to present at a future NSTA National Conference on Science Education.*



### **Yager Scholar and District XII**

#### **Kristin Rademaker**

Science Teacher  
Harlem High School  
Machesney Park, IL

Teaching through phenomena allows Kristin Rademaker to engage her students and get them figuring out the science behind what happened, sparking natural curiosity to figure things out. Once the phenomena is introduced she uses the science practices and other strategies that allow students to dig into what they know, figure out what they don't know, and fix the things they thought they knew. Rademaker focuses on students learning science through working together, solving problems, making mistakes, embracing them, and trying again. Teaching through phenomena also allows her to implement a number of different teaching methods depending on the task at hand. Using strategies that get the students active and engaged have been instrumental in changing the culture of her classroom. Engaging students through productive talk turns her classroom into a student-driven learning environment. Along with using productive talk, she also uses gallery walks, small- and whole-group discussion, close reading, driving question boards, and claim evidence reasoning along with many others. These methods coupled with the science and engineering practices not only provide students with opportunities for engagement but also allow them to develop valuable skills they can use across all academic areas and beyond. "I have come to see Mrs. Rademaker as a transformative leader in science education that I wished every science teacher in our country could meet someday and learn from," says Michael Novak, Instructor, Northwestern University.

## ROBERT E. YAGER EXCELLENCE IN TEACHING AWARDS

**District I****Steven Autieri**

Science Teacher  
Suffield Public Schools  
Suffield, CT

Steven Autieri has been involved in developing and instructing courses centered on the theme of blended instruction, which is a computer-mediated instructional strategy that permits students to complete essential tasks at their own pace. Autieri has also served as a contributing member of a school blended learning implementation team, which provided professional support to building staff and has coordinated learning walks to highlight implementation of technology in the classroom. He inspires fellow colleagues to adopt these strategies in their own classrooms by sharing with them developed resources, lessons, and assessment strategies that will help them to be successful in driving student learning. Autieri has been deeply involved in the professional development of and discourse with other educators in his own district, as well as with teachers across the state through a workshop conducted on blended instruction delivered at the 2013 annual meeting of the Connecticut Computer Educator's Association (CECA). According to Maria Pompano, Science Instructional Leader, East Haven High School, "Steve's enthusiasm, innovativeness, and genuine concern for the students at our school were exemplary. He was a teacher leader, a role model, and an asset in the building as well as in the greater community of science teachers in Connecticut."

## ROBERT E. YAGER EXCELLENCE IN TEACHING AWARDS

**District VI****Covey Denton**

Science Teacher  
Greenfield School  
Wilson, NC

Covey Denton's students begin a science unit with immediate engagement and a fun activity. While always ensuring that the true science behind the fun is learned, Denton uses multiple modalities to reach her students. She uses hand motions and moving bodies to explore. She raps, sings songs, and claps rhythms to help those who are auditory learners. Denton encourages students by proposing STEM design challenges, letting students develop and test their own lab ideas, and offering a student choice project to her fifth and sixth graders for every unit. Denton's homework assignments include creating a story about the rock cycle, told from a rock's point of view or having students write their own comic book adventure about science topics. Her love for science is infectious and quickly spreads from her to her students. "Ms. Denton has brought so much energy and enthusiasm to her lower and middle school science classes. She has a terrific knowledge of the sciences taught in our school and continually works to make it interesting, fun, and educational. Students are not just learning science, they are DOING science. They are all over campus taking and testing soil samples, examining the water in our pond on campus while learning about water pollution and the effects of runoff from our soccer field, or examining our small ecosystem along our nature trail," says Beth Peters, Head of School, Greenfield School.



## ROBERT E. YAGER EXCELLENCE IN TEACHING AWARDS

**District VII – Kristen Sumrall**

Science Teacher  
Lafayette Middle School  
Lafayette, MS

Kristen Sumrall has three questions she asks when preparing for a new year of science instruction. “How can I motivate my students to want to learn science? How can I convince my students to like/enjoy the world of science? And, how can I convince ALL my students that they can be successful at doing science?” She uses these three goals and questions as the driving force in how she develops curriculum as well as how she teaches science. Three of her favorite science teaching methods are open inquiry, problem based learning, and use of the 5E model, which have been effective in helping her motivate and convince her students that they can be successful at doing science. She uses the NGSS and state standards as the driving forces in the development of lessons and in her instruction. She believes that the purpose/relevancy of science to the world as identified in the NGSS is an important aspect of why and how we teach science. “Kristen is grounded in research-based practices. She has breadth and depth of scientific and educational research knowledge beyond her professional years of experience. She is an innovative science educator and a remarkable leader. She models professionalism and excellence in everything she does but especially in how she motivates others and brings forth the best in everyone,” says John Ammons Professor, Mississippi Delta Community College.

## ROBERT E. YAGER EXCELLENCE IN TEACHING AWARDS

**District XIII****George Hademenos**

Physics Teacher

Richardson High School

Richardson, TX

To ensure that his lessons are presented from the student perspective, George Hademenos designs each lesson so his students do not hear and write about the discussed concepts or topics but that they see and experience

them. Hademenos has been known to wear high-heeled shoes to illustrate the concept of pressure, use a bowling ball pendulum to illustrate the concept of friction, launch a pill bottle rocket using a PVC pipe launching pad and a bicycle pump, and launch high-altitude weather balloons to see and understand science 100,000 feet above the Earth's surface. Students could describe characteristics of his teaching style by saying words like animated, expressive, emotive, and loud. Violetta Espinoza, former student, states that Hademenos "is capable of giving lessons that are understandable, with some humor on the side to keep people engaged. Most of all, however, he does an amazing job at helping students reach their academic goals." Hademenos loves to show his students how excited he is about physics because chances are good that if he's excited about something, the students will also be excited about it. "Dr. Hademenos is a teacher that is not content with the daily responsibilities of lecture, labs, and tests. He is always looking for opportunities to bring practical examples of his subject into the classroom," says Charles Bruner, Principal, Richardson High School.

## ROBERT E. YAGER EXCELLENCE IN TEACHING AWARDS

**District XVIII****Ruggero Racca**

Science Teacher

Toronto District School Board

Toronto, Ontario, Canada

Ruggero Racca's work as a teacher situates itself at the convergence of three pedagogical stances: interdisciplinary learning, transformative learning, and inquiry-based learning. Interdisciplinary learning provides his students with authentic experiences in more than one content area, offering them a range of learning experiences, and giving them choices in the projects they pursue and the ways they demonstrate their learning. His students engage in journal writing, metaphors, life history exploration, learning contracts, group projects, role play, case studies, and using literature to stimulate critical consciousness as pathways to transformative learning. Students use open-ended investigations into a question or a problem, engaging in evidence-based reasoning, problem finding and problem solving. In this rich context, and through the use of gradual release of responsibility, students in his class acquire transferable, lasting inquiry skills and the ability to apply them across the curriculum in examining and challenging their own expanding knowledge. "The inquiry model Ruggero perfected in his classroom has been the focus of observation and broader implementation by the Toronto District School Board (TDSB), as well as by the Ontario Ministry of Education. In his teaching, Ruggero nurtures not only highly effective science learning, but also a deepening of the students' empathy towards, and connection with, the world around them," says Catherine Munro, Vice Principal, Cosburn Middle School.

## ROBERT H. CARLETON AWARD FOR NATIONAL LEADERSHIP IN THE FIELD OF SCIENCE EDUCATION

*This is the most prestigious award an NSTA member may receive. The Robert H. Carleton Award recognizes one individual who has made outstanding contributions to and provided leadership in science education at the national level and to NSTA in particular. It is NSTA's highest honor.*

*The awardee receives \$5,000; a formal citation; and an expense-paid trip to attend the NSTA National Conference on Science Education.*

*Partially sponsored by Phil and Amy Mickelson Foundation*



**Edward P. Ortleb**

NSTA Past President 1978-79

Consultant/Author

St. Louis, MO

Edward Ortleb's academic background covers science education at all levels, which has given him the platform upon which to develop a successful career spanning more than six decades, including classroom teaching at the primary and intermediate levels, model teaching, curriculum leadership roles, university faculty member, author, workshop presenter, and science education consultant. According to Linda Froschauer, Editor of *Science and Children* and NSTA President 2006–07, Ortleb “has worked tirelessly for science education and NSTA. He simply goes about doing what needs to be accomplished without fanfare and accolades, or even a mention of his involvement unless probed to share. He is clearly a ‘can do’ person who has been tapped by a variety of agencies and associations because of his many talents.” Ortleb has received many awards and has been recognized for his skills and dedication by numerous organizations. As a strong leader locally and regionally, Ortleb's work is exemplified by his many contributions to community service-oriented organizations. Fred Johnson, NSTA Past President, says, “Not only has Mr. Ortleb served as a consummate teacher and science educator, he has served, admirably and effectively, in numerous capacities within the educational enterprise as President and Board Member of NSTA, classroom teacher, served and provided leadership on numerous NSTA committees, and Director of Science for St. Louis Public Schools, and leader in numerous other scientific organizations and societies. He has provided leadership and dedicated service to science education for five decades. His record of service and leadership in science education locally, nationally, and internationally eminently qualifies him to receive NSTA's highest and most prestigious award.”