



NSTA Strategic Goals 2015

BUILDING A BETTER FUTURE

NSTA National
Science
Teachers
Association



Introduction



Science begins with careful observation. Data are collected by teams and models are built. Metrics are established to evaluate the quality of that work. If the science is done well, those models help us build a better future. The process of developing a strategic plan is much the same. Teams of stakeholders document the present and use that data to forge a pathway to the future. They struggle to balance the practical and the ideal, keeping in mind the measurement tools that they will use to judge success.

During the first half of 2014, NSTA President Bill Badders gathered a team to draft a five-year strategic plan for the association. The task force was diverse but committed to similar goals. The participants grounded their work in surveys and focus groups of members, conference attendees, past presidents, and other stakeholders; previously commissioned reports on important topics such as communications, membership, and professional development; and interviews with NSTA staff. They were determined to chart an ambitious, but attainable, path toward the future. Each of the recommended steps will expand NSTA's reach and influence and improve the quality of the contributions we make to science education.

During all the data analysis, self-examination, and goal setting, however, NSTA's mission remains constant over time: "... to promote excellence and innovation in science teaching and learning for all." Members often ask why our mission statement begins with ellipses. In the process of strategic planning, the task force members looked again at the unusual grammar and rediscovered its significance. Our work in support of the highest level of science teaching and learning has no real start or finish, but rather is an ongoing process.

Join us as we work toward a more scientifically literate future, where students' scientific wonder is nurtured inside and outside the classroom, and the critical knowledge and skills gained enable them to be productive and responsible members of society and innovators of tomorrow.



John Whitsett
Task Force Chair



Juliana Texley
2014–15 NSTA President

Letter From the Executive Director

Since 1944, the National Science Teachers Association (NSTA) has served its mission “... to promote excellence and innovation in science teaching and learning for all”—even amid great change in the education landscape. Our focus has always been on teachers, schools, and districts, providing support from the ground up by way of face-to-face professional development; publications filled with pedagogical tips, science background knowledge, and classroom activities; and opportunities to recognize student and teacher achievement. In recent years, the nation has turned its attention to science education in a big way, perhaps more so than at any other time since the launch of Sputnik, and we must seize the moment.

Fortunately, the science education community has a powerful opportunity for helping improve the quality of science instruction for all students in this country. The current focus on science, technology, engineering, and mathematics—collectively known as STEM—has fueled demands for college and career readiness in these fields among U.S. graduates. Corporate America is throwing its weight behind programs that improve STEM education, and governments offer similar support. At the same time, the year-old *Next Generation Science Standards*, or NGSS, written by a group of science educators from

26 states, offer a blueprint for guiding all students toward that “readiness” benchmark. Now officially adopted by 12 states and the District of Columbia and greatly influencing standards in other states, the NGSS emphasize using the critical practices of scientists and engineers to teach foundational content and cross-disciplinary concepts. The NGSS even include connections to technology, math, and English language arts.

As an organization, we are uniquely situated to help translate the country’s focus on STEM into significant gains in students’ scientific literacy. NSTA’s views are solicited and respected by both Congress and the administration, and we have an established national network of state chapters and other affiliated groups. Most important, science teachers know and trust NSTA.

In a fall 2013 survey, more than 70% of respondents recognized the inherent value of professional learning resources that have been developed or recommended by NSTA. We deliver award-winning content through our print and digital publications and online Learning Center. Attendance at our five annual conferences is at record levels, and more than 90% of members surveyed would recommend NSTA membership to their colleagues.

As we look to the future, we will continue to place a premium on high-quality content—print and digital—but we must also find ways to bundle our products and services to provide more comprehensive professional learning experiences. In all of our programming, from journals to the New Science Teacher Academy, we will highlight the connections between literacy and science, provide greater support for elementary educators, define what genuine STEM instruction is, and work to model the three-dimensional learning advocated in the *Next Generation Science Standards* in all that we do.

We will also respond to, even anticipate, the needs of teachers in a digital age. Our content needs to be accessible on all digital platforms, and we need to better engage conference attendees in meaningful experiences that extend beyond the conferences and make optimal use of technology and social media.

To that end, by the end of the decade, we will:

1. engage all teachers of science to be members of the education reform movement;
2. dramatically improve the quality and prominence of elementary science education;
3. model the practices of research-based instruction methodology through our own professional learning programs;
4. support implementation of NGSS and *A Framework for K–12 Science Education* in every science learning experience in or out of the classroom;
5. work with other teachers' organizations to establish a program of certification for STEM educators and schools;
6. mobilize a national network that raises the status of science education and teachers; and
7. support the NSTA staff and infrastructure to accomplish this vision.

This is both an exciting and critical time in science education. With the 2013 release of the NGSS, we hold the key to improving science education, as evidenced by years of research. And thanks to the buzz surrounding STEM, the public and policy makers alike are paying attention to science. Let's convince them both to make a real commitment.



David L. Evans

Executive Director
National Science Teachers
Association



Strategic Goal 1

Advocacy

Raise the status of science education and science teaching as a profession by advocating for high-quality science education within national, state, and local contexts.

The prevalence of high-quality science education for all students, and the public support necessary for science teachers to provide it, ultimately depend on the value society places on the scientific endeavor. At the same time that the national STEM movement brings much-needed focus to science education, other social and political forces are working to undermine the importance of science in our society and education system. NSTA must be a strong national voice in support of science, thereby raising the stature of both science education and science teachers. The association must play a pivotal role in facilitating a national dialogue among practitioners, researchers, policy makers, and the general public.

- Promote the importance of science, science education, and the science teaching profession.
- Advocate for improved science instruction for all students, particularly minorities, girls, and other traditionally underrepresented groups.
- Build strong connections with and among researchers, practitioners, and policy makers.
- Increase the visibility, involvement, and influence of NSTA and its network of chapters, associated groups, and members among policy makers at the state and local levels.

Professional Learning

Enhance the professional learning of science educators by providing a suite of tools, resources, and opportunities that support long-term growth within a collaborative learning environment.

Members or nonmembers, when customers hear “NSTA,” they think of discrete products or services such as books, journals, or conferences. In fact, NSTA offers a considerable library of high-quality, award-winning resources. With such a tremendous collection of offerings, however, we need to structure our professional learning opportunities to address the full scope of educators’ changing needs and to spur long-term growth and sustainability. NSTA must be seen as the source for comprehensive, coherent, and continuous professional teacher growth over the life of their career. We must take a more consultative approach—addressing the topics of greatest interest to teachers and being cognizant of emerging trends in how teachers learn and are evaluated—and develop ongoing relationships with both individual teachers and whole districts.

- Bundle products and services for a comprehensive professional learning experience designed to reflect professional development research in ways that allow both scale and sustainability.
- Develop and market products and services thematically, working across organizational divisions and addressing the increased need for video and digital products.
- Address key areas in science education—including STEM, NGSS, science and literacy, educational technology, teacher evaluation models, and meeting the needs of diverse student populations.
- Provide conference experiences that engage live and virtual attendees in meaningful professional learning that extends beyond the event itself, making optimal use of technology and social media.
- Schedule NSTA conferences to ensure the greatest financial benefit to the association—which, by definition, ensures that we reach the highest possible number of educators.
- Develop a teachers-in-residence program to enhance the quality and appeal of NSTA’s offerings to support teacher professional learning.
- Bridge the gap between the classroom and the informal science education community.
- Provide resources that promote and support leadership development of members.

Next Generation Science Standards and STEM

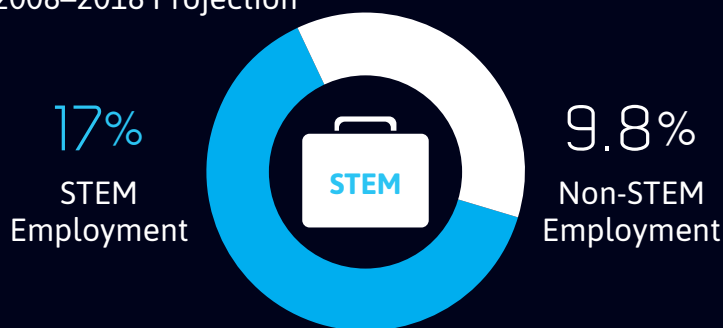
Revitalize science education to boost student achievement and science literacy, and bolster U.S. economic standing.

In our society, the ability to engage with science—to read a news article about the effects of climate change, understand the importance of vaccinating children, make an informed decision about a purchase, and so forth—is more critical than ever before. Furthermore, American industry requires a workforce with a strong foundation in scientific thinking and practice; technical skills are essential. Research shows that the best way to prepare students for college and career readiness is through the use of science and engineering practices to teach central scientific concepts. Developing and Using Models, Analyzing and Interpreting Data, Using Mathematics and Computational Thinking, Engaging in Argument from Evidence—these are examples of the critical skills we need to instill in future generations. The *Next Generation Science Standards*—which aim to combine science, technology, engineering, and mathematics in a meaningful way—provide a road map for getting us there.

- Support NGSS implementation as a means of bringing together science, technology, engineering, and math instruction.
- Lead collaborative efforts with other teacher professional organizations.
- Expand the STEM conference with greater technology, engineering, and mathematics integrated programming.
- Explore the development of a STEM certification and/or accreditation program by identifying the knowledge and skills that are hallmarks of high-quality STEM instruction.
- Develop products and services that facilitate the creation of equitable learning opportunities for all students—regardless of socioeconomic backgrounds, developmental levels, genders, native languages, and other demographic differences.

Projected Growth in STEM and Non-STEM Employment

2008–2018 Projection



Source: ESA calculations using Current Population Survey public-use microdata and estimates from the Employment Projections Program of the Bureau of Labor Statistics.

Elementary Education

Nurture scientific curiosity among children in the earliest grades.

“Why?” It’s a question that underpins all of scientific enterprise and one that’s often heard from young children. Yet research shows that students lose interest in science—deem the study too hard or the memorization of facts too boring—by middle school. In today’s world, in which citizens face important decisions about their health and well-being, the environment, and digital technology on a daily basis, science is everywhere. Fostering the development of a scientifically literate citizenry is more crucial than ever before, and it needs to begin in elementary school. As educators, we must encourage the inherent curiosity of our youngest students and guide them as they seek answers to their questions and develop the ability to uncover evidence. We must encourage students to continue asking, “Why?” and we must provide them with the intellectual tools they need to find answers, now and throughout their lives.

- Advocate for regularly scheduled science instruction in the elementary classroom.
- Promote the practices of NGSS as a means to engage inherently curious students in the early grades.
- Provide cohesive professional learning options to better prepare K–6 educators in science content and pedagogical strategies.
- Disseminate research and provide resources related to supporting the learning of children from populations traditionally underrepresented in science.
- Help educators maximize the connections between high-quality science and literacy instruction.
- Provide student resources that demonstrate authentic science.



Membership

Enrich the NSTA membership experience through enhanced peer-to-peer engagement and differentiated benefits.

Two million educators in the United States teach science, and yet NSTA membership hovers around 55,000. As a national organization, we must pursue new and better ways of engaging far more of that two million. We cannot empower science teachers—be they in elementary school classrooms, high school chemistry labs, museums and science centers, or after-school programs—if we can't reach them. To do so, we must recognize the changing face of membership organizations and support teachers, who engage with the world far differently than they did a generation ago, with the benefits they actually seek. Namely, NSTA should strive to become a community-centered, network-driven organization that encourages members to connect with one another to share their valuable pool of teaching, learning, and leading experiences.

- Implement new strategies for membership renewal and experiment with a variety of new membership benefits, levels, and options.
- Facilitate a more interactive membership base with more peer-to-peer engagement and network-building opportunities.
- Recognize and support the full spectrum of teachers of science, including informal educators, after-school educators, and homeschoolers.
- Explore new models for joint NSTA–state chapter memberships.
- Build relationships with new members through increased engagement with preservice teachers and student chapters.



Internal Organizational Goals

Fulfilling the goals and objectives outlined in this plan requires updates in infrastructure, as well as certain tactical staff supports.

- Establish a work space that reflects the mission and goals of NSTA.
- Adopt a goal-oriented, market-driven strategy, and optimize communication and collaboration among staff.
- Strengthen staffing resources in key departments, increase opportunities for professional growth among staff, and modernize internal processes to bring them more in line with current industry practices.
- Use technology and data-driven decision making to more effectively address our mission and strategic priorities.

Strategic Plan Task Force

John Whitsett

Chair, NSTA Past President

Bill Badders

NSTA 2013–2014 President

Tyson Brown

NSTA Director, New Products and Services

Eric Brunsell

NSTA District XII Director

Chris Campbell

eCYBERMISSION Outreach Specialist

Peggy Carlisle

NSTA Preschool & Elementary Director

Kate Falk

NSTA Senior Manager, Public Relations

Paula Gangopadhyay

Chief Learning Officer at The Henry Ford

Jennifer Horak

NSTA Project Manager, NGSS@NSTA

Michael Lach

Director of STEM Policy/Strategic Initiatives, University of Chicago

Mariel Milano

STEM Coordinator, Orange County Public Schools

Jeremy Peacock

Social Media Director,
Georgia Science Teachers Association

Tamica Stubbs

Biology Instruction, Phillip O Berry Academy of Technology

Kelli Wells

Executive Director, Education,
GE Foundation

Board of Directors

Juliana Texley

President 2014–15

Carolyn Hayes

President-Elect 2014–15

Bill Badders

Retiring President 2014–15

Sally Harms (13–16)

Director, College Science
Teaching

Kelly Price (13–16)

Director, Coordination and
Supervision
of Science Teaching

Beverly DeVore-Wedding (13–16)

Director, High School Science
Teaching

Candace Lutzow-Felling (12–15)

Director, Informal Science

Patty McGinnis (12–15)

Director, Middle Level Science
Teaching

Jerry Valadez (14–17)

Director, Multicultural/Equity in
Science Education

Peggy Carlisle (12–15)

Director, Preschool &
Elementary

Eric Pyle (14–17)

Director, Preservice Teacher
Preparation

Steve Rich (12–15)

Director, Professional
Development

John Tillotson (14–17)

Director, Research in Science
Education

Ex Officio

LeRoy Lee

Treasurer

Harold Pratt

Parliamentarian

NSTA Council

Jeanette Day (14–17)

Director, District I

Lynn Farrin (12–15)

Director, District II

Stephanie Wright (13–16)

Director, District III

Frances Hess (12–15)

Director, District IV

Donna Governor (13–16)

Director, District V

Manley Midgett (14–17)

Director, District VI

John F. Ammons (14–17)

Director, District VII

David Helm (12–15)

Director, District VIII

Mary Colson (13–16)

Director, District IX

Janet Struble (12–15)

Director, District X

Paul Adams (13–16)

Director, District XI

Natacia Campbell (14–17)

Director, District XII

Norma Neely (14–17)

Director, District XIII

Vicki Massey (12–15)

Director, District XIV

Timothy Maze (13–16)

Director, District XV

Tim Williamson (12–15)

Director, District XVI

Steven Ruthford (13–16)

Director, District XVII

Michael Bowen (14–17)

Director, District XVIII



1840 Wilson Blvd., Arlington, VA 22201
www.nsta.org