

NSTA Professional Development Programs

We know that great teachers help create great students. Research shows that the most direct route to increased student achievement is quality teaching. This is why developing and delivering high-quality professional development opportunities for science educators is one of NSTA's highest priorities.

NSTA New Science Teacher Academy

Launched during the spring of 2007, the NSTA New Science Teacher Academy is a yearlong program established to help reduce the high attrition rate in



the science teaching profession by providing professional development and mentoring support to early-career science teachers. Intended for science educators entering their second or third year of teaching, the Academy is designed to help promote quality science teaching, enhance teacher confidence and classroom excellence, and improve teacher content knowledge. Throughout an academic year, the Academy Fellows:

- Benefit from online one-to-one interaction with an experienced teacher as mentor, as well as wide-ranging discussions online with a community of other Fellows and mentors;
- Participate in a focused face-to-face professional development opportunity at the NSTA National Conference on Science Education;
- Enjoy the benefits of NSTA membership; and
- Participate in a variety of electronic, web-based professional development activities, including web seminars.

This year, NSTA along with the Dow Chemical Company Foundation, the Amgen Foundation, Astellas Pharma US, Inc., and the American Honda Foundation will support 220 new science teachers as Fellows in the 2011 NSTA New Science Teacher Academy. Since its inception, the Academy has provided high-quality professional development to nearly 620 science teachers nationwide.

Mickelson ExxonMobil Teachers Academy

The Mickelson ExxonMobil Teachers Academy is an intense five-day professional development program for third- through fifth-grade teachers. The Academy is a joint effort of Phil and Amy Mickelson, the ExxonMobil Foundation, NSTA, and Math Solutions. The overall goal of the program is to help teachers teach science



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"... to promote excellence and innovation in science teaching and learning for all."

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and mathematics effectively and appropriately, based on the cognitive development of students in grades 3 through 5. The Academy is dedicated to increasing students' learning and appreciation of math and science by:

- Enhancing teachers' mathematics and science content knowledge;
- Demonstrating the relationship between scientific inquiry and mathematical problem solving;
- Helping teachers use the tools of mathematics to build understanding of and connections to science concepts; and
- Modeling best practices in teaching for learning that teachers can use in their classrooms.

Members of the Academies will:

- Deepen their understanding of mathematics and science content in the areas of data and statistics, measurement, force and motion;
- Build expertise in facilitating student learning through problem solving and inquiry;
- Use links between math and science to support student learning;
- Understand how children learn and how to apply this to classroom instruction;
- Build their knowledge and use of instructional strategies to support students' learning; and
- Network with others involved in elementary school mathematics and science education.

United Technologies Corporation/NSTA STEM Externship

The United Technologies Corporation/NSTA STEM Externship Program provides high schools science teachers with the unique opportunity to work directly with scientists to help strengthen their understanding of STEM (science, technology, engineering, and mathematics) content and sharpen inquiry-based instructional strategies. During the six-week long summer program, teachers, under the mentorship of a United Technologies Corporation (UTC) scientist, work on an actual engineering project, learning the skills and processes used by scientists and engineers daily. Teachers will then be assisted by NSTA to translate these scientific practices into effective classroom instruction. Teachers who participate in the externship also receive a \$6,000 stipend, access to NSTA's various online resources, and a one-year NSTA membership.

Urban Science Education Leadership (USEL) Academy

As a result of a grassroots effort by science education leaders in the urban community in 2007, NSTA provided a forum and support for Urban Science Education Leaders (USEL) that enable them to "build a community to share and support excellence in science." Three major goals guide the work of the USEL group:

- Identify effective policies that lead to increased student performance in science in urban school settings and in higher education STEM programs;
- Identify and disseminate programs that exemplify best practices for teaching, learning, and assessing science in pre-k-16 urban school settings; and
- Provide opportunities and tools that support the leadership skills and knowledge of urban science education leaders to improve their effectiveness.

The Urban Science Education Leadership Academy (USELA) is an activity that is held annually to support the USEL groups' goals. The purpose of the USELA is to impact urban students' achievement through the development of leaders who will help guide and reform the learning, teaching and assessment of science in elementary and middle schools. At the Academy, a team of teachers, accompanied by their district supervisor/coordinator and principal/assistant principal, work collaboratively to develop the leadership skills and implementation plans that will guide reforms to support excellence in science learning in urban schools.

Past Academy attendees include the following districts/University cohorts:

- Baltimore City Schools
- Buffalo Public Schools
- Charlotte Mecklenburg School System
- Chicago Public Schools
- Dayton Public Schools
- District of Columbia Public Schools
- East Baton Rouge Parish
- Hot Springs School District
- Philadelphia School System
- Prince Georges County Public Schools
- Puerto Rico School District
- Recovery School District
- Richmond School System
- School District of Clayton-Missouri
- University Prep Science/Math-Detroit Public Schools
- Xavier University