



[NSTA Home](#) | [NSTA Communities](#) | [Member Benefits](#) | [Conferences](#) | [Journals](#) | [Science Store](#) | [Learning Center](#) | [Career Center](#)

Week of July 13, 2009

Table of Contents

- [News Roundup](#)
- [Raytheon Unveils New STEM Education Model](#)
- [NC Sept. PD Opportunity from AAAS Project 2061: "Using *Atlas for Science Literacy*" Workshop](#)
- [Opportunities for '09 Professional Development for Science Educators](#)
- [From the NSTA Online Calendar](#)
- [Activities Linking Science With Math, K-4 Encourages Critical Thinking Through Interdisciplinary Study](#)
- [PD for Science Educators This Fall](#)
- [Gone Fishin'](#)

News Roundup

New Survey Shows Gap Between Scientists and Public on Key Issues

A new survey shows a growing gap between scientists and public belief on many issues such as global warming and evolution. While most scientists believe that humans are the cause of global warming, about half of the public disagrees while eleven percent does not believe in climate change at all. These differences in scientific knowledge and public belief illustrate a need for scientists to better engage the public and present their research and data in a clear and understandable form.

For more information and to view the survey, visit the [Pew Research Center for the People & the Press](#) and the [New York Times](#).

Fewer Jobs Available for Scientists and Engineers

A *USA Today* article reports a growing shortage of jobs for scientists and engineers in the United States. While the unemployment rate for all engineers has recently risen to 5.5%, fewer college students are graduating with science and engineering degrees. According to USA Today, part of the problem has to do with the low wages offered in science and engineering careers compared with the much higher salaries offered in other fields such as medicine and law. Furthermore, many of today's engineers are simply overqualified for the positions that are available.

To address this problem, many educators and policymakers have been pushing for more funding for STEM education in an effort to increase the number of graduates with STEM degrees and therefore expand the job market. However, some believe that increased funding will only yield limited growth in scientific positions. Nevertheless, top officials including Secretary of Education Arne Duncan believe that the U.S. needs more, not less, scientists and engineers to meet the challenges that the nation faces.

- [Read the full article](#)

[\(back to top\)](#)

Raytheon Unveils New STEM Education Model

On July 8, Raytheon Company presented their newly developed U.S. STEM Education Model. Analyzing approximately two hundred variables, such as student attrition rates and gender differences, the model maps out a student's academic career and predicts the likelihood he or she will graduate with a STEM degree and enter the industry or become a teacher. According to Raytheon, the model's primary goal is to help effective education methods rise to the top in order to increase the number of U.S. students who graduate in STEM fields. Raytheon has gifted the program to Business Higher Education Forum (BHEF), who has, in turn, made the program available for the public, encouraging users to suggest changes and new research to improve the model. For more information on the program and to download the model itself, visit www.STEMnetwork.org.

[\(back to top\)](#)

NC Sept. PD Opportunity from AAAS Project 2061: "Using *Atlas for Science Literacy*" Workshop

Do you want to learn more about AAAS's *Atlas of Science Literacy, Vol. 1 & 2* and how to put it to use to improve curriculum, instruction, and assessment? AAAS Project 2061 is offering its next popular professional development workshop "*Using Atlas of Science Literacy*" in September at the **Museum of Life + Science**, [Durham, NC](#).

Developed by AAAS Project 2061, the two-volume *Atlas of Science Literacy* contain 100 strand maps that present conceptual connections among the ideas and skills that all students should learn as they make progress toward science literacy. Designed for K–12 science teachers, curriculum specialists, and other educators and researchers, the workshop gives participants a new perspective on standards-based reform based on **understanding the maps, clarifying standards, changing classroom practice, and improving curriculum**. *Atlas of Science Literacy* is copublished by AAAS and NSTA.

Earlybird rates are available and a limited number of **scholarships** are available, too—so don't wait! For more details and a registration form go to the [workshop information page](#); for information about scholarships and deadlines, [click here](#).

If you can't make this date but would like to attend an *Atlas* workshop later this year, an October workshop will be held in [Washington, DC](#) at AAAS Headquarters.

If your institution would like to cohost a workshop, [download this document](#) (PDF) for more details.

And finally, to receive a free e-newsletter and receive automatic updates on workshops and other Project 2061 news, [sign up here](#).

[\(back to top\)](#)

Opportunities for '09 Professional Development for Science Educators

NSTA is working on a wonderful fall season of conferences for science educators who need a reason to enjoy an educational getaway. We're sure you'll find "Inspiration" when you hear a keynote presenter like author Richard Louv in Minneapolis or Ellen Prager, Author and Chief Scientist, NOAA in Ft. Lauderdale. You'll likely find "Discovery" in the Exhibition Hall or at a workshop where tips and techniques are

highlighted and lesson plans are handouts. It might be professional “Growth” that you desire—through seminars and sessions specifically in your discipline. In Phoenix you can count on day long programs in physical science, chemistry, Earth science, and physics. If it’s content knowledge you want, assessment strategies, sessions on ELL issues, or elementary-specific workshops, we have hundreds of offerings at each area conference across the country. We invite teachers from every grade band and every discipline, preservice to veteran, principals and administrators to attend. Fall Conferences on Science Education to consider:

- [Minneapolis, Oct. 29–31](#)
- [Ft. Lauderdale, Nov. 12–14](#)
- [Phoenix, Dec. 4–6](#)

Other reasons to attend?

- For “Freebies” from Exhibitors when you stop by to visit
- For “Connections” you’ll make with your peers and mentors
- For “Passion” you’ll share with other science educators
- For “Expertise” you’ll develop in your subject
- For “Motivation” to be the best teacher you can be

Visit www.nsta.org/conferences for more complete information about our fall conferences.

[\(back to top\)](#)

From the NSTA Online Calendar

Spicing Up Your Teaching With Resources from the ChemEd Digital Library

The Chemical Education Digital Library (ChemEd DL) contains resources and ideas to help you design an innovative and educational chemistry class or make your class even more exciting for your students. This webinar will highlight the resources you can find at the ChemEd DL, everything from the Periodic Table Live! with videos of reactions, data, graphs, and more, to Molecules 360, interactive structures illustrating what molecules look like and how they move. You'll hear some ideas about developing an online component to your course using Moodle (an online classroom management system). The free webinar will be held 1–2 p.m. Eastern Time on July 14. [Register online](#).

Follow a Teacher's Expedition to the Bering Sea

Tom Harten, a teacher with the CHESPAX environmental education program of the Calvert County Public Schools in Maryland, will travel to the Pribilof Islands in the Bering Sea as part of the [PolarTREC program](#), a project that partners teachers with scientists conducting polar research in both the arctic and in Antarctica. Starting on July 15, Harten's month-long project will investigate the impact of climate change on seabirds nesting on these remote islands. He will post journal entries from the field as video and audio podcasts and answer questions from students and teachers.

Visit the [NSTA online calendar](#) for more events and opportunities.

[\(back to top\)](#)

Activities Linking Science With Math, K–4 Encourages Critical Thinking Through Interdisciplinary Study

Activities Linking Science with Math, K–4, offers preservice and inservice elementary school teachers a ready-to-use, hands-on guide that integrates the study of science with mathematics, as well as with the

visual arts, social sciences, and language arts. The 20 lessons, aligned with the latest national standards, encourage the natural curiosity of elementary students and promote the development of their problem-solving skills. The interdisciplinary activities are teacher-friendly and require only inexpensive and easy-to-find materials. The lessons, which cover topics in general, physical, chemical, Earth, and life science include an overview, skills to learn, step-by-step procedures, discussion questions, and assessment techniques. “What Makes a Boat Float,” “Your Very Own Museum—Making Collections,” and “Investigating the Properties of Magnets” are just a few of the activity titles that can extend your curriculum.

To examine a sample chapter and to purchase, visit the [NSTA Science Store](#).

About the Author: John Eichinger has been an educator for more than 30 years, both in K–12 classrooms and at the university level. He has been teaching at California State University, Los Angeles, for the past 17 years.

[\(back to top\)](#)

PD for Science Educators This Fall

Join us in beautiful Minneapolis this fall for NSTA’s Conference on Science Education, Oct 29–31. We offer a professional development getaway for teachers and administrators from every grade band and every discipline. Thousands of science educators will enjoy presentations by renowned speakers such as leadership coach and author William Sommers, workshops on inquiry, sessions to build content knowledge, seminars on pedagogy, and strategies for the newest teacher and the veteran. Here is a sample of our fall program.

- Inquiry Instruction in High School Chemistry and Its Effect on Students' Proportional Reasoning Ability, Research methods and results will be shared. (Middle–College, Supervision)
- The Ecological Footprint Dilemma: A Case Study (College)
- Using Dark Matter to Teach Physics Concepts (High School)
- Biotechnology and Environmental Risk: Project Learning Tree's New Secondary Program (General)
- For Anyone with More Than One Student in Their Classroom! Learn strategies to manage your changing classroom. (Elem–High)
- Climate Change: Classroom Tools to Explore the Past, Present, and Future (Middle, Informal Education)
- Slip Sliding with Glacier Goo—Come construct glaciers and try some inquiry-based lessons (Elem–High)
- Be Particular: Air Quality Activities for the Secondary Classroom from the STORM Project (Middle–High)
- Quick and Effective Visual Formative Assessments (Middle–High)
- Field Trip: The Raptor Center: Face-to-Beak with Nature’s Aerial Predators (ticketed)
- Field Trip: Minneapolis Public Schools Science Materials Center: Supporting Science in a Big District (ticketed)

Don’t forget the favorite Exhibition Hall where companies from across the nation bring their products and services—and giveaways—to those who stop by. For more information or to register, visit www.nsta.org/minneapolis. To save the most, register by our earlybird deadline, **September 18**.

[\(back to top\)](#)

Gone Fishin’

As the hot, humid air settles in on Northern Virginia, *NSTA Express* is taking two weeks off. We'll be hitting your inbox again the week of August 3.

[\(back to top\)](#)

And Don't Forget...

Visit our **member services web page** to ensure that NSTA has your current [contact information](#). And when the time comes to renew—select the "Autorenew" option!

Visit the [NSTA Science Store](#) for an outstanding array of bestselling books and teaching resources. Receive 30% off the price of the July featured book, [Animal Coloration: Activities on the Evolution of Concealment](#).

Professional development courses in your future?

Online options give you a world of choice.

Take a look at these groups offering [courses](#) for science educators!

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