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Week of January 25, 2010

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White House Releases Science and Engineering Indicators 2010 Report

Last week, at an event at the White House, the National Science Board released its Science and Engineering Indicators 2010 report. According to the report, produced every two years, the state of U.S. science and engineering is still strong, but our nation's global primacy in science and engineering has significantly dropped in recent years, largely because of rapidly increasing capabilities among East Asian nations, particularly China. The detailed report also presents information about elementary and secondary science and math education, the science and engineering labor force, and public attitudes and understanding about science and technology, among other things.

- [Read the report](#)

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The Buzz on National Lab Day

Have you heard about National Lab Day? More than 700 NSTA members have already signed up for it.

What is National Lab Day (NLD)? It's more than just a day. It's a nationwide movement to bring together stakeholders in communities of support where science, technology, engineering, and math (STEM) professionals and teachers work together to provide more science experiences to students.

President Obama announced National Lab Day in November as part of the Administration's Educate to Innovate campaign. More than 6.5 million professionals from 200 STEM organizations are being asked to join NLD, which is tentatively set for May 2010.

Science educators will be critical to the success of National Lab Day. NLD projects are teacher-driven. At the NLD website, teachers will be partnered with outside experts to assess current labs, update or refurbish lab equipment, conduct equipment and materials inventory, or clean and repair equipment. Or teachers can elect to have STEM professionals work with them to:

- Implement hands-on projects,
 - Start a fund-raising effort to buy needed supplies,
 - Help with science fairs,
 - Mentor a student,
 - Coordinate and host field trips,
 - Provide internship opportunities,
 - Donate materials, and
 - Assist with lesson plans.
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- [Find out more about NLD](#)
 - [Read Tom Friedman's column on innovation and National Lab Day](#)

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Challenge Your Students to Write Their Way to the Kennedy Space Center

The 24th annual DuPont Challenge© Science Essay Competition is underway and is accepting entries now through **January 31, 2010**. Designed to inspire young people to excel in scientific writing, the competition invites students in 7th through 12th grade to research and write a 700- to 1,000-word essay about a scientific discovery, theory, event, or technological application that has captured their interest. Essays are judged on mechanics and conventions; ideas and content; organization; style, and creativity; and voice. Winners receive savings bonds up to \$5,000 and an expenses-paid trip to Walt Disney World and the Kennedy Space Center. The program also rewards the unique contributions of the teachers of the winning students with trips with winners, \$500 education grants, and sponsorships to attend the 2011 NSTA National Conference on Science Education in San Francisco. Created to honor the *Challenger* astronauts, this competition is a great way to get students to push the limits of imagination and discovery. For more information on classroom use and the competition, visit the [DuPont Challenge website](#).

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Deadline Extended: Top Stars: Educators Invited to Submit Examples of Inspiring Uses of Hubble in Education

2010 is the 20th anniversary of the launching of the Hubble Space Telescope, and to celebrate, the NASA Top Stars contest has extended its next deadline to **February 28, 2010**. U.S. formal (K-12, college) and informal educators are invited to submit their best examples of using NASA's Hubble Space Telescope for science, technology, engineering, or mathematics education. Those selected as "Top Stars" will receive national recognition and awards.

For more information, visit topstars.strategies.org. Questions about this opportunity should be directed to topstars@strategies.org.

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National Conference on Science Education

Plan to attend [NSTA's National Conference on Science Education](#) as an educational getaway. Scheduled for March 18–21, science educators will meet in historic Philadelphia to attend workshops, seminars, and presentations that will inspire you, fine tune your content knowledge, test your strategies and techniques to build student performance, and tackle critical education issues of the day. Along the way, enjoy field trips (28 to choose from) to Longwood Gardens, the Academy of Natural Sciences, or the Wagner Free Institute of Science—in a historic landmark building.

Preconference PD Institutes offer in-depth study starting Wednesday, March 17. *Deepening Science Thinking and Reasoning Through Discussion and Writing in K–8 Inquiry-based* (ticketed) is one of 10 to consider with follow-on pathway sessions later in the week.

Special programs to review: NSTA's Exemplary Science Program, Teacher Researcher Day, Informal Science Day, and Centers for Ocean Sciences Education Excellence (COSEE) Program.

Sessions number almost 2000 to choose from, for every grade band, every discipline, and for preservice through veteran educators. Check out some samples:

- Advancing Science as Inquiry: Professional Development Tools You Can Use (Elem–High School)
- Going Fishing for Rainbows: Connecting Content for Diverse Learners—Practical ideas for connecting hands-on science and mathematics to children's literature and writing through the use of thematic units (Elem)
- NASA Astrobiology Institute: Life on Earth ... and Elsewhere?—Hands-on activities and resources connecting the latest in interdisciplinary science to the classroom (Middle–High)
- Playing with Ecosystem Science: Informal Modeling Games to Explore the Delicate Balance—Learn games that model the living components, nutrient cycles, and human impacts on ecosystems; expand student content knowledge through inquiry (Middle/Informal)
- Empirical Evidence vs. Intuition and the Let's Make a Deal Game Show (High–College)
- Seven Inquiry-based Labs That Integrate the Physical Sciences and Algebra (High School)
- Teaching Chemistry with Hydrogen and Fuel Cells (High–College)
- The Virtual Genetics Lab: A Free Interactive Computer Simulation of Genetics (High–College)
- A Universal Design for Learning Approach to Understanding Cells (Middle–College)

Visit the [Philadelphia conference web pages](#) for more information and to register.

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From the NSTA Calendar: Learn About Robotics

In March, NASA educator and mission specialist Dorothy Metcalf-Lindenburger will launch into space as part of the STS-131 mission crew. Her work during the mission will focus on robotics. On January 27 at 4 p.m. Eastern Time, join NASA's [Digital Learning Network](#) for a free webcast to learn more about the mission and activities you can do to support robotics in the classroom.

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The Everyday Science Mysteries Just Keep on Coming

Everyone loves a good mystery and these unfold in the 15 stories presented in [Even More Everyday Science Mysteries](#), the third volume in author Richard Konicek-Moran's award-winning series. Again, the author uses stories without endings to teach a science principle, allowing students to investigate how each story can be resolved. All the stories relate to the world around us and encourage students to "take ownership" of their learning while offering great shared-inquiry opportunities for teachers as they help students identify problems and design ways to discover the answers to questions raised.

[Pre-order your copy today!](#)

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