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### Week of October 26, 2009

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#### STEM Education Focus of PCAST October Meeting

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Last week Education Secretary Arne Duncan delivered a major policy address on Science, Technology, Engineering, and Mathematics (STEM) education before a meeting of the President's Council of Advisors on Science and Technology (PCAST). PCAST is an advisory group of the nation's leading scientists and engineers who directly advise the President and the Executive Office of the President. A good portion of the PCAST meeting focused on STEM education and also included testimony from federal agencies on their STEM programs and from major STEM stakeholders. NSTA Executive Director Francis Eberle was selected to provide public comment to PCAST members.

- [Learn more about the Oct 22–23 PCAST meeting](#)
- [Read Sec. Duncan's Remarks to the President's Council of Advisors on Science and Technology](#)
- [Read NSTA's Comments to PCAST](#) (PDF)

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#### Education Secretary Duncan Calls for Reforms in Teacher Education

In a major address before Columbia Teachers College last week, Secretary of Education Arne Duncan called for a revolutionary change in the teacher education programs at colleges and universities. "By almost any standard," Duncan said, "many if not most of the nation's 1,450 schools, colleges, and departments of education are doing a mediocre job of preparing teachers for the realities of the 21st century classroom. ... For decades, schools of education have been renowned for being cash cows for universities. The large enrollment in education schools and their relatively low overhead have made them profit-centers. But many universities have diverted those profits to more prestigious but under-enrolled graduate departments like physics—while doing little to invest in rigorous educational research and well-run clinical training .... This robbing Peter to pay Paul is shortsighted. If teaching is—and should be—one of our most revered professions, teacher preparation programs should be among a university's most important responsibilities. Unfortunately, this is the exception, not the rule."

- [Read the Associated Press article on Secretary Duncan's speech](#)
- [Read Secretary Duncan's remarks on teacher preparation](#)

- [Webcast of Secretary Duncan's speech](#)

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## 2009 Siemens We Can Change the World Challenge Winners Meet with U.S. Secretary of Education

Earlier this month, U.S. Secretary of Education Arne Duncan met with the winners of the [2009 Siemens We Can Change the World Challenge](#), Team "Dead Weight," along with NSTA Executive Director Francis Eberle and officials from the Siemens Foundation and Discovery Education. West Branch Middle School Students Jathan Kron (age 12), Justin Roth (age 13), and Brennan Nelson (age 12), along with their teacher, Hector Ibarra, won the inaugural year of the Challenge with a project that raised awareness about the dangers of lead wheel weights in vehicles to help phase out this hazardous material in the tire industry.

Since the Challenge, the winning team has lobbied at the Iowa State Capitol for a bill banning lead wheel weights and phasing in use of steel weights instead; presented their project to the West Branch City Council and convinced the municipality to remove lead weights from all city vehicles; and presented their project to a global audience of students and United Nations representatives during United Nations International Youth Day.

Left to right: Assistant to the President for Science and Technology and Director of the White House Office of Science and Technology Policy Dr. John P. Holdren; Jathan Kron; Justin Roth; Brennan Nelson; U.S. Secretary of Education Arne Duncan.

"I applaud the Siemens We Can Change the World Challenge and all its participants," said Education Secretary Duncan. "Jathan, Justin, Brennan, and their teacher Hector are representative of how a great teacher can empower students to reach their fullest potential and positively impact their local community and the world."

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## Science Education in Fort Lauderdale, Nov. 12–14

If there's anything that renews a teacher's spirit and energy, it's a day out of the classroom in a destination city that overlooks the Atlantic and offers opportunities to nurture your passion for teaching science. For just one day at NSTA's Conference, you can

- Learn about a new approach to examining biomedical practices such as genetic testing,
- Access inquiry-based chemistry labs on a budget,
- Use inquiry through experimental design challenges focusing on force and motion,
- Use hands-on activities to explore energy's role in the carbon cycle and climate change,
- Use a laser and diffraction to measure the width of a human hair,
- Hear Dr. Ellen Prager, marine scientist and author, present on *Unveiling Stories of Wonder and Adventure from the Field and How Science Really Works*,
- Experience "Butterfly World" or the Florida Everglades,
- Visit the exhibitors who will fill your tote with giveaways.

Visit [www.nsta.org/fortlauderdale](http://www.nsta.org/fortlauderdale) to register. For all grade bands and disciplines, invest in yourself to be the best teacher you can be. One-day registration is \$135.

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### **NSTA Offers Conference Rate Online for Buy a Brick ... Build a Legacy Program**

To kick off the fall season of area conferences, NSTA is extending a "conference rate" online for the Buy a Brick ... Build a Legacy program. NSTA successfully launched the Buy a Brick ... Build a Legacy program at the national conference in New Orleans. The program gives donors at every level of giving the opportunity for lasting recognition of their support for the John Glenn Center for Science Education.

The program is a wonderful opportunity for NSTA members and other individuals to honor or memorialize loved ones, family members, teachers, mentors, or others. And, of course, all gifts will help create an important new resource for science educators everywhere. Donors to the Buy a Brick ... Build a Legacy program can choose customized text to be engraved on bricks and pavers that will be featured in prominent locations in the Glenn Center. Companies and other organizations can even have a logo engraved on a paver.

The conference rate for bricks will be available online starting the week of the NSTA Area Conference in Minneapolis (Monday, October 26) through the week of the NSTA Area Conference in Phoenix (Sunday, December 6). Three options are available as part of the program for gifts of \$50 (normally \$75), \$250 (normally \$275), or \$350 (normally \$375). Visit [www.nsta.org/buyabrick](http://www.nsta.org/buyabrick) to participate.

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### **"Stuffing" the November Calendar with Web Seminars for Middle and High School Teachers**

Learn how to give kids a working understanding of physical science concepts while increasing their enthusiasm for engineering with Design Squad—a reality competition series on PBS where teenagers tackle engineering challenges from real-world clients. On Wednesday, November 4, 2009 from 6:30 p.m. to 8:00 p.m. Eastern Time, join Natalie Hebshie, Thea Sahr, and Margot Sigur for Design Squad: Today's Students, Tomorrow's Engineers.

Climate Change is Happening Now in Your Backyard! Experts will highlight premier online resources to help you understand and incorporate the latest on global climate change its impact. Thursday, November 5, 2009 at 8:00 p.m.–9:30 p.m Eastern Time—[Global Climate Change Impacts in the Western United States](#).

Want to keep up on the ever shrinking world of Nano Technologies? Join Dr. Lisa Regalla, Science Editor for DragonflyTV, as she highlights ways you can incorporate nanoscale science and technology into your biology, chemistry, mathematics, and technology classes on Wednesday, November 11, 2009—[Knowing Nano: New Video, Web, and Print](#).

What's new in space? Take a look while Professor Lynn Cominsky presents information on the Fermi Gamma-Ray Space Telescope. Thursday, November 12, 2009—[Anti-matter Eyes on the Gamma-ray Skies](#).

If you live east of the Mississippi river, catch the other half of what climate change is doing to the U.S. on Tuesday, November 17, 2009—[Global Climate Change Impacts in the Eastern United States](#).

Join Dr. Julie Moss and education specialists from the Food and Drug Administration (FDA) in the first

web seminar related to the FDA Symposium held at the NSTA Area Conference on Science Education in Ft. Lauderdale, Florida. Wednesday, November 18, 2009—[FDA/CFSAN International Affairs](#).

What does supertiny technology have to do with food and cosmetics? Find out here: Tuesday, November 24, 2009—[Applications of Nanotechnology in Cosmetics and Foods](#).

All programs are from 6:30 p.m. to 8:00 p.m. Eastern Time unless otherwise noted. [Register today!](#)

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### Real Answers to Real Science Questions

Best-selling author Bill Robertson proves you don't have to be a science geek to understand basic science concepts. Elementary and middle school teachers should check out his latest title, [Answers to Science Questions from the Stop Faking It! Guy](#).

- Entertaining compendium of Robertson's Science 101 column covering general science topics.
- Ideal for K–8 teachers, homeschoolers, and parents who want science background.
- Thought provoking, hands-on activities followed by explanations to help you "get it."
- Columns are organized by topic and cover everything from quarks to photosynthesis, telescopes to the expanding universe, and atomic clocks to curveballs.
- Clear language, readable format, and illustrations by cartoonist Brian Diskin make this collection a fun-filled course you can get an A in.

Members: \$19.16 | Nonmembers: \$23.95.

Visit [www.nsta.org/store](http://www.nsta.org/store) to read a free chapter or place an online order. Call 1.800.277.5300 to order by phone.

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