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Fwd: National Research Council Releases Framework for K-12 Science Education

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Thu, Aug 18, 2011 at 9:33 AM

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We can talk about this at meeting too -- D

-----Original Message-----

From: NSTA Express [<mailto:pleasedonotreply2@minime.nsta.org>]

Sent: Tue 7/19/2011 1:23 PM

To: Littlejohn, Patty

Subject: National Research Council Releases Framework for K-12 Science Education

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Week of July 18, 2011

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National Research Council Releases A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas

The National Research Council (NRC) today released its much-anticipated report that presents a new framework for K-12 science education and identifies the key concepts and practices that all students should learn. A Framework for K-12 Science Education offers a new vision for K-12 education in science and engineering, and represents a significant shift in how these subjects are viewed and taught.

According to the report, "K-12 science and engineering education should focus on a limited number of disciplinary core ideas and crosscutting concepts, be designed so that students continually build on and revise their knowledge and abilities over multiple years, and support the integration of such knowledge and abilities with the practices needed to engage in scientific inquiry and engineering design."

The framework will serve as the basis for the Next Generation Science Standards, a state-led effort managed by Achieve, Inc. The framework will also inform the work of curriculum and assessment developers, researchers, teacher educators, and others.

Read the full report A Framework for K-12 Science Education (http://www.nap.edu/catalog.php?record_id=13165) Read the NRC press release (<http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=13165>) Read NSTA press statement (<http://www.nsta.org/publications/news/story.aspx?id=58735>) on the framework Read the Education Week article

(<http://www.edweek.org/ew/articles/2011/07/19/37science.h30.html?tkn=NXLF84%2BGWb96XT8cVTiWy9AqtlCk76XPNOFL&cmp=clp-edweek>) on the release of the NRC framework For a report brief, Q&A, and additional information, click here (http://www7.nationalacademies.org/bose/Standards_Framework_Homepage.html).

NSTA and the National Research Council will present a web seminar (http://learningcenter.nsta.org/products/symposia_seminars/NLC/webseminarXI.aspx) on Tuesday, July 26, at 6:30 p.m. to explore major new components of the framework. The web seminar is free and open to all. The web seminar will also be archived and accessible after the event.

For updates, resources, and insights on the conceptual framework, as well as the work surrounding new science standards, visit the dedicated NSTA web page--Next Generation Science Standards (<http://www.nsta.org/about/standardsupdate.aspx>).

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STEM: Good Jobs Now and for the Future

A new report released last week by the U.S. Department of Commerce on U.S. employment in the STEM fields finds that in 2010, 7.6 million people (5.5 percent of the labor force) worked in STEM occupations. Over the past 10 years, growth in STEM jobs was three times greater than that of non-STEM jobs, and STEM jobs are expected to continue to grow at a faster rate than other jobs in the coming decade. STEM workers are also less likely to experience joblessness. Further findings show STEM workers command higher wages, earning about 26 percent more than their non-STEM counterparts. STEM degree holders also enjoy higher earnings, regardless of whether they work in STEM or non-STEM occupations. Likewise, college graduates--no matter what their major--enjoy an earnings premium for having a STEM job.

Read the report STEM: Good Jobs Now and for the Future (<http://www.esa.doc.gov/Reports/stem-good-jobs-now-and-future>) (PDF) And Education Week's Erik Roblen reports (http://blogs.edweek.org/edweek/curriculum/2011/06/sparking_stem_interest_is_key.html) that "[t]he most promising pathway to generating more college graduates with STEM degrees is not enrolling students in advanced math and science classes in high school or emphasizing higher achievement, a new study (<http://onlinelibrary.wiley.com/doi/10.1002/sce.20441/abstract>) suggests, but simply doing more to spark their interest in the subjects."

New Resources from the National Earth Science Teachers Association: Open Windows to the Universe

The National Earth Science Teachers Association (<http://www.nestanet.org/cms/content/welcome>) (NESTA) announces new resources for K-12 Earth and space science educators and upcoming events at the Fall NSTA Area Conferences. NESTA is now the home of Windows to the Universe (<http://www.windows2universe.org/>), one of the most popular educational resources for Earth and space science educators and students, with over 9000 pages of content spanning Earth and space science at upper elementary, middle and high school levels as well as well over a hundred tested

classroom activities you can use immediately in the classroom. We have just released a dozen new classroom activities on topics associated with Our Changing Planet (http://www.windows2universe.org/earth/changing_planet/changing_planet.html), ranging from Adaptation of Butterflies (http://www.windows2universe.org/teacher_resources/adaptation_species.html) to Withering Crops (http://www.windows2universe.org/teacher_resources/withering_crops_activity.html), each accompanied by a beautiful video developed by NBC Learn (<http://www.nbclearn.com/climate>), with support from the National Science Foundation (<http://www.nsf.gov/>). NESTA's schedule of events at the Fall NSTA Area Conferences is available at on the NESTA website. (https://www.nestanet.org/cms/sites/default/files/documents/NESTA_Workshops_Fall_2011_NSTA.pdf) Join (<http://www.nestanet.org/cms/content/welcome>) NESTA today!

Watch Out for the Future Engineers!

The next generation of top engineers may be in your classroom. To help you encourage them--and educate all of your students about science, technology, engineering, and mathematics (STEM)--The National Engineers Week Foundation offers a student competition and a free website.

In the 2011-2012 National Engineers Week Future® City Competition, sixth, seventh, and eighth graders across the country team with engineer-volunteer mentors to create their visions of the city of tomorrow. Future City combines problem-based learning with computer simulation to address real-world issues and national and state academic content standards. You can learn more and pre-register your students at www.futurecity.org (<http://www.futurecity.org/>); the registration deadline is October 31, 2011. Budding engineers of all ages and their teachers in the United States will find local opportunities to experience engineering at My Discover-e (<http://www.mydiscover-e.org/>). My Discover-e connects teachers and students to engineering-related resources in their area through maps, event calendars, event searches, and an engineer network. The site also highlights engineering achievements and promotes learning about engineering inside and outside the classroom. Future City is just one of the many student programs appearing on the NSTA Calendar (<http://www.nsta.org/publications/calendar/?lid=exp>). For more free STEM education resources, visit Freebies for Science Teachers (<http://www.nsta.org/publications/freebies.aspx?lid=exp>).

Win Yearlong PD Scholarship to the New Science Teacher Academy

For new secondary science teachers, those first years of teaching often are stressful and anxiety-ridden. Research indicates new teachers' performance and confidence is enhanced with professional development, engagement with like-minded peers, and solid professional mentoring. To that end, NSTA and sponsoring corporations established the New Science Teacher Academy, a program that fills those needs. Middle and high school science teachers in their second or third year of teaching are invited to apply to participate in the Academy. More than 200 teacher applicants will win a scholarship for the 2011-2012 Academy program. "Fellows" in the Academy will enjoy the following:

Membership in the NSTA with full benefits
Access to facilitate, web-based curriculum devoted to content and classroom pedagogy
One on one e-mentoring, specific to the Fellow's discipline and grade band
All expenses paid to NSTA's National Conference (lodging, airfare, meals, and registration included)
Attendance at a PD Institute or Research Conference
Visit www.nsta.org/academy (<http://www.nsta.org/academy/>) to learn more or apply. The deadline is Aug. 1.

NSTA's Hartford Conference: Science Inspiring Growth

NSTA will host the first regional Conference on Science Education this fall in Hartford, Connecticut (<http://www.nsta.org/conferences/2011har/>), Oct. 27-29. Top-notch professional development will be offered at more than 400 presentations, workshops, and seminars to sharpen your teaching skills and build content knowledge. Three professional development stands--STEM Education, Sustainable Global Communities, and Developing Literacy Skills through Science--will be key to many of the scheduled learning events. Attendees will hear from featured speakers like Dr. Jim Garvin, NASA's Goddard Space Flight Center Sciences and Exploration Directorate Chief Scientist. Experience Hartford's rich culture through academic field trips to the Mark Twain House and Museum (<http://www.marktwainhouse.org/>) and the Connecticut Science Center (<http://www.ctsciencecenter.org/>), and don't forget to visit the Exhibit Hall to test cutting-edge products developed for science teachers. Enjoy exhibitors' giveaways and ready-to-use lesson plans to use in your classroom. Register (<https://ecommerce.nsta.org/>)

[2011HAR/](#)) by the earlybird deadline of September 16 to save the most! Visit www.nsta.org/hartford (<http://www.nsta.org/conferences/2011har/>) for more information or to register.

Professional development courses in your future?

Online options give you a world of choice.

Take a look at these groups offering courses (http://learningcenter.nsta.org/products/online_courses/?lid=exp) for science educators!

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And Don't Forget...

Visit our member services web page to ensure that NSTA has your current contact information (<http://www.nsta.org/membership/contactupdate.aspx?lid=exp>). And when the time comes to renew--select the "Autorenew" option!

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Click on the logo above for more information and to register for these free professional development opportunities.

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