

# STEM CAUCUS NEWS

July 2012

**The Congressional Science, Technology, Engineering, and Mathematics Education (STEM Ed) Caucus News is a collection of the major news stories, events, and legislation in STEM policy. The Congressional STEM Ed Caucus is co-chaired by Congressmen Dan Lipinski and Roscoe Bartlett. If your Member is interested in joining the Caucus, or would like to be removed from the Caucus distribution list please e-mail Jim Curry [Jim.Curry@mail.house.gov](mailto:Jim.Curry@mail.house.gov) (Lipinski) or Faye Powers [Faye.Powers@mail.house.gov](mailto:Faye.Powers@mail.house.gov) (Bartlett).**

## **In the News...**

### [Who Is Writing the 'Next Generation' Science Standards?](#)

May 14, 2012

As the general public now gets a chance to weigh in on a first draft of common standards in science, the question arises: Who is writing these voluntary standards, anyway? The short answer? It's complicated. Organizers have billed the development of the so-called Next Generation Science Standards as a "state-led" process. And that includes 26 states spanning the continent, from California to Maine, and from South Dakota to Georgia. But that doesn't tell the whole story.

### [New Classroom Science Standards Up for Review](#)

May 18, 2012

The first substantial update to national science teaching standards in roughly 15 years — and the first including the science of human-driven climate change — is open for public comment through this month. The effort has been directed by Achieve, an organization created by states and corporate backers eager to boost student performance and prospects as science and technology increasingly drive economies. The final (optional) standards will help guide states in shaping science curricula and requirements.

### [Why is it Difficult to Connect US Veterans with Energy Jobs?](#)

June 5, 2012

The electric utility industry needs to replace nearly half of its skilled workforce as a generation reaches retirement age in the next few years. Soldiers, sailors and Marines separating from the armed forces bring education, discipline and a proven work ethic, but confront a higher-than-average unemployment rate. Sounds like a ready-made match, so what's stopping it? That is the question that veterans, their advocates, and businesses are grappling with, experts told a Bipartisan Policy Center (BPC) session May 22 in Washington DC.

### [Evidence Persists of STEM Achievement Gap for Girls](#)

June 11, 2012

With the 40th anniversary of Title IX just days away, one key area where questions about gender equity persist is STEM education and the under-representation of women in those professions. In researching this subject for a forthcoming EdWeek story, I discovered some evidence that a STEM achievement gap persists for girls at the K-12 level, especially in science. I also learned that what may be true for the United States is not necessarily so across the globe.

### [How to integrate literacy with STEM](#)

June 14, 2012

The education reform discussion is often fraught with false choices. Consider the news last month that U.S. students are still struggling with science, according to national assessments. The same assessments showed last fall that two thirds of fourth graders are not reading proficiently. So should we invest our limited education resources in teaching critical reading skills or in what's known as STEM — science, technology, engineering and math? The truth is, we can and must do both.

### [For Most U.S. High Schoolers, STEM Knowledge Is Only Skin Deep](#)

June 20, 2012

American teens are adept at conducting scientific experiments, but only if they don't stray beyond the basics, according to assessment results released Tuesday by the National Center for Education Statistics. Seventy-five percent of high school seniors successfully completed straightforward experiments as part of the 2009 National Assessment of Educational Progress (NAEP) science exam. When tasked with more complicated experiments, only 25 percent came to the correct conclusion.

### [Why Aren't America's Students Smart Enough to Handle Science?](#)

June 21, 2012

The National Center for Education Statistics released the findings of their National Assessment of Educational Progress science exam this week and it doesn't bode well for the state of STEM (Science, Technology, Engineering and Mathematics) education. While the majority of students at the fourth, eighth and twelfth grade levels could successfully complete straightforward hands-on or computer-based tasks and arrive at the correct conclusions, once additional variables or more complex calculations were introduced, their performance declined dramatically.

### [Boosting STEM Education at Community Colleges](#)

July 8, 2012

A 2011 report about STEM workforce needs (STEM stands for Science, Technology, Engineering and Math) from the Center on Education and the Workforce at Georgetown University indicates that by 2018, 92 percent of STEM workers will need post-secondary education. Of that total, around 65 percent will need a Bachelor's degree or higher, while 35 percent will be comprised of those with sub-baccalaureate training. The breakdown in qualifications making up that 35 percent: 1 million Associate's degrees; 745,000 professional certificates; and 760,000 industry-based certifications.

### [California STEM Learning Network \(CSLNet\) Joins 12 Other States to Launch STEMx](#)

July 11, 2012

The California STEM Learning Network (CSLNet) joined Battelle and twelve other state STEM (science, technology, engineering and mathematics) networks to officially launch STEMx at the recent U.S. News STEM Solutions Summit in Dallas, Texas. Led by the Battelle Memorial Institute, STEMx connects state networks and partners to accelerate the growth of policies, practices and partnerships that will expand the number of STEM teachers, increase student achievement in STEM education and, ultimately, grow tomorrow's innovators.

### [Teaching Engineering in the Younger Grades](#)

July, 2012

Due in part to testing pressures, for years science has taken a back seat to reading and math. And though topics like volcanos and time travel have the potential to get kids' attention, science's status as a curricular stepchild typically translates into dull textbooks and little budget

for experiments or supplies. The tide is beginning to turn. President Obama has made science, technology, engineering, and mathematics—the so-called STEM curriculum—a priority in his educational agenda. More states are including STEM objectives in their standards. And teachers are discovering that STEM offers students unique opportunities for cross-curricular learning and for developing skills they'll need for the workplace.

### [Can We Fix Computer Science Education in America?](#)

July 16, 2012

In a field as quickly moving as technology, Blomeyer stresses the importance of building communities of teachers, either through physical meetings or online. She personally puts her lesson plans on her website so that other teachers from across the country can access them. Still, once students take Exploring Computer Science, they still need something to advance toward afterwards. That's why educators are looking to provide an alternative to the current, Java-heavy AP computer science course with Computer Science: Principles, which, aside from programming, also focuses on algorithm design, big data and social implications of technology.

### [Universities Reshaping Education on the Web](#)

July 17, 2012

As part of a seismic shift in online learning that is reshaping higher education, Coursera, a year-old company founded by two Stanford University computer scientists, will announce on Tuesday that a dozen major research universities are joining the venture. In the fall, Coursera will offer 100 or more free massive open online courses, or MOOCs, that are expected to draw millions of students and adult learners globally.

## ***From the Administration...***

### [NAEP Releases its 2011 Report Card on America's Science Education](#)

May 2012

A representative sample of 122,000 eighth-graders participated in the 2011 National Assessment of Educational Progress (NAEP) science assessment, which is designed to measure students' knowledge and abilities in the areas of physical science, life science, and Earth and space sciences.

### [White House Commemorates 40 Years of Title IX with Announcement on Women in STEM](#)

June 20, 2012

The Department of Education will announce the revision of its Title IX Technical Assistance presentation, made available nationwide to state and local education agencies across the country, to include information on how institutions receiving federal financial assistance are also required to ensure equal access to educational programs and resources in STEM fields.

### [Obama plans \\$1B effort to build "Master Teacher Corps" of elite math, science teachers](#)

July 18, 2012

The Obama administration unveiled plans Wednesday to create an elite corps of master teachers, a \$1 billion effort to boost U.S. students' achievement in science, technology, engineering and math. The program to reward high-performing teachers with salary stipends is part of a long-term effort by President Obama to encourage education in high-demand areas that hold the key to future economic growth — and to close the achievement gap between American students and their international peers.

## **On the Hill...**

### **[NIST's Summer Undergraduate Research Fellowship Undergraduates to Showcase their Research](#)**

The 2012 class of 176 students who participated in NIST's Summer Undergraduate Research Fellowship Program will be on the Hill Tuesday, July 24<sup>th</sup> to showcase the research they have conducted. The Science, Space, and Technology Committee is hosting these outstanding students and providing an opportunity for members of Congress and staff to meet the students, talk with them about their work and hear from some of the students themselves about the importance of the program to their education. The students are conducting research at NIST's Gaithersburg campus located just outside Washington, DC.

## **Recent Action on STEM Legislation...**

\*\*This is a record of recently introduced legislation related to STEM Ed. The Caucus does not endorse any specific initiatives or legislation but instead strives to inform Members and staff about matters related to STEM Education.

### **[H.R.4483](#)**

**Latest Title:** Broadening Participation in STEM Education Act

**Sponsor:** [Rep Johnson, Eddie Bernice](#) [D-TX-30] (introduced 4/24/2012)    **Cosponsors:** [12](#)

**Committees:** House Science, Space, and Technology

**Latest Major Action:** 4/27/2012 Referred to House subcommittee. Status: Referred to the Subcommittee on Research and Science Education.

### **[H.R.4366](#)**

**Latest Title:** Project Ready STEM Act

**Sponsor:** [Rep Fudge, Marcia L.](#) [D-OH-11] (introduced 4/17/2012)    **Cosponsors:** [10](#)

**Committees:** House Education and the Workforce

**Latest Major Action:** 4/17/2012 Referred to House committee. Status: Referred to the House Committee on Education and the Workforce.

### **[H.R.3821](#)**

**Latest Title:** After School for America's Children Act of 2012

**Sponsor:** [Rep Kildee, Dale E.](#) [D-MI-5] (introduced 1/24/2012)    **Cosponsors:** [13](#)

**Committees:** House Education and the Workforce

**Related Bills:** [S.1370](#)

**Latest Major Action:** 3/29/2012 Referred to House subcommittee. Status: Referred to the Subcommittee on Early Childhood, Elementary, and Secondary Education.

### **[H.R.3990](#)**

**Latest Title:** Encouraging Innovation and Effective Teachers Act

**Sponsor:** [Rep Kline, John](#) [R-MN-2] (introduced 2/9/2012)    **Cosponsors:** [10](#)

**Committees:** House Education and the Workforce; House Armed Services; House Financial Services

**House Reports:** [112-459](#) Part 1

**Related Bills:** [H.R.2094](#), [H.R.3896](#), [S.595](#)

**Latest Major Action:** 4/27/2012 Placed on the Union Calendar, Calendar No. 321.

### **[H.R.3989](#)**

**Latest Title:** Student Success Act

**Sponsor:** [Rep Kline, John](#) [R-MN-2] (introduced 2/9/2012)    **Cosponsors:** [13](#)

**Committees:** House Education and the Workforce

**House Reports:** [112-458](#)

**Latest Major Action:** 4/27/2012 Placed on the Union Calendar, Calendar No. 320.

### **[H.R.1903](#)**

**Latest Title:** 21st Century STEM for Girls and Underrepresented Minorities Act

**Sponsor:** [Rep Woolsey, Lynn C.](#) [D-CA-6] (introduced 5/13/2011)    **Cosponsors:** [41](#)

**Committees:** House Education and the Workforce

**Latest Major Action:** 9/8/2011 Referred to House subcommittee. Status: Referred to the Subcommittee on Early Childhood, Elementary, and Secondary Education.