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Editor's Note

For this month's feature, we are pleased to collaborate with federal colleagues from the "Educate to Innovate" campaign noted in last month's edition, and specifically with National Lab Day, one of the five innovative partnerships that comprise this new initiative to improve the performance of America's students in science, technology, engineering, and mathematics.

Feature

National Lab Day: More Than the Name Might Imply

The United States typically ranks well-below average in student science and mathematics scores when compared to the other industrialized nations of the world.

That must change if the U.S. is to remain globally competitive. In a speech last spring, President Obama issued a call to action, saying, "... Make no mistake: Our future is on the line. The nation that out-educates us today is going to out-compete us tomorrow." As a result of this call, the President last fall an "all hands on deck call" to scientists, engineers, businesses, and the general public to work together in the service of STEM education. This campaign, "[Educate to Innovate](#)," has three main aims:

- increase STEM literacy so that all students can learn deeply and think critically in science, math, engineering, and technology;
- move American students from the middle of the pack to top in math and science in the next decade; and
- expand STEM education and career opportunities for underrepresented groups, including women and girls.

One component of the administration's science, technology, engineering, and mathematics strategy is to leverage these partnerships to harness the power of media, interactive games, hands-on learning, and community volunteers to reach millions of students over the next four years, inspiring them to be the next generation of inventors and innovators. [National Lab Day](#) (NLD) was one of those partnerships.

NLD focuses on the part of the President's call to action that was specifically addressed to the nation's scientists:

I want to persuade you to spend time in the classroom, talking and showing young people what it is that your work can mean, and what it means to you ... to think about new and creative ways to engage young people in science and engineering ... encourage young people to be makers of things, not just consumers of things.

— President Barack Obama, April 2009

NLD connects the scientists who respond to the teachers and students who need them, as a [video](#) on Vimeo evidences.

More than Just a Day

The name is misleading. NLD is not about "labs" in the usual, narrow sense – test tubes and bubbling beakers, frogs or scurrying beetles. Rather, it takes a very broad view of what a lab is: any place where students can tinker, explore, experiment, and test; it is any place that they can get their hands dirty and their

students can tinker, explore, experiment, and test; it is any place that they can get their hands dirty and their minds engaged. A lab could be a laptop for a software designer, a mountaintop to a geologist, a computer link to a distant particle accelerator to a physicist, or a factory floor to an industrial engineer. It's a place where hands-on lessons in science, technology, and engineering can happen, or where math can come alive to a child. It could be anywhere in the physical or virtual world.



Students and scientists share hands-on learning experiences outside the classroom.

NLD is also not about a day. This year's activities will culminate in some events during the first week in May but the effort will not end there. NLD is an ongoing effort to bring exciting, hands-on, discovery-based learning experiences to students. It is a movement that is supporting STEM education in schools by giving students well-equipped labs and access to the STEM-based professionals who can inspire them.

"We know that teachers and schools can benefit tremendously from partnerships with scientists and engineers – and that benefit often goes both ways. National Lab Day is an innovative tool to make it easier to form those connections," said Michael Lach, Special Assistant for STEM Education at the U. S. Department of Education. "It

really makes it easy to initiate partnerships."

Teacher-Driven Design

Teachers, in collaboration with their local communities, set the agenda for their own students. Teachers are the experts. Their needs could be additional lab equipment, personal mentoring from a scientist, a visit to a working lab, tech support, internships, help with a lesson plan or a science fair project, up-to-date career information, chaperones for a field trip, or just an extra set of hands for a class project. In all these instances and more, teachers know best what is needed to improve their students' hands-on learning experiences. They start the process by registering on the [National Lab Day Web site](#) and describing the goals of their project. Requests for equipment, books, or supplies can be automatically listed on [DonorsChoose.org](#).

More than a thousand teachers have already posted projects on the website. The projects are wide-ranging. Some teachers ask for general help with curricular topics, such as:

Alternative Energy Resources. I am looking for any classroom projects that are cross-curricular on alternate (renewable) energy resources.

Chemistry of Fire: I would like to incorporate an in-depth study of fire into our unit on Redox. We live in an area of Florida where fire is used to control the growth of plants in certain areas. I might also like to incorporate a discussion of arson and chemistry.

Other teachers have very specific projects in mind:

LED Light vs. Fluorescent Light on Hydroponically Grown Basil. Basil plants will be grown in a hydroponic system. Plants will be exposed to either LED light sources or fluorescent light sources. The vitamin C content of the basil plants will be assayed, using indolphenol. We are looking for experts or hobbyists willing to answer questions regarding maintenance of the hydroponic system and/or assay techniques and data interpretation.

Math and Science Lab Design. Seventh-grade students will be using math concepts such as scale, geometry, and measure to design a math/science lab for our growing school. The goal is to primarily introduce pre-algebra students to the practical applications of interior design. We have an available space that is currently in disrepair. The school plans to use the space for an auditorium and business

offices, but the design for the math/science lab might be considered if it was close to professional quality and took very little space. We need an engineer to advise us and an architect to critique plans.

Biology Brain Night. Students would create biology-based projects that illustrate one or two important concepts of Biology that impact life in their community. The students would present their idea in an interesting way using formats such as video, poster, song, art work or interactive website.

Alternatively, students would develop a program that trains young children on a healthy eating lifestyle. Students would then participate in a Brain Bee. I would need materials for the health project and judges for the contest.

Air Capacitors. The standard model of an air capacitor is two peanut butter containers glued together with a piece of elastic material between them. These are fragile and break easily. What I would like ideally is to have each pair or triplet of students build an air circuit with a pump and pinwheels functioning as analogous bulbs. The energy stored in the air capacitors in the form of elastic potential energy could then be used to spin a tiny wind generator lighting a bulb. This would bring energy generation into the curriculum at an early time. I have 190 students in three completely different subjects: Pre-AP Biology, Pre-AP Physics, and Inquiry Science for 9th-graders, so I don't have much time to build and test equipment.

Some projects are longer term, such as the following one based on an existing program. NLD is a great way to find more scientists and teachers for ongoing efforts:

Citizen Schools: What will YOU teach? We are all experts! In our careers, in the computer lab, on the basketball court, in the garden, or in the kitchen – YOU are an expert at something. Citizen Schools gives you the opportunity to teach what you know in your professional career or personal pursuits – to help middle school students learn real world skills and get excited about learning. Remember that teacher who sparked a passion in you? Here's your chance to do the same. What we are looking for: No teaching experience is necessary. The volunteer experience lasts about 12 weeks. Volunteers commit to about three to four hours a week, which includes lesson preparation and the weekly 90-minute apprenticeship session. You will receive training, on-site orientation, and will be closely supported. Can't commit to 12 weeks? We also invite you to attend or serve as a judge at one of our end-of-semester "WOW!" showcases that take place in May and December. This will give you a firsthand understanding of the amazing work that volunteer Citizen Teachers do in sharing their expertise and career paths with students and in bringing science to life. What will YOU teach?



Teachers share NLD projects so others can learn from their innovative ideas and collaborations with STEM professionals.

Other projects are short-term and relatively informal. Lots of teachers ask for local STEM-based professionals to help with science fairs, Olympiads, or festivals. Teachers may ask for tech support for computer labs or robotics projects, or they may ask for scientists to come and talk about their careers. One teacher is hosting a series of "dinners with a scientist" where kids and a scientist meet over pizza to talk informally. Another teacher has proposed "Skype with a Child" where STEM-based professionals sign up to interactively answer students' questions once a month. Other teachers, STEM professionals, and the public can view many of the resulting projects [online](#).

Calling All Scientists and Engineers!

A super majority—94 percent—of teachers ask to be connected to a scientist or engineer, and NLD is about making those connections.



More than 350 projects can be searched by using the Projects Map on the NLD Web site.

Scientists, techies, engineers, and mathematicians are needed in classrooms for their expertise and for the excitement and enthusiasm that they can bring to discussion of their field. They can connect to projects by first registering at the NLD Web site. Once they do, they will be automatically matched to schools in their local areas that need their expertise. Both the teachers and the volunteers receive periodic e-mail notifications of the matches. They are each free to respond or not. If they do respond, communications are handled through the Web site until both parties choose to reveal their personal e-mails or contact information. Scientists and volunteers can also find projects by searching under the “Projects” tab or by scanning the Project Map. If they see a project they like, they can just

click on the “I want to help” button to get connected. Finally, potential volunteers can be proactive by going to their local school and telling them about NLD.

Connecting Teachers to Resources

National Lab Day is also becoming an effective way to disseminate resources. The Web site has lots of resources on project ideas, professional development opportunities, and information on relevant programs and events. It is a way to connect to a wide range of companies, federal agencies, and nonprofit organizations that offer STEM materials, programs, and events.

NLD is expected to last well beyond this May’s events by mobilizing citizens – especially citizen scientists – to see schools as an important national resource worthy of their support. National Lab Day has enormous potential to change the way students see science. It can build the ongoing, long-term collaborations needed to make high quality, hands-on STEM experiences and practitioners routinely available to all students.

Check out the Web site. Register. See what projects teachers in your area are proposing. See what volunteers in your area have to offer. Put your project on the map!

Want to know more about NLD? Contact Jan Cuny, Senior Director of Professional and Federal Programs at the National Science Foundation, at jan@nationallabday.org.

What’s New ?

Special Report: White House Proposes ESEA Reform

The Obama Administration released its [blueprint](#) to revise the Elementary and Secondary Education Act (ESEA) to help raise expectations of students and reward schools for producing dramatic gains in student achievement. Following the lead of the nation’s governors and state education leaders, the plan will ask states to ensure that their academic standards prepare students to succeed in college and the workplace, and to create accountability systems that recognize student growth and school progress toward meeting that goal. Announcing the blueprint in his weekly address on Saturday, March 13, President Obama stressed the urgency of committing to an ambitious goal of all students graduating from high school prepared for college. “Unless we take action – unless we step up – there are countless children who will never realize their full talent and potential,” he said. “I don’t accept that future for them. And I don’t accept that future for the United States of America.”

Following the release of the President’s blueprint, [Secretary Duncan](#) focused on needed improvements in accountability for student achievement as a key area that the administration’s proposal addresses. “To make ESEA work we have to fix accountability and get it right,” he said. “A rigorous and fair accountability system measures student growth, rewards schools that accelerate student achievement, and identifies and rewards outstanding teachers and leaders.”

Secretary Duncan is prepared to work with Congress on a bipartisan basis to reauthorize the ESEA, and began the process on March 17, when he [testified](#) before the Senate Health, Education, Labor, and Pensions Committee and the House Education and Labor Committee. He stressed the urgency of the reforms proposed in the President's blueprint. "Our children and our future are at risk," Secretary Duncan said, "so let us together do the difficult but necessary things our schools demand, and our children deserve." (March 2010)

From the U.S. Department of Education

On March 1, President Barack Obama and Secretary of Education Arne Duncan joined General Colin Powell for the [announcement](#) of "Grad Nation," a 10-year campaign by the America's Promise Alliance to mobilize America to reverse the dropout crisis. The President challenged states to identify high schools with graduation rates below 60 percent and discussed the Obama Administration's new investments to turn schools around. (March 2010)

Secretary Duncan invites comments on the draft [National Educational Technology Plan](#), which describes how information and communication technologies can help transform American education. It provides concrete goals to inform state and local educational technology plans, and recommendations to inspire research, development, and innovation. "This plan was prepared for the Office of Educational Technology by leading researchers and practitioners," the Secretary noted in [announcing the new plan](#). "It represents their best ideas about how we can bring forward our schools—making them centers of learning designed to close the gap between the technology-rich and exciting experiences that dominate students' lives outside of school while preparing them for success in today's competitive global marketplace." (March 2010)

Secretary Duncan joined former Secretary of Education Richard Riley at the fifth annual [Celebration of Teaching and Learning](#) 2010 in New York City. The conference brought together more than 8,500 educators with global experts, activists, academics, and artists to share their experiences in and outside of the classroom. (March 2010)

"2010 Census: Make Education Count," a [fact sheet](#) from the Census Bureau, notes that the accuracy of the 2010 census has significant implications for education. In fact, 2010 census data will directly affect how approximately \$26 billion in annual federal education funding is allocated to local, state, and tribal governments over the next 10 years. Census data is used to create funding formulas for over 30 formula grant programs administered by the Department, which provide aid to low-income students, English language learners, students with disabilities, homeless children, and migrant children. (March 2010)

The Department issued proposed priorities for a new \$439 million competition under the [Teacher Incentive Fund](#) to support states, school districts, charter schools, and nonprofit organizations in partnership with any of these entities in the development and implementation of performance-based compensation systems for teachers and principals. The goals are to increase educator effectiveness and student achievement in high-need schools. Applicants will have the opportunity to apply for funding to develop differentiated pay systems that reward teachers and leaders who demonstrate their effectiveness in improving student learning, take on enhanced leadership roles, and serve in hard-to-staff schools or core subjects. (February 2010)

In a recent meeting with the nation's governors, President Obama [outlined new steps](#), as part of the reauthorization of the Elementary and Secondary Education Act (ESEA), to better prepare America's children for college and the workforce. For example, he proposed requiring all states to adopt and certify that they have college- and career-ready standards in reading and math to qualify for Title I funding. A state could meet this requirement in two ways: by adopting standards developed by a consortium of states or by verifying, in a process to be developed with state universities, that their existing standards are high enough. (February 2010)

From the Office of Innovation and Improvement

Secretary of Education Arne Duncan [announced](#) the final priorities and released the grant application for the [Investing in Innovation Fund](#) (i3). The fund will support the development of path-breaking new ideas, the validation of approaches that have demonstrated promise, and the scale-up of the nation's most successful and proven education innovations. "Many of our generation's greatest breakthroughs occur when people are willing to invest in small scale projects with big scale potential," said Duncan. "We need to identify these pockets of promise in the education community and give them the resources they need to grow." (March 2010)

From the Institute of Education Sciences

The Institute of Education Sciences (IES) is requesting applications to evaluate Race to the Top Awards (Phase 1 and Phase 2) under its [Evaluation of State and Local Education Programs and Policies Program](#) (84.305E). Applications will be accepted on or before April 1, 2010, June 24, 2010, and September 16, 2010. The April deadline is only available for applicants intending to evaluate Race to the Top Awards. This first round allows applicants to start their evaluations at the same time that Phase 1 awardees are expected to be implemented. Applications to evaluate Race to the Top Awards can also be submitted by the June or September deadlines. (March 2010)

FY 2011 Requests for Applications for two research grant competitions, [Education Research Grants](#) (84.305A) and [Special Education Research Grants](#) (84.324A), have been announced. (March 2010)

American Recovery and Reinvestment Act

Fifteen states and the District of Columbia will [advance as finalists](#) for Phase 1 of the Race to the Top competition. Race to the Top is the Department's \$4.35 billion effort to dramatically re-shape America's educational system to better engage and prepare our students for success in a competitive 21st century economy and workplace. States competing for Race to the Top funds were asked to document past education reform successes, as well as outline plans to: extend reforms using college and career-ready standards and assessments; build a workforce of highly effective educators; create educational data systems to support student achievement; and turn around their lowest-performing schools. (March 2010)

The Department of Education approved [State Fiscal Stabilization Fund \(SFSF\) Phase II](#) funding for Illinois, Massachusetts, and New Jersey. SFSF's Phase II application required states to supply data that will lay the foundation for education reform. State applications are being approved on a rolling basis. (March 2010)

Arts Education

A five-year, [comprehensive study](#) of the [Oklahoma A+ Schools](#) provides documentation of the growth and effectiveness of this 60-school network that includes public, private, and charter schools from early childhood through high school, in urban, suburban, and rural Oklahoma. Schools commit to a set of eight A+ Essentials™ that include the arts, enriched assessment, and collaborative instruction. A+ schools, according to the study, evidence higher student achievement, decreased discipline problems, and stronger parent and community involvement. (March 2010)

The [Arts Education Partnership's Wire](#) currently features a summary of the findings of a recently released study of analyzed data from the National Educational Longitudinal Survey (NELS:88), a study of some 25,000 secondary school students over their high school years and then an additional 10 years, until age 26. The results, presented in *Doing Well and Doing Good by Doing Arts*, by James Catterall of UCLA, strongly connect arts learning with both general academic success and pro-social outcomes. The study offers evidence of the significant role that the arts play in preparing young people for success, both in academia and in life. (March 2010)

The Southeast Center for Education in the Arts third national [Arts & Education Forum: Arts @ the Core of 21st Century Learning](#) will take place in Chattanooga, Tenn., on May 14-15, 2010. The Forum will examine

how artistic concepts and processes can be illuminated and propagated for more creative and meaningful instruction throughout the curriculum. Participants will experience, discuss, and explore the influence the arts can have on 21st century competencies as well the impact of integrated teaching and learning on arts education. The deadline to take advantage of special hotel rates is April 13. (February 2010)

Financial Education

The [National Financial Capability Challenge](#), unveiled last December by Secretary of the Treasury Tim Geithner and Secretary of Education Arne Duncan, is an awards program that increases the financial knowledge and capability of high school-aged youth across the United States. It challenges high school teachers and other educators to teach the basics of personal finance and rewards students, educators, schools, and states for their participation and performance. Join more than 5,000 educators nationwide whose students are expected to take the voluntary online exam. The deadline for educators to sign on has been extended to April 9, 2010, which is the final day to administer the exam.

Parents

[State Laws on Family Engagement in Education](#) from the National PTA is designed to help State PTAs and other family and child advocates to increase systemic, effective family engagement in schools. The reference guide has two purposes: First, to provide information that will help families to effectively advocate for their children's education on the school and district levels. Second, it guides policymakers' and advocates' development of their legislative reform initiatives as well as their efforts to monitor the implementation of existing laws. The guide covers six topics, including state grant and award programs for family engagement; labor laws regarding parent participation in school activities; and family engagement targeting children in high-risk situations. (February 2010)

Raising Student Achievement

A draft of the K-12 [Common Core Standards](#) was made public on March 10. The standards define the knowledge and skills students should have in mathematics and English language arts in order to graduate high school able to succeed in entry-level, credit-bearing academic courses and in workforce training programs. The [Common Core State Standards Initiative](#) is coordinated by the National Governors Association and the Council of Chief State School Officers and involves governors and state commissioners from 48 states and the District of Columbia. These standards are open for public comment until Friday, April 2. (March 2010)

Each year, on the anniversary of the 2005 National Education Summit on High Schools, Achieve [releases](#) a 50-state progress report on the alignment of high school policies with the demands of college and careers. [Closing the Expectations Gap, 2010](#) is the fifth annual report in this series. The report details state progress implementing the American Diploma Project policy agenda. (March 2010)

A long-term [study](#) of the effects of paying students for high achievement, "A Stitch in Time: The Effects of a Novel Incentive-Based High-School Intervention on College Outcomes," found that Texas high school students who were paid for passing scores on Advanced Placement exams attended college in greater numbers, earned improved GPAs in college, and remained in college beyond freshman year in higher numbers. The study was published by the National Bureau of Economic Research in its Working Papers series. (February 2010)

School Improvement

A new report from the [Rennie Center for Education Research & Policy](#) reveals reasons for the decrease in the statewide dropout rate in Massachusetts, which dropped below three percent in 2008-2009. The report, ["Meeting the Challenge. Promising Practices for Reducing Drop-Out Rates in Massachusetts Schools and Districts,"](#) addresses the question of what is working in the state's schools and highlights strategies being used in 11 high schools and a number of Massachusetts school districts. (February 2010)

Teacher Quality and Development

In a new report on teacher evaluation, "[More than Widgets: TAP: A Systemic Approach to Increased Teacher Effectiveness](#)," researcher and former teacher Jonathan Eckert describes an approach for differentiating between effective and ineffective teachers. The report addresses the four “levers” that, based on research of [TAP™](#), need to be work in concert in order to create a sustainable evaluation structure. TAP, which is supported by the National Institute for Excellence in Teaching, currently impacts more than 7,500 teachers and 85,000 students across the country. Jonathan Eckert was a 2008-2009 Teacher Ambassador Fellow at the U.S. Department of Education. (March 2010)

Innovations in the News

Charters/Choice

Open houses, fliers, sophisticated Web sites and blogs, visits to daycare centers – these are some of the ways that public schools in Harlem are marketing themselves to attract students who might otherwise select one of the increasing number of local charter schools. At a recent open house at P.S. 125, which has fewer than half the number of students it did five years ago, principal Rafaela Espinal not only touts her school’s A on the last school report card, but proudly shows off an ornate auditorium and swimming pool. “We have to think about selling ourselves all the time,” according to Espinal. “We have to get them in the door if we are even going to try to convince them to come here.” [More—The [New York Times](#)] (March 10)

A dozen young men – 100 percent of the first senior class of Urban Prep in Chicago – are not only college ready; they are college bound. And the 12 have come a long way from their freshman year, when only four percent of them were reading at grade level. Tim King, Urban Prep’s founder and CEO, was joined by Chicago Mayor Richard Daley and city schools chief Ron Huberman as well as the graduating seniors’ families at a recent all-school assembly where the seniors traded their red uniform ties for striped red and gold ones, the symbol of being accepted into college. “Being accepted to college is the first step,” said the school’s director of college counseling, Kenneth Hutchinson, “to changing their lives and their communities.” [More—The [Chicago Tribune](#)] (March 5)

Research is increasingly pointing to teaching as the *sine qua non* in an effective classroom, but Deborah Kenny, founder of the successful Harlem Village Academies, knew that to be the case nearly a decade ago. Rather than program elements, such as curriculum and class size, Kenny put the greatest attention on the quality of teaching when she began in 2001. It was “100 times more important than anything else” to Kenny to have “an amazing teacher who was talented and passionate and given the freedom and support to teach well.” When that element is missing, according to her, it’s very difficult to repeat the success of her schools. [More—The [New York Times](#)] (Feb. 23)

Early Childhood Education

Ninety-seven percent of Oklahoma school districts offer pre-kindergarten programs through the public schools, and that kind of commitment has garnered the state the No. 1 state status for early childhood education from the National Institute for Early Education Research for six consecutive years. The state’s commitment to its youngest students took a major leap forward more than a decade ago when pre-kindergarten funding became part of the State Aid Formula, which made all 4-year-olds eligible to attend school. Three quarters of the state’s 4-year-olds are voluntarily enrolled in publicly funded pre-K programs, and about half of those children are in full-day programs. [More—[Oklahoma City Friday](#)] (Feb. 25)

School Improvement

"International education benchmarks make disappointing reading for the U.S.," according to Andreas Schleicher of the Organization for Economic Cooperation and Development (OECD), who testified before Congress on comparisons of student achievement among OECD countries. He reported that New Zealand, Spain, Turkey, and Mexico have lower high school completion rates than the U.S., which stands at 70 percent of American students earning a diploma. More successful nations, according to Schleicher, centralize control over standards and curriculum, and provide local schools with more freedom from regulation. More schools with "charter-like autonomy" would make the U.S. schools more like those in the world's best-performing education systems, he noted. [More—The [New York Times](#)] (March 10)

Students in Colorado's Aurora public schools will be able to follow their specialized interests in a range of academic subjects when the district's new P-20 school open this coming August. Four specialized pathways – STEM; health sciences; arts, humanities and music; and business, marketing and entrepreneurship – will be offered in a new school that is designed to eventually house grades P to 20; a number of colleges in the Aurora community are expected to be involved and have a presence at the school. [More—The [Aurora \(CO\) Sentinel](#)] (March 5)

Leaders of the Baltimore City Schools and the John Hopkins University are partners in a unique volunteering arrangement by which the University's 14,000 employees will be offered two days of paid leave a year to volunteer in the City schools. "We know how an education can transform a student's life," said Johns Hopkins President Ronald J. Daniels, as he announced the start of "Johns Hopkins Takes Time for Schools." The University's employees will be able to volunteer for a wide range of tasks in both classrooms and support areas such as information technology and administration. [More—The [Baltimore Sun](#)] (March 3)

A panel of policymakers and educators outlined a vision and comprehensive system of assessment that proposes a move away from multiple-choice tests "toward the development of a set of deeper, more analytical questions, tasks, and projects that ask students to solve and discuss complex problems." The proposed assessments can be "of, for, and as learning," according to panel leader Professor Linda Darling-Hammond of Stanford University. The panel was convened by the National Governors Association and the Council of Chief State School Officers (CCSSO), which have also coordinated the efforts of 48 states to devise common college- and career-readiness content standards. The common standards are essential but will not be adequate to improve education, according to CCSSO's executive director, Gene Wilhoit, unless they are accompanied by improved assessment. [More—[Education Week](#)] (Feb. 23) (*premium article access compliments of EdWeek.org*)

STEM

Science and math teachers could do more to familiarize students with career options in science, technology, engineering, and math, according to a recent online survey of students in grades three to 12 commissioned by the American Society for Quality. Eighty-five percent of the 1,000 students surveyed gave their teachers at least a "B" for their knowledge about science, but nearly two-thirds of high school students gave their teachers a "C" or lower for the extent to which they talked about engineering careers, and 42 percent of the high school respondents thought their teachers could better demonstrate how science can be used in careers. [More—[eSchool News](#)] (free registration) (Feb.25)

Teacher Quality and Development

After playing an instrumental role in creating and developing the Uncommon Schools network, Doug Lemov went in search of an answer to a question that long perplexed him: Are effective teachers born that way or is greatness in the classroom a learned behavior? Lemov sought out and documented the practices of effective teachers nationwide, developing, as a result, "Teach Like a Champion: The 49 Techniques That Put Students on the Path to College," often referred to as Lemov's taxonomy. In addition to it being adopted

as part of the teacher-training program at Uncommon Schools, the taxonomy is being widely shared by Lemov in workshops for charter schools, Teach for America, and the Match Teacher Residency in Boston. [More—The [New York Times](#)] (March 4)

Timely and informative data on student achievement and committed teacher teams discussing data and devising strategies to span common grade-level classrooms is reaping rewards in a Florida elementary school. The team of third-grade teachers at San Antonio Elementary has been sharing assessment data on reading as they prepare students for the state's reading exam. A strategic, data-driven decision to increase phonics instruction and implement pullouts for students with specific needs was credited with moving the median score on the reading assessment from the 21st to the 50th percentile. San Antonio principal Vanessa Hilton is committed to data-informed teacher teams at all grade levels, seeing it as a way to meet the goal of helping all students achieve. [More—The [St. Petersburg Times](#)] (Feb. 25)

A teacher team in Newport News, Va., responded to research on their fifth-graders' learning styles by creating a dual-classroom arrangement, one for the more artistic, creative problem-solving side of the brain and the other set in a more structured and traditional approach to learning. They think they are on the right track to their goal of meeting each child's needs with the physical as well as instructional differentiated learning. The students have responded well to the dual environment by taking ownership of the right-brain room where the teachers have noted a discernable lack of tension and greater willingness of students to work together. [More—[Daily Press \(Newport News/Hampton, Va.\)](#)] (Feb. 21)

Technology in Education

Videoconferencing allows the students in Stamford High School to not only access a multitude of places throughout the U.S. and the world, but to share indigenous aspects of life in their rural Texas community with their peers. As part of a videoconference class at Stamford High, students designed a program about cotton growing and processing, a staple of the local economy. Through a virtual field trip for grades 3 to 5, students anywhere go from being in a cotton field in Stamford to participating in a discussion with Stamford High students about cotton products and by-products. [More—[T.H.E. Journal](#)] (March 5)

Students across Pennsylvania may use video games to help them learn math and science if plans recently initiated by the state Board of Education take root. State board member Ed Sheehan, a business executive in the technology sector, will work with a team of video gaming and special effects experts to launch "an innovative statewide technology program that boosts student math, science, and technology achievements by actively engaging them with cutting-edge 3-D gaming technology, real-world, project-based internships, and technology camps." [More—[Pennsylvania's Tribune-Democrat](#)] (March 2)

Students at Linwood Middle School in North Brunswick, N.J., are charting their path to high school graduation with personalized learning plans as part of a 16 school, statewide pilot program. The 428 sixth graders at Linwood each have electronic portfolios containing information about their academic interests, career goals, learning styles and more. New Jersey is among 24 states and D.C. with policies that support the development of individualized learning plans for middle-grades students. [More—[The New York Times](#)] (Feb. 28)

Who should ensure that kids are safe for life and learning in cyberspace – their parents or teachers? The jury's still out on this according to a recent survey of school administrators commissioned by the National Cyber Security Alliance (NCSA). "There's no national consensus around what we are supposed to be teaching kids about being participants in a digital age," according to the NCSA's executive director Michael Kaiser. Administrators reported that about half of their school systems require lessons in online safety, and 40 percent of teachers have not taught students about such security measures as changing online passwords. [More—The [Christian Science Monitor](#)] (Feb. 26)

Students played a central role in designing the Student Space in the Seaside Schools, and more of that kind of student involvement is needed, according to surveys of students about their use of technology in and outside of schools. A recap of the findings of the 2008 Speak Up survey, conducted by Project Tomorrow, is the springboard for an online discussion by Education Week about the role of students in decisions about

technology use. Join the discussion by using the link in this recent Education Week feature. [More—[Education Week](#)] (Feb. 3) (*premium article access compliments of EdWeek.org*)

Purpose

The purpose of the U.S. Department of Education's online newsletter *The Education Innovator* is to promote innovative practices in education; to offer features on promising programs and practices; to provide information on innovative research, schools, policies, and trends; and to keep readers informed of key Department priorities and activities. The Department's Office of Innovation and Improvement (OII) is responsible for the newsletter's research, writing, and production.

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