

Views You Can Use

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19th Annual Model Schools Conference



June 26-29, 2011
Nashville

[Register today!](#)

The 19th Annual Model Schools Conference is filling up fast. We encourage you to register soon if you would like to join us for this event by visiting www.modelschoolsconference.com.

This year's conference will focus on:

- How to build a culture of high achievement based on rigor, relevance and relationships
- Aligning instruction and assessments to the Common Core State Standards and next generation assessments
- Successful practices for school improvement and instructional excellence
- Cutting-edge research to drive 21st century learning and teaching

Hope to see you in Nashville.

Sincerely,
Bill Daggett
CEO



Education Trends

More Internet Speed Needed for a Better Technological Connection

While nearly all schools in the United States are connected to the Internet, the speed of connection is inadequate to meet the demands of a technological society. That's according to the National Telecommunications and Information Administration (NTIA), which unveiled the first public searchable map of broadband Internet availability along with the *February 2011 Digital Nation Report*, which analyzed survey results relating to Internet connectivity.

According to the report, two-thirds of schools have connection speeds of lower than 25 megabits per second (Mbps). Most schools need connectivity of 50-100 Mbps. In addition, the map shows that 5-10% of Americans lack access to broadband at speeds that support basic set applications, including downloading Web pages, photos, and video and using simple video conferencing.

"The National Broadband Map shows there are still too many people and community institutions lacking the level of broadband service needed to fully participate in the Internet economy," said U.S. Department of Commerce Assistant Secretary for Communications and Information and NTIA Administrator Lawrence Strickling in a statement. The map,

which will be updated every six months, includes more than 25 million searchable records that show where broadband Internet service is available, the technology used to provide the service, the maximum advertised speeds of the service, and the names of the service providers. NTIA, a division of the U.S. Department of Commerce, was required by Congress to develop and launch the map by Feb. 17, 2011.

Sources:

www.ntia.doc.gov/press/2011/NationalBroadbandMap_02172011.html

www.ednetinsight.com/news-alerts/featured-news/national-broadband-map-reveals-quality-of-schools-internet-connections-woefully-inadequate-to-meet-education-goals.html

National STEM Trend Takes Hold

With a push from the federal government and national education-based organizations, schools are stepping up their STEM (science, technology, engineering, mathematics) curriculum efforts. The Knox County Schools in Tennessee, for instance, is building a STEM magnet high school with federal Race-to-the-Top money. Classroom learning will be supplemented with outside expertise and internships, likely with the assistance of neighboring Oak Ridge National Laboratory and the University of Tennessee. Horry County Schools in South Carolina is set to unveil a STEM initiative this fall which will offer concentrated courses in the four subjects. South Range Middle School in Ohio also is implementing a STEM initiative this fall which will expose students to different fields of engineering through rotating classes. Students will also have the opportunity to be part of a robotics club.

While the Obama administration has placed STEM high on the list of education priorities, the National Science Teachers Association is pushing for a nationwide unified set of science education standards as part of the Common Core State Standards (CCSS) initiative. The CCSS, embraced by most states, already details what math and English skills all students should master before high school graduation.

Sources:

www.districtadministration.com/viewarticle.aspx?articleid=2741

www.wmbfnews.com/story/14343290/stem-initiative-drives-home-science-technology-in-horry-co

www.salemnews.net/page/content.detail/id/540819/South-Range-to-boost-middle-school-tech.html?nav=5007

Strengthen School Programs for Diverse Learners Say Parents and Teachers

Most teachers and parents say that strengthening education programs and resources to help diverse learners with the highest needs meet college- and career-ready standards should be a school priority, according to MetLife's report *Preparing Students for College and Careers - Part 2: Teaching Diverse Learners*. The report is one of two publications based on a fall 2010 national survey of 1,000 public school teachers in grades 6-12, 2,000 public school students in grades 6-12, 580 parents, and more than 300 business executives from Fortune 1,000 companies.

Findings include: Almost half (49%) of teachers in schools with two-thirds or more low-income students say that giving schools more ability to remove teachers who are not serving students well should be one of the highest priorities in education, compared to 38% of teachers in schools that have one-third or fewer low-income students. There was a discrepancy between teachers and parents and Fortune 1,000 executives relating to using measurements of teacher effectiveness that are based on student growth. Of teachers, 69% said this was a priority while 92% of parents and 97% of Fortune 1,000 executives said this was a priority. (Please see "By the Numbers" for more statistics.)

Sources:

www.ednetinsight.com/news-alerts/from-the-editor/the-challenges-of-diverse-learners.html

www.ednetinsight.com/news-alerts/featured-news/part-2-of-latest-metlife-survey-of-the-american-teacher-finds-continuing-challenges-in-preparing-diverse-learners-for-college-and-careers.html



Global Trends

China Could Soon Trump U.S. as Leader in Science and Technology Research

China could become the world leader in science and technology research in as little as two years, according to an analysis of global trends in science by the Royal Society, the United Kingdom's national science academy. In addition, countries such as Brazil, India, and South Korea are moving ahead in their research agendas at an impressive speed, taking a bigger share of the pie. Leadership in science and technology was measured by the number of articles published in international science magazines, a key indicator of scientific effort. China moved to second place in 2004-08 from sixth place in 1999-2003.

The U.S. continues to lead the world in research, with its scientists authoring 20% of the world's research papers. The U.S. also invests nearly \$400 billion per year in public and private research development. Nevertheless, its share of research publishing and spending is slipping globally, the report said, with China gaining the most momentum. In 1996, U.S. scientists published 292,513 papers, more than 10 times the number of papers by China at 25,474. By 2008, the U.S. total had increased slightly to 316,317. Meanwhile, the number of published papers by China had surged more than seven-fold to 184,080.

Sources:

www.bbc.co.uk/news/science-environment-12885271

www.guardian.co.uk/science/2011/mar/28/china-us-publisher-scientific-papers



Biotechnology Trends

Your Dashboard Could Be Made from - a Banana Plant

Researchers at Sao Paulo State University in Brazil have developed a biodegradable automotive plastic from the fibers of bananas, pineapples, coconut shells, and other plants. The nanocellulose material is lighter in weight and 30% stronger than traditional materials used for dashboards, bumpers, side panels, and other plastic parts. The researchers expect that the new nanomaterial, which is also more heat resistant, could be used widely within a few years and could eventually replace steel and aluminum parts.

One big advantage of the nanocellulose is that it would reduce the weight of new vehicles, which would increase fuel economy while not compromising material strength, which contributes to safety. To extract a plant's nanocellulose fibers, the leaves and stems are heated in a device similar to a big pressure cooker, yielding a substance resembling talcum powder. One pound of nanocellulose can produce 100 pounds of plastic.

Source:

www.wired.com/autopia/2011/03/bananas-could-make-cars-leaner-greener/



Nanotechnology Trends

Novel Nanofibers Hold Promise for Cartilage Repair

Researchers at the University of Michigan have created star-shaped biodegradable polymers that can self-assemble into hollow nanofiber spheres. The scientists are hoping that the spheres will someday serve as temporary scaffolding to help cells form new cartilage tissue in hard-to-treat joint areas, especially the knee. The hollow spheres were combined with cells and then injected into damaged tissue. The nanofibers provide a thriving environment for the cells, which stick to the self-assembled scaffolding to form new tissue at the injured site. The scaffolding then biodegrades, leaving healthy tissue intact.

Source:

<http://esciencenews.com/articles/2011/04/17/researchers.inject.nanofiber.spheres.carrying.cells.wounds.grow.tissue>



By the Numbers

Following are statistics based on MetLife's report, titled *Preparing Students for College and Careers - Part 2: Teaching Diverse Learners*. (See "Education Trends" for the story.)

- Of the teachers, 91% said that strengthening programs and resources to help diverse learners with the highest needs meet college- and career-ready standards either should or must be a priority in education.
- Of parents, 84% say that strengthening programs and resources to help diverse learners should or must be a priority in education.
- Of teachers, 61% said they are able to differentiate instruction a great deal to address the different learning needs of students within a class.
- Math teachers were the least likely to say they can differentiate instruction a great deal (46% vs. 60% of English teachers and 65% of teachers of other subjects).
- On average, students gave their teachers a grade of B- for teaching individual students according to their different needs and abilities.
- High-need students graded their teachers lower in this area. Students who have considered dropping out of school were four times as likely as other students to give their teachers a grade of D or F (45% vs. 11%).
- Only one-quarter of students (26%) rate the overall quality of the education that they receive at school as excellent.
- A gender gap on college aspirations emerges in high school. While girls and boys in middle school did not differ in their aspirations for college, high school girls were more likely than boys to say it is very likely they will go to college (83% vs. 71%) and to say that they plan on getting a Bachelor's or higher degree (83% vs. 72%).

Source:

www.metlife.com/assets/cao/contributions/foundation/american-teacher/MetLife_Teacher_Survey_2010_Part2.pdf