



Views You Can Use

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Registration for the 2007 Model Schools Conference on June 30-July 3 in Washington, DC is now open. Please visit www.modelschoolsconference.com for more information and to download a brochure.

Our K-8 Math Academy will be held on Saturday and Sunday, January 13-14 in Albany, NY. "Using Relevancy as the Route to Rigor" will focus on math instruction. Sessions are scheduled for administrators and teachers, so come as a team. Registration is limited to 300, and everyone receives a video iPod and instruction on its use in mathematics. For registration information, please [click here](#).

Sincerely,

Bill Daggett

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Education Trends

Education mirrors the society it serves. Appropriately, *Edutopia* magazine recently offered a list of trends to watch during this school year:

- Continuing emphasis on healthy eating for students.
- School disaster-recovery planning.
- Modifications to No Child Left Behind, possibly including the use of an individual-growth model.
- Accelerated infusion of instructional technology, such as user friendly keyboards, text-to-speech, applications, and XML textbooks.
- A "truce" between schools and families over in-school cell phone use by students.
- Less concern about gender differences in learning.
- Next-generation computer game simulations for education.
- Increased discussion of a national education strategy for economic development.
- More integration of academics in electives.

- Reexamination of traditional graduation requirements.

Source: *Edutopia*, Sept. 2006/vol.2/no.6

Information Technology Trends

Take My Little Brother... Please. A new software developed by university researchers in Scotland called the STANDUP Project (System To Augment Non-speakers' Dialogue Using Puns) helps children – especially youngsters with speech challenges – to develop active language skills by using puns and other forms of spoken humor. The program is based on the premises that social situations such as joke-telling encourage the use of spoken language, that children enjoy telling jokes to family and friends, and that youngsters gain confidence in their speaking abilities by doing so.

Source: University of Dundee, August 22, 2006.

<http://www.dundee.ac.uk/pressreleases/2006/praug06/joke.html>

Once again, we observe an instructional practice designed for special needs students that potentially has great value for all of our students.

The Impulse-Purchase Window. Polo Ralph Lauren recently introduced an innovative variation of retail window shopping in Manhattan's Upper Eastside. Impulse shoppers can, at any hour of the day or night, use wall-mounted touch-screens and credit-card readers to purchase items projected as holograms in store windows. With 2006 online sales up 23% over 2005 year-to-date, brick-and-mortar retailers may find that the experimental technology of virtual shopping is a new weapon in the war for consumer-impulse purchasing.

Source: *Maclean's* magazine, Sept. 11, 2006.

http://www.macleans.ca/topstories/life/article.jsp?content=20060911_132867_132867

Blue Notes. If you use an electronic device such as a cell phone or PDA that employs Bluetooth technology, you could soon start enjoying the benefits of targeted messaging that can identify individual users. The new technology leverages the fact that every Bluetooth device emits a unique signal. This identification allows a nearby "smart" screen to identify different individuals passing nearby and flash targeted messages to them. It even varies the messages to eliminate repetition. An already-operational application at Southampton University in the U.K. notifies students and professors of upcoming seminars, news items from the university's Web site, and video streams of departmental lectures. Future applications could involve commercial advertising and the transmission of consumer-specific messages to match individual user profiles and tastes.

Source: NewScientistTech, September 12, 2006.

<http://www.newscientisttech.com/article/dn10065-advertising-screen-tailors-ads-to-its-audience.html>

Will this emerging technology be accepted as a benefit or shunned as an invasion of privacy?

Biotechnology Trends

Bioengineering the Immune System. The National Cancer Institute has tested an experimental therapy that uses genetically engineered immune cells to shrink cancerous tumors. Researchers extracted immune system cells – ordinary blood cells called T cells – from 17 advanced melanoma patients who had not responded to conventional treatments. The cells were then genetically altered to become cancer killers that would recognize and attack the melanoma cells. The modified cells were then injected back into each patient. Results were mixed and much remains to be learned about the process. However, the new approach – leveraging the body’s own immune system – could be a major medical breakthrough in treating breast, lung or ovarian cancer.

Source: ABC World News. <http://abcnews.go.com/WNT/story?id=2379761&page=2>

Medical Bionanotech Video. Anyone interested in nanotechnology in general and medical applications of nanotechnology in particular may want to view a brief, but informative, video clip, titled *Video Journey into Nanotechnology*, produced by the National Cancer Institute’s Alliance for Nanotechnology in Cancer.

Source: National Cancer Institute, http://nano.cancer.gov/resource_center/video_journey.asp

Nanotechnology Trends

Big Award for Small Contributions. *Small Times* magazine recently presented its 2006 Best of Small Tech Lifetime Achievement Award to Dr. Morinobu Endo, engineering professor at Shinshu University in Nagano, Japan. Dr. Endo has been working with carbon nanotubes and related materials since the mid-1970s. The manufacturing methods for carbon nanotubes that he developed have enabled others to use the breakthrough technology in their own work, including for commercial applications. Endo’s work on developing new forms of carbon and graphite, nanoporous carbons, lithium-ion batteries and electric double-layer capacitors has also inspired other scientists to push ahead into the nanotechnology frontier.

Source: www.SmallTimesNanoCon.com

A New Spin on Computing. Today’s electronic computing is based on simple physics: All electrons have a negative charge. Rapidly switching an electron current on and off creates the 1s and 0s of the digital world and forms the basis of digital circuits. Spintronics, on the other hand, is an emerging branch of chip technology that uses another property of electrons known as “spin.” Spintronics could lead to computers that turn on instantly and electronics that use far less battery power. Spintronics also promises to help scientists overcome the problem of miniaturization in manufacturing today’s transistorized chips: transistors smaller than a few nanometers in size “leak” electrons.

Source: http://www.technologyreview.com/read_article.aspx?id=17390&ch=infotech

Economic Trends

It Sure Feels Like 1980. Although gas prices in parts of the country rose to more than \$3 a gallon during the summer, the inflation-adjusted high in 1980 was even higher – around \$3.15. Furthermore, in 1980, the average American had to work 105 minutes to buy enough gas to drive the average car 100 miles. By comparison, this year, that same employee needed to work only 52 minutes thanks in part to better fuel efficiency, but mostly because of higher earning power.

Source: <http://money.cnn.com/magazines/moneymag/makemoneylast/>

Working on Your First \$1 Million. Speaking of being better off than you were in 1980, have you ever wanted to know how long it will take to reach the seven-figure level in savings and investments? CNNMoney.com offers you a free “Millionaire Calculator” on its Web site.

Source: <http://cgi.money.cnn.com/tools/millionaire/millionaire.html>

Can You Hear Me Now? If you get the sense that cell phones are everywhere, consider the following data from the cell phone manufacturing industry in its 2nd quarter worldwide sales of mobile phones '05 vs. '06 in U.S. millions:

	2005	2006	% increase
Nokia	61.2	77.1	+26%
Motorola	35.32	50.2	+46%
Samsung	25.0	25.5	+ 2%
LG	13.1	14.4	+10%
Sony Eric	11.9	15.3	+29%

About one billion mobile phones are now being shipped worldwide annually. The U.S. market mobile phone penetration rate is now up to 80%.

Source: *Newsweek*, Sept. 11, 2006

Above Par Economy in the Subcontinent. Attendees at this year’s Model School’s Conference in June heard me share some attention-getting data about the growth of emerging economic powers, such as China and India. Here is an update:

- It was reported recently that India's industrial production at factories, utilities, and mines in July was 12.4% higher than a year earlier.
- That growth rate in Asia's fourth-largest economy was the fastest pace in a decade.
- In the last full year, India's \$775-billion economy expanded 9.3%, the fastest after China among the world's 20 biggest economies.
- Salaries in India are forecast to rise by 7.3 percentage points above inflation in 2006, the biggest increase forecast among 70 countries, which include U.S., U.K. and Japan.

- Infrastructure spending by the Indian government to help drive economic growth is up 24% to \$21 billion in the year that started April 1, but India – the world’s second most populous country – still spends only a seventh of China’s \$150 billion investment in public works each year.
- Rising corporate sales have sent the benchmark Bombay Stock Exchange Sensitive Index, or Sensex, higher by 23% since Jan. 1.
- Industrial production also is getting a boost from demand for houses. Rising incomes and tax breaks on mortgage loans are enabling Indians to borrow more to buy houses in recent years, spurring construction. The effective interest rate on a home loan dropped to 5.18% from 11.73% between 2000 and 2006.

Source: <http://www.bloomberg.com/apps/news?pid=20601080&sid=aMdYGqP6Hq3U&refer=asia>

By the Numbers

- Each year, 950,000 engineers graduate from China and India combined compared to 70,000 in the U.S.
- The hiring cost of one engineer or chemist in the U.S. equals the cost of five chemists in China or 11 engineers in India.
- Of the 120 new \$1 billion-plus chemical plants being built around the world, one is in the U.S. and 50 are in China.
- In 2006, more people in the U.S. will graduate with degrees in sports exercise than in electrical engineering.
- By 2040, China will have a higher percentage of elderly people than the U.S. China’s one-child policy will create what Chinese demographers call a “4-2-1 problem” – four grandparents and two parents will have to be supported by one worker.
- The U.S. has borrowed 80% of the world’s savings. More money is spent in the U.S. on litigation than on research and development. Both of these facts are direct results of government public policy.

Source: Fareed Zakaria, “How Long Will America Lead the World?” *Newsweek*, June 12, 2006. <http://www.msnbc.msn.com/id/13123358/site/newsweek/>