

**Newsletter****Special Interest Articles**

- 2014 e3Technology Conference

**Individual Highlights**

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## Using Games to Measure Student Skills

By Laura Devaney, Managing Editor, eSchool

News: Daily Tech News & Innovation

Game-based learning has broad implications for assessing student skills, researchers say. Game-based learning is one of the most popular trends in education today, and for good reason—a well-designed game engages students, boosts their interest in the topic it addresses, and immerses students in an educational and challenge-driven environment in an almost seamless manner.

But this is just scratching the surface. Many researchers and educators say games have a positive impact on student learning and that they help students develop skills such as problem solving, critical thinking, and collaboration.

What if game-based learning could help educators measure skills such as these—skills that aren't always measured by traditional assessments?

Students' actions and choices while playing games could very well be used for this purpose, said Kristen DiCerbo, Ph.D., principal research scientist at Pearson. DiCerbo's research centers on digital technologies in learning and assessment, particularly on the use of data generated from interactions to inform instructional decisions. She is part of the team that developed [SimCityEDU](#) and the newly-released [Mars Generation One: Argubot Academy](#), both products of the Institute of Play's [GlassLab](#), where DiCerbo is a distinguished learning games scientist.

DiCerbo said she and her colleagues wondered how they might use students' interactions in gaming environments to help teachers understand what the students know and how they are applying knowledge, and those questions led them to think about evidence in a very different way from traditional tests.

For instance, students' in-game actions could inform educators as to whether students have particular skills or not. Tracking that information would lead to models of student understanding that would be fed back to students through the game and also to teachers in almost real time.

Read more online at: <http://www.eschoolnews.com/2014/05/14/games-assessing-skills-983/2/>



# Transitioning to College and Careers



**Southern Regional  
Education Board**

## SREB Readiness Courses

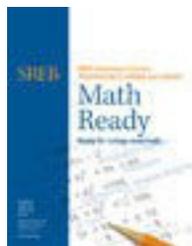
**Math Ready: Ready for college-level math**

**Literacy Ready: Ready for reading in all disciplines**

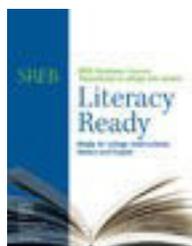
Powerful courses to teach students the skills they need to learn and think independently after high school

[http://www.sreb.org/page/1073/college\\_and\\_career\\_readiness.html](http://www.sreb.org/page/1073/college_and_career_readiness.html)

The problem: Too many students graduate from high school underprepared for college or career training, and far too many need developmental education when they get to college. This [readiness gap](#) will look even larger as new assessments begin testing students on more rigorous college- and career-readiness expectations such as the Common Core State Standards.



One solution: SREB's two Readiness Courses were developed specifically to help close the readiness gap. They teach young adults the reading, writing and math skills they must have to succeed in the workplace or college. The classes are taught in an engaging way that leads students to learn and think independently, read for information and solve problems.



Who developed them? [SREB partnered with states](#) around the nation, working with teams of teachers, faculty, agency staff and experts, to write and test the courses and offer them, at no cost, to all states. SREB plans to update future versions of the courses based on feedback from classroom teachers.

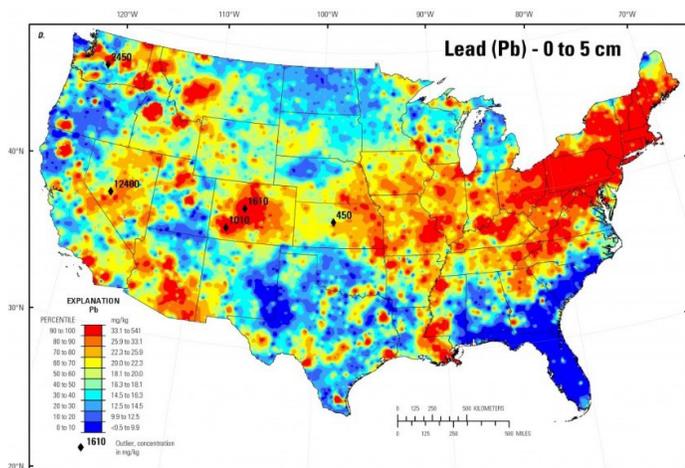
For which students? Students who are assessed as underprepared on college- and career-readiness standards will take the classes, generally in 11th or 12th grade.

Read more online at: [http://www.sreb.org/page/1073/college\\_and\\_career\\_readiness.html](http://www.sreb.org/page/1073/college_and_career_readiness.html)



# Getting the Dirt on Soil

BY: MICHAEL T. JARVIS (MJARVIS@USGS.GOV) AND DIANE NOSERALE (DNOSERAL@USGS.GOV)



The U.S. Geological Survey has released a [set of maps](#) depicting the distribution of selected chemical elements and minerals in soils across the country. Understanding the composition of soil is important for a variety of reasons. Specialists in agriculture and food safety find soil data useful because soil is the source of most biologically active trace elements that reach humans through the food chain. Public health specialists need to understand soil pathways for human exposure to potentially toxic elements. Regulators and resource managers use soil data to identify contamination, assess the risks to ecosystems and human health from contamination, and to set remediation goals. The maps and [data sets](#) serve as a starting point for future

research in a variety of fields.

## The Details are in the Dirt

To produce the maps, about 40 people collected thousands of soil samples from more than 4,800 sites throughout the conterminous U.S. from 2007 to 2010. For each site, they collected three samples from the surface down to about three feet. In total, scientists analyzed more than 14,000 soil samples for 45 elements and nearly 10,000 samples for major minerals.



## Sourcing the Samples

It takes a lot more than just digging holes to gather soil from thousands of sites across the lower 48 states. In the nationwide sampling effort, the USGS enlisted help from state geological surveys, the U.S. Department of Agriculture's Natural Resources Conservation Service, and 19 students from 12 universities who participated from 2008–2010. The sampling crews had flexibility at each site with the general guidance being that no samples be taken within 200 meters of a major highway, within 100 meters of a building or structure, within 50 meters of a rural road and no less than 5 kilometers downwind of any power plants or stack emitters.

Read more online at: [http://www.usgs.gov/blogs/features/usgs\\_top\\_story/getting-the-dirt-on-soil/?from=textlink](http://www.usgs.gov/blogs/features/usgs_top_story/getting-the-dirt-on-soil/?from=textlink)

## How do teachers use technology?

By Meris Stansbury, Managing Editor for eCampus News

May 15th, 2014



<http://www.eschoolnews.com/2014/05/15/infographic-teachers-technology-659/>

In education it's easy to get data from one school, district, or even state. But obtaining national data, encompassing most of the teachers in the U.S., is no easy feat, and breaking that data into technology use is even rarer. However, that's exactly what the [National Center for Education Statistics](#) (NCES) accomplished.

The [data compiled](#) by the NCES is one of the most comprehensive breakdowns of how teachers use technology in classrooms, from professional development to its use in parent and student communication. It also details the availability of the technology, and whether or not teachers make use of it.

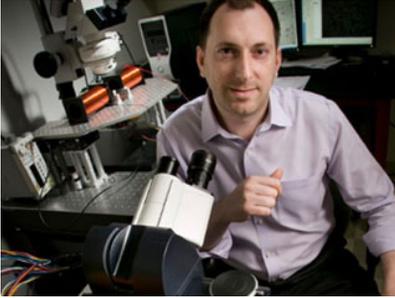
What's interesting to note, is that technology availability and use don't differ as dramatically across geographically, and perhaps socio-economically, diverse schools and districts as many may think—perhaps computers really are ubiquitous these days. There is one catch, however: The data, which is the most current in terms of scope, is from 2009. Interestingly enough, this snapshot of a few years ago leads to some interesting thoughts, such as:

- Would incorporating the use of social media for learning in the classroom be as low today as it was in 2009?
- Do teachers still use eMail as the main form of communication to contact parents?
- Would the most used software in 2009 (gradebooks) be the most used today?
- If data was collected on the scope and depth of technology used by teachers today, would computers still be the only device measured, or would tablets and smartphones also be included?

Supposedly, the NCES will have teacher technology use data available soon from the 2013 survey. Be sure to check back, as surely this data will have some interesting results of its own!

Read more online at: <http://www.eschoolnews.com/2014/05/15/infographic-teachers-technology-659/>

## Microchip-like Technology Allows Single-Cell Analysis



<http://news.science360.gov/object/story/4cd23076-662b-4deb-b242-1b1593844d46/microchip-technology-allows-single-cell-analysis>

A U.S. and Korean research team has developed a chip-like device that could be scaled up to sort and store hundreds of thousands of individual living cells in a matter of minutes. The system is similar to a random access memory chip, but it moves cells rather than electrons. Researchers at Duke University and Daegu Gyeongbuk Institute of Science and Technology (DGIST) in the Republic of Korea hope the cell-sorting system will revolutionize research by allowing the fast, efficient control and separation of individual cells that could then be studied in vast numbers. “Most experiments grind up a bunch of cells and analyze genetic activity by averaging the population of an entire tissue rather than looking at the differences between single cells within that population,” said Benjamin Yellen, an associate professor of mechanical engineering and materials science at Duke’s Pratt School of Engineering. “That’s like taking the eye color of everyone in a room and finding that the average color is grey, when not a single person in the room has grey eyes. You need to be able to study individual cells to understand and appreciate small but significant differences in a similar population.” The study appeared online in a recent issue of Nature Communications.

## Farmer uses STEM Education in Daily Work

By: Jason Caterina      News Channel 13 Albany, NY [www.wnyt.com](http://www.wnyt.com)



<http://wnyt.com/article/stories/S3456972.shtml?cat=10114>

Science, technology, engineering and math are more and more a part of our everyday lives.

Farmers are using new technology to help us all keep food on the table.

When you think of science, technology, engineering and mathematics, you might think of high tech fields like Nanotechnology or microchip processing, but more and more, these days they’re starting to show up in fields like this.

Jason Zaleski operates this John Deere Tractor in Washington County, but he doesn’t necessarily drive it.

“It’s in a way, like a video game. You get in the seat and you punch a few buttons and you watch your tractor go on the screen,” he explained.

The tractor drives itself, using global positioning satellites to make sure it uses every inch of available planting space.

It’s more efficient, so it uses less fuel.

When it comes time to plant, the tractor knows exactly where to lay the seed and can help minimize the amount of not just seed, but also pesticide and fertilizer applied to the field.

It saves time, money and it’s better for the environment.

“It’s just amazing that, a fact, that two percent of the population is feeding 98 percent. We have to make do with what we have. Land is not becoming available day after day. What we have is what we’ve got and we have got to work with it,” said Zaleski, who first learned about this technology while earning his degree in Agricultural Engineering from SUNY Cobleskill.

“I never thought I would see it or use it any more than the college classroom and here today as we stand, I’m in it, working it,” he said.

## 2014 e3Technology Conference - July 28-29

**Warsaw Community Schools is honored to host the 2014 e3Technology Conference** in partnership with the IDOE - Summer of eLearning. Come learn from education experts, as well as real classroom teachers as they share their successes and the journey they took to get there. Learn how to use technology in meaningful ways to help your students, to help yourself, and to connect with others.

There will be sessions offered in the beginner, intermediate, and advanced categories, for primary (K-2), intermediate (3-6), middle (7-8) or high school (9-12) levels. General Sessions applicable to any grade level or subject area will also be available. One-hour breakout sessions and longer workshop sessions will focus on interactive, hands-on learning. Earn Professional Growth Points while preparing to reengage your students with knowledge you can immediately apply, and have fun at the same time.

### **KEYNOTE SPEAKER: ANGELA MAIERS** [@AngelaMaiers](#)



As a teacher educator, author and consultant, Angela has spent the past twenty-two years working diligently to help learners of all ages succeed by recognizing their power as readers, writers, and global communicators.

Today, Angela is at the forefront of Web 2.0 technologies and keeping her eye toward Web 3.0. An active blogger and social media evangelist, she is deeply committed to helping learners of all ages understand the transformational power of literacy and the potential of technology as a vehicle and platform for their success in school and beyond.

Her latest books, *Classroom Habitudes* and *The Passion Driven Classroom*, have inspired readers everywhere with lessons and ideas necessary to find their way on the social web and this newly flattened world.

### **KEYNOTE SPEAKER: KEVIN HONEYCUTT** [@kevinhoneycutt](#)



Kevin Honeycutt is a technology integrationist and a staff developer from Central Kansas. He spent 13 years teaching K-12 art and now travels the country and the world sharing ideas with educators.

For the past four years he has hosted a creative learning site called ArtSnacks where he shares 150+ ten minute drawing videos that support standards curriculum. This social “learning” network is his Petri-dish for learning to mentor teachers and students in virtual environments. He was selected to be in the Apple Distinguished Educator class of 2011 and spends time helping schools that use Apple’s powerful tools get the most out of them for students and teachers.

He is currently serving his ninth year as a Technology Integration Specialist at ESSDACK, in Hutchinson, Kansas. He researches and designs programs, training and staff development with a strong passion for helping teachers and learners become successful with educational uses of technology. He shares his thinking and learning on his blog *Tradigital Learning* and in his podcast *Driving Questions in Education*. He is passionate about meeting the needs of at-risk learners and developing approaches to re-engage the “lost” learner.

## Indy Joins STEM Push

By: Maureen Groppe, Star Washington Bureau

WASHINGTON — Indianapolis is among seven cities chosen by a national initiative to develop mentoring programs for young students in science, technology, engineering and math fields, the White House announced Tuesday.

The cities will share \$1 million in financial, consulting and staff support to start their programs, which are intended to be models for increasing mentorships and giving students hands-on experience in STEM fields.

Indianapolis Mayor Greg Ballard said the city is “proud to answer the White House’s call to get more boys and girls interested in STEM subjects.”

One of the best ways to lift the economic fortune of our city and its residents is to adequately prepare them for the careers of tomorrow,” Ballard said in a statement.

The winners, which were chosen from more than 50 competing cities, were announced at the White House Science Fair, where more than 100 students were honored for their school projects.

The mentoring program was one of several initiatives that President Barack Obama promoted Tuesday to encourage participation in STEM fields, particularly among girls and other underrepresented groups.

“These are the fields of the future,” the president said. “This is where the good jobs are going to be. And I want America to be home for those jobs.”

Read more online at: <http://www.indystar.com/story/news/politics/2014/05/27/indy-among-winners-develop-stem-program-youth/9642193/>

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[www.rose-prism.org](http://www.rose-prism.org)



PRISM is a free website that provides collections of online resources for Indiana educators in the fields of science, technology, engineering, and mathematics (STEM). The primary collection of digital teaching materials is indexed according to the Indiana Academic Standards for 6th, 7th, and 8th grade and secondary education courses.