

Mobile Devices

for learning

Tuesday, October 13, 2009

Technology Briefing:
Mobile Devices for Learning

$$M + W = 24/7$$

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If we wrote it as an equation, this idea would be

$$M + W = 24/7$$

Miniaturization plus Wireless equals 24-hour access 7 days a week. From anywhere.



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We see students in the library, but not using the books -- they are instead working with their project group to research a new idea from sources available only online.



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Working adults use their laptops to learn at a distance, enjoying full human interaction with the rest of the class.



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Young students go home with a bookshelf of new stories and texts on their iPod or Kindle.



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College students review illustrated podcasts from their professors as they commute to campus.



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Students in the chemistry lab analyze reactions frame by frame through video shot with a Flip camera.



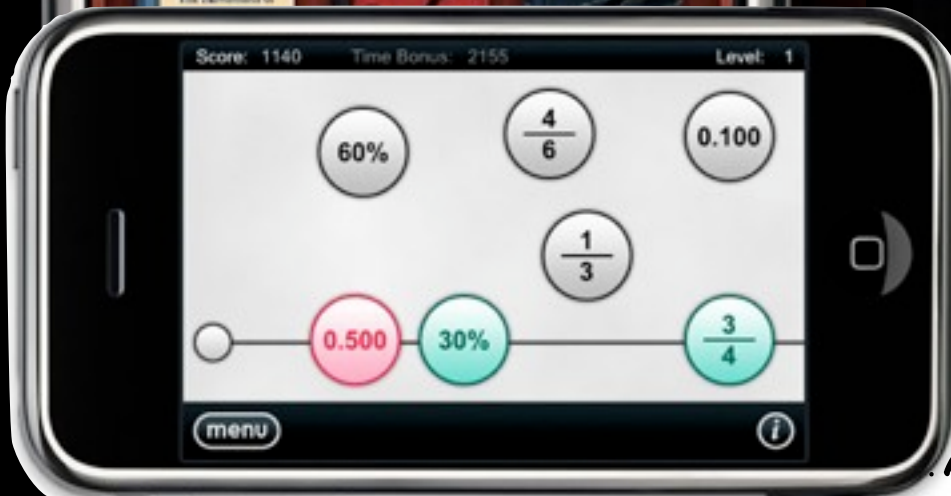
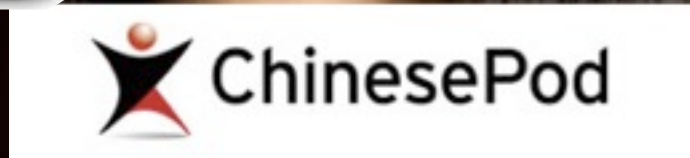
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As the tools shrink smaller, the intellectual resources available to them grow broader.



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Next to the iPod on the table in front of me is a projector of the same size. I connect the two with a short cable and I can present slides to my seminar anywhere. And show student work. With one miniature device in each pocket, the portable professor can be quick on the draw, ready to shoot ideas onto the nearest wall.



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The same iPod houses hundreds of books, from *The Odyssey* to *Paradise Lost* to *Programming with PHP/SQL*. As well as video of Zeffirelli's *Romeo and Juliet*, music of Wagner's *The Flying Dutchman*, and dozens of podcast lessons in learning Chinese. And an animated school bus for beginning readers, along with an interactive number line for learning fractions.



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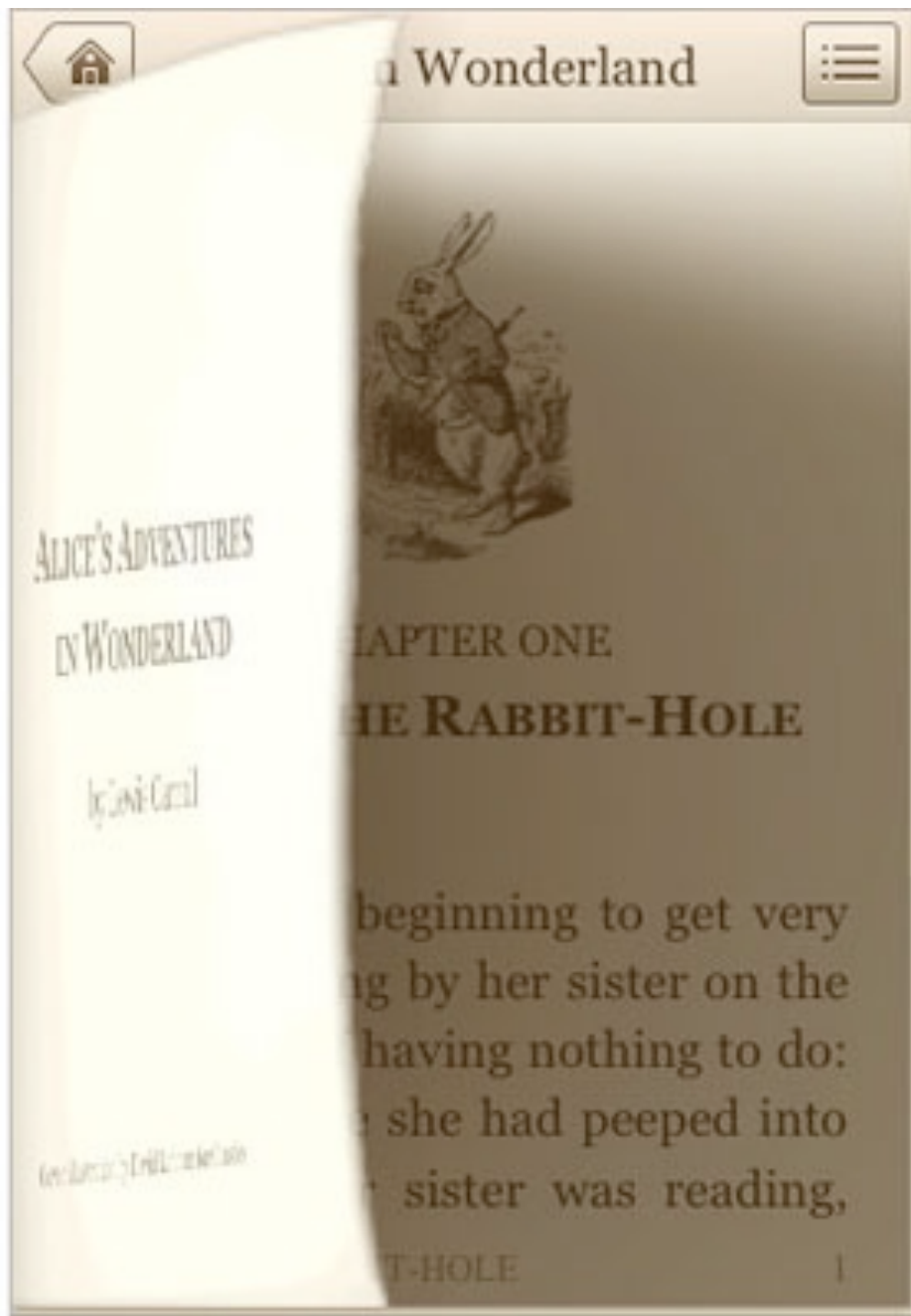
What's on the iPods of your students right now? If you had your druthers, what would you want to see on there?



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What are they?

They are devices smaller than a breadbox that let students learn. The list includes laptop computers, iPods, Kindles, SONY Readers, small digital cameras, data probes, and some smart cell phones. The world is full of mobile digital devices, that's for sure; but few of them are used for learning. Most are used for entertainment and personal communication. But they harbor the potential to be used for serious academic purposes.

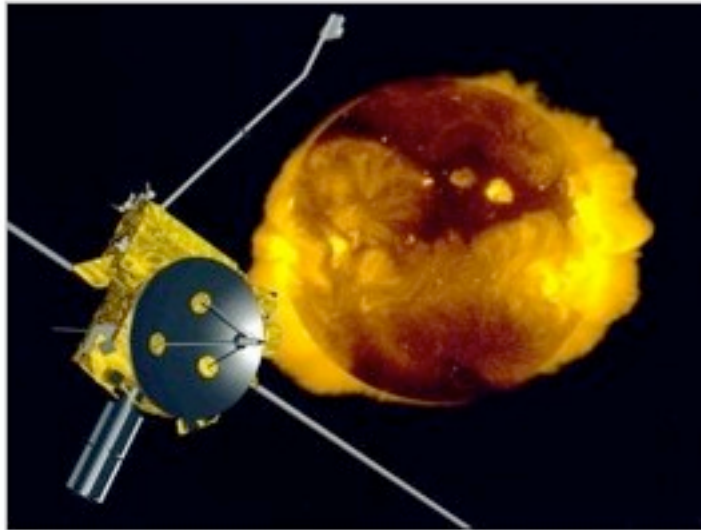


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What do they do?

They can store and display academic information in many formats: text, images, video, voice, music, graphics, maps. They can present exercises, quizzes, and tests that develop students' understanding. They can connect to the internet for access to research. They can record text, voice, images, video, music, and real-world data. They can be turned into a graphing calculator, a geographic information display, or a response clicker. They can manage a student's schedule, contacts, classes, and assignments. They can communicate through email or instant messaging. In fact, the best of today's mobile devices can do anything that a personal computer can do except for advanced video and image editing or complex database programming.

Ulysses Solar Polar Mission



Fast Facts

A joint project between NASA and the European Space Agency, Ulysses for the first time sent a spacecraft out of the ecliptic - the

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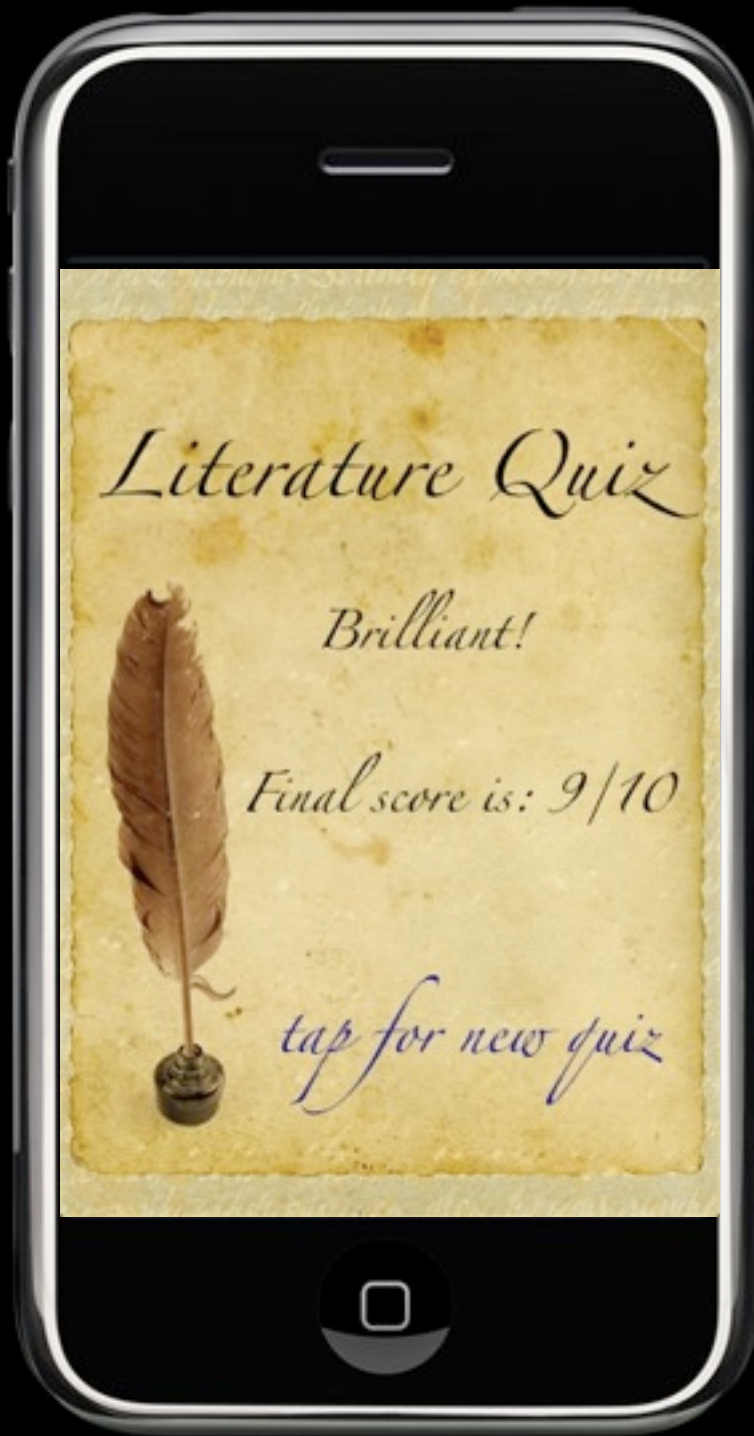
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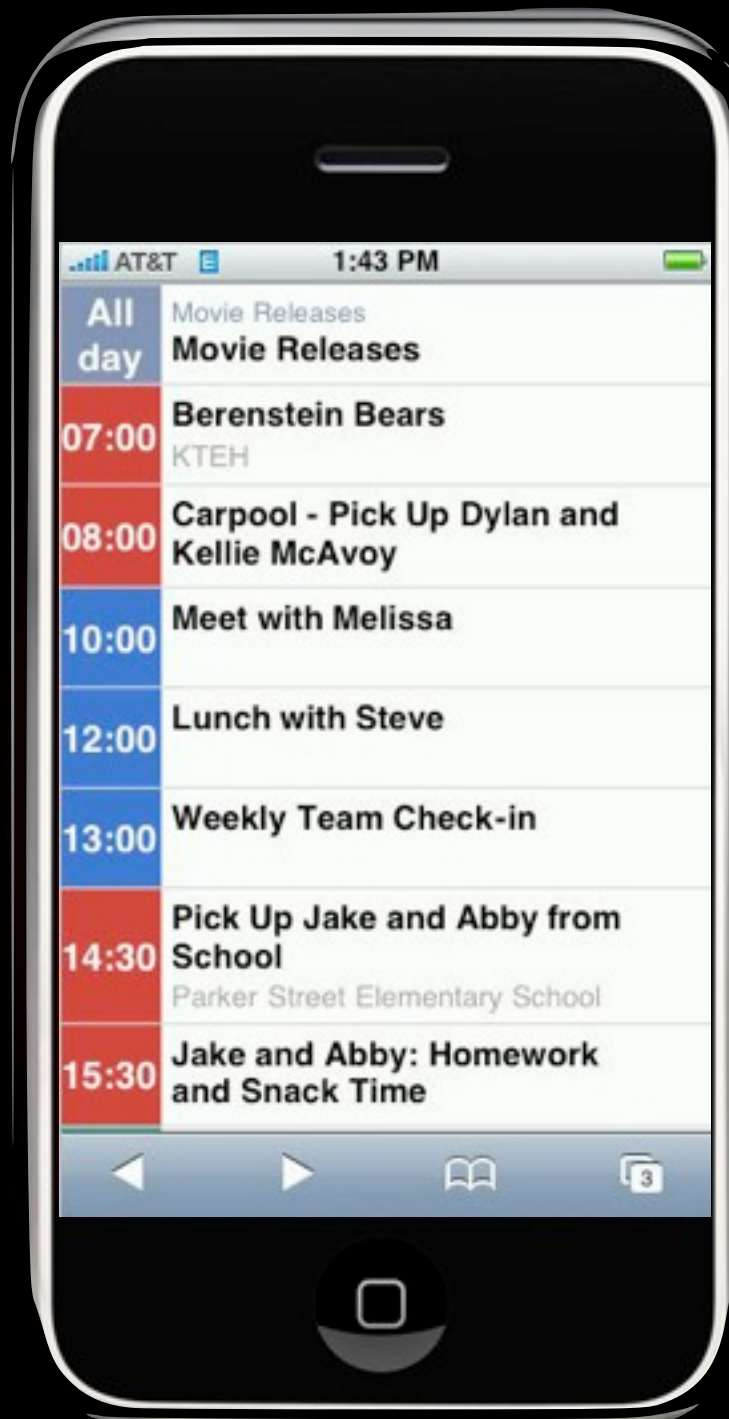
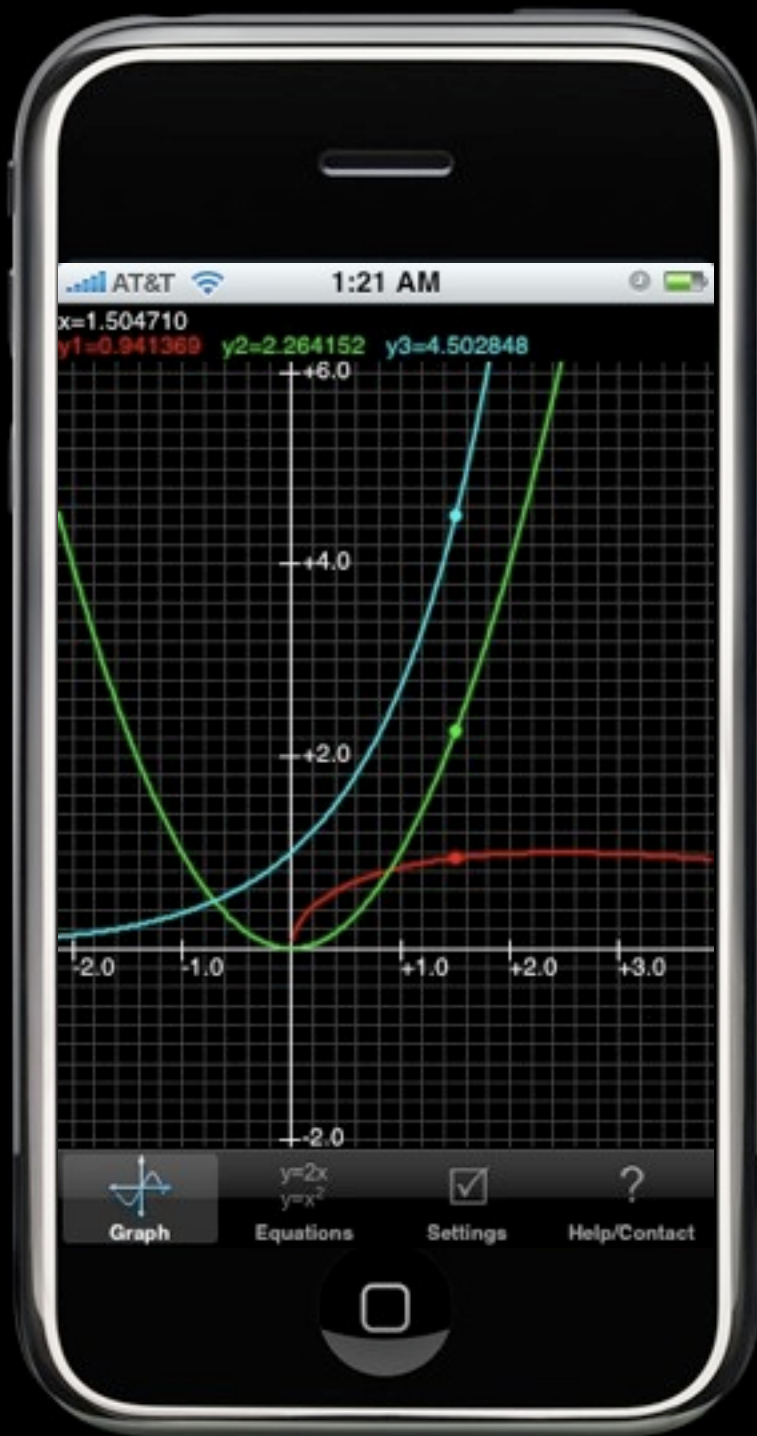
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How much do they cost?

The least-expensive iPods and video cameras cost about \$100; the most expensive smartphones cost \$300. The most popular mobile device, the iPod Touch -- really an iPhone without the phone -- costs about \$200. Only the BlackBerry and the smartphones require a monthly fee; the others are free to use.



MODULE 3: RADIOGRAPHIC CONTRAST

Section 3: Influencing Factors

3.8 Contrast Media

There are two categories of contrast media to consider: positive contrast media (usually air) and negative contrast media, such as barium. Negative contrast media decrease the absorption of x-ray photons by an anatomic area. This is generally an increase in contrast (higher contrast is black or very dark on the image). Contrast media are used to increase the absorption of x-ray photons in an anatomic area. The increase in radiographic contrast is achieved by adding

French and Italian Renaissance Literature



How to use this course



Course syllabus



Course calendar



Faculty profiles



Contacts

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What are the system requirements?

To use these devices in school you need a robust, standards-based wireless network. Even more important (and sorely lacking in most schools), you need a robust, standards-based online curriculum that can be displayed on the mobile devices and takes full advantage of their possibilities.



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Who are the market leaders?

Among young people, Apple's iPod and iPhone products have captured the bulk of the market share. In some communities, upwards of 80% of high school and college-age people own one of these devices. Among working adults, the BlackBerry is the market leader among smartphones, with Palm in second place. Single-purpose devices such as the Kindle or the Sony Reader have yet to penetrate the mass market.

Are You Ready for Mobile Learning?

Pros and Cons of iPods in School,

The Mobile Curriculum

New iPod rules touch off heated debate

No ipod, blackberry use in school proposed,

An iPod for School?,

High-Tech Cheating: What every parent needs to know,

Mobile Devices: Facing Challenges and Opportunities for Learning,

Northridge Electronic Devices Policy

iPod touch. Touching student lives in the classroom

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Why are mobile learning devices controversial in school?

Read these articles *pro* and *con* to find out.

	iPod Touch	Kindle	Sony Reader	Flip camera	Blackberry	iPhone	Smart phone	Zune
Read a book	•	•	•			•		
Browse the web	•	•			•	•	•	•
Play a podcast	•					•		•
Send an instant message	•				•	•	•	
Take a picture	•							
Record video				•	•	•	•	•
Display maps	•					•	•	
Work through a tutorial	•					•		
Take a quiz	•					•		
Compose an essay	•				•	•		
Read today's newspaper	•	•	•		•	•		
Record audio	•			•		•	•	