Technology Integration for Teachers™

Ten Basic Technology Skills Every Teacher Should Have
By Kathy Schrock   NETS•T – IB, VA, VB, VC

If we consider technology a tool to support instruction, it's natural to extend the analogy to recognize the need for training in the skills necessary to utilize the tool. Just as you don't use a chainsaw to cut down a tree without training, neither can you use a new technology without training. Gaining technology skills is a cumulative process. The more you know, the easier it is to learn new strategies. But if you are a beginner, you may not even know which skills you need. Here are ten basic operations and concepts at which teachers who use technology need to be proficient:

1. Hooking up a computer.
2. Recognizing the various ports on the computer that allow the attachment of peripherals such as microphones, headphones, LCD projectors, printers, interactive whiteboards, handheld computers, digital cameras and camcorders, and scanners.
3. File management and network file management.
4. Installation of software.
5. Updating virus software definitions.
6. Troubleshooting peripheral error messages.
7. Burning data to a CD-R disk.
8. Copyright issues pertaining to shareware and software.
9. Knowing the "vocabulary" of the computer and Internet browser.
10. Checking and sending email, and saving and creating attachments.

Once you are comfortable with the computer as a tool, advance to new technology how to's in the context of how they will improve teaching and learning. For example, instead of studying how to synchronize a handheld device to a desktop computer, start by investigating educational software already installed on these devices and think of ways they can be used in the curriculum. Or, instead of tackling how to create a blog on one of the free blog-hosting sites, brainstorm ideas of how you could use blogs—for example, as parent-communication tools, as project interactions with others around the world, or simply as a place to post homework and links for students.

If your school doesn't provide ongoing staff

On the Go with a Router That Travels
By Carol Holzberg, Ph.D.   NETS•T – IB; VA, VC

Small, personal, and easy to take with you when you're on the move, the **Linksys Wireless-G Travel Router with Speed Booster (Model #WTR54GS)** comes with almost everything you'd expect from a portable lightweight travel router. It includes a Cat5 Ethernet cable, zippered travel pouch, built-in LAN port to share another wired device, a PC setup wizard that can configure your laptop for network or online connection in just minutes, and a 3-year warranty. You'll need a broadband Internet connection (DSL, cable, or T1), since the **Linksys WTR54GS** doesn't work with dial-up modems.

Offering several advanced networking and security features, plus a built-in antenna and its own power supply (with retractable power plug), the **Linksys**

WTR54GS delivers high speed connections to both 802.11g and 802.11b networks. Its only shortcoming is that it leaves Macintosh users to configure installation and setup on their own because it lacks a Mac-compatible setup wizard. If you need help connecting a Macintosh, the installation instructions are on our website: **www.technologyintegrationforteachers.com.** Measuring 2.87" x 4.21" x 1.22" and weighing 4.64 ounces, this grab-and-go router takes up little space in a backpack or briefcase. The device can function both as a wireless access point and a wired or wireless router to connect to Wireless-G and -B devices, as well as Ethernet-wired PCs and Macs. It sports a wireless LED that lights up when there is a successful wireless connection, an Internet LED that lights up when a connection is made to the Internet (WAN port), and an

GADGET GRABBER

Every month you will find two new technology integration strategies that have been shown to be highly effective in the classroom.
Find all the previous "Toolbox Strategies" at
www.technologyintegrationforteachers.com

Toolbox Strategy #19 Keyboarding Shortcuts

Definition:
Keyboarding shortcuts or key commands help students work more efficiently with individual software programs.

Why should this strategy be used?
This technical skill helps students become more computer-savvy as they learn to manipulate files, move information from one location to another, and format data within a document.

Steps for implementation:
1. Teach students where the Control key is located (the control key for Macs is the Apple key).
2. Demonstrate and have students practice the use of these commands…

☑ **within a program to manipulate files:**

[Ctrl] + O = open a file
[Ctrl] + N = create a new document
[Ctrl] + S = save a file

[Ctrl] + P = print a file
[Ctrl] + W = close a file

☑ **to move information from one location to another:**

[Ctrl] + X = cut
[Ctrl] + C = copy
[Ctrl] + V = paste
[Ctrl] + Y = repeat

☑ **to format a document:**

[Ctrl] + U = underline
[Ctrl] + I = italics
[Ctrl] + B = bold
[Ctrl] + A = select all
[Ctrl] + D = access the font menu
[Ctrl] + T = tab at the beginning of a paragraph

☑ **to correct mistakes:**

[Ctrl] + Z = undo

Insider Tip: *Display key commands or shortcuts on a poster or bulletin board. This will help students become familiar with the commands and reinforce your expectation that they use them.*

Toolbox Strategy #20 SQ3R

Definition:
SQ3R (Survey, Question, Read, Recite, Review) is a study method involving a prescribed series of steps for comprehending expository text. Use this strategy as a technique for comprehending material found on websites or CD-ROMs, as well as in textbooks.

Why should this strategy be used?
SQ3R helps students formulate questions, review content, and summarize information in order to increase comprehension of expository text.

Steps for implementation:
Determine whether students are to use a table or spreadsheet format to record information from the text. Also, discuss whether information will be presented horizontally or vertically. Then instruct students to follow these steps:

1. Survey the text, looking for titles, headings, illustrations, captions, diagrams, or graphs. The survey is an opportunity to get a general impression of the content.
2. Turn each title or subheading into a question that can be answered as soon as the section has been read. These questions will be recorded in the table or spreadsheet.
3. Read the section and mentally answer the questions that have been generated.
4. Record answers, key facts, phrases, vocabulary words, and concepts below or beside the questions listed in the table or spreadsheet.
5. At the end of each section, summarize the material that has been presented. Type the summary below or beside the answers, key facts, vocabulary words, and concepts.

Insider Tip: *Have students study the resulting SQ3R charts to help prepare for an exam over the material. For students who are struggling with this procedure, provide quality examples that are a compilation of several students' work.*

Flash Drive Precautions
NETS•T – IB; VC
By Tweed W. Ross, Ed.D.

Flash drives are great for copying files and moving them from one machine to another, or for taking documents on the road. As the devices grow in capacity–gigabyte capacities are now available—there is a temptation to use them as a backup for all the data on your computer. This is especially true when you're considering updating your operating system, which often erases the hard drive. But don't do it!

Flash drives are a fragile medium and if you unplug them while writing a file or without safely removing them from your computer, the files may become corrupted. Then, if you erase your hard drive or it fails, your data is gone! Flash drives are not a backup system.

On The Go with A Router That Travels

Ethernet LED that lights up to show network activity. With support for Linksys' own speed-enhancement **SpeedBooster** technology, this broadband travel router can also connect to other **SpeedBooster**-enabled products at twice the speed of standard 802.11B or G devices.

Security features built into the **Linksys WTR54GS** include support for several types of wireless WPA (Wireless Protected Access), including WPA-Personal, WPA2-Personal, and WPA2-Mixed, plus support for WEP (Wired Equivalent Privacy), MAC address filtering, SSID (Service Set ID) Broadcast, and SPI (Stateful Packet Inspection) protection. You can create Internet access policies, block anonymous Internet requests (to prevent your network from being pinged by other Internet users), and block access to local servers from local network computers. It also offers support for VPN (Virtual Private Networking).

Product: Linksys Wireless-G Travel Router with Speed Booster (Model #WTR54GS)

Platform: Windows: 200 MHz or Faster Processor, 64 MB of RAM, Internet Explorer 4.0 or Netscape Navigator 4.7 or Higher for Web-based configuration, Windows 98SE, Me, 2000, or XP; Network Adapter. Also, tested with Macintosh PowerBook G4, but configuration must be done manually.

Price: $80-$100.

Company: Linksys, a division of Cisco Systems, Inc.; 800-546-5797; www.linksys.com
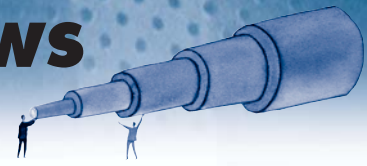
Find more information at

www.technologyintegration forteachers.com

SOFTWARE REVIEWS

Warren Buckleitner, Ph.D.
Editor, *Children's Technology Review*

NETS•T – IIB, IIIC

Elementary Pick of the Month

Wordy Query: Foundations for Reading & Writing Fluency

Grades 2-4; Windows XP, Windows 98, Mac OSX; home edition $35; single school edition (two programs) $55; lab edition (six programs) $149; site license (25 computers) $499. Talking Fingers, Inc.

www. **www.talkingfingers.com**

This program is for 7-10 year-olds who have learned the basics of phonics and word identification and are ready to master more complex reading and writing skills. It uses games, songs, rhymes, storytelling, and rewards to teach children 20 spelling rules, introduce word families, and challenge students with words that do not conform to spelling conventions and must be memorized by sight.

The program features 20 Wordy Query Lessons with six steps to reading and writing fluency in each lesson: Patterns, Karaoke, Recycler, Pop-a-Word, Write Stories, and Read Stories.

Secondary Pick of the Month

EarMaster Pro 5

Grades 5-12; Windows XP; $69.95; eMedia

www. **www.emediamusic.com**

Here's a wonderful tool for any music teacher. This solid musical tutorial is like having a personal music theory teacher in a Windows computer. The focus is ear training—otherwise known as the development of tone and chord discrimination skills. Having these skills makes it easier for a student to sing or play along to other melodies, or perhaps transcribe the next great symphony without needing a nearby piano keyboard for every note. One disk contains 651 lessons organized into 12 areas, from interval comparison to melodic dictation.

The program starts easy, with "which interval is the greater" (followed by two notes). The harder levels put the notes in the context of scales (lydian or mixolydian) or chord progressions. As you work, the challenge increases—although progress is not saved. In a typical easy problem, you hear two pairs of notes and then must decide which pair has the greater interval.

The program features playability in 13 languages; 128 instrument sounds; an on-screen guitar, violin, bass, and piano; and a second set of tutorials designed specifically for jazz. A suite of MIDI features allows answers to be entered with any MIDI instrument (recommended for extended use, but not required in order to make the program function).

Schools may be interested in *EarMaster School*—the same program with more management features, including the ability to create custom class lessons or track multiple students.

Correction: The review of *Inspiration 8* that should have appeared in this space last month is now on our website, **www.technology integrationfor teachers.com**.

MySpace, YourSpace, OurSpace

By Suzette Lovely

Nets*T – IB; VC; VIA, VID

Imagine my shock when reading in a local newspaper that a former student was going by the name "Hooker" on the popular Internet site, MySpace. When I last saw "Hooker" as her elementary principal, she was clad in sneakers and a sweatshirt. The article went on to say that "Hooker's" mother was horrified, too. When Mom pressed her daughter for details about the name's inception, the naïve 17 year old calmly told her, "From our last fishing trip. Don't you remember?"

This new Internet medium is a world most parents and educators simply don't understand. Described as a combination yearbook, personal diary, and social club, MySpace is one of the fastest growing websites in the U.S., with 50 million members. Kids chat about everything from school to dating to environmental issues, such as global warming. Teenagers in droves are posting their profiles, opinions, and intimate secrets.

The majority of MySpace users are completely oblivious to the hidden dangers.

A January story on NBC's *Dateline* revealed that just about everything is posted on MySpace—addresses, birthdays, cell phone numbers, schools, and even daily schedules. Although the rules say you must be 14 or older to visit the Web community, who's checking IDs at the chat room door?

In the *Dateline* report, scenes of binge drinking, drug use, and sexual activity were commonplace. Such cyberfreedom seems to give kids both the social anonymity they need and the notoriety they crave. The problem is that most parents have no idea what their children are up to, tucked away inside their bedrooms. Just because no friends are in the house doesn't mean kids are alone. If parents don't clue in soon, it may be too late.

Internet lawyer Patty Aftab has designed a website to provide parents with help and information about Internet safety (**www.wiredsafety.org**). Links take parents on an odyssey from IM tutorials and the secret codes teens use online, to how to recognize cyberbullying. But, of course, the biggest concern among parents and child advocates is how to protect adolescents from Internet predators.

According to WiredSafety.org, most victims are between the ages of 11 and 15.

Sheltered and naïve, many are tricked into thinking they're finding puppy love with a peer. As for the predators, says Aftab, it's one-stop shopping where they can browse by catalog. Even MySpace users who don't list names or addresses can be conned through other details like favorite bands, movies they watch, or which boys they think are cute.

Websites will never be able to take responsibility for monitoring all users. And why should they? That's our job. Parents have to take control of their children's home computer use and not be afraid to invade their space. Teachers have to monitor sites being visited at school and educate children and parents about the dangers lurking behind the screen.

As for the former student who thought "Hooker" was a clever pseudonym, she says she now sees it differently. Since Mom has access and regularly checks up on her activity, the teen is much more careful. "At first I kind of thought she was invading my privacy," the high school senior told the reporter. "But now if she has any doubts that I'm doing something wrong, she has the email and password. I have no problem with that."

Ten Basic Skills...
(continued from page 1)

development in technology, encourage administrators to establish such instruction. In the meantime, survey your fellow teachers and support staff to determine who understands these skills. Once you've identified the level of understanding, create teams to help instruct and mentor others to ensure everyone is competent. As you move up the knowledge ladder and start instructing others, remember that how-to training for basic skills is most effective when it involves handouts of screenshots, demo screen capture movies, and other hands-on materials. Keep groups as small as possible and follow up on instruction as learners begin to implement the skills.

Find a brief checklist to help survey your colleagues at

www.technology integrationforteachers.com

NASA launches website for kids
Grades K - 4
NETS•T – IIIA, IIIB, IIIC

In April, NASA announced a new website called Kids' Club, featuring animated, entertaining, and educational activities for children. Interactive games on the site teach children about exploring space, building and launching rockets, keeping airplanes on schedule, how a comet travels through the solar system, and more. This is a terrific website parents can use to encourage children to play games at home for entertainment, and educators can use as a fun way to reach students in the classroom or during after-school programs.

The educational games and activities were developed for five skill levels and support various national education standards in science and math.

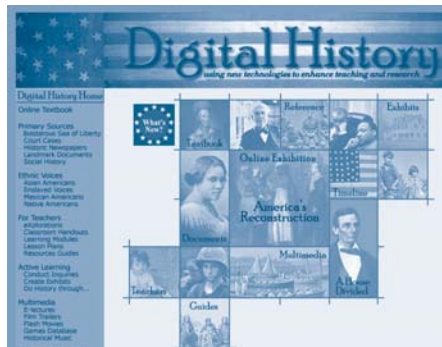**www.nasa.gov/kidsclub**

Digital History
NETS•T – IIIA, IIIB, IIIC
By Carol Holzberg, Ph.D.

What's gone is gone, but not forgotten at the University of Houston's **Digital History** interactive website (**www.digitalhistory.uh.edu**). Focusing on American history topics of importance for K-12 students, the site offers numerous resources to whet a history buff's palette. These include special exhibits such as Reconstruction and "people and politics after the civil war"; primary resources such as court cases, newspapers, documents written by Christopher Columbus, and voyage narratives; and an interactive timeline beginning with Walter Raleigh's first North American settlement in 1585 and spanning social, political, and cultural events until 1999.

Designed by faculty in the University of Houston's history department and College of Education, in partnership with the Chicago Historical Society, New York's Gilder Lehrman Institute of American History, the National Park Service, and Houston's Museum of Fine Arts, **Digital History** aims to make historical studies more interactive and less "boring."

Other resources at the site include an online interactive U.S. history textbook covering events from the Revolution to September 11, 2001; multimedia flash movies, games, music, and e-lectures; a host of special topics including the history of American film; a History Reference Room with several biographies and an encyclopedia; and several inquiry-based interactive learning modules encouraging students to conduct historical investigations and analyze primary sources so they can draw their own conclusions. There's even a section for teachers, complete with lesson plans, handouts, and resource guides.

www.digitalhistory.uh.edu

WriteToLearn
By Warren Buckleitner, Ph.D.
NETS•T – IIIA, IIIB, IIIC; IVA, IVB

Grades 6-10; Internet Site; $400 and up (subscription); Pearson Knowledge Technologies

Pearson Knowledge Technologies has announced a new online essay reading service, with prices starting at $20 per student per year, with a minimum 20-student order. The service, designed for middle and high school students, uses Pearson's Knowledge Analysis Technology (KAT) engine, which evaluates the meaning of text by examining whole written passages. The KAT engine in turn uses a Latent Semantic Analysis (LSA) tool, which generates semantic similarity of words and passages by analyzing large bodies of relevant text. According to Pearson PR, LSA can then "understand" the meaning of text much the same as a human reader.

www.k-a-t.com/