

Technology



**Integration
Strategies
Tips
Websites
WebQuests**



Web Gallery

About Faces

www.nidcr.nih.gov/lyf/index.html

Grades K-8

This site is more than just another "pretty face" among Web resources. Produced jointly by the Smithsonian Institution and the National Institute of Dental and Craniofacial Research, About Faces is an online exhibit that offers a glimpse into the history and study of the parts of the face. While the ears, nose, eyes, skin, and oral cavity are described, also discussed are inventions that have been designed to improve these features such as contact lenses and hearing aids. Visitors may view images from the actual exhibit shown at the National Museum of American History.

Assessing Student Projects

pblmm.k12.ca.us/PBLGuide/AssessPBL.html

Grades K-12

Assessing Student Work with Project-Based Learning discusses some of the diverse functions of assessment.

Baltimore Museum of Art: Matisse for Kids

artbma.org/education/index.html

Grades K-8

As part of the online exhibit of the renowned Cone Collection, the Baltimore Museum of Art has created Matisse for Kids. Matisse's schnauzer, Raoudi, guides visitors through an interactive investigation of the artist's work. Meet Matisse, see how he created his paintings, and learn about his artistic vision. As part of their tour, students collect bits of color, patterns, and other props from Matisse's paintings and use them to create their own Matisse-themed masterpiece. Macromedia Flash is required.



Bibliotherapy

maxweber.hunter.cuny.edu/pub/eres/EDSPC715_MCINTYRE/Biblio.html

www.ericfacility.net/ericdigests/ed436008.html

www.clpgh.org/kids/booknook/bibliotherapy

www.learnwell.org/biblio.htm

Biodiversity Counts

www.amnh.org/learn/biodiversity_counts/

Grades 4 - 8

Biodiversity Counts is a middle-school science program developed by the American Museum of Natural History. One of the goals of the program is to get students out of the classroom and into the field by having them identify a site near their school where they can complete hands-on investigations into biodiversity. Participants assume the role of museum scientists by making observations; recording and analyzing data; collecting and classifying evidence;

and creating exhibits. To facilitate participation in the program, a downloadable Teacher's Guide includes Classroom Preparation, Establishing Rules for Field Trips, a Dichotomous Key, and a Directory of Specialists.

Bridge to Classroom

www.newbaybridge.com

Grades 3-8

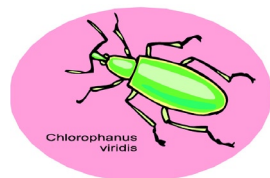
Scheduled for completion in 2007, the new east span of the San Francisco-Oakland Bay Bridge is destined to serve travelers for many years. Now students can study the art of designing and building major bridges, as they closely examine one of the greatest concerns of this bridge's designers . . . the threat of an earthquake. In Bridge to Classroom, kids can engineer their own bridge and test its strength. They can also learn about the people who have assumed the challenge of creating the new east span and how technology is aiding them in their task.

Bugscope

bugscope.beckman.uiuc.edu

Grades K-12

A joint project of the Beckman Institute for Advanced Science and Technology and the Imaging Technology Group at the University of Illinois, Bugscope gives students the opportunity to use computers to remotely operate a scanning electron microscope to image insects. At the Web site you'll find an application form and information about how to configure your computer for participation. There is also a good collection of activities, introductory articles on electron microscopy and arthropods, and a 3D Image Gallery.



Cavalcade O' Chemistry

www.chemfiesta.com/

Grades K-12

A veteran chemistry teacher and author, Ian Guch makes chemistry fun, accessible, and comprehensible. For students, the Helpdesk offers worksheets, tutorials, vocabulary, and FAQs. For teachers there are free labs and the Worksheet of the Month. Study compounds, acids and bases, reactions, subatomic particles, and the periodic table. Review the questions sent to Mr. Guch and his answers. Send him your unique query, and he'll do his best to reply.

Colonial Williamsburg.

www.history.org

Grades K-12

Located in Williamsburg, VA, site of Britain's wealthiest eighteenth century colony, Colonial Williamsburg is the world's largest living history museum. Its 300 acres are home to historically accurate reconstructions inhabited by costumed interpreters. Thanks to the impressive Web site, a virtual visit is incredibly rewarding. Click Explore and Learn for an opportunity to Meet the People (colonial families), See the Places (historic buildings), or Experience the Life (Politics, Religion, Family, Clothing, Food, and Trades). Teacher Resources offers lesson plans and two interactive activities - Tour the Town and Mapping Colonial America. Current Excavations, Electronic Field Trips, and an Archaeology Kids'

Page provide more information. History students form all over the world can view this site as it is available in seven languages.

Dr. Bob's Science Stuff

www.frontiernet.net/~docbob/

Grades4-8

Dr. Bob was trained as an organic cheist and has 17 years of experience doing industrial research. At present, however, he runs the Sylvan Learning Center in Middletown, New York, and maintains this interesting Web site. Features contain nine articles about recent discoveries in science. Text is large and easy to read, and the articles are informative and make good use of hypertext. Topics include tsunamis, the death of our sun, and mysterious sliding boulders. Other resources at Dr. Bob's include Kid's World, where Web-smart visitors can play cool games; Science Circle, which provides information about a variety of scientific fields; Science Fair Mania; and Links.

Future State

www.future.state.gov/

Grades K-8

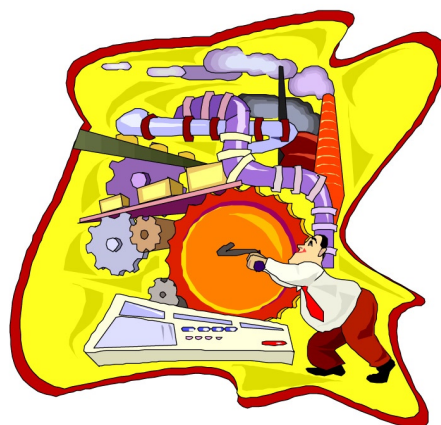
Created by the U.S. Department of State, Future State shows young people how this government group handles foreign affairs and diplomacy. In addition to information about the office of the Secretary of State, students can learn about youth programs that promote peace and find out what it is like to live outside of the United States. The Fun Activities section contains word puzzles and games. There are also lesson plans for teachers that focus on terrorism, the Cuban Missile Crisis, and Vietnam.

[How Stuff Works Express](http://express.howstuffworks.com/)

<http://express.howstuffworks.com/>

Grades 4-12

HowStuffWorksExpress is the e-publication of HowStuff-Works. Published several times a year, each issue contains artricles on Neat Technology, Internet Projects, HOw Stuff Will Work (in the future), Toy Autopsy, Now Way Mysteries and Misconceptions, and Extraordinary People. Features include understanding the workings of an MP3 player, mining the Web for information about hurricanes, attempting to explain augmented reality, discovering how butterflies migrate annually, and meeting Tim Berners-Lee, the creator of the Internet. In addition to these regular features, you'll also find Games, Homework Wizard, and Hot Sites. And don't forget to visit the Teacher's Corner for free teaching materials, an online Teahcer Forum, and Student Incentives.



Inside Kindergarten

www.geocities.com/Athens/Aegean/2221

Grades K-2

In support of all of those who deal with the littlest students on a daily basis, elementary principal Addie Gaines offers Inside Kindergarten. The site is full of ideas, tips, and links for educators. Be sure to check out this site's collection of units with teaching suggestions, books, and other resources on topics from bats to trains to watermelon! Make time for the great leads to Internet projects that are shared here as well.



Katerpillars (& Mystery Bugs)

www.uky.edu/Agriculture/Entomology/ythfacts/entyouth.htm

Grades K-6

From making food that looks like an insect to stories of cultures that eat the real thing, Katerpillars is a fun and informative resource for kids and teachers. Provided by the Department of Entomology at the University of Kentucky, this site has instructions for observing insects in the classroom, crafts and projects, and games and jokes. There are plenty of bug related recipes and suggestions to help your class learn about bugs all year long. Before you send your class on a bug hunt, introduce them to dangerous and friendly insects through this site's guide called *Get This Bug Off of Me!*

Kiddyhouse

www.kiddyhouse.com

Grades Pre-K-2

Kiddyhouse is a wonderful destination for early-childhood educators. The Teachers' Corner offers an impressive array of resources including Lesson Plans, Literature-based Units, Worksheets, Clip Art, Teacher Tools, Crafts, Articles, Lesson Resources, Early Childhood, and Songs for Kids. The lessons are great, covering topics such as colors, firefighters, and penguins. Articles are extremely useful and deal with the issues that confront teachers on a daily basis: classroom management, behavior, learning styles, and lesson plan development. The Tools section has twelve different tools so that teachers can create report cards and worksheets, and track grades and attendance. Similarly, the Kids' Korner provides excellent age-appropriate activities. Kids can investigate frogs, farms, or snails, listen to online stories, and participate in sing-a-longs. Homework help and holiday activities are also available. For Laura Ingalls Wilder fans, there are directions for building a prairie.

Kim's Korner for Teacher Talk

www.kimskorner4teachertalk.com

Grades 6-8

Kim's Korner is created and maintained by Kimberly Steele, a 15-year veteran teacher of middle school language arts. Resources are categorized into Writing, Reading and Literature, Grammar, Classroom Management, Kim's Kreations, Favorites, and more. You'll find suggestions for using cartoons in the classroom, building and maintaining a classroom library, and alternatives to book reports. Of particular interest is the impressive collection of Six Trait Model, and a portion of the site is dedicated to providing information about it, as well as Kim's original print-ready worksheets.

Liberty's Kids

<http://pbskids.org/libertyskids/>

Grades 3-8

PBS's *Liberty's Kids* is making Colonial America cool! Presented in animation and with the voice talents of famous personalities such as Walter Cronkite and Dustin Hoffman, the show deals with events during the War of Independence. Now students can continue their investigation of the past online through the show's web site. There are interactive games, notes from behind the scenes, comparisons of the 1700s and today, and e-cards. In addition, students may download a newspaper creation program and search an archive of people, places, and things from the revolutionary period. A section for parents and teachers includes plays, activities, and explanation of the war, and advice to help adults make learning about this period more meaningful for children.

National Underground Railroad Freedom Center

www.freedomcenter.org/

Grades 3-12



The dramatic new National Underground Railroad Freedom Center opened its doors in Cincinnati, OH on August 23, 2004. Even if you are unable to visit in person, you can take advantage of the Center's many resources at their Web site. Click Educators, then Lesson Plans, and finally FreedomQuests, for units that build higher-level thinking skills for grades five through twelve. (FreedomQuests require Adobe Acrobat and Macromedia Flash Plug-ins.) Click Learn, then Underground Railroad for a timeline of events and stories of people who helped slaves escape to freedom. The Freedom Stations Program is an archive service for researchers and educators who want to apply the history of the Underground Railroad to present-day human relations efforts. This program also offers a place to discuss the topics of freedom and race.

Ology

www.ology.amnh.org

Grades 4-12

Created by the many "ologists" at New York's famed American Museum of Natural History, this site covers Astronomy, Biodiversity, Einstein, Genetics, Marine Biology, and Paleontology. Throughout the site, students can be on the lookout for over 200 different printable collectible cards. There are also numerous interactive activities. Begin your genetic journey by answering questions about your ability to curl your tongue, wiggle your ears, or raise one eyebrow. Expand your knowledge of outer space by reading a funny yet informative interview with the planet Mars. Explore a city park or visit the Global Grocery section and discover the origin of many common foods. Wherever you go at this site, make sure you have Flash Player installed.

Online Poetry Classroom

www.onlinepoetryclassroom.org

Grades 6-12

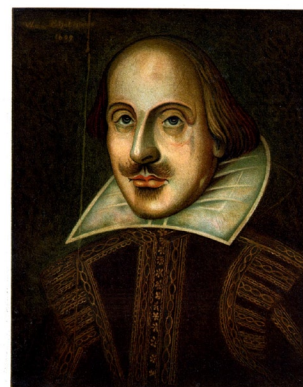
Here is an excellent destination into the world of verse. Designed for high school language arts teachers, resources are organized into How to Teach, What to Teach, Workshops, Find a Poet, Find a Poem, Teacher Forums, and Links. Online Poetry Classroom has held conferences at Columbia Teachers' College, at the Bread Loaf School, and the National Council Teachers of English Conference. One of the products of these conferences is an impressive collection of original lesson plans and teaching ideas. You'll also find biographies of over 450 poets, plus a timeline of poetry that begins with Anne Bradstreet in 1612. The site contains the texts of over 1200 poems, and the media center has audio and video clips of authors reading their own poems. The Forum provides registered users with an online community for sharing ideas, and links provide access to even more virtual poetry resources.

Shakespeare for Kids

www.folger.edu/education/kids/kidshome.asp

Grades 5-8

Did you know the playwright Shakespeare was also an actor in London? This site is a good introduction to the many famous Shakespearean quotations and unusual words from his plays. Printable scripts are available for scenes from The Winter's Tale, The Tempest, and The Merry Wives of Windsor. Activities include Who Am I?, Whose Line is It?, and Meet a Costume Designer. Puck's Place for Kids lets students submit their own stories, poems, plays, and art. In addition, learn about Queen Elizabeth I, who enjoyed watching Shakespeare's plays or examine an authentic engraving of London in 1616. You can even listen to a piece of music from Shakespeare's era called *Half Hannikin*.



Self- and Peer-evaluation Using Rubrics

learnweb.harvard.edu/alps/thinking/docs/rubicar.htm

Grades K-12

Although there are many types of authentic assessment, the main scoring tool is usually a rubric. Heidi Goodrich Andrade, an educational researcher at Harvard University, provides guidelines for building rubrics.

<http://rubistar.4teachers.org/index.php> is an online rubric builder

Spywatch

www.bbc.co.uk/education/lookandread/intro.htm

Grades 4-8

Spywatch is a super cool Web quest created by the British Broadcasting Corporation. Student sleuths test their deductive skills by going back over sixty years to World War II, collecting clues, and analyzing them to identify spies. There are a printable spybook for recording clues, a teacher's guide with helpful notes, a club where students can play games or submit their own writing, and more. Honing observation skills has never been such fun!

Texas Beyond History

www.texasbeyondhistory.net/

Grades K-12

Texas Beyond History is a project of the TExas Archeological Research Laboratory at the University of Texas, Austin. It's purpose is "to interpret and share the results of archeological and historical research on the cultural heritage of Texas with the citizens of Texas and the world." Texas Beyond History includes a map featuring archeological sites to explore in Texas. Kids Only has fun activities and facts, plus a forum where you can direct questions to the archeologist, Dr. Dirt. Teachers can find lesson and activity ideas in the areas of art, math, science, social studies, and language arts.

University of Pennsylvania Museum of Archaeology and Anthropology

www.museum.upenn.edu/new/exhibits/online_exhibits/online_exhibits.shtml

Grades K-12

The University of Pennsylvania Museum of Archaeology and Anthropology has a collection of over 20 virtual exhibits from an impressive array of geographical locations, cultures, and periods in history. Topics include The Ancient Greek World, Egypt, and Sailing the Ocean Without Map or Compass. Each exhibit features informative articles and artifacts from the museum's collection. This wonderful resource is for anyone seeking an unusual virtual field trip.



This Way to My Body

kidshealth.org/misc_pages/mybody_LP.html

Grades 3-5

How much do kids know about their bodies? KidsHealth, using Macromedia Shockwave, lets students discover and explore the systems of the body with a click of a mouse. Well-written by doctors, this site includes a Scavenger Hunt Challenge, colorful diagrams, embedded terms that link to detailed facts, and definitions in the Glossary of Medical Words. Additional topics include Everyday Illnesses and Injuries; People, Places, and Things That Help Me; Dealing With Feelings; and Staying Healthy.

Women Illustrators of Children's Books

www.ortakales.com/Illustrators/index.html

Grades K-6

Denise Ortakales, a paper sculpture illustrator, has devoted a portion of her Web site to feature the artwork of 30 women illustrators including Barbara Cooney, Trina Hyman, Beatrix Potter, and Tasha Tudor. For each illustrator, Ms. Ortakales has written an informative biography and included illustrations, book lists, awards, and links to interviews. This great way to introduce students to the work of these exceptional women.

Women in World History

www.womeninworldhistory.com

Grades 4-12

This curriculum Web site is an offshoot of a 1985 Department of Education project to create a bibliography of classroom resources. The Web site offers a fascinating glimpse

at women throughout history. The site is impressively multicultural and highlights women from all continents and cultures. Great Women Rulers focuses on 19 notable leaders including Nefertiti, Cleopatra, Catherine de Medici, and Catherine the Great, Female Heroes, organized by region, profiles 12 women of distinction. Lessons offer ten creative plans for units on using art to understand women's roles in history, exploring archaeologists' and anthropologists' use of tools to "uncover women's work," and unraveling the history of Mayan women through their weaving. Other resources at the Web site include a wonderful section dedicated to Women in the First Millennium, Words of Wisdom, links, and more information about the curriculum.

Writing a Book Report

Many classes are taking advantage of their computer access and sharing their responses to their readings with the world. Check out these examples of online book reports.

The Sign of the Beaver - www.kpbsd.k12.ak.us/seward.elem/signofbeaver.htm

Books Alive! www.ncsu.edu/midlink/bkfair/books.alive.html

The Book Report - <http://lkwdpl.org/study/bookrep>

How to Write a Book Report - www.infoplease.com/homework/wsbookreportelem.html

How to Write a Book Report (Grade 5-12) www.infoplease.com/homeowrk/wsbookreporths.html

Book Report Now - www.randomhouse.com/kids/bookreportnow

How to Write a Book Review - library.queensu.ca/infoef/bookreview/write_review.htm

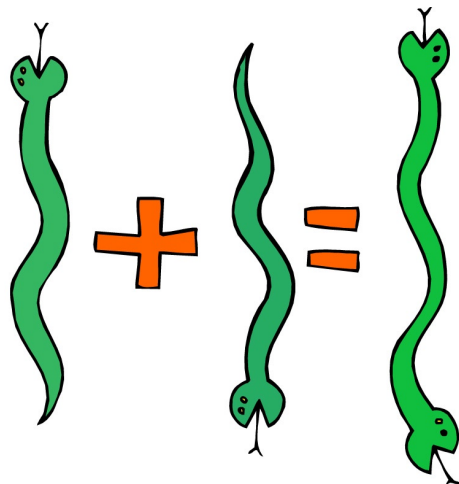
Book Report Forms - www.abcteach.com/directory/basics/reading/book_report_forms

A+ Math

www.aplusmath.com/

Grades 3-9

Students can improve their math skills with this site's interactive activities. The Homework Helper lets students input a problem and the answer. The Helper instantly figures out if the solution is correct. The Online Worksheets section lets students fill in the answers and then corrects the worksheets immediately. Test math skills with online flashcards or make custom flashcards and print them out. Java games include Matho (a math version of Bingo), Hidden Picture, and Concentration. Practice problems are available for addition, subtraction, multiplication, division, money, fractions, decimals, geometric shapes, and basic algebra.



Beyond Basic Email

Five Tips to Increase Your Productivity

In a school situation, email is an effective tool to enhance communication with administrators, colleagues, and students - as well as a good way to complement online project-based learning activities.

Attaching Files to Email

In addition to exchanging text, files can be sent along with your email message. Files such as word processing, images, spreadsheets, databases, applications, programs, and other items can be sent via email. You can have your students attach essays and send them to you in an email. This is far better than sending a text email because the word processor file keeps all formatting intact such as underlining, tables, spacing, and photos. If you use Microsoft Word, teachers have the advantage of inserting comments within documents and then returning corrected assignments to students using a virtual paperless system. It's best not to send files larger than 750 KB per email. If your files are very large, use a compression program such as WinZip or StuffIt to make them smaller or to consolidate multiple files into one.



WinZip for Windows www.winzip.com

StuffIt for Mac and Windows www.stuffit.com

The procedure for attaching files varies depending on the software or Web-based mail program that you are using. In general, follow the steps below.

1. Compose our message.
2. Click Attach to attach a file from your computer to this message. Usually, you click on a paper clip icon located on the toolbar of the program.
3. Navigate to and select the file you want to attach from your hard drive or disk.
4. After selecting the file, click to attach it.
5. When your message is complete, click Send.

Hide Multiple Email Recipients

If you want all your recipients to think they are getting personal attention, use the BCC (blind carbon copy) feature. After opening a new message, make sure that All Headers is checked under the view menu. This is good for when you want to email many diverse people the same information, but do not want to broadcast each person's email address. This is the perfect tool for emailing all your students at once while maintaining complete privacy.

Backing Up Your Email Address Book

You can back up your address book very simply to a floppy disk, thumb drive, or a personal drive on your school network.

The directions are here for Outlook Express for Windows, but are similar for Outlook and Netscape users.

1. Insert a blank floppy or thumb drive.



2. Start Outlook Express.
3. Click on the Address Book icon from the toolbar.
4. Click on File, scroll down to Export, and click on Address Book.
5. Click in the box and choose three-inch Floppy, Thumb Drive, or Personal Drive location.
6. Type address book backup in the File name box.
7. Click Save and then OK after backup completes.

In case of a hard drive crash, you can easily restore your address book from the saved file by choosing import instead of export from step four above.

Printing Your Email Address Book

1. Start Outlook Express.
2. Click on the Address Book icon from the toolbar.
3. In the address book window, click on File from the menu, then Print.
4. The print window will give you style options.

Using Email Filters to Organize Messages

Filters can direct mail to specific folders as soon as you retrieve your email. The only thing necessary is to inform your email program where to send mail that comes from certain sources. You may set up as many folders as necessary to designate the various areas for sorting. As an educator, this is most valuable if you want to separate student work from staff and personal email. Finally, email folders can block spam and other unwanted email messages by automatically deleting them. The following is an example for using Outlook Express for Windows.

1. Create your mail folders by right clicking on Local Folders from the folder list, then clicking on New Folder.
2. Click on Tools, and then Message Rules and Mail.
3. Select New to create a New Mail Rule.
4. You will be given a choice of four boxed areas with the New Mail Rule screen.
5. The first box contains four specific conditions of your rule such as "Where the Subject line contains specific words" or "Where the To line contains people."
6. The second box allows the actions for your rule such as "Move it to the specified folder" or "Delete it." Choose the action desired.
7. The third box specifies the directions for the Rule description. Click on any underlined words to set the parameter.
8. The fourth box is a place to name your rule something descriptive.
9. Click OK.
10. Click New and repeat the steps to add new rules.

Courtesy of : Connected Newsletter
November, 2004



The Three Cs: Communication, Computing, and Critical Thinking

The Foundations of Technology Integration

Isaac Asimov once said, "Wouldn't it be wonderful if humans were as compassionate, warm, protective, and understanding as we expect robots to be?" In this day of Blackberries, Palm Pilots, and other hand-held devices, the fact is that nothing will ever replace the human contact that only a living, warm, compassionate, and understanding teacher can provide. This article is written with all those attributes constantly in mind.

After many years of research, refinement, and application, I believe we can boil technology integration down to its foundations, namely the three Cs: Communication, Computing, and Critical Thinking. No matter if you've taught for one year or three decades, integrating technology such as the Internet into your classroom is essential if you are to properly prepare your students for their future (not *your* past). The vast majority of jobs that will open up to our students over the next few years don't even exist yet!

1. Communication

Communication is perhaps the most important foundation of technology integration. I strongly believe that other people are our greatest resource. If I don't know the answer to a question or don't know how to solve a particular problem, you can bet someone else does. Knowing how to communicate with those who know the answers is almost as important as the answers themselves. In this day and age of "instant gratification takes too long," students want to know now, not later. Technology such as the Internet provides the perfect vehicle to accomplish this end.

There are two basic types of communication we can use when integrating technology into our lessons. The first is communicating with another human being somewhere around the world. That can be a student's peer in a foreign country or an expert from NASA. The most common way to introduce students, especially those in elementary schools, to online communication is by using keypals (electronic pen pals). Kids love to communicate with one another and, by using keypals, we accomplish more than one goal. Students not only improve their communication skills, but also their keyboarding, spelling, sentence structure, and in some cases foreign language skills. Students are also learning to use technology such as email to perfect their copy-and-paste skills, as well as learning how to attach files to messages.

An excellent source of keypals can be found at ePALS. It is a free service for teachers and students that has connected over 4,000,000 students in over 80,000 classrooms from over 190 countries in eight languages. Imagine the possibilities!

ePALS <http://www.epals.com>

The second type of communication using technology involves student communication with a remote computer. Again, the Internet is the vehicle. They can be simply accessing a



particular computer's database, if they know its Web address, or searching for specific information somewhere in Cyberspace using one of these sophisticated search engines.

Google <http://www.google.com>

Ixquick <http://ixquick.com>

KartOO <http://www.kartoo.com>

Teachers and students need to be proficient in **communication skills, proper searching techniques, copying-and-pasting from the Internet to a word processing document, and evaluating and citing online resources**. After communication, proper search techniques are the most important integration skills needed. Much valuable classroom time can be wasted if students simply spin their wheels in "cyberdust" looking for information. The Internet is like your school library, only much larger, with all the books thrown onto the floor and no card catalog! Here is an excellent and complete searching tutorial.

BrightPlanet <http://www.brightplanet.com/deepcontent/tutorials/search/index.asp>

In addition to the more than 2500 search engines, you may also choose one of the popular ask-a-question sites now available on the Web, including Pitsco's Ask and Expert and Ask Jeeves (or Ask Jeeves for Kids). You will be amazed at the wealth of the information these sites hold. Someone recently asked me what the little plastic tips on the ends of shoelaces were called. So I asked Jeeves. I received the answer and a poem about them, as well! Go figure . .

Pitsco's Ask an Expert <http://www.askanexpert.com>

Ask Jeeves <http://askjeeves.com> <http://www.ajkids.com>

Once students have gained an understanding of how search engines work, they can retrieve more information than they will be able to digest. That is why it is important for them to fully comprehend the importance of evaluating online resources. A good tutorial on the subject is found at <http://eduscapes.com/tap/topic32.htm>

2. Computing

The second foundation of technology integration is computing. Once students have located the needed information, or have completed a research project where they have received data from participants around the world, they must do something with it. That can simply be printing it out, or saving it to a disk for later use. They may also immediately create a word processing document by copying-and-pasting. ***A word of caution here: when students locate the information they need and copy-and-paste it into a word processor, we call that plagiarism!*** Be sure to have them review the new Modern Language Association rules for citing online resources. You can find an easy tutorial on citing online resources at this web site.

Brewer Technology and Learning Center.

http://www.tonybrewer.com/teacher_links.htm

The days of "read a book, write a report" are rapidly becoming archaic. Instead, today's students are creating exciting and powerful PowerPoint presentations that they share with their classmates. They are including pictures, charts, graphs, audio and video files, as well as text. ISTE, the International Society for Technology in Education, reports that when



students are allowed to work as team members to create a project to share with their peers, community, and family, the greatest amount of learning and retention takes place.

Having students create their own charts, graphs, and computer-generated presentations often goes beyond the original intent of your lesson plan, which is a good thing. In addition to learning about the chosen topic, they will be learning to communicate effectively, perfect their keyboarding skills, work as a team member, and enhance their public speaking abilities. here is an excellent PowerPoint tutorial.

Microsoft Education

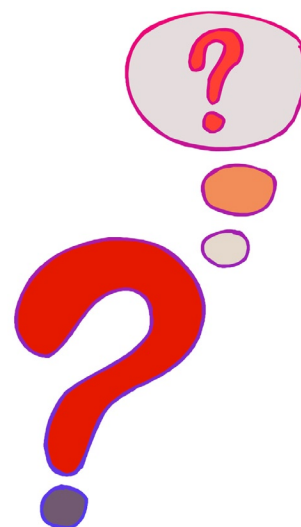
<http://www.microsoft.com/education/?ID=Tutorials>

Today's teacher is no longer the sole provider of knowledge and information in the classroom. An instantaneous wealth of information is now available to students with the click of a mouse button.

3. Critical Thinking

In the ever-burgioning online world, students are faced with the difficult task of sorting good information from bad, or even solving complex problems. That brings into play the third of the foundations of technology integration, critical thinking.

Most educators recognize the importance of students developing effective problem solving and critical thinking skills. Back in the days of the "sage on teh stage" method of teaching, the traditional instructional model of read, listen, and practice worked well for learning lower-level facts and skills. While learning the multiplication table is certainly still an important part of developing a child's brain, today's students are faced with a whole new set of learning attributes, mainly technology. Today's teachers are recognizing that they must move to a "guide on the side" type of instruction, where students are more actively engaged in their own learning process.



Earlier I discussed communication and computing, two essentials in today's twenty-first century classroom. yet, these two attributes are not enough to provide students with the skills necessary to achieve success in tomorrow's workplace or even to meet the requirements of the new No Child Left Behind legislation. Today's students aren't going to be successful without the ability to sort good information from bad, or to view data and analyze it accurately. Using technology such as the Internet to locate information and create spreadsheets, charts, and graphs is fine when we wish to view that data for effect or comparison. But to actually use that information for problem solving is another challenge altogether.

Project-Based Learning

To help students use this new technology to its fullest, and to promote critical thinking skills, I recommend that teachers introduce their students to new subject matter by using one of three basic types of project-based learning activities. Many teachers are choosing to create WebQuests to accomplish project-based learning.

- * **Interpersonal Communication:** To locate information, a student communicates via computer with another student or expert somewhere in the world or with another computer.
- * **Information Gathering or Data Collection:** To view the data more effectively, students compile the information they have gathered from remote computers or from other people and place it into charts, graphs, or spreadsheets.
- * **Collaborative Problem Solving:** After placing their collected data into charts, graphs, and spreadsheets, students do a realistic scientific analysis.

The Global Schoolhouse is an excellent source of project ideas for your classroom. Here you will find hundreds of completed classroom projects, along with contact information for the projects' creators. You might also visit The WebQuest Page for information on creating your own WebQuest or adapting someone else's.

Global Schoolhouse
The WebQuest Page

<http://www.gsn.org>
<http://webquest.sdsu.edu/>

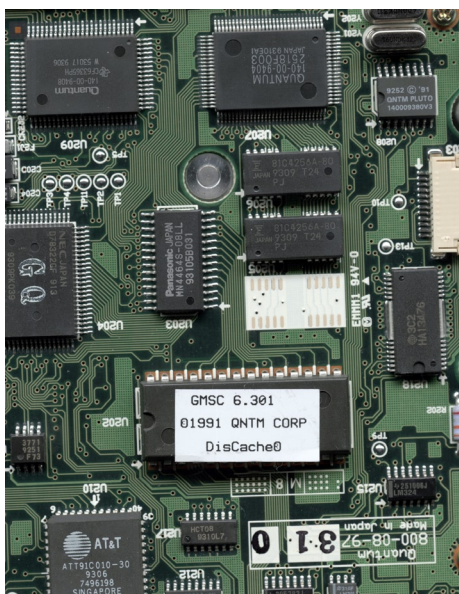
Technology is Here to Stay

The success of computers in the classroom is directly related to the teacher's willingness to embrace this new technology. As I provide technology in-service training to thousands of teachers every year, I am privileged to witness the phenomenal growth of technology-assisted learning. However, having the technology alone is not the answer. It is the skill, compassion, and knowledge of a teacher using a given tool or method that will have the greatest impact on student learning. Providing students with an effective, fun way to enhance their critical thinking skills is essential if students are going to be ready to face the educational and vocational challenges of the new millennium.

Schools must gradually move away from traditional classroom instructional models. Like speed limits, technology is not just a suggestion; it is becoming mandatory. Schools must make the most effective use of even the limited technology they possess in order to help students become the knowledge workers of the twenty-first century.

Courtesy of: Classroom Connect
"The Three Cs"

by Tony Brewer, Director, Brewer Technology and Learning Center



Using Technology Tools to Encourage Reluctant Writers



Recently I reflected on the scary things that confront me, such as bad drivers, spiders, snarling dogs, and the blinking cursor on the blank computer screen. For me, the blinking cursor is the scariest of all. The cursor sits there expectantly and waits for the movement of my words to propel it across the preset margins. It pulsates. It must be satiated.

"Writing is an expedition into the unknown that we embark on to develop our thoughts and feelings," writes John Barell in *Developing More Curious Minds*. The unknown is scary, so why would anyone want to embark on such an expedition and write? People write because writing is essential. It is an integral component of success in school and life after school.

The technology in our classrooms can encourage even the most reluctant writers to flourish and publish without perishing. Here are a few strategies designed to utilize technology to encourage even the most reluctant writers in your classroom.

1. Change the Audience

Anticipating an audience reaction is one of the keys to writing success. In most classrooms, teachers are the audience and, unfortunately, some kids are not impressed with us. Spending hours or even minutes writing for an audience of one is tantamount to painting the garage. A small audience equals a small investment of time. But if you change the audience, student interest increases.

"Kids will work harder for an authentic audience than they will for a grade," says Alan November, educator and futurist. Every writing assignment should have an anticipated audience in mind. Just as we delineate the subject, scope, and guidelines for an assignment, we should also communicate the intended audience. Published works can be displayed and read at Home and School meetings, open houses, school board meetings, over-the-school public address systems, or on closed-circuit television. Writing products can be assembled into a classroom anthology and sold as a fundraising project. These anthologies can also be delivered to local nursing homes, children's hospitals, and day-care centers.

The Internet offers opportunities for a huge audience reception. Online portfolios offer ways for students to publish their writing, solicit comments, and republish their edited work. A teacher's Web site can showcase a Writer of the Week.

Alan November recommends a Web site for secondary students called Fan Fiction. Here members can submit stories, read and react to the stories of other members, and communicate with other authors and readers through forums and chat rooms. For younger writers up to age 13, the KidPub Web site has published over 42,000 stories from students around the world.

Fan Fiction <http://www.fanfiction.net>
 KidPub <http://www.kidpub.org/kidpub>

Another inventive approach is to ask a local writers' club to accept story or essay contributions as their club activity once during the school year. Stories may be printed and delivered or emailed to the club historian. When the essays are evaluated, they are delivered back to the teacher to preview before returning to students. Students may then have the option to revise and resubmit their stories to the writing club.

Students need to believe that their work won't end up as just another grade in your grade-book. An expanded audience offers the practical application of class time to the real-world arena of constructive criticism and product submission.

2. Provide Time

Set aside a structured class time of at least 15 minutes every day for free writing or response writing. If a blank screen is too intimidating, invite students to change the background color of their files. In most word processing programs, this option is under the Format menu, then choose Background. Let students experiment with different font styles, sizes, and colors to customize their writing space.

During structured writing time, write alongside your students. At one time, I would use student-writing time to catch up on my classroom housekeeping chores. I would scurry around and water plants, update calendars, post announcements, and adjust the thermostat. And I would wonder why my students kept bothering me as I did my chores!

Then one day I got it. I understood that students don't want to write when they perceive it as busy work. They will model what their teacher does. So I booted up the computer and opened a word processing file. I put my name in the header and changed the background color to salmon and the font and color to Garamond, Blue. As I began to journey into the unknown valley of words, my students settled down. "I don't want to disturb you," one young man said, "you seem so caught up in what you are doing."

Third grade teacher Mary White from Tahlequah, OK, tells about a colleague who writes his own essays while his students write theirs. He involves his students in his writing process. He reads his paper and describes the thought processes he employs in word and sentence choices. He involves his students in discussions over which word or phrase he should use. After modeling in this way for students, he often asks them to discuss their own writing samples. Why did they choose this particular phrase or that metaphor? How can they describe objects with greater clarity? *Metacognition*, or thinking about thinking, was one of my favorite words in graduate school," White recalls, "but my colleague really puts it into practice."

3. Encourage Electronic Journal-Writing

It used to be that the main drawback to journal-writing was volume. I remember the ecstasy of keeping a journal, but the agony of toting back and forth all those spiral notebooks. Now, with word processors, students can key their responses



in files on disks or on shared folders as electronic journals (e-journals). They may email their e-journal files to me, or they can hand me their disks.

In his book *The First Days of School*, education consultant and former elementary teacher Harry Wong advises that every class period should begin with a warm-up activity. E-journals are perfect for warming up those writing muscles. After taking attendance, I join students in finishing the warm-up writing prompt. For about 10 minutes, we are all tapping away on the keys, pushing the blinking cursor beyond its anticipation point. It is great to start class as a group working toward a shared goal. If your classroom has 1-4 machines, group them as a writing center. Instruct students to write in longhand and transcribe their thoughts in the writing center as the day progresses. The first students to arrive use the writing center first, which is a great motivation to come to class early!

The flexibility and accessibility of e-journals make them perfect tools to hold warm-up writing, pop quizzes, sudden epiphanies, or closure comments. As a variation on e-journals, you and your students can begin an electronic gratitude journal during the month of November. They can continue it weekly. Fifth grade teacher Jan Purnell of Littlestown, PA, has already done the work of setting up gratitude journals. Her Web page contains writing prompts, handouts, and great resources for students.

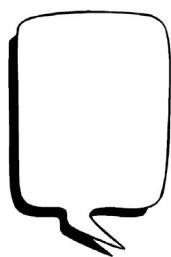
Gratitude Journals

www.geocities.com/EnchantedForest/Mountain/9112/GratJourn/Gratitude.html

4. Provide Options

Everyday routines do not require creativity and ingenuity. Creativity is unstructured and random. To supplant creativity and erase routine, supply budding writers with a "text and tech" assortment of writing tools. Some students are naturally prone to creative thought. Pair these students with more linear-thinking students. An easy way to tell the abstract, random writers from the concrete, sequential writers is to watch what writing tools they choose. Traditionalists may prefer pen and paper. Let them experiment with color cards, graffiti walls, overhead transparencies, and puzzle pieces.

Concrete, sequential students love the structure of spreadsheet programs. Use a spreadsheet or Table feature in a word processing program to create "Captain's Logs." Captain's Logs can be created by using a 4 x 4 table and the Thesaurus feature in the word processing software, a thesaurus book, or reference Web site.



Students can use AutoShape callouts to supply dialogue, thoughts of historical figures, current world leaders, characters, animals, etc. AutoShape callouts are usually found in the Insert menu, Picture submenu. To utilize callouts, write a key concept or name on the white board. Students can use an AutoShape rectangle to copy this word or phrase and choose the callout to add their thoughts. They can use the line tool to connect to smaller rectangles with details as they create mindmaps. Prompt students to increase the size or "grow" words of importance or words pertaining to your topic, and decrease the size or "shrink" filler words for eye variety. Inspiration or Kidspiration software is also great for this type of activity.

Inspiration Software <http://www.inspiration.com>

A picture can definitely yield a thousand words, and they aid in what Barell calls the "power of reflection." Utilize your word processing program to display a portrait or group scene. The Kodak Web site is a great source for pictures; click on Today's Picture, then click on Browse PhotoQuilt. If you're looking for a newsworthy photo, visit the United Press International Web site, which maintains an archive of 100,000+ images, and adds 1200 more images each month. Younger students will enjoy the pictorial dictionary at Picture Dictionary.

Kodak <http://www.kodak.com>
 United Press International <http://www.upi.com/photos/index.cfm>
 Picture Dictionary <http://www.pdictionary.com/>

Vary your students' options for production output. Instead of predictable printouts on white paper, use printable transparencies. Students can key their copy, then spellcheck, edit, revise, and resave. They print their copy on the transparencies, then add color from highlighters or markers, and cut their finished products into interesting shapes. The resulting shapes are fun to position and reposition on the overhead projector. By knowing their products ahead of time, students can craft their writing to short sentences with active voice.

Some student writers complain that they don't have anything to say. I once gave the e-journal prompt, "How was Winston Churchill responsible for the victories of the allies during World War II? My student Ricky responded, "Lots." I said, "You must respond in a complete sentence," satisfied that I had spurred the reluctant writer within Ricky. After a while, he turned in a printout that said, "Winston Churchill did lots." (It was, after all, a complete sentence.)

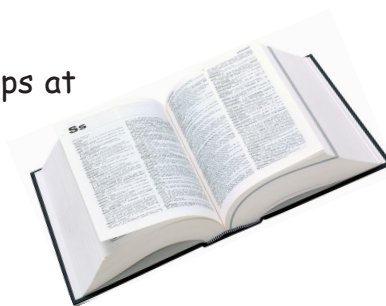
I asked Ricky to explain what he meant by "lots." He gave a cogent discourse with many examples. I wrote down what he said as he said it. I observed that day that Ricky was a great speaker and a reluctant writer. As long as he talked through an essay, his word fluency increased. So, I gathered my microphones, headphones, and tape recorders, and formed a mini-classroom recording center. Students enter this center to talk through e-journal prompts, record a story or poem, or practice pronunciation. Students play their sound recordings and transcribe their copy. Working alone or with a peer, they can edit their writing and make final revisions.

The Candlelight Stories Web site displays story text for students to read and then record observations. Giggle Poetry, Dr. Seuss's Seussville, and author Jan Brett's homepage all have fun, short poems for reading and response.

Candlelight Stories <http://www.candlelightstories.com>
 Giggle Poetry <http://www.gigglepoetry.com>
 Seussville <http://www.seussville.com/seussville/>
 Jan Brett <http://www.janbrett.com/>



Students can hear the pronunciation of words in short audio clips at Merriam-Webster Online. This is especially helpful for students with limited language experience. The Google search engine has a translation section under its Language Tools feature that translates from English to other languages and vice versa.



Merriam-Webster Online
Google

<http://www.m-w.com>
<http://www.google.com>

You can bring the fun of the recording center to the whole group setting. Find an audio clip to play of a song, speech, or recent broadcast. Instruct students to key from memory as much as they remember of what you played. Play the selection again and have them revise and re-key, as necessary. Students again compare their dictation skills, either alone or with a peer, and revise their copy. They can write about their impressions of the audio clip or add a paragraph or two of extension. This activity is also fun with folk songs or oldies. Good Internet sources for audio clips include the National Public Radio archives of real-time broadcasts and the Public Broadcast System's audio clips of American speeches.

NPR Archives
PBS's Great American Speech Archive

<http://www.npr.org>
<http://www.pbs.org/greatspeeches/timeline/index.html>

By following the cycle of writing, revising, and reworking, students become proficient in practice. The structure of the writing cycle lets students practice their growing skills. The Paradigm Online Writing Assistant site is an interactive, online writing guide with discussions and activities to practice the writing cycle sequence. Its author Chuck Guilford teaches composition, creative writing, and literature at Boise State University. Topics include "Discovering What to Write," "Organizing Your Writing," "Editing Your Writing," and "Documenting Your Sources." When students have a variety of topics, it takes both the fear and monotony out of writing and makes writing a fun word game.

Paradigm Online Writing Assistant <http://www.powa.org>

5. Embellish and Entertain

Would you rather be an *anagram* or an *isogram*? Just as it is impossible to keep your eyes open during a sneeze, it is impossible to get "writer's stuck" when playing word games and accessing word game Web sites. Ross Eckler calls this "reloading the word matrix." His book Making the Alphabet Dance: Recreational Wordplay contains interesting word games and etymology activities. The goal is to relax and have fun with words and all their uses as descriptors, explainers, storytellers, communicators, innovators, and illuminators.

The ReadWriteThink Web site offers tutorials, lessons, and fun approaches to writing. The Northwest Regional Educational Laboratory has easy-to-implement ideas and lesson plans. Use the activities at Quia to practice grammar concepts, parts of speech, and vocabulary. Grammar Gorillas is an old favorite of students across the grade levels. Its easy practice style is great for review and reteaching.

ReadWriteThink

<http://www.readwritethink.org/about.html>

Northwest Regional Educational Laboratory

<http://www.nwrel.org/assessment/departments.asp?d=1>

Quia

<http://www.quia.com>

Grammar Gorillas

<http://www.funbrain.com/grammar>

Once the writing process becomes fun and fluency is optimized, students can progress through the curriculum of writing products. Students can establish thesis statements, integrate quotations and citations into written text, compose a technical writing sample document, publish their writing online, write responses to literature, and write analysis papers.

Technology enlivens writing practice. Software features boost word fluency. Web sites encourage just-in-time publishing. The ultimate goal is for students to write for their own satisfaction, but first they must get through the production curve and quickly feel the satisfaction of completing the task. By considering audience, time, options, e-journaling, and entertainment, your classroom can gently transform the reluctant writer into a master wordsmith.

Courtesy of: Classroom Connect

November 2003

"Using Technology Tools to Encourage Reluctant Writers"

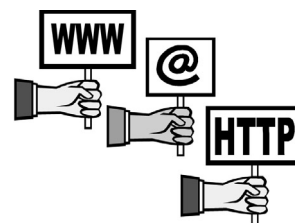
Helen Teague



iKeepBookmarks.com

Maximize your productivity with this online Web tool

How many times have your students been frustrated by typing in a misspelled link or spending most of the class period searching for an appropriate site to complete their research assignment? iKeepBookmarks.com will store your favorite Web links for free on a Web-based server that can be accessed anytime from any computer. Pre-selecting Web sites for lessons can save valuable class time and provide appropriately selected links that are correlated to state and national standards. Setting up your free iKeepBookmarks.com site is fast, easy, and intuitive.



Creating Your Account

1. Go to www.ikeepbookmarks.com and click Create New Account.
2. Fill out all the necessary account information.
Account Name This will be your main folder name listed on your iKeepBookmarks' screen.
Authoring Password This is the password necessary to edit the site. It is advisable not to check "Remember my Login (on this computer)" to eliminate any security problems if more than one person uses your computer at school.
Contact Name & Email Address Insert your first and last name and email address in the respective fields. This information is used only for notification of account status changes.
 For **Public Listing**, keep the Listed selection as the default.
 For **Account Type**, select Schools.
3. When done, click the **finished** icon in the lower right-hand corner to process the information.

Easy-to-Follow Set-Up Directions

1. **Design and Concept** The new screen will appear with a yellow and green bar. The yellow bar represents the current folder you are using and the green bar lists the links inside that folder. Any additional folders within the current folder will be listed under the yellow bar. As you click on any folder, the active links associated with that folder will appear under the green bar.
2. **Adding and Editing Folders**
 To the right of the yellow line, click the word Add.

Enter the name of the folder that you would like to use for placing your list of favorite links. Create as many folders as necessary to organize your personalized iKeepBookmarks.com site. The folder names can include grade levels, teacher names,



subject areas, topics, and themes. The entire site can be personalized for one teacher, an entire school, or any combination that serves your needs best. There is also an area to write a description about the folder with the option to choose fun little icons and/or stars.

The Edit button enables you to change the title or description of your folders, plus it has some additional helpful features that are self-explanatory. One of the features is the ability to add up to five additional folders all at once.

3. **Adding and Editing Links**

Be sure to click on the folder that you would like to enter your links. IF you do not click on a selected folder, your links will appear under the site's main folder, which contains all your sub-folders.

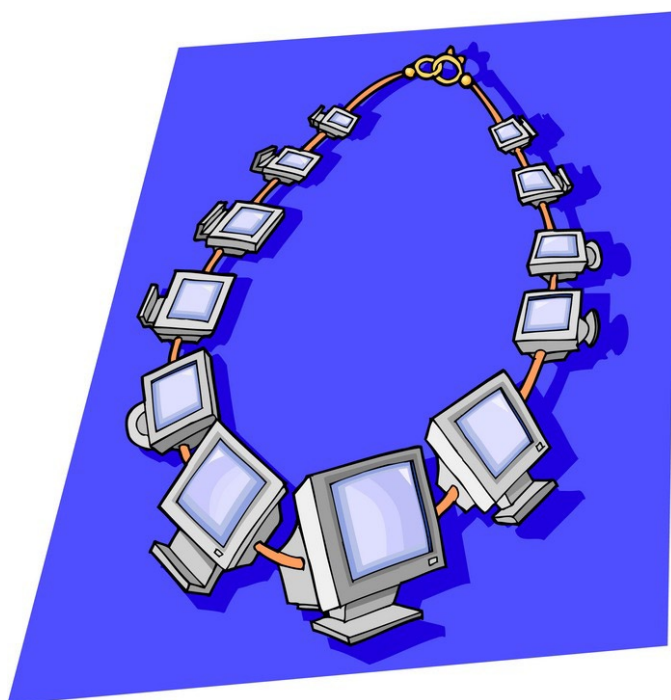
On the right of the green line, click on the word Add.

You will be presented with a dialogue box to enter the title, URL, description, and an optional descriptive icon.

The Edit button will give you the same choices as described in the folder section above.

4. **The Search Feature**

The search bar is located on the top gray bar. By typing in a keyword, it will search for all links that contain that keyword in your titles and descriptions. It can also search other schools' sites that are registered with iKeepBookmarks.com.



Exploring Natural Disasters

Are your students prepared?

For all its beauty and balance, planet Earth can be a harsh and volatile place. Studying the extremes of nature can offer our learners an expanded view of their home. I caution teachers to be aware of student fears about uncontrollable life events, especially those involving potentially life-threatening situations. Show concern for the needs of your learners when exploring sites that show devastation and loss of life. It is possible to study natural disasters without terrifying our learners.

Activities to Try

Choose Your Disaster

Ask your students to choose a disaster. Using the Web resources provided in this article, ask learners to prepare an argument explaining which natural disaster they would prefer to experience and why. Encourage them to make charts, graphs, and other tools to aid them in creating a convincing argument.

Problem Finders

Break your class into disaster response teams. Give each team a one-page fact sheet about a natural disaster that really happened. The fact sheet should include information such as where, when, and how, as well as information about the effects of the disaster. (Use the information from the sites provided below.) Ask teams to use their fact sheet to answer the question, "What problems will the people who live in that area have to face?" Students will need to use cause-and-effect reasoning to brainstorm a list of problems to be solved.

Future Disasters

Launch your class into the future to discover the natural disasters that loom ahead! Break your class into futurist teams and ask them to create an emergency press conference that is designed to alert the population about a coming natural disaster in the year 2250. They'll need to follow a press conference format that the class can develop. This should include a presidential announcement, expert testimony from scientists, calls to action, and warnings.

HURRICANES

Hurricane Basics

hurricanes.noaa.gov/prepare

Hurricane: Storm Science

www.miamisci.org/hurricane/hurricane0.html

National Geographic Kids: Flying into the Eye of a Hurricane

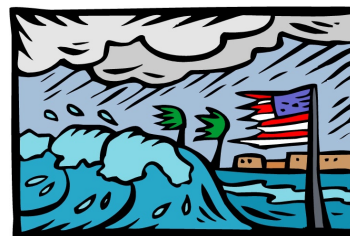
www.nationalgeographic.com/ngkids/0308/hurricane

NASA's Observatorium: Hurricanes

observe.arc.nasa.gov/nasa/earth/hurricane/splash.html

FEMA For Kids: Hurricanes

www.fema.gov/kids/hurr.htm



TORNADO

Twister: The Tornado Story

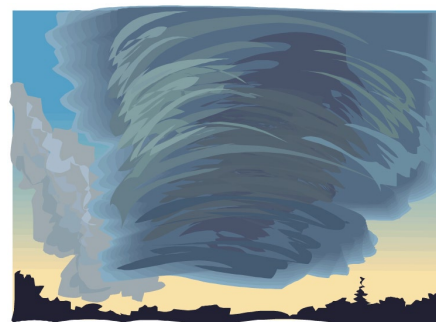
whyfiles.org/013tornado/index.html

FEMA For Kids: Tornadoes

www.fema.gov/kids/tornado.htm

Tornado Facts

www.aoml.noaa.gov/general/lib/tornado.html



TSUNAMIS

Tsunami

observe.arc.nasa.gov/nasa/exhibits/tsunami/tsun_start.html

Nacional Geographic: Tsunami

www.nationalgeographic.com/ngkids/9610/kwave

A Survey of Great Tsunamis

www.geophys.washington.edu/tsunami/general/historic/historic.htm

FLOODS

NOVA Online: Flood!

www.pbs.org/wgbh/nova/flood

Cincinnati Enquirer: Rivers Unleashed

www.enquirer.com/flood_of_97

Floodplain Management Association

www.floodplain.org/flood_basics.htm

FEMA For Kids: Floods

www.fema.gov/kids/floods.htm



VOLCANOES

Images of Volcanoes

volcano.und.edu/vwdocs/voic_images.html

Volcanoes Online

library.thinkquest.org/17457/english.html

Vocanoes

www.learner.org/exhibits/volcanoes

Volcano Live

www.vocanolive.com

EARTHQUAKES

The Earthquake Preparedness Handbook: LAFD

www.lafd.org/eqindex.htm

Understanding Earthquakes

www.crustal.ucsb.edu/ics/understanding

USGS: Earthquake Hazards Program

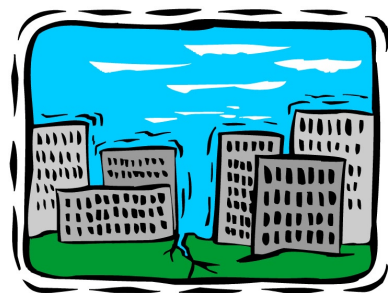
earthquake.usgs.gov

FEMA For Kids: Earthquakes

www.fema.gov/kids/quake.htm

National Geographic: Earthquakes

www.nationalgeographic.com/eye/earthquakes/earthquakesintro.html



General Sites of Interest

NASA: Natural Disaster Reference Database

ndrd.gsfc.nasa.gov

Hurricane Names

kids.mtpe.hq.nasa.gov/archive/hurricane/names.html

Weather

www.learner.org/exhibits/weather

Online Disaster Quiz

www.redcross.org/news/dro/game.html

FEMA: Kids

www.fema.gov/kids

National Oceanic and Atmospheric Administration

www.noaa.gov

NOAA: Photo library

www.photolib.noaa.gov/nssi

Questions and Answers About Thunderstorms

www.nssi.noaa.gov/edu/storm

Heatwave: A National Problem

www.aomi.noaa.gov/general/lib/heatw.html

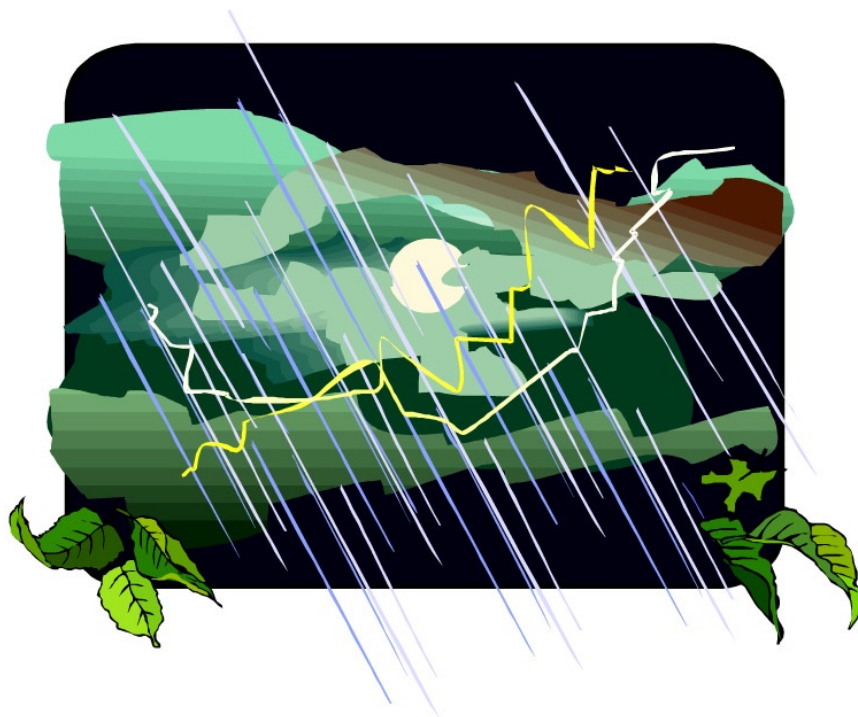
Lightning Information Center

www.srh.noaa.gov/mib/litgcenter/litgmain.html

Courtesy of: Classroom Connect Connected Newsletter

Deidre Kelly, M.Ed

December/January 2004-2005



Family Math Night

These days, most parents recognize the value of reading to their children. Reading aloud each day and developing a love of books is one of the most important gifts a parent can give to a child.

Parents may be less confident, however, when it comes to engaging their children in mathematical activities. They may be hindered by their own math phobia or they may not have ideas for suitable math-oriented activities. And yet, as every educator knows, parental involvement is a crucial element in a student's academic success. In recent years, many schools have begun to organize family math nights to help strengthen the parent-teacher-student connection.

The Rationale

As described in The Parent Factor, an article from the National Staff Development Council, research shows that "parents who attend family math nights tend to become and stay more involved in their child's school, even if they were not previously very involved." Family math night is also a great way to introduce your curriculum to parents and get buy-in for the types of activities that students will be doing throughout the year. According to the College of Education at Southeastern Louisiana University, family math night "allows parents to see how something fun can also be concept building and educational."

The Parent Factor

www.nsdc.org/library/publications/tools/tools-4-00rich.cfm

Southeastern Louisiana University: Family Math Night

www.selu.edu/Academics/Education/TEC/famath.htm

Getting Started

If your school has never held a family math night, you might start by visiting the three sites provided below. These sites describe some of the typical elements of family math nights and they share helpful tips for organizing the event. you might also share these sites with colleagues to build enthusiasm and support within your school.

Family Math Night - A Success Story

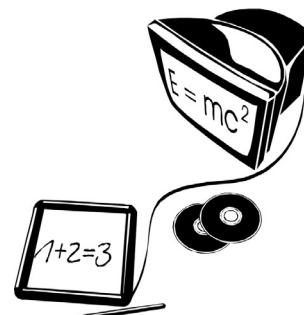
www.wcer.wisc.edu/ccvi/pub/newsletter/Fall1998_ParentsSchsWorkingTogether/FamilyMath_Night.html

Math Night by the Numbers

www.education-world.com/a_admin/admin/admin339.shtml

Family Night Night: Ideas For Success

www.kaidy.com/FamilyMathNight.htm



Adding a Theme

Perhaps the best way to start planning a family math night is to find out what other schools are doing. Some schools build their family math night around a theme. For example, at Churchill Road Elementary School in McLean, Virginia, the family math night activities took participants on a trip through time. The Strategenie Web site shows how the evening's games and puzzles were linked to various periods of history, including prehistoric times, ancient China, medieval Europe, and colonial America.

Other schools organize family math night around a mathematical theme, such as measurement or geometric art. On the other hand, the Fourth-Grade Family Math Night Web site shows that you don't necessarily need a theme - a collection of diverse, hands-on activities can be the starting point for a very memorable night!

Strategenie: Back in Time

www.fcps.k12.va.us/ChurchillRoadES/crs9899/mathnight

Family Measurement Night

www.joycharter.org/Measurement%20Night/Measure_1.htm

Geometry Through Art: Family Math Day

mathforum.org/~sarah/shapiro/shapiro.family.math.html



A Fourth-Grade Family Math Night

www.tenet.edu/teks/math/resources/4thmathnite.html

What Does Family Math Night Look Like?

The Web sites listed below offer photographs of family math nights from two schools. The photos are inspiring, and they may give you ideas on how to organize the physical layout of your own family math event.

Pine Grove School: Family Math Night

pgschool.com/Family%20Math.htm

Awesome Autumn Family Math Night

www.mcps.k12.md.us/schools/sligocreekes/2003-2004/math_night.htm

Family Math Night in High School

Although family math nights are most common in the elementary grades, they can serve an important role in middle school and high school. As students begin to study algebra, parents may feel that their own math skills are a bit rusty, and this can make it difficult for them to offer homework help. Family math night is a good opportunity to refresh parents' skills and introduce them to new technologies. This site shows how one high school engaged parents and students in algebra activities.

Bloomington High School South's Annual Family Math Night

www.mccsc.edu/~khall/fmn.htm

Additional Resources and Ideas

The sites below provide a wealth of resources for a variety of grade levels. For example, the Figure This Web site, which was developed by the National Council of Teachers of Mathematics (NCTM), features 80 activities that are specially designed for family collaboration. The site includes teaching notes, hints, answers, and much more. Even if you don't organize a family math event this year, you may want to encourage students to explore one or more of these challenges at home with their families.

Figure This!

www.figurethis.org

The Buddy Project: Family Math

www.buddyproject.org/resources/family/math/default.asp

Family Math Night Resources

www.techteachers.com/mathweb/familymath

Courtesy of: Classroom Connect [Connected Newsletter](#)

Joe Todaro

December 2004/January 2005



Digital Cameras in the Classroom

Making Effective Use of a Digital Camera

It is common and rewarding practice for teachers to take snapshots of students. Classroom albums help create a sense of identity for the class. Photos of students doing different activities in class and on field trips and other special projects create a sense of shared history and remind students of how far they have come in a school year. This month I suggest a way to make extensive use of digital cameras in the classroom... without spending half your time organizing files and tracking down ink cartridges for the printer!



Why Digital?

When a simple point-and-shoot or disposable camera works just fine, why bother learning how to use and manage a digital camera? There are three primary reasons. First, seeing your pictures instantly makes it easy to retake photos as needed. Second, not paying for film or development facilitates taking more pictures. Third, using online photo services (see "Putting Pictures Online") makes it easier to share pictures with students' families and others.

Permissions

Parental permission is normally required before taking a picture of a student. Check your district's policies. My recommendation to use online photo processing to share pictures with students' families may require district review, as well.

Digital Camera Basics

When you take a picture with a digital camera, instead of exposing light to chemically reactive film, you are exposing light to an electronic sensor that creates a digital computer file. How many pictures you can take before unloading the camera varies tremendously depending on the size of the media storage (loosely called memory) in the camera and the size of these digital files. The size of the files in turn depends on the capabilities of the camera and the resolution it is set to. For most uses, a setting of 1280 by 960 pixels (1.2 megapixels) is about right.

Once you have set up your camera and filled it with images, you simply attach it to a computer with a cable and use either the software included or the regular file system to move the files off the camera and onto the computer. Then you can look at the pictures and resize, enlarge, or crop them as needed. For Windows users I recommend the free program IrfanView to quickly review and make basic changes to your images.

IrfanView

<http://www.irfanview.com/>



Organizing the Files

Once "going digital" has you and your students clicking away, you will end up with large numbers of files. To keep organized, it is essential to create a simple system of folders on your computer. I recommend that you use one folder for a year's worth of shots. Call it "2004 Pictures," and within that folder create a new folder for every batch of photos downloaded. Name that folder with a three-digit number starting with "001"; every time you upload a new batch create a new folder "002," "003," etc. After the opening numeral, add a short description of the pictures included such as "140: Field Trip to Padilla Bay."

Most digital pictures are not modified in any way. They come out of the camera, they are admired, and they sit on the hard drive. For the few that you choose to crop, resize, or modify for printing or displaying on the Web site, make a subfolder inside the numbered folder. Call it "Best Pix" or "For Web Site," and put the modified copy of the original image in this folder.

Putting Pictures Online

It isn't practical to print more than the occasional digital picture on the inkjet printer in your classroom. The expensive ink cartridges get used up, the printer is slow, the higher quality paper you need quickly runs out... you get the picture. Instead, consider creating a free account at one of the online photo printing services. My two favorites are Ofoto and SnapFish.

Ofoto

www.ofoto.com

SnapFish

www.snapfish.com

Digital Camera Resources

Digital Cameras and Photography

<http://www.imaging-resource.com/>

Digital Camera Basics

<http://www.digitalcamerabasics.com/>

Both services provide free software that simplifies viewing, editing, and uploading the images to your account at their Web site.

There are three major advantages to this. First, you can choose to print only the pictures that are really worth printing. Second, your photos will be printed on high quality photographic paper, and they'll usually look just as good as prints from a film camera. Third, once the images are uploaded into an album on your account, you can select people (such as the parents of students) with whom you wish to share the album. This generates an email to those people that gives them access to view and order prints. This means that parents can view the pictures from the class field trip as soon as you can get them uploaded, and they can order prints of their favorites without any effort on your part! A final advantage is that these online services automatically modify the images you upload to make them suitable for display on their Web site. This means that with a right-click or a click and hold, you can save the Web-prepared images and thumbnails straight from their Web site back to your hard drive. Then those images are ready for addition to the class Web site.

Courtesy of: Classroom Connect Connected Newsletter
April 2004
Tim Burnett



Weather Projects

Using Web-Based Weather Data

Almost every student has experience with the daily collection of weather data, usually charted on the wall. While this is certainly an important activity to learn about data collection, the options for teaching statistics and data analysis are limited by the fact that you can only collect a single set of climate data in one school year.

Interesting data analysis starts when you have multiple sets of data. By calculating statistical descriptions of each data set (mean, median, and mode), it becomes possible to compare data sets in a way that is not possible when looking at raw data. Secondary educators can also work with standard deviation and other analyses of difference measures, as well as correlations and other trends. The Web makes weather data available in several ways.

Choosing the Data

Depending on grade level, resources, and time, the data collected could be as simple as a single temperature reading at 9:00 a.m., or your school could assemble a complete weather station and measure daily maximum and minimum temperatures, barometric pressure, wind speeds, and precipitation. For suggestions on setting up a school weather station, start at the Royal Meteorological Society Weather Club. To see what one school did with their weather page, check out Pacific Junction School Weather Page. For really impressive weather statistics, see the Environment Canada Weather Page. The Family Education Network has some suggestions on setting up a backyard weather station.

Royal Meteorological Society Weather Club

<http://www.royal-met-soc.org.uk/weatherclub/primary/setup1.html>

Pacific Junction School Weather Page

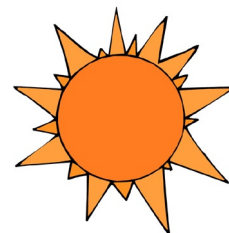
<http://www.assd3.org/schools/pj/temperature/pjwx.htm>

Environment Canada Weather Page

http://weatheroffice.ec.gc.ca/canada_e.html

Backyard Weather Stations

<http://www.familyeducation.com/article/0,1120,67-5168,00.html>



Collaboration with Other Schools

To find a partner school, use one of the online directories of schools interested in long distance collaboration. If you work with only one other school, try to find one with a dissimilar climate. Perhaps you may even find a school in the southern hemisphere. If possible, collect and compare weather data daily, then make the analytical comparison of the different schools' data a weekly part of your class routine. You might assign different groups of students to calculate different measures. For example, one group might report back to the class on changes in the weekly mean temperature at 9 a.m. Compare the average temperatures of both schools.

The United States Department of Education maintains a directory of sites where you can find international collaboration opportunities.

Teacher's Guide to International Collaboration on the Internet

http://www.ed.gov/teachers/how/tech/international/guide_pg2.html

Weather collaboration can be easily integrated with e-pal activities. One student in each class is responsible for a given data collection task (such as recording the barometric pressure). Then the two students email each other daily to exchange data. EMO weather Watchers is an example of a regional multi-school weather data project.

EMO Weather Watchers

<http://www-ed.fnal.gov/ntep/f98/projects/bnl/weather/>

For the more ambitious, consider organizing a regional weather project in which you design a simple Web page that allows each participating school to submit their weather data online. Technically this can be done quite simply by using a "mailto" form for the data submission and updating a simple data Web page (by using an HTML table to show the data as it is submitted). Or it can be completely automated by connecting the data collection form to a database on the server, and displaying that data automatically to a Web page using server-side scripting. For the basics on building a form and the "mailto" form, see Chapter 17 of this excellent tutorial.

HTML: An Interactive Tutorial for Beginners

<http://www.davesite.com/webstation/html/>

More advanced programming options depend on the type of server used, but if you start with sample code or can get a little help, it might be reasonable to set up an automatically updated weather data page showing the latest submissions from each school.

Past and Present

Another way to compare sets of weather data is to compare the data you collect with past climatic records. This can be a great activity to contrast qualitative and quantitative assessments of the climate. For example, "Everyone is saying this is the driest year ever, but let's find out if that's true. If we compare the year-to-date precipitation with past records online, how does this year rank?" WorldClimate features average weather data to show a typical climatic year. It has a good search feature to take you directly to your town, but be sure to check neighboring towns and cities that may have much more data. WeatherBase offers similar features. Check them both to see which offers the most complete data for your area.

WorldClimate

<http://www.worldclimate.com/>

WeatherBase

<http://www.weatherbase.com/>

A treasure trove of climate records and detailed descriptions of climate trends are available from the National Oceanic and Atmospheric Administration (NOAA). Some browsing and reading will be needed to access the specific information you need.

NOAA: Climate Diagnostics Center

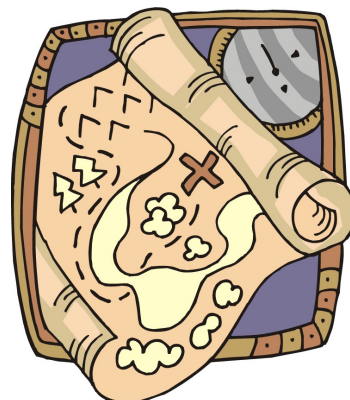
<http://www.cdc.noaa.gov>

Courtesy of: Classroom Connect Connected Newsletter
Tim Burnett



How You Can Effectively Teach U.S. History Using the Internet

Wired teachers come in all shapes and sizes and teach in all disciplines. My field is U.S. history, and I love the broad and deep array of resources and tools that are available on the Internet to help teach this subject. I believe that there is nothing like the Zimmerman telegram in the original, Einstein's series of letters to FDR, Jackie Robinson's letter on motel stationery to Branch Rickey, the shock as you listen to the original recording of "Oh, the humanity!" or the incredible Civil War photographs that are available to all students at the click of a link.



But some of my colleagues who teach other subjects are convinced that the Internet serves their teaching in their discipline in ways that can't be equaled for the unfortunate teachers in other departments. I have heard teachers in science, math, or English describe the incomparable resources available online for their subjects. At least three billion sites out there, and I find myself thinking about "my" Internet as others apparently think about "theirs." Since I teach American history, much of "my" Internet is involved with that subject. This article is about what I consider to be the best sites for teachers and students of U.S. history.

One caution: my list of favorite/best U.S. history Web sites won't be the same as yours (or anyone else's). My standards and criteria for including a site here are specific to my tastes and interests and, most importantly, to how useful I find the site in the teaching/learning exchange. I value a site that has ready-made lesson plans or at least a list of themes and resources that enable me to create my own lesson plan. If a site doesn't meet the test of usefulness, I won't recommend it here.

The Library of Congress

The resources listed here enhance the teaching and learning of American history. Who can deny that there is not a better Web site than the Library of Congress <http://www.loc.gov?> The American Memory section is where teachers and students will want to go and explore, and linger among collections and documents (over seven million) that illuminate American history as no other site even attempts. Perhaps in the lazy days of summer you can spend some time here and learn your way around, so you can find eras, themes, collections, and individual documents. Rest assured that time spent at this site is well worth it, perhaps more than anywhere else.

At the LOC, it is best to start at the beginning, which is the Learning Page <http://memory.loc.gov/ammem/ndlpedu/start/index.html>. There you will find an excellent guide for both teachers and students on how to use primary sources to study history and, just as importantly, why we use them <http://memory.loc.gov/ammem/ndlpedu/lessons/primary.html>, with plenty of examples included. Next you should survey the lesson plans,

carefully developed and collected over the years at <http://memory.loc.gov/ammem/ndlpedu/lessons/index.html>. (One of my lesson plans is here!) You are sure to find something that suits you, your students, your subject, and your time period.

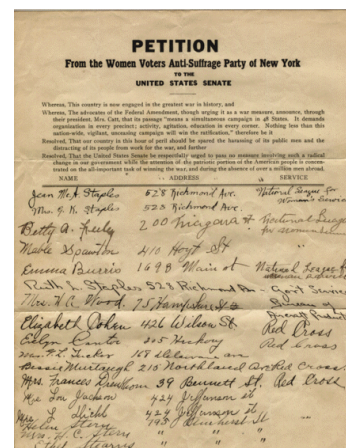
Once you feel somewhat comfortable in this digital library, go to the "American Memory Timeline" <http://memory.loc.gov/ammem/ndlpedu/features/timeline/index.html>, which is nicely organized into nine eras of U.S. history. Click on one of the eras (each of which is divided into 6-8 themes), then click on the theme, and find the documents that suit your subject. There you will find the primary source (a letter, photograph, movie or video, or sound recording) that you will want to point your students to.

National Archives and Records Administration

After you've spent some time at the Library of Congress, cross the virtual street to the NARA <http://www.archives.gov/>. As with the Library of Congress, students and teachers will find elementary guides to the how and why of document search and analysis, which are excellent and most useful. Then skip right to the collection of "100 Milestone Documents in U.S. History" (from the Lee Resolution, 1776, to the Voting Rights Act of 1965) at <http://www.ourdocuments.gov/content.php?page=milestone>. Be careful, because you and your students will get pleasantly lost among these as you browse around. Next, visit the "Exhibit Hall" for some more virtual touring, this time among a set of 41 thematic collections http://www.archives.gov/exhibit_hall/index.html. My favorite is "Powers of Persuasion," which has gorgeous posters from World War II http://www.archives.gov/exhibit_hall/powers_of_persuasion/powers_of_persuasion_home.html. What student won't be moved by Uncle Sam's intense stare and pointing finger, or by Rosie the Riveter flexing her muscle and defiantly declaring, "Yes We Can." If left on their own, your students might dig into the set of documents generated from the meeting between Elvis and Richard Nixon http://www.archives.gov/exhibit_hall/when_nixon_met_elvis/part_1.html, in which The King requested that the President appoint him "a Federal Agent at Large." My advice? Let students go there and read Elvis's longhand note to Nixon written on the American Airlines stationery, and then create a teachable moment about the Vietnam War and domestic protest in the 1960s and 70s.

Finally, you can go to the chronologically organized "American Originals" section http://www.archives.gov/exhibit_hall/american_originals/origina2.html, which houses a representative sample of all the documents at NARA. Click on the era title, and you will come to a small group of primary documents from that period. Each document is accompanied by a short essay that introduces the student to the subject at hand.

The Library of Congress and National Archives are truly the basic can't-do-without sites for all teachers and students of U.S. history. I have only hinted at the broad and deep array of resources available in each. Spend some time at each and browse, clicking on collections and documents casually. You will inevitably (and shortly) come upon the exact resource you need (remember that we are talking about resources that span all media, from print through video) that will help your students create their own understanding of



a certain person, event, or time period. These documents will, in turn, lead the student to other related source material that illuminates the subject even better, which is what wired learning is all about. Nowhere is it done better and more deliberately than at the LOC and at NARA.

History Matters

Another site that combines excellent content with classroom usability is History Matters: the U.S. Survey Course on the Web <http://historymatters.gmu.edu/>. Created and maintained by the American Social History Project, this site delivers many of the best tools for teaching and learning U.S. history... right into your hands. Rather than being comprehensive, the site presents selected themes and material, with the emphasis on social history. You won't find a lot of biography or military history here; you will find that History Matters "emphasizes the experiences of 'ordinary' Americans."

The site is divided into eight sections and includes primary sources, essays by historians on various subjects, links to other exemplary sites and resources, a collection of 73 exemplary lesson plans at other sites, annotated links to the syllabi of 14 U.S. History courses (David Jaffee's is excellent <http://historymatters.gmu.edu/syllabi/jaffeeintro.html>), an annotated guide to 31 notable online projects created by students, and finally, "Secrets of Great History Teachers." The content of History Matters is challenging and best-suited for teachers and students in high school, but there is something here for everyone.

More Favorites

There are a few sites that you won't find on anyone else's list of best history sites, but I love them and use them often. The first is the Prelinger Archives <http://www.archive.org/movies/prelinger.php>. This is a collection of hundreds of short films that have been put together by Rick Prelinger, who felt that these "ephemeral" resources should be preserved and made available to the public. Some of these are short TV commercials ("L.S./M.F.T."), but many are 10-20 minutes long, all made during the twentieth century (many during mid-century), and dealing with a wide range of subjects: advertisements, social, industrial, governmental, and more. If you have a class of serious-minded students who do not consider the mores and appearances of the previous generation of Americans as silly or quaint, then bring them to the Prelinger Archive and let them view "Duck and Cover," <http://www.archive.org/movies/movies-details-db.php?collection=prelinger&collectionid=19069&from=mostViewed>, which showed students of the 1950s how to protect themselves in case of a nuclear attack. Many of the films here can be readily adapted in the wired classroom for a lesson focusing on a single document.

Another wonderful site with a somewhat narrow focus is the Ad*Access Project at the Scriptorium, Duke University <http://scriptorium.lib.duke.edu/adaccess/>. The site is gorgeous and well organized, and you can search chronologically, by theme, or by keyword. The main categories are: Beauty and Hygiene, Radio, Television, Transportation, and World War II. The Scriptorium presents over 7,000 print advertisements from U.S. newspapers and magazines between the years 1911-1955. I believe that ads reflect the values and ideas of their times, so I use this site often in my classes. There is a terrific bounty of resources here covering many subjects. In your survey course, when you come to the first half of the twentieth century, teachers will find endless opportunities for pedagogically sound lessons.



Browse through the site's main categories at <http://scriptorium.lib.duke.edu/adaccess/browse.html>, then start digging for the right image/text combination that will transport your students into the United States, as seen through the lens of ads of 50-100 years ago.

One last site in this short but non-authoritative list is somewhat idiosyncratic. PBS is spectacular in its presentation of selected topics in U.S. history. You want to be in the "American Experience" section <http://www.pbs.org/wgbh/amex/>. Once there, scroll down to the bottom of the page and look at the six categories, then start browsing and clicking. When you get into the "War and Politics" category, look at the history of the Hamilton-Burr duel <http://www.pbs.org/wgbh/amex/duel/>.

You will find legitimate history presented here through an excellent combination of graphics, text, maps, timelines, biographies, animations, and all the things that make the Internet such a valuable tool for learning. Don't stop there, of course: dozens of other themes and subjects beg to be explored and used in class. Don't miss "John Brown's Holy War" <http://www.pbs.org/wgbh/amex/brown/>; I use it in class every year, never get tired of it, and find that students encounter difficult issues deeply and meaningfully when they use this rich resource and others linked to it.

I haven't become a better teacher of U.S. history since the Internet came along. But the resources available to me and my students have certainly become better: more abundant, richer and deeper in content, more engaging to students, and more demanding of active inquiry. The sites discussed here qualify on all counts.

Courtesy of: Classroom Connect Connected Newsletter

May 2004

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