Technology in Education Newsletter

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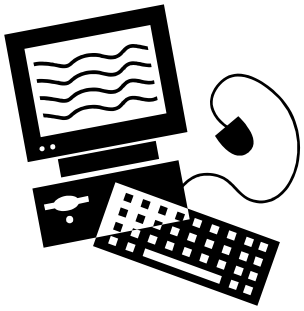
Inside this issue:



School Wide Curriculum Mapping: Improving Student Learning K-12

By Dr. Heidi Hayes Jacobs

Curriculum mapping is a process and a technology tool for articulating what actually happens in a classroom, school, or district. It is a calendar based compilation of the content, skills, and assessments that a child experiences at each grade level. It not only shows you the proposed itinerary of the child's journey, but more importantly it documents the "actual trip" the child has taken. In this way teachers can look within a grade level as well as across grade levels vertically to get a true picture of the students' experiences from grade to grade, building to building.

Communication is enhanced within a school and between schools sharing the same learners. They increase communication between administrator and staff; teacher and parent; teacher and students. We are able to solve problems in schools more effectively with accurate information that tells us what is going on in classroom life. In the past we often have communicated in meetings by referring to guidelines which have never reflected what has actually happened. Consider how medical doctors are very clear that "guidelines" help inform their decisions, but do not reflect what happens with each patient. Each patient is different and those differences are reflected in real time records. In this way, the calendar is also a significant communication touchstone. Teachers are always making choices based on the limits of the school year, the school day, class size, and the ability range of learners. Maps reflect those choices.

The reality of mapping allows for dynamic decision-making. School professionals can make decisions that reflect the cumulative nature of learning. Meaning rather than just focusing on the one year a teacher has with a child, we can step back and see the big picture. Technology has made this possible. Just as we go to MAPQUEST on the internet to determine the level of detail we need when driving from place to place, a school can go into mapping technology and get the level of curriculum detail needed to assist in making classroom experiences work. There are connections between every class that are forged through thoughtful review and revision of the maps. The whole school becomes a team.

Exciting breakthroughs are currently emerging with curriculum mapping technology. The most promising new developments are direct links to assessment data warehouses; the analysis of those assessment data that directly links to maps; international search features that allow teachers to post and receiving lesson plans from colleagues around the world; and, student entering their own curriculum maps. A common practice is the use of mapping for all professional development and building initiatives. In short, curriculum mapping is not "another trend"; it is a critical 21st vehicle for solving problems and helping our learners.

Editor's Note: Heidi Hayes Jacobs will be speaking at the Teaching and Learning Conference and the WOW Conference. For more information about future conferences, visit the AzTEA Web site: http://aztea.org

Message From the President
Lisa Long, Tucson Unified School District

Welcome to a new school year from AzTEA! Most of you have already been in school for a month and are well on the road to a new school year. The AzTEA board has been busy planning new activities to help strengthen technology initiatives in the state of Arizona.

I first want to give applause to Cathy Poplin for an extremely successful year as AzTEA president. Cathy raised our level of awareness as an organization and helped strengthen our voice at the Arizona Department of Education. The organization looks forward to working with Cathy in her new role at ADE.

Next, I want to make sure all of our members and our friends that are thinking about membership know of our extremely exciting initiative with the Arizona Department of Education. We have partnered with the department to provide a year long set of conferences that infuse technology into the curriculum mapping process. Our belief is that technology can be the foundation to make the process of mapping easier. We also believe that in order to meet the mandates of 8th grade technological literacy in NCLB, districts will need to map their technology skills throughout the first 8 years of a child's education so that they will be able to pass the requirement at the end of 8th grade. Check out this fabulous series of conferences (www.aztea.org) and join us for all 3! Register today for our first conference on October 23rd.

Last, I would just like to thank you for the opportunity to serve as AzTEA president for this school year. I bring passion and excitement about helping our students learn to the position. I believe that we need to provide all the possible tools to improve the achievement of our students to the classroom. Technology is just one of those tools, together we can help embrace these tools for the sake of our students.

Conferences

Mark your calendars for upcoming conferences.

The Arizona Department of Education is sponsoring Heidi Hayes Jacobs as a keynote speaker and is encouraging teachers to participate in all three conferences, each building on the other.

October 23, 2004 - 7th Annual Peak Performance Conference, Flagstaff, Arizona. Bena Kallic will be the keynote speaker.

January 29, 2005 - 13th Annual Teaching and Technology Conference, Tucson, Arizona. Heidi Hayes Jacobs will be the keynote speaker.

May 7, 2005 - 4th Annual WOW Conference, Glendale, Arizona. Heidi Hayes Jacobs will be the guest speaker.

Register for all three conferences and receive a free copy of *Mapping the Big Picture* by Heidi Hayes Jacobs.

Pre-Registration pricing:
Pre-register for three conferences @ $90 (includes *Mapping the Big Picture*)
Pre-register for two conferences @ $65
Pre-register for one conference @ $40

On-Site Registration (day of the conference - lunch not included)
$100 for 3 conferences (includes *Mapping the Big Picture*)
$70 for 2 conferences
$50 for 1 conference only

Educational Accountability and Assessment
by Roger Pfeuffer
Superintendent of the Tucson Unified School District

In March, Tucson Unified School District representatives attended the U.S. Department of Education's Accountability and Assessment Summit held in St. Louis. TUSD's Accountability and Research department, helped present information regarding TUSD's Stats website at the summit, which provided technical assistance for state and local education leaders. Titled "An Internet-Based System Designed to Support the Requirements of NCLB," the presentation was made before state and local education leaders, governors and other statewide elected officials and district personnel.

Among the information presented was an overview of the district and its accountability plan, which encompasses the goals of the TUSD's BOLD! Game and Arizona LEARNS as well as the federal government's No Child Left Behind Act. The presentation demonstrated how the TUSD Stats page was developed to accomplish the goals outlined by these measures through a comprehensive resource for assessment, demographic and school profile data. Additionally, the site provides student specific data to authorized users such as teachers, school administrators and parents, information critical to tracking academic achievement among students.

Since 2000, TUSD has developed a framework for effective accountability systems, which included a three-tiered structure:

- System-wide indicators outlining the commitment to high standards for all
- School-based indicators that recognize school differences and focus on improvement
- Narrative descriptions of the relationships between past performance, current data and future plans.
- The structure was TUSD's response to do whatever is necessary systemically, structurally and fiscally to help students succeed. Figures accessed through the TUSD Stats page helped the district focus on needed improvement including student proficiency in reading, writing and math. As a result of the resources concentrated on this goal, TUSD increased the number of excelling schools from 1 to 10, an increase of 900 percent. Furthermore, TUSD drastically reduced the number of underperforming schools from 21 in 2002 to 12.

After the presentation, Ray Simon, the assistant secretary for the U.S. Department of Education's Office of Elementary and Secondary Education complimented the Accountability and Research department on the presentation and acknowledged the excellent work the staff at the department of Accountability and Research has done to help TUSD employees, parents and community members track student progress. TUSD continues to develop methods to enhance the TUSD Stats website in its ongoing efforts to improve student achievement and make the district the premiere district in the nation.

Visit TUSD Stats at the following Web address:
http://tusdstats.tusd.k12.az.us

Features of the Web Site:

·Parental Access to student test scores, grades, attendance and much more.

·Assessment Data (AIMS, Stanford 9) which is available to the public.

·TUSD Demographic information, available to the public.

·Student Level Data, protected by password. You can view this sample data by using the following user name and passwords:

User Name: elem
Password: demo

·Teachers in the school district are able to view their student's:

·Grades

·Attendance

·Test Scores (AIMS and Stanford 9)

·Contact Information

·Rubrics Based Progress Report (RCB Testing - used by elementary teachers only)

Determining the Readability of a Document

Readability Scores

When Microsoft Word finishes checking spelling and grammar, it can display information about the reading level of the document, including the following readability scores. Each readability score bases its rating on the average number of syllables per word and words per sentence.

Flesch Reading Ease Score

Rates text on a 100-point scale; the higher the score, the easier it is to understand the document. For most standard documents, aim for a score of approximately 60 to 70.

The formula for the Flesch Reading Ease score is:
206.835 – (1.015 x ASL) – (84.6 x ASW)
where:
ASL = average sentence length (the number of words divided by the number of sentences)
ASW = average number of syllables per word (the number of syllables divided by the number of words)

Continued on p. 4

Why Do We Care?
Copyrights: A Confession and Perspective, Part 2
by Ruth Catalano

In the continuing saga of "true confessions," it's probably important to have some background on the topic of intellectual property rights. The following is an "unillustrated" part of the impassioned plea I give to schools to encourage compliance. Please understand that I'm not pretending to know it all or be a true "expert" and I highly recommend that every school have a copy of Carol Simpson's book, *Copyright for Schools*, 3rd edition, Linworth Publishing.

In the beginning, Federal Statute Title 17 U.S. Patent and Copyrights was created to promote the progress of science and useful arts. There are three kinds of property in the United States arena: real (land), personal (cars, clothing) and intellectual. Once the mortgage is paid or the credit card bill is paid, the house or stereo belong to you. You can rent it, paint it, tear it up and so forth (remember there is the EPA, zoning laws, etc.) Rarely is the "ownership" of intellectual property completely sold. Rather, the owner sells the "rights" as defined by the owner to an individual. So you buy the right to read the book, view the picture, watch the movie, listen to the music, and color the picture. The coloring book purchase does not give you the right to make a copy for each child, unless specifically allowed in the tiny print in the front of the publication. This is truly an issue of "read the fine print" on any kind of purchase that you want to be "creative with."

Copyright is defined as "original works of authorship fixed in a tangible media of expression." Someone may have told you something like "if you change 10%, it's not the original." There are numerous cases that this has caused someone to lose time, money and reputation. The benchmark to measure against is more open. If a product looks, feels, tastes, smells or sounds like a copyrighted piece, so much so that the viewer/user connects the two as the same, then it's a potential violation. The courts are looking for fixation, creativity and originality in ownership.

The easiest concept to quantify is ownership. Ownership starts with © and date on material. The owner must keep records of publications and editing changes. You must prove you were first with that project/product or thought. The most secure way to create ownership is to register formally with the Library of Congress of the United States.

Ownership and property rights vary internationally and I can only address U.S. Copyright law. In the United States, however, where Intellectually Property rights are designed to protect the individual's right to profit and control, there are certain things that ONLY the property rights holder can do (versus rights of the buyer). That's for the next installment.

We care because:

- We have an educational responsibility. Besides the social studies standards that are related to civics and social behavior, there is also Standard 2 of the Arizona Technology Standards dealing with social, ethical and human issues related to Technology.
- There are legal implication (including jail, fines and professional disaster because we are dealing with laws)
- We have ethical responsibility as role models both professionally and personally in the way we treat other people's intellectual property.

Determining the Readability of a Document
continued from p. 3

Flesch-Kincaid Grade Level Score

Rates text on a U.S. grade-school level. For example, a score of 8.0 means that an eighth grader can understand the document. For most standard documents, aim for a score of approximately 7.0 to 8.0.

The formula for the Flesch-Kincaid Grade Level score is:

(.39 x ASL) + (11.8 x ASW) – 15.59
where:
ASL = average sentence length (the number of words divided by the number of sentences)
ASW = average number of syllables per word (the number of syllables divided by the number of words)

25th Annual Microcomputers in Education Conference

Mark you calendars for March 14-16, 2005 at Arizona State university in Tempe. For more information about the conference, visit the MEC Web site at http://mec.asu.edu/2005/

AzTEA Members will receive a discount if they register by November 6, 2004.

The AzTEA Web site can be found at http://www.aztea.org The Web site has information about conferences, resources for teachers, award winners, ISTE information and much more.

The Educator's Guide to Copyright and Fair Use
by Hall Davidson, Executive Director of Educational Services and Telecommunications at KOCE-TV in California.

The Copyright Quiz

Answer True or False to the following 20 questions.

Part I: Computers and Software

1. A student snaps in half a CD-ROM the teacher really needed for her next class. The teacher decides to make a back-up copy of all her crucial disks so it never happens again. This is permissible.

2. A technology coordinator installs the one copy of Photoshop the school owns on a central server so students are able to access it from their classroom workstations. This is a violation of copyright law.

3. A school has a site license for version 3.3 of a multimedia program. A teacher buys five copies of version 4.0, which is more powerful, and installs them on five workstations in the computer lab. But now when students at these workstations create a project and bring it back to their classrooms, the computers (running 3.3) won't read the work! To end the chaos, it's permissible to install 4.0 on all machines.

4. The state mandates technology proficiency for all high school students but adds no money to schools' software budgets. To ensure equity, public schools are allowed to buy what software they can afford and copy the rest.

5. A geography teacher has more students and computers than software. He uses a CD burner to make several copies of a copyright interactive CD-ROM so each student can use an individual copy in class. This is fair use.

Part II: The Internet

6. A middle school science class studying ocean ecosystems must gather material for multimedia projects. The teacher downloads pictures and information on marine life from various commercial and noncommercial sites to store in a folder for students to access. This is fair use.

7. An elementary school designs a password-protected Web site for families and faculty only. It's OK for teachers to post student work there, even when it uses copyright material without permission.

8. A student film buff downloads a new release from a Taiwanese Web site to use for a humanities project. As long as the student gives credit to the sites from which he's downloaded material, this is covered under fair use.

9. A technology coordinator downloads audio clips from MP3.com to integrate into a curriculum project. This is fair use.

10. A teacher gets clip art and music from popular file-sharing sites, then creates a lesson plan and posts it on the school Web site to share with other teachers. This is permissible.

Part III: Video

11. A teacher videotapes a rerun of Frontier House, the PBS reality show that profiles three modern families living as homesteaders from the 1880s did. In class, students edit themselves "into" the frontier and make fun of the spoiled family from California. This is fair use.

12. A student tries to digitize the shower scene from a rented copy of Psycho into a "History of Horror" report. Her computer won't do it. The movie happens to be on an NBC station that week, so the teacher tapes it and then digitizes it on the computer for her. This is fair use.

13. A history class videotapes a Holocaust survivor who lives in the community. The students digitally compress the interview, and, with the interviewee's permission, post it on the Web. Another school discovers the interview online and uses it in their History Day project. This is fair use.

14. On Back-to-School night, an elementary school offers child care for students' younger siblings. They put the kids in the library and show them Disney VHS tapes bought by the PTA. This is permissible.

15. A teacher makes a compilation of movie clips from various VHS tapes to use in his classroom as lesson starters. This is covered under fair use.

Part IV: Multimedia

16. At a local electronics show, a teacher buys a machine that defeats the copy protection on DVDs, CD-ROMs, and just about everything else. She lets her students use it so they can incorporate clips from rented DVDs into their film genre projects. This is fair use.

17. A number of students take digital pictures of local streets and businesses for their Web projects. These are permissible to post online.

18. A student wants to play a clip of ethnic music to represent her family's country of origin. Her teacher has a CD that meets her needs. It is fair use for the student to copy and use the music in her project.

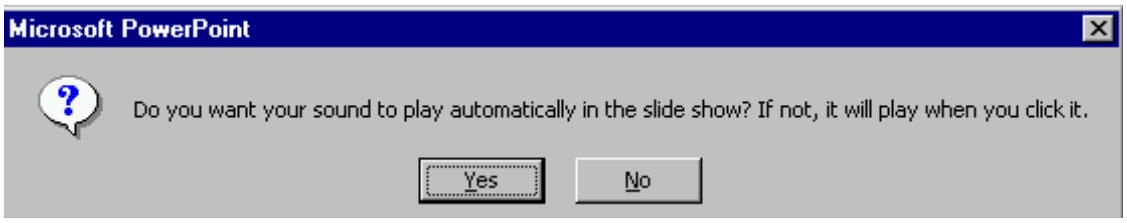
19. A high school video class produces a DVD yearbook that includes the year's top ten music hits as background music. This is fair use.

Adding Music to a Microsoft® PowerPoint Presentation

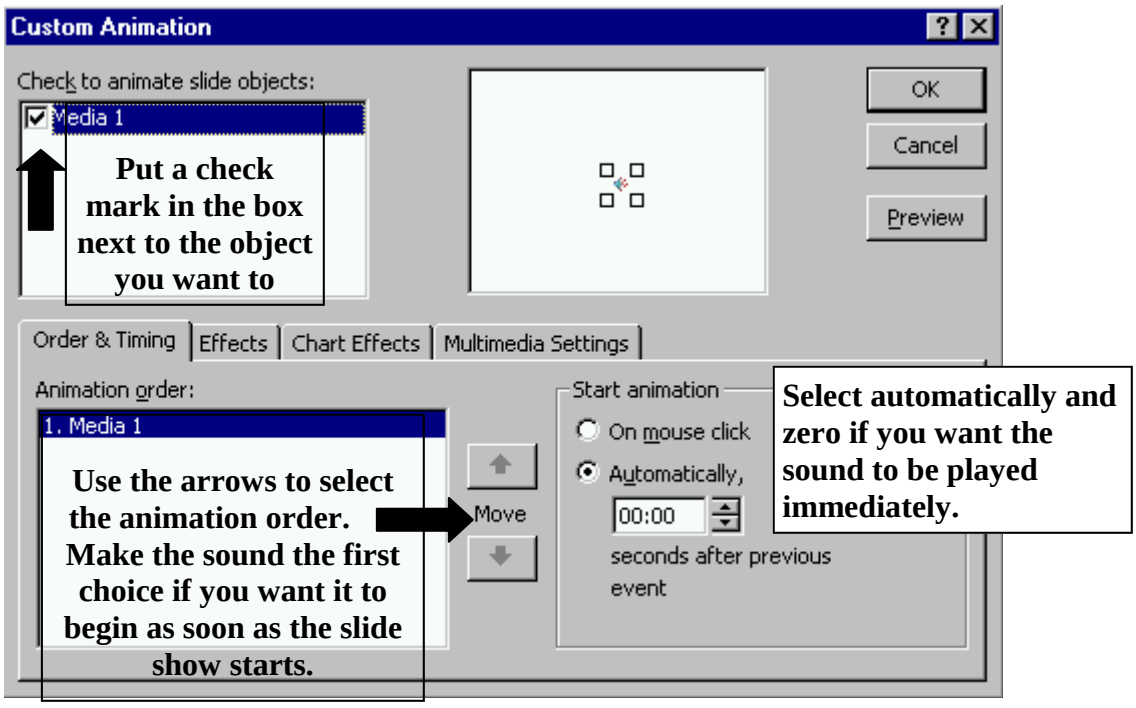
You can jazz up your PowerPoint presentations by adding some sound to them. Follow the directions below to make your presentations the envy of others.

****When inserting sounds from a file, make sure the sound file is included in a folder with the PowerPoint presentation.*

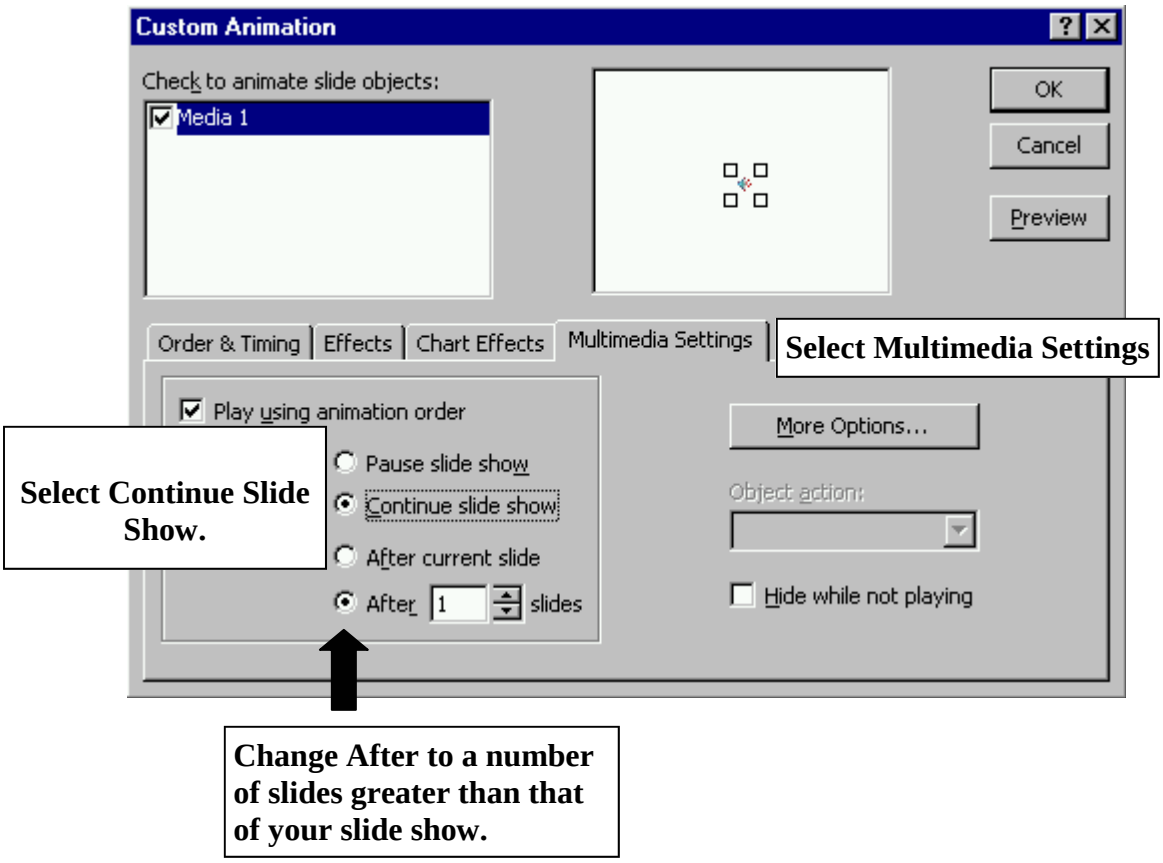
1. On the Insert menu, point to Movies and Sounds and then click on Sound from File.
2. Navigate to the sound file you had previously saved, click on it, then click OK.
3. You will be asked whether you want the sound file to be played automatically. Click Yes.



4 If you select No, the sound will only play when you click on the play icon.
5. On the Slide Show menu, click Custom Animation.



6. If you want the sound to play continuously throughout the slide show, click on the Multimedia Settings tab.



7. Click OK.

***Please keep in mind there are laws applying to the use of music in PowerPoint and other multimedia presentations. There are many midi and WAV files which can be used without danger of violating copyright, as well as music that has fallen into the public domain. Listed below are guidelines that apply to creating a multimedia presentation.*

Students

Students are allowed to use up to 30 seconds of music without permission and THEY can archive the production as portfolio or resume forever. However, the presentation can NOT be used as a public performance (without receiving permission or paying royalties.)

Teachers

Teachers are allowed to use up to 30 seconds of music without permission and they must destroy the presentation after 2 years of using in it face-to-face instruction. Teachers can NOT keep their productions more than 2 years without permission. However, they can keep their original presentation and replace the "borrowed" music. Just as with students, the presentation may no be used for public performance, which includes presentations at conferences, which are considered to be public performances.

The Answers

Part I: Computers and Software

1. A student snaps in half a CD-ROM the teacher really needed for her next class. The teacher decides to make a back-up copy of all her crucial disks so it never happens again. This is permissible.

True. Technically, this should be done in the library. The law allows archival copies, and, in some cases, lost, stolen, or damaged originals may be replaced with copies if the originals are unavailable or unreasonably priced.

2. A technology coordinator installs the one copy of Photoshop the school owns on a central server so students are able to access it from their classroom workstations. This is a violation of copyright law.

False. As long as one copy is not being used simultaneously, it's OK to distribute the software via the server. However, when districts or schools fail to monitor and enforce simultaneous use, they get in trouble. (On a network it's easy to track if a program is being used in more than one location.)

3. A school has a site license for version 3.3 of a multimedia program. A teacher buys five copies of version 4.0, which is more powerful, and installs them on five workstations in the computer lab. But now when students at these workstations create a project and bring it back to their classrooms, the computers (running 3.3) won't read the work! To end the chaos, it's permissible to install 4.0 on all machines.

False. Alas, the teacher bought a product that isn't backwards-compatible and should complain to the manufacturer. It's likely the law would deem it reasonable to install 3.3 in the new machines (after removing 4) until the issue is resolved.

4. The state mandates technology proficiency for all high school students but adds no money to schools' software budgets. To ensure equity, public schools are allowed to buy what software they can afford and copy the rest.

False. Some interpretations of the 11th Amendment of the Constitution suggest that state schools may in fact be exempt from copyright prosecutions. However, following the guidelines encourages software and hardware makers to keep making quality products for us to buy.

5. A geography teacher has more students and computers than software. He uses a CD burner to make several copies of a copyright interactive CD-ROM so each student can use an individual copy in class. This is fair use.

False. Just as with a print encyclopedia, one student at a time has access to a piece of software. The number of students who can use a software program simultaneously is restricted to the number of copies the school owns (but be sure to check out #2 above).

6. A middle school science class studying ocean ecosystems must gather material for multimedia projects. The teacher downloads pictures and information on marine life from various commercial and noncommercial sites to store in a folder for students to access. This is fair use.

True. The Web may be mined for resources. Download away (of course, don't hack into subscription sites)! But remember: you can't put these projects back up on the Web without permission from the copyright holders.

7. An elementary school designs a password-protected Web site for families and faculty only. It's OK for teachers to post student work there, even when it uses copyright material without permission.

True. If the site really is protected, then this is considered OK. The school should monitor its Web hits, though, and make sure the outside world isn't sneaking in.

8. A student film buff downloads a new release from a Taiwanese Web site to use for a humanities project. As long as the student gives credit to the sites from which he's downloaded material, this is covered under fair use.

False. Educators may use "legitimately acquired" material without asking permission, but many file-sharing sites are suspect in this area. Use common sense to determine if those peer-to-peer resources are legitimate or pirated. (You can also check copyright ownership at www.loc.gov or www.mpa.org.)

9. A technology coordinator downloads audio clips from MP3.com to integrate into a curriculum project. This is fair use.

True. MP3.com pays for its archives, so the material there is legitimately acquired. Be wary of some of the other peer-to-peer sites, however (see #8).

10. A teacher gets clip art and music from popular file-sharing sites, then creates a lesson plan and posts it on the school Web site to share with other teachers. This is permissible.

False. Legitimately acquired material can be used in classrooms. However, under the current law, no teacher can redistribute such material over the Net or any other medium. You can use it, but you can't spread it around.

Copyright Quiz
The Answers

Part III: Video

11. A teacher videotapes a rerun of Frontier House, the PBS reality show that profiles three modern families living as homesteaders from the 1880s did. In class, students edit themselves "into" the frontier and make fun of the spoiled family from California. This is fair use.

True. Video can be pulled into multimedia projects. I live in California, too, so I share their pain.

12. A student tries to digitize the shower scene from a rented copy of Psycho into a "History of Horror" report. Her computer won't do it. The movie happens to be on an NBC station that week, so the teacher tapes it and then digitizes it on the computer for her. This is fair use.

True. Manufacturers are instituting blocking technology, authorized under the law, so newer material like VHS rentals and DVDs block educators from their constitutional right to use material for teaching. It's time to begin complaining. In the meantime, educators should grab all the laserdiscs they can find. They're unblocked.

13. A history class videotapes a Holocaust survivor who lives in the community. The students digitally compress the interview, and, with the interviewee's permission, post it on the Web. Another school discovers the interview online and uses it in their History Day project. This is fair use.

True. That's the other side of fair use. Just as you can use other people's intellectual property for educational purposes without permission, so can your own be used.

14. On Back-to-School night, an elementary school offers child care for students' younger siblings. They put the kids in the library and show them Disney VHS tapes bought by the PTA. This is permissible.

False. Video (like everything else) is not covered under fair use for entertainment or reward. The use described is entertainment, pure and simple. However, Disney will sell you a one-time license for $25 that makes this legal use. Call Disney at (818) 560-1000, ask for "Rights," and prepare to trade faxes.

15. A teacher makes a compilation of movie clips from various VHS tapes to use in his classroom as lesson starters. This is covered under fair use.

False. The current guidelines exclude the creation of video compilations. However, FilmClipsOnline.com offers film clips for free (the VHS tape on American values is particularly good.) E-mail Michael Rhodes at imrhodes@msn.com or call (805) 984-5907.

Part IV: Multimedia

16. At a local electronics show, a teacher buys a machine that defeats the copy protection on DVDs, CD-ROMs, and just about everything else. She lets her students use it so they can incorporate clips from rented DVDs into their film genre projects. This is fair use.

True. Manufacturing these machines is now prohibited (it previously wasn't). But teachers have the right to use material that is technologically blocked. Personally, as a teacher, I would absolutely use it to unlock content for students, but I would absolutely not use it to make copies at home.

17. A number of students take digital pictures of local streets and businesses for their Web projects. These are permissible to post online.

True. You may use the images in projects and post such images on the Web. Some sites, like Disneyland and architectural landmarks, may be considered copyright material, however, and might ask you to remove the image. People (not selectively chosen) in public places are as a rule OK in photographs.

18. A student wants to play a clip of ethnic music to represent her family's country of origin. Her teacher has a CD that meets her needs. It is fair use for the student to copy and use the music in her project.

True. See the chart on page 32 for limitations on length. To my mind, the music guidelines need to be rethought and broadened. Until then, look for CDs that are created royalty-free.

19. A high school video class produces a DVD yearbook that includes the year's top ten music hits as background music. This is fair use.

False. This is not fair use. Yearbooks are not generally intended to be instructional. Plus, it's not permissible to use entire songs. If you're using pieces of songs and analyzing them as a reflection of the times students lived in, that's different.

20. Last year, a school's science fair multimedia CD-ROM was so popular everyone wanted a copy of it. Everything in it was copied under fair use guidelines. It's permissible for the school to sell copies to recover the costs of reproduction.

False. Fair use allows educational use of copyright material, true, but it does so only if there is no anticipation of wider distribution.

What's On the Web?

Super Science Fair Projects
http://www.super-science-fair-projects.com
Super Science Fair Projects provides guidance for middle and high school students as they prepare to create a science fair project. Students learn how to create a science log, choose a topic, how to complete all six steps of the scientific process and create the display board. The site includes a parent guide and a resource page for teachers. (Middle and High School)

Atoms Family (Miami Museum of Science)
http://www.miamisci.org/af/sln/
The Atoms Family Web site contains lessons and activities that relate to various forms of energy. Some of the activities included on the site are The Mummy's Tomb, where the visitor to this site learns about energy conservation, kinetic and potential energy and Dracula's Library, where the user learns about properties of light, waves and particles. (Elementary, Middle and High School)

HomeTownLocator Gazetteer
http://Gazetteer.HomeTownLocator.com
The Home Town Locator Gazetteer contains information about 1.8 million physical and cultural features and census information for 98,000 local areas, as well as the distance calculations between 177,000 different places. The site also contains links to aerial photos and topographical maps. The user of this site can also search for cities, towns, counties and states.
(Elementary, Middle and High School)

Basic Steps to the Research Process
http://www.crlsresearchguide.org
This site provides step by step directions for students on how to complete a research project. The Tips section of the site includes tips on how to cite resources, select a research topic., as well as how to write a conclusion and thesis statement. (Elementary, Middle and High School)

September 11 Digital Archive
http://911digitalarchive.org/
No one can forget the horrible events of 9/11. This site provides an electronic history of the attacks on the World Trade Center, the Pentagon, the bravery of the passengers that brought down an airplane in a Pennsylvania field and the response of the public to these tragedies. The site includes still images, audio, documents, as well as a 9/11 FAQ and links to other Web resources.
(Elementary, Middle and High School)

Eric Weisstein's World of Mathematics
http://mathworld.wolfram.com/
MathWorld is an interactive math encyclopedia for both teachers and students. The site a subject index and an alphabetical index. Each entry has links to other Web sites related to the topic. (Elementary, Middle and High School)

Dictionary Link
http://www.dictionarylink.com
Dictionary Link is a compilation of free online dictionaries, thesaurus, language translators, crossword solvers, quotes and other language resources. The site also contains a page with links to major news sources and newspapers.
(Elementary, Middle and High School)

StudyStack
http://www.studystack.com/java-studysta/Home.jsp
StudyStack helps students memorize facts through the use of virtual flash cards. Students may use an existing studystack or create one of their own if the topic they are interested in does not appear on the site. The site contains links for parents and teachers as well.
(Elementary, Middle and High School)

metric conversions . org
http://www.metric-conversions.org/
Metric conversions.org provides tools for that help the user to calculate and convert from or to metric. The site also contains online calculators, metric conversion tools and links to other metric conversion sites on the Web.
(Elementary, Middle and High School)

Reporting Civil Rights (Library of America)
http://www.reportingcivilrights.org/
The history of the civil rights movement in America is told through the efforts and experiences of reporters, journalists and activists. The site contains an interactive timeline for the years 1941to 1973. A companion site shares nearly 200 newspaper and magazine reports, book excerpts and 151 eyewitness accounts.
(Elementary, Middle and High School)

Plants-In-Motion
http://sunflower.bio.indiana.edu/~rhangart/plantmotion/PlantsInMotion.html
Time-lapse photography is used to show the movements and changes in plants. Real time movies are used to demonstrate topics such as germination, tropisms, general growth and more. (Elementary, Middle and High School)

Amusement Park Physics
http://www.learner.org/exhibits/parkphysics/
Amusement Park Physics allows the user of this site to design their own roller coaster and in the process, learn how the laws of physics apply to roller coasters. The site includes information about the history of roller coasters, roller coaster and physics links and allow the user to learn about the concepts of free fall and pendulum.
(Middle School, High School)

Arizona Technology in Education Mission Statement

The Arizona Technology in Education Alliance (AzTEA), an ISTE affiliate, is a professional non-profit organization devoted to increasing student achievement through technology in teaching and learning. Our mission is to empower the educational community in Arizona to infuse technology as an integral part of the educational process. We do this by providing advocacy and leadership, promoting educational reform, and supporting technology based innovation through our services, activities, programs, and collaborative efforts.

Memberships Available: Individual $25.00

If you are interested in joining AzTEA, fill out the form below, enclose the appropriate fee and mail to:
AzTEA, PMB 292, 1739 E Broadway Ste 1, Tempe, AZ 85282

You may also submit your application online:
http://www.aztea.org/

Arizona Technology in Education Alliance Membership Application Form

Please fill out the information below and mail this form along with $25 for a one year membership.
Chapter Affiliation: ☐ WestSide Chapter ☐ Southern Arizona Chapter ☐ Northern Arizona Chapter ☐ EastSide Chapter

Type of Membership New Renewal Change of Information

Name _____

School/Organization _____

District Name _____

Title/Position _____

Address _____

City _____ State _____ Zip _____

Work Phone _____ Extension _____ Fax _____

Pager _____ Cell Phone _____

School/Org URL: _____

School/Org Email Address _____

Home Address _____

City _____ State _____ Zip _____

Home Phone _____ Unlisted ☐ Home Fax _____

Personal URL _____

Personal Email _____

Use Home Address for All Correspondance ☐ Yes ☐ No

Application Date _____

AchieveIT: Achievement Improved Through Technology*
Update
Tamara Nicolosi

The spring issue of the AZTEA newsletter featured an article on the AchieveIT competitive technology grant being implemented in Tucson. After examining the 3rd grade AIMS results for the participating students, we are pleased to share some exciting results. Measurable gains were evident in the areas of math, writing and reading through the integration of technology into content areas.

	2003 CCSA (District Criterion Referenced Test) Results	**2004 AIMS Results**
Math	**44%**	**55%**
Writing	**2.5%**	**3%**
Reading	**54%**	**62%**

AchieveIT provided two technology-based tutoring sessions per week to all third grade students who were not meeting the standards in a target area at fifteen Tucson schools. Professional development was provided to teachers and software was purchased for the schools. The program continues this year with a math focus at 13 elementary schools and one middle school. For more information please feel free to contact Tamara Nicolosi at tamara.nicolosi@tusd.k12.az.us or visit the project website: http://edweb.tusd.k12.az.us/achieveit.

Many thanks to our corporate sponsors!

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