



Catholic Schools

DIOCESE of DALLAS

Office of Catholic Schools
3725 Blackburn Street
Dallas, TX 75219
csodallas.org

T- echnology I- ntegration E- xpectations

*“T.I.E.ing” Technology with
Teaching and Learning*

Grades PreK-12

Young people especially are rapidly adapting to the computer culture and its "language." This is surely a cause for satisfaction. Let us "trust the young."... They have had the advantage of growing up with the new developments, and it will be their duty to employ these new instruments for a wider and more intense dialogue among all the



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Mary Beth Applegate

Tracey Arbo

Kathleen Gauthier

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Focus

The Catholic schools of the Diocese must integrate technology into the educational process to enhance learning, instruction, communication, and information management in a manner that is both equitable and accessible to all.

As we move to the next millennium, we must utilize the emerging technologies, which when properly integrated become valuable tools for communication and learning. In particular, these provide media to aid the human development of our youth as we engage in the four fold character of the ministry of education: message, community, worship, and service.¹

The mission of the schools within is the evangelization and education of students and families. Our focus is to ensure that through their experiences in the classrooms of our Catholic schools, our students will acquire the knowledge and skills they need to become productive, moral citizens who can critically think in a global and technological society.

Surely we must be grateful for the new technology which enables us to store information in vast man-made artificial memories, thus providing wide and instant access to the knowledge which is our human heritage, to the Church's teaching and tradition, the words of Sacred Scripture, the counsels of the great masters of spirituality, the history and traditions of the local churches, of religious orders and lay institutes, and to the ideas and experiences of initiators and innovators whose insights bear constant witness to the faithful presence in our midst of a loving Father who brings out of His treasure new things and old.²

Philosophy

Diocesan schools must nurture and develop life-long learners who value and live the faith traditions of their Catholic education and are confident in using technology morally and responsibly. The following tenets form the basis of our vision of technology within the Diocesan schools:

- Technology will help Catholic schools fulfill their mission to spread the Good News, build community, and be of service.
- Technology is an educational tool that supports learners in solving problems, in developing critical thinking skills, in communicating ideas, and in working collaboratively on multi-disciplinary projects within all curriculum areas.
- Professional development for educators is imperative if technology is to be used effectively as part of the teaching/learning process.
- Learning is an active process through which students acquire their own knowledge through participation in complex, meaningful tasks.
- The information explosion demands that we develop skills to manage and communicate information effectively.

In The Sight Of All, Communications: A Vision All Can Share; Office of Publishing and Promotional Services for the Administrative Board of the United States Catholic Conference, 1986©

² Cf. Pontifical Council for Social Communications, *The Church and Internet* (February 22 nd , 2002), 6: Vatican City, 2002, p. 13-15

- Technology will enable students to become active, independent, life-long learners.

“Man’s genius has with God’s help, produced marvelous technical inventions from creation, especially in our times. The Church, our mother, is particularly interested in those which directly touch man’s spirit and which have opened up new avenues of easy communication of all kinds of news, of ideas and orientations.” Schools of the 21st century must be bold, flexible, creative, and prepared to accept and meet the challenge of the paradigm shift that was ushered in with a dramatic technological component. “...our challenge now is to reinvent schools for the 21st century - for the sake of our children, our students and the welfare of our world.”³

It is critical for our students to be taught how to reflect, analyze, evaluate, manage, and apply information rather than merely absorb it. This requires higher-order thinking, multiple perspectives, and new communication and relationship skills. It requires that we give students the body of knowledge that enables them to make sense of the world around them, to be culturally and *technologically literate*⁴ in an information-based, global environment. This brings with it exciting new possibilities to expand our resources, problem-solving methods, and innovative resolutions.

With the assistance of the Office of Catholic Schools, our schools must position themselves to address these challenges. **To that end, the Diocesan goal is the complete integration of technology into the teaching and learning processes at all levels.** This document is presented as a practical guideline to foster and give direction to the realization of this goal and to provide benchmarks for the plans of the individual schools. The Diocesan plan for technology, the formation of technology literacy, and the corresponding plans of individual schools must be flexible enough to account for continual change and must also reflect the constant truth of the Gospel message of peace and justice.

“Emerging technologies and resulting globalization ... provide unlimited possibilities for exciting new discoveries and developments such as new forms of energy, medical advances, restoration of environmentally ravaged areas, communications, and exploration into space and into the depths of the oceans. The possibilities are unlimited.”⁵


N.B. Portions of this document are excerpted from:

- National Educational Technology Standards for Students © 2007 ISTE
- CT State Department of Education, Information and Technology Literacy Framework
- Center for Catholic School Effectiveness, Loyola University, Chicago

³ 21st Century Schools, April 2008, http://www.21stcenturyschools.com/What_is_21st_Century_Education.htm

⁴ For this document, the definition of a technologically literate person will be defined according to the criteria outlined by the National Academy of Engineering: <http://www.nae.edu/NAE/techlithome.nsf/weblinks/KGRG-55SQ37?OpenDocument>

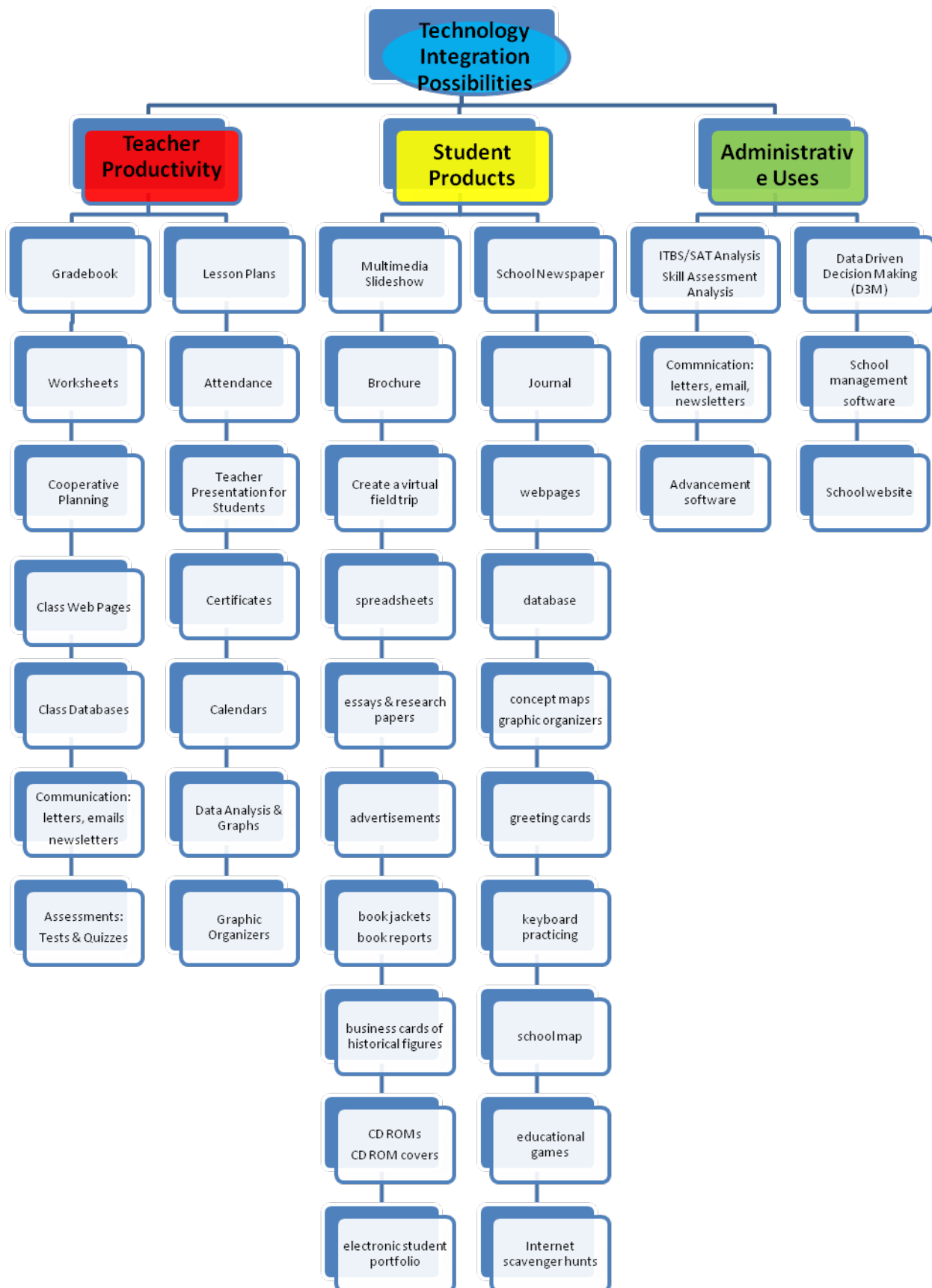
⁵ 21st Century Schools, April 2008, http://www.21stcenturyschools.com/What_is_21st_Century_Education.htm



Catholic Schools
DIOCESE of DALLAS

Graduation Outcomes

- ✚ Students will live according to the Catholic social teachings of the Church.
- ✚ Students will use effective communication skills.
- ✚ Students will read, think, and listen critically.
- ✚ Students will be culturally inclusive and demonstrate a global awareness.
- ✚ Students will engage in lifelong learning.
- ✚ Students will solve problems effectively and justly.
- ✚ Students will use technology for the betterment of society.
- ✚ Students will develop an appreciation for the beauty in the world around them through the fine arts.



Grades Pre-K – 2
TECHNOLOGY INTEGRATION

STUDENT EXPECTATIONS

- I. Illustrate and communicate original ideas and stories using digital tools and media-rich resources. (Standard 1, 2)
- II. Identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution. (Standard 1, 3, 4)
- III. Engage in electronic learning activities with learners from multiple cultures in order to understand that the world is one human family. (Standard 2, 5)
- IV. Use a variety of technologies to communicate and celebrate God's word. (Standard 5)
- V. In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area. (Standard 1, 2, 6)
- VI. Choose and Use various methods to organize information including lists, systematic counting, sorting, graphic organizers, and tables (Standard 4, 6) (Math)
- VII. Demonstrate the safe and cooperative use of technology. (Standard 6)
- VIII. Independently apply digital tools and resources to address a variety of tasks and problems. (Standard 4, 6)
- IX. Communicate about technology using developmentally appropriate and accurate terminology. (Standard 6)
- X. Demonstrate the ability to navigate in virtual environments such as electronic books, simulation software, and Web sites. (Standard 6)

TECHNOLOGY OPERATIONS AND CONCEPTS

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 2, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Use input devices (e.g., mouse, keyboard, remote control) and output devices (e.g., monitor, printer) to successfully operate computers, VCRs, audiotapes, and other technologies. (6) 2. Use a variety of media and technology resources for directed and independent learning activities. (6, 1) 3. Communicate about technology using developmentally appropriate and accurate terminology. (6) 4. Use developmentally appropriate multimedia resources (e.g., interactive books, educational software, elementary multimedia encyclopedias) to support learning. (6) 5. Work cooperatively and collaboratively with peers, family members, and others when using technology in the classroom. (5) 6. Demonstrate positive social and ethical behaviors when using technology. (5) 7. Practice responsible use of technology systems and software. (5) 8. Create developmentally appropriate multimedia products with support from teachers, family members, or student partners. (1) 9. Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories. (1, 2, 5, 6) 10. Gather information and communicate with others using telecommunications, with support from teacher or family members. (2) 11. Use email to communicate original ideas or collaborate on a project (1, 4) 		

Technology Implementation Suggestions -- Grades K-2

1. Care for equipment and use it safely in an age-appropriate manner. (Gr. K, 1, 2, Computer Lab)
2. Name basic technology system components. (Gr. 1 & 2 – Hang up pictures of computer parts)
3. Comfortably use input devices (e.g. mouse, keyboard, remote control) to operate computers, video and DVD players, CDs, audiotapes and other technologies. (Gr. K, 1, 2)
4. Insert and remove flash drives and CD-ROMs. (Gr. K, 1, 2)
5. Create new files. (Gr. 1, 2)
6. Save, quit, and print appropriately. (Gr. 1, 2)
7. Benefit from an introduction to the Internet and its uses. (Gr. K, 1 & 2)
8. In ways appropriate to age and development, understand and abide by guidelines of acceptable behavior regarding Internet and general computer etiquette. (Gr. 1 & 2)
9. Practice responsible use of technology. (Gr. K, 1, 2)
Whose Property Is This?
http://cybersmartcurriculum.org/mannersbullyingethics/lessons/2-3/whose_property_is_this/
Is This Yours? http://cybersmartcurriculum.org/mannersbullyingethics/lessons/k-1/is_this_yours/
10. Work collaboratively with others using technology. (Gr. 1, 2, Computer Lab)
Work in pairs or teams to complete a project.
11. Demonstrate respect for the intellectual property of others. (Ethics discussion in Gr. 1 & 2; can tie in with guideline # 9 above)- Great selection of lesson plans at www.cybersmartcurriculum.org
12. Navigate and explore multimedia applications pertaining to units of study. (Gr. 1 & 2)
13. Use age-appropriate software and sources of electronic information to support and enhance learning of concepts and skills. (Digital camera, remote control, scanner, etc.)
14. Use basic word processing features, including composing and editing work. (Gr. 1, 2)
15. Produce creative work. (Use drawing or art program such as Kid Pix Deluxe, Crayola Art Studio, Drawing for Children (free download program), etc. to design a creative work for a class project)
16. Use simple graphic tools such as circles, boxes, lines or pencil, brush, use color, and stamps to create pictures to illustrate thoughts, ideas and stories. (This will be done in conjunction with guideline # 15 above)
17. Use technology tools such as puzzles, programs that promote thinking skills, and simulation software for problem solving. (Use one of many interactive learning programs or online games & puzzles.)
18. Use technology for self directed and independent learning. (Use advanced learning programs for gifted students to stimulate interest and provide challenges.)

See Sample Worksheets for ethics, respect for intellectual property of others, responsible use of technology, etc. @ <http://cybersmartcurriculum.org/> Also try out the CyberSmart Toolbar at http://cybersmarttoolbar.com/main/toolbar_registration.php?cookie_set=2

Teaching and Learning with Technology- Language Arts

PERFORMANCE INDICATORS	NOTES	Assessment
<p><u>GRADES 1-12:</u></p> <ol style="list-style-type: none"> 1. Use reference sources (text and electronic) as an aid in writing 2. Use print and electronic media (internet) to access information <p>BY THE END OF GRADE 2, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Use story maps and other electronic graphic organizers to chart and understand the information they read. 2. Use simple electronic graphic organizers (charts, webs) for pre-writing assignments. 3. Keep personal literature journals or blogs (Online journals) 4. Use text synthesis to read/write own stories (Speech text synthesis is a machine's ability to interpret or translate spoken and written words.) 5. Use electronic devices to tape sounds 6. Send emails to friends or to take part in an online project 7. Use "spell check" and other technologies to spell correctly 8. Listen to tapes, CDs, computer-generated material, for specific information 9. Tell stories digitally using a video prompt. 10. Practice using communication devices. (Telephones, microphones, etc.) 11. Imitate good oral language heard on electronic devices 		

Teaching and Learning with Technology – Math

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 1, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Make and interpret a real object, picture, and bar graphs 2. Make and interpret a tally chart 3. Pose questions to collect data 4. Read and use data from a graph, table, and/or picture 5. Use a Venn diagram and other graphic organizers to sort items 6. Use a variety of online math simulations 7. Analyze data in tables and graphs 8. Use comparative language to describe/interpret data in tables and graphs 9. Observe, record, graph, and describe the results of simple probability activities and games 10. Use electronic devices to collect and illustrate data 11. Use simulations and graphical organizers to explore and depict patterns of growth such as the life cycles of plants and animals. 12. Keep a graph of sunny/cloudy days and write prayers thanking God for both. <p>BY THE END OF GRADE 2, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Model equivalent fractions (using manipulatives, pictures, graphics, etc.) 2. Use a Venn diagram and other graphic organizers to sort items 3. Read and interpret vertical graphs, pictographs 4. Use a variety of online math simulations 5. Create simple (picture, bar) graphs from 		

<p>given data</p> <ol style="list-style-type: none">6. Graph ways in which people in communities help one another and ways in which they can help their communities (family, school, parish, and neighborhood).7. Make string phones with a paper cup at each end; record and graph sounds heard at 10 ft, 20 feet, etc.		
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Teaching and Learning with Technology - Science

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 2, THE STUDENTS WILL:</p> <p>Identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses (Grades 1 - 12)</p> <ol style="list-style-type: none"> 1. Compare and contrast humans and animals (use charts, graphs, etc.) 2. Compare and contrast different animals (use charts, graphs, etc.) 3. Compare and contrast the adaptations that animals have made in order to survive (use charts, graphs, etc.) 4. Discuss positive and negative uses of TV, Internet, video games, magazines 5. Find examples that effectively present nutrition, learning how to brush/floss teeth, etc. from various positive media sources 6. Use a digital camera and video recording material to "capture" the world of forces and motion 7. Work together to create charts that show the relationship between states/phases of matter 8. Find pictures, (magazine, internet, digital camera) of different rock formations and other physical features of the Earth. Present findings in a photo journal. 9. Compare food chains and food webs (use charts, graphs, etc.) 10. Research earthquakes of recent times and chart changes brought to the Earth's surface 11. Discuss ways technology can positively impact health 12. Work together to create charts of things as living and nonliving 13. Classify plant and animals by physical features 14. Chart different plants and their uses 15. Chart clouds 16. Use charts or graphs to record observations of plant growth and discuss how they take care of God's creation. 		

Teaching and Learning with Technology - Social Studies

PERFORMANCE INDICATORS	NOTES	Assessment
<p><u>GRADES 1-12 PRIMARY SKILLS:</u></p> <ol style="list-style-type: none"> 1. Identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses (Grades 1 - 12) 2. Identify and describe examples in which technology has changed the lives of people, such as in homemaking, childcare, work, transportation, and communication. (Grades 2 - 12) <p>BY THE END OF GRADE 1:</p> <ol style="list-style-type: none"> 1. Use a chart to compare prices of a particular good or service 2. Compare and contrast land and water (chart, table, etc.) 3. Compare and contrast cities and suburbs (charts, tables, etc.) 4. Engage in learning activities with learners from multiple cultures through e-mail and other electronic means in order to understand that the world is one human family. 5. Compare and contrast one culture from another region of the world with USA (holiday, birthday or other celebrations from around the world) (chart, table, essay, etc.) <p>BY THE END OF GRADE 2:</p> <ol style="list-style-type: none"> 1. Compare and contrast cities and towns (chart, table, essay, etc.) 2. Compare and contrast needs and wants (chart, table, essay, etc.) 3. Create a time line putting events in chronological order 4. Describe changes in communication, technology and transportation over the past 150 years. 5. Describe how technology has changed lives of Americans 6. Identify and describe examples in which technology has changed the lives of people, such as in homemaking, childcare, work, transportation, and communication; (Grades 2 - 12) 		

Grades 3-5
TECHNOLOGY INTEGRATION

STUDENT EXPECTATIONS

- I. Produce a media-rich digital story about a significant local event based on first-person interviews. (1, 2, 3, 4)
- II. Use digital-imaging technology to modify or create works of art for use in a digital presentation. (1, 2, 6)
- III. Recognize bias in digital resources while researching an environmental issue with guidance from the teacher. (3, 4)
- IV. Select and apply digital tools to collect, organize, and analyze data to evaluate theories or test hypotheses. (3, 4, 6)
- V. Identify and investigate a global issue and generate possible solutions, in a moral and responsible manner, using digital tools and resources. (3, 4, 5)
- VI. Conduct science experiments using digital instruments and measurement devices. (4, 6)
- VII. Conceptualize, guide, and manage individual or group learning projects using digital planning tools with teacher support. (4, 6)
- VIII. Practice injury prevention by applying a variety of ergonomic strategies when using technology. (5)
- IX. Debate the effect of existing and emerging technologies on individuals, society, and the global community. (5, 6)
- X. Apply previous knowledge of digital technology operations to analyze and solve current hardware and software problems. (4, 6)

Technology Operations and Concepts

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 5, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Use keyboards and other common input and output devices (including adaptive devices when necessary) efficiently and effectively. (6) 2. Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide. (6, 5) 3. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use. (5) 4. Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum. (1, 6) 5. Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom. (1, 2, 6) 6. Use telecommunications efficiently and effectively to access remote information, communicate with others in support of direct and independent learning, and peruse personal interests (2) 7. Use telecommunications and online resources (e.g., e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom. (2, 4, 5) 8. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities. (3, 4) 9. Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems. (3, 4) 10. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources. (5) 		

Technology Implementation Suggestions (Grades 3-5)

1. Use a keyboard, a mouse, and other common input and output devices efficiently and effectively. *(Grade 3)*
2. Identify everyday uses of technology and the advantages or disadvantages of those uses. *(Grades 3 in general discussion)*
3. Comfortably use application-specific menu options i.e., know how to use the toolbar. *(Grades 3, 4, 5)*
4. Identify and manipulate parts of user interface, e.g. drag bars, close box, resize boxes. *(Practice on classroom projects for Grades 3, 4, 5)*
5. Understand the idea of intranet (an internal network of computers which can share programs and information.) Cover this under **Internet Vocabulary – attached** (Guideline # 23)
6. Know how to launch multiple applications at one time and understand how to navigate among them with purpose. *(Practice by moving between multiple websites or the Internet and a word processor.)*
7. Begin to evaluate technology programs on such criteria as user friendliness, screen design, navigation, and usefulness of content. *(A good intro to this would be a discussion on software programs that students have at home – Are they always as good as the designers claim? Are the directions easy to follow and the program easy to use? Do they work the way you expect them to, or do they fall short of your expectations? Etc.)*
8. Understand issues around conservation of computer resources (paper, ink, electricity, disk space, and bandwidth) *(Grades 4 & 5 -- Disk space comes into play when you want to save your work to the hard drive, a flash drive, or a CD/DVD and your document has lots of pictures or movies clips which take up LOTS of space; the same thing applies to bandwidth if you are trying to send an email attachment with lots of pictures or video; there is often a limit on the size of files which an email account can receive, because it ties up space for the Internet Server. Discuss reducing the resolution of pictures for email or websites.)*
9. Use standard keyboarding techniques (e.g. use home row keys, correct posture). *(Stress proper fingering and posture)*
10. Without looking at hands, touch type at speed faster than handwriting rate (approximately 20 words per minute). *(This is the goal at the end of Grade 5; practice as necessary.)*
11. Understand copyright & plagiarism issues and discuss personal consequences of inappropriate use.
A good site is <http://cybersmartcurriculum.org/>
Specific lessons are:
Gr. 4 - "Do the Right Thing?" http://cybersmartcurriculum.org/mannersbullyingethics/lessons/4-5/do_the_right_thing/
Gr. 5 - "Whose is it Anyway?" http://cybersmartcurriculum.org/mannersbullyingethics/lessons/4-5/whose_is_it_anyway/
12. Select and use appropriate technology for tasks. *(Gr. 3, 4, 5 & Computer Lab)*
13. Express an age-appropriate understanding of the capacities, limitations, and workings of available technologies, and be able to discuss the advantages and disadvantages of various technologies. *(Gr. 5)*

14. Use directories, indexes, and keywords to search for information pertaining to units of study (Internet, CD-ROM encyclopedias, library catalogs).
15. Use telecommunications to collaborate with and learn from others such as students, teachers, researchers, and experts. (*Grades 3, 4, 5 can use a program such as [ePALS Classroom Exchange](#) to communicate with other classrooms around the world. Or <http://www.technospudprojects.com> to work on a project with other schools.*)
16. Carry out fundamentals of writing to include such activities as brainstorming, creating and revising drafts, proofreading, and collaborating with peers. (*Use a mapping program such as Kidspiration or Inspiration to prepare for a project*)
17. Use more advanced word processing skills with ease.
18. Create charts and graphs using spreadsheet or graphing program. (*Grade 3, 4, 5*)
19. Use scanners to create electronic files from paper images. (*Gr. 3, 4, 5*)
20. Create multimedia presentations, which may include text, graphics, audio and video images, and scanned documents, from multiple sources. (*Gr. 4 & 5 in conjunction with a project on planets or US states, etc. Use Internet or other programs to research information.*)
21. Incorporate the use of other technology tools, such as digital cameras, tape recorders, CD player, etc., into classroom work. (*Gr. 3, 4, 5*)
22. Apply technology resources to a variety of tasks and problems. (*Gr. 3, 4, 5 Use technology resources for varied projects in language arts, math, science, etc.*)
23. Evaluate electronic information sources and make decisions on the accuracy and relevance of such information (understand the grammar of the Internet).

(*Gr. 3, 4, 5 Use [Gr. 3-5 Internet Vocabulary sheets](#) below for "grammar of the Internet"*)

(*Gr. 5 Go to **CyberSmart** for the lesson on Evaluating Websites --*

http://cybersmartcurriculum.org/researchinfo/lessons/4-5/rating_web_sites/

Grades 3-5 Internet Vocabulary

Bandwidth - Bandwidth refers to how much stuff you can send through a connection, such as over a telephone or data line. It is usually measured in bits-per-second (**bps**). (A full page of English text is about 16,000 bits. Full-motion full-screen video would require roughly 10,000,000 bps.)

Blog (Comes from combining web and log) A blog is a journal that is available on the *web*. Postings on a blog are almost always arranged in date order with the most recent additions featured first.

Bps (Bits-Per-Second) A measurement of how fast data is moved from one place to another.

Browser A program (software) that is used to view Internet documents

Cyberspace Cyberspace is currently used to describe the whole range of information resources available through computer networks.

Download Transferring data (usually a file) from another computer to the computer you are using. The opposite of *upload*.

DSL (Digital Subscriber Line) High-speed Internet service

Email (Electronic Mail) Messages, usually text, sent from one person to another via computer. E-mail can also be sent automatically to a large number of addresses at the same time.

Home Page (or Homepage) Originally, the Homepage was the *web* page that your *browser* uses when it starts up. The more common meaning refers to the main web page for a business, organization, or person.

Hypertext Generally, any (blue) text on a Web page that you can click on to get to another document.

IM (Instant Message) Connecting with one or more people and carrying on a conversation by typing in a message and getting back a typed reply from the other parties.

Internet (Upper case I) The vast collection of inter-connected networks on the World Wide Web.

Intranet A private *network* inside a school, or company that uses the same kinds of software that you would find on the *Internet*, but it is only for internal use.

Login Noun: The account name used to access a computer system. (Not secret, as in a *Password*).

Verb: the act of connecting to a computer system by giving your "username" and "password")

Netiquette The etiquette rules to use on the *Internet*.

Netizen Derived from the term citizen, referring to a citizen of the *Internet*, or someone who uses networked resources. The term implies civic responsibility and participation.

Netscape A *WWW Browser* and the name of an Internet company.

Network Any time you connect 2 or more computers together so that they can share resources, you have a computer network. Connect 2 or more networks together and you have an *internet*.

Password A code used to gain access (*login*) to a secure system. Good passwords contain letters, numbers and symbols, such as 5%df(29) Passwords using your name or birth date are usually able to be figured out easily.

Spam (or Spamming) An inappropriate attempt to use a *mailing list* to send the same message to a large number of people who didn't ask for it.

Spyware A somewhat vague term generally referring to software that is secretly installed on a users computer and that monitors use of the computer in some way without the users' knowledge or consent.

Upload Transferring data (usually a file) from a computer you are using to another computer. The opposite of *download*.

URL -- (Uniform Resource Locator) The term URL is a web address for a site available on the Internet.

Virus A chunk of computer programming code that makes copies of itself and infect your computer system. Some viruses also might display messages, install other software or files, delete some of your software or files or programs, etc.

Web / WWW Short for "World Wide Web."

Web page A document designed for viewing in a *web browser*.

Website The entire collection of *web pages* and other information (such as images, sounds, and video files, etc.) that are made available through a single web server.

Web mapping - used to create mind maps (brainstorming), concept maps and process flow charts

Teaching and Learning with Technology - Language Arts

PERFORMANCE INDICATORS	NOTES	Assessment
<p><u>GRADES 1-12 PRIMARY SKILLS:</u></p> <ol style="list-style-type: none"> 1. Use reference sources (text and electronic) as an aid in writing 2. Use print and electronic media (internet) to access information <p>BY THE END OF GRADE 3:</p> <ol style="list-style-type: none"> 1. Locate information in a variety of print and electronic texts 2. Find information online by accessing websites with teacher/parent direction 3. Collect data, facts, and ideas from a variety of print and online sources 4. Use word processing and other media tools to produce documents 5. Select, organize, and produce visuals to complement and extend meaning (graphs, charts, simple spreadsheets, models, illustrations) 6. Use input devices to write using technology (e.g., mouse, keyboard) 7. Access and navigate through technology programs (including toolbars and features of word processing programs) 8. Save written work electronically 9. Enter and edit text in electronic documents 10. Use graphic drawing tools 11. Practice responsible use of technology 12. Use online programs to practice spelling and vocabulary 13. Use online programs to enforce reading and phonics 14. Use story maps and other graphic organizers to aid understanding 15. Use electronic devices in writing at all stages 16. Tell stories digitally (using a video prompt) 17. Publish final draft 18. Use electronic devices to organize ideas and 		

information, create text, edit and correct text

19. Use a thesaurus or thesaurus software to build vocabulary
20. Take notes and use graphic organizers to manage and record information
21. Use word processing software to outline study materials
22. Analyze information presented in media
23. Share journals, blogs (Online journals) and creative writing, experiences and ideas with one another in small and whole class groups

BY THE END OF GRADE 4:

24. Use story maps and other graphic organizers to aid understanding
25. Use telecommunications to collaborate with and learn from others (blogs, e-mail –monitored by teacher)
26. Evaluate electronic information sources and make decisions on the accuracy and relevance of such information (understand how to read URLs – the grammar of the Internet)
27. Use directories, indexes and keywords to search for information pertaining to units of study (Internet, CD-ROM references, library catalogs)
28. Print/Exhibit/Present work in text or digital form
29. Select, organize and produce visuals to complement and extend meaning (graphs, charts, simple spreadsheets, models, illustrations)
30. Use technology to write, revise, edit and correct own work
31. Use keyboard with increasing facility
32. Use a dictionary or spell-check to check for correct spelling
33. Use a thesaurus or thesaurus software to build vocabulary
34. Choose appropriate technology for communication tasks
35. Discuss the basic rules of plagiarism and how it applies to online sources
36. Write email messages, using Standard English, appropriate to the purpose and audience
37. Email pen pals from other countries and deepen their understanding and tolerance of different cultures. (2,

5)

BY THE END OF GRADE 5:

1. Use technology to increase comprehension, locate information, and collect data
2. Compare and contrast across media (books, DVDs, audio, etc.)
3. Select and use appropriate technology for reading & research tasks
4. Use directories, indexes, and keywords to search for information pertinent to the curriculum
5. Use telecommunications to collaborate with and learn from others (students, teachers, researchers, and experts)
6. Evaluate electronic information sources and make decisions about the accuracy and relevance of such information
7. Use technology to increase comprehension, locate information, collect data
8. Use telecommunications to collaborate with and learn from others (teacher-supervised blogs, e-mail, text-messaging)
9. Evaluate electronic information sources and evaluate the accuracy and relevance of such information (understand how to read URLs, websites, etc.)
10. Use directories, indices, and keywords to search for information pertaining to all curriculum areas (Internet, CD-ROM, references, library catalogs)
11. Type email and postcard messages appropriate to purpose and audience
12. Select, organize and produce visuals to complement and extend meaning (graphs, charts, simple spreadsheets, models, illustrations)
13. Apply standard keyboard knowledge to the writing process
14. Use technology to carry out fundamentals of writing including such activities as brainstorming, creating and revising drafts, proofreading, and collaborating with peers both proximate and remote.
15. Explore the use of a variety of tech tools (digital cameras, computer presentation systems) to enhance and improve written work.
16. Identify copyright and plagiarism issues in both written and online text and discuss personal consequences of inappropriate
17. Use dictionaries and thesauri (both traditional and

technological) to check the spelling of words and to find synonyms and antonyms

Intermediate Skills

1. Create and use graphic organizers
2. Use technology to organize and store information
3. Use libraries (school, public, Online) to access information
4. Find specific information from a variety of text and electronic sources
5. Evaluate source of information by skimming contents
6. Synthesize information found in text and graphs or charts
7. Create outlines to organize information
8. Demonstrate the use of a variety of graphic organizers

Teaching and Learning with Technology – Math

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 3, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Model equivalent fractions (using manipulatives, pictures, graphics, etc. 2. Use a variety of online math simulations 3. Use a variety of graphic organizers to sort items 4. Create simple (picture, bar) graphs from given data 5. Create a tally chart using given data 6. Create diagrams and charts to solve problems 7. Read and interpret line graphs 8. Use electronic devices to collect and illustrate data <p>BY THE END OF GRADE 4, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Use a table to explore functions and graph them on a coordinate grid (Quadrant I) 2. Use, read, create and interpret a variety of graphic organizers, charts, and graphs (These charts, graphs, etc. should include tally charts, frequency tables, line graphs, bar graphs, picture graphs, Venn diagrams and simple circle graphs.) (3, 4) 3. Use a variety of ways to collect, organize, record, analyze, and interpret data and identify patterns and trends (3, 4) 4. Use electronic devices to collect and illustrate data 5. Use a variety of online math simulations 6. Use technology to create spreadsheets and convert information into graphs (3, 4, 6) 7. Use electronic devices to collect and illustrate data <p>BY THE END OF GRADE 5, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Generate a table of equal ratios and graph the ordered pairs 2. Represent geometric and numeric patterns using tables and graphs. (3, 4) 		

<ol style="list-style-type: none"> 3. Graph patterns and data to make predictions. (3, 4) 4. Determine the nature of changes in linear relationships using graphs, tables, and equations 5. Use a table to explore functions and graph them 6. Use, read, create and interpret a variety of graphic organizers, charts, and graphs (These charts, graphs, etc. should include Venn diagrams, broken line graphs, bar graphs, picture graphs, circle graphs, and stem and leaf plot.) 7. Use technology to create spreadsheets and convert information into graphs (3, 4, 6) 8. Use electronic devices to collect and illustrate data 9. Use a variety of online simulations 		
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Teaching and Learning with Technology – Science

PERFORMANCE INDICATORS	NOTES	Assessment
<p><u>GRADES 1-12:</u></p> <p>Identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses (Grades 1 - 12)</p> <p>BY THE END OF GRADE 3, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Compare and contrast safe and harmful behaviors (use charts, graphs, etc.) 2. List electronic and other media sources that provide reliable, accurate health information 3. State ways medical technology has improved over the years (i.e. audio visual, print, etc.) 4. Provide a digital camera and video recording material to "capture" the world of forces and motion 5. Work together to create charts that show the relationship between states/phases of matter 6. Predict, test, chart which objects in a group of objects will stick to a magnet 7. Design a diorama with examples of machines benefiting people 8. Work together to create charts of things as living and non-living 9. Classify plants and animals by physical features 10. Chart different plants and their uses 11. Create charts and/or graphs of weather-related data 12. Use a thermometer, record temperature changes 13. Describe how the TV, the Internet, magazines, newspapers, etc., affect health knowledge, choices, and behavior <p>BY THE END OF GRADE 4, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Compare food chains and food webs (use charts, graphs, etc.) 2. Research earthquakes of recent times and chart 		

changes brought to the Earth's surface

3. Discuss ways technology can positively impact health

BY THE END OF GRADE 5, THE STUDENTS WILL:

1. Compare and contrast the structures of the human eye with those of the camera (use charts, graphs, etc.)
2. Compare and contrast the response of organisms to their environment (use charts, graphs, etc.)
3. Compare and contrast the effects of erosion on mountains and other landforms (use charts, graphs, etc.)
4. Track and graph hours of sleep for a week or two weeks
5. Critically evaluate, and analyze how print media, broadcast media, and Internet technology influence perceptions of health information.
6. Utilize online simulations

Teaching and Learning with Technology – Social Studies

PERFORMANCE INDICATORS	NOTES	Assessment
<p>GRADES 1-12: Find and evaluate information related to a current or historical person or event using digital resources. (3)</p> <p>Identify and describe examples in which technology has changed the lives of people, such as in homemaking, childcare, work, transportation, and communication; (Grades 2 - 12)</p> <p>Identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses (Grades 1 - 12)</p> <p>Use online sources to learn more about their God, their faith and their role in the mission of the Church. (3-5)</p> <p>Examine the effects of changing technologies in the global community (Grades 3-12)</p> <p>BY THE END OF GRADE 3, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Compare and contrast the ways various groups celebrate holidays (charts, tables, etc.) 2. Compare and contrast the way the different cultures interpret events and experiences (Schools in colonial time vs. today; immigrants from Europe in the U.S. vs. immigrants from Europe in South America) (chart, table, essay, etc.) 3. Compare and contrast the role of governor or mayor with the legislature or board of alderman (chart, table, essay, etc.) 4. Compare and contrast the political freedoms of Americans with other countries (chart, table, essay, etc.) 5. Use maps, globes, newspapers, and charts to identify physical, political, demographic and economic characteristics of regions 6. Describe how technology has changed local and global communities (chart, table, essay, etc.) 7. Describe changes in communities over time including changes in goods and services, architecture, landscape and technology 		

8. Gather information about changes over time by reading line graphs and timelines
9. Compare and contrast the perspectives, practices and cultural products of diverse groups who have lived in various communities at different times (chart, table, essay, etc.)
10. Work individually and in groups to create graphs, charts, or diagrams that compare costs of particular goods; compare and contrast local leaders; compare and contrast different cultures within a region
11. Develop the habit of reading news sources (text or electronic) regularly.

BY THE END OF GRADE 4, THE STUDENTS WILL:

1. Compare and contrast the functions of local government with those of the federal government (i.e., making, amending, removing, and enforcing laws) (chart, table, essay, etc.)
2. Compare and contrast money and barter (chart, table, essay, etc.)
3. Compare and contrast skilled and unskilled workers (chart, table, essay, etc.)
4. Describe how technology has changed local and global communities
5. Compare and contrast physical and man-made features of regions (chart, table, essay, etc.)
6. Identify and compare and contrast the physical, demographic, and economic characteristics of regions of the United States (chart, table, essay, etc.)
7. Describe the ways in which technology and science have changed the way Americans in all regions look at natural resources
8. Compare and contrast Native American (American Indian) and early settler attitudes about natural resources (chart, table, essay, etc.)
9. Work independently and in groups to create graphs, charts, or diagrams that compare and contrast the ways American Indians viewed nature with the way Americans do today
10. Develop the habit of reading news sources (text

or electronic) regularly.

11. Use technology in all phases of learning

BY THE END OF GRADE 5, THE STUDENTS WILL:

1. Compare and contrast monarchy, dictatorship and democracy (chart, table, essay, etc.)
2. List ways to monitor technology in order to protect the physical environment, individual rights, and the common good (respect of copyright laws connected to Internet use; recycling of electronic and computer equipment; evaluate website sources)
3. Compare and contrast an issue of public concern from multiple points of view (i.e. Wars throughout American history, environmental issues, etc.) (chart, table, essay, etc.)
4. Describe how advances in communication, transportation, technology have contributed to interdependence of nations around the world
5. Compare and contrast map projections (chart, table, essay, etc.)
6. Compare and contrast the way government has established order and managed conflict (or failed to do so) during different periods of American history (chart, table, essay, etc.)
7. Describe how advances in technology and science have changed the way Americans interact with their environment
8. Compare and contrast reasons for the establishment of the 13 distinct British colonies in North America (chart, table, essay, etc.)

Grades 6-8
TECHNOLOGY INTEGRATION

STUDENT EXPECTATIONS

- I. Describe and illustrate a content-related concept or process using a model, simulation, or concept-mapping software. (1, 2)
- II. Create original animations or videos documenting school, community, or local events. (1, 2, 6)
- III. Gather data, examine patterns, and apply information for decision making and predicting using digital tools and resources. (1, 4) (Math)
- IV. Participate in a cooperative learning project in an online learning community. (2)
- V. Evaluate digital resources to determine the credibility of the author and publisher and the timeliness and accuracy of the content. (3)
- VI. Employ data-collection technology such as probes, handheld devices, and geographic mapping systems to gather, view, analyze, and report results for content-related problems. (3, 4, 6)
- VII. Select and use the appropriate tools and digital resources to accomplish a variety of tasks and to solve problems. (3, 4, 6)
- VIII. Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other learners. (2, 3, 4, 5)
- IX. Integrate a variety of file types to create and illustrate a presentation that shows how to preserve the goods of the earth and define the call of Catholic Christians to stewardship of God's creation. (1, 5, 6)
- X. Independently develop and apply strategies for identifying and solving routine hardware and software problems. (4, 6)
- XI. Utilize the latest technology tools such as wikis, blogs, podcasting, etc. for collaboration and communication either in-house or interscholastically. (1, 2, 6)

Technology Operations and Concepts

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 8, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use. (6) 2. Demonstrate knowledge of current changes in information technologies and the effect those changes have on the workplace and society. (6) 3. Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse. (5) 4. Use content-specific tools, software, and simulations (e.g., environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research. (1, 3) 5. Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum. (1, 2, 6) 6. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom. (1, 2, 6) 7. Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information, and to develop solutions or products for audiences inside and outside the classroom. (2, 4) 8. Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems. (6, 4) 9. Demonstrate an understanding of concepts underlying hardware, software, related connectivity, and of practical applications to learning and problem solving. (6, 4) 10. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems. (3, 5, 4) 		

[Understanding Wikis, Podcasting, Blogs, etc.](#)

This site has **very simple explanations** of complex topics listed below.

You don't need to sign in; just click on the little video screen to start the movie. To enlarge it on the screen, go down to the bottom right corner of your monitor and click the size up to about 200, then center it.

[Video: Wikis in Plain English](#) <http://www.youtube.com/watch?v=-dnL00TdmLY>

A short introduction to wikis focused on a group of people planning a trip using a wiki.

[Video: Web Search Strategies in Plain English](#) <http://www.youtube.com/watch?v=CWHPf00Jkqg>

A short video designed to help you get more out of your web searches.

[Video: Social Media in Plain English](#) <http://www.youtube.com/watch?v=MpIOCIX1jPE>

An introduction to Social Media via a story about a small town with many flavors of ice cream.

[Video: Podcasting in Plain English](#) <http://www.youtube.com/watch?v=y-MSL42NV3c>

A short introduction to Podcasting and how it's different from broadcasting.

[Video: Twitter in Plain English](#) <http://www.youtube.com/watch?v=ddO9idmax0o>

A short introduction to the micro-blogging service [Twitter](#).

[Video: Online Photo Sharing in Plain English](#) <http://www.youtube.com/watch?v=vPU4awtuTsk>

A short introduction to the concept and features of online photo sharing web sites.

[Video: Blogs in Plain English](#) <http://www.youtube.com/watch?v=NN2I1pWXjXI>

A short introduction to blogs - how they work and why they matter.

[Video: Social Bookmarking in Plain English](#) <http://www.youtube.com/watch?v=x66IV7GOcNU>

A short introduction to the concept of social bookmarking, using [Delicious](#) as the example.

[Video: Social Networking in Plain English](#) http://www.youtube.com/watch?v=6a_KF7TYKVC

A short introduction to the concepts behind social networking websites.

[Video: RSS in Plain English](#) <http://www.youtube.com/watch?v=0klgLSxGsU>

An introduction to RSS as a way to save time reading

Technology Implementation Suggestions -- Grades 6-8

1. Problem Solving Strategies...

- Computer troubleshooting <http://www.computerhope.com/basic.htm>
- A "Computer Terms" Quiz (on-line interactive) <http://www.quia.com/jg/65620.html>
or <http://www.quia.com/cb/8260.html>

2. Operate 2 or more software programs simultaneously...

- Design a Web Quest requiring go on line to answer questions and then back to word processor to type in the answers.
- Research a topic (i.e. "Christmas Traditions Around the World" -- move back and forth to a word processing document to type a report.)
- Move between a document and a graphics program to select pictures or clipart for a report.

3. Cameras, Scanners, etc.

- Ideas for Digital Cameras in the Classroom (Located at the end of this section)
- Ideas for Using Scanners in the Classroom (Located at the end of this section)

4. Ethical Issues of Using Technology

- Read about identifying Plagiarism <http://www.uregina.ca/tdc/CutPastePlagiarism.htm>
- When is copying OK? <http://www.efuse.com/Plan/copyright2.html>
- Discuss copyright violations; checkout the discussion forum on PBS (questions on left side)
<http://www.pbs.org/newshour/forum/june03/copyright.html>
- Discuss database and Internet Privacy issues
- Discuss Internet Safety & Usage (take a look at <http://www.isafe.org/>)
- Discuss types of computer crime and its ramifications-
http://www.ed.uiuc.edu/wp/crime/computer_crime_web_sites.htm
- Discuss Computer Hoaxes, Myths, etc. using sites such as:
<http://www.vmyths.com/>
http://urbanlegends.about.com/od/virushoaxes1/Computer_Virus_Hoaxes.htm
- Study the Web by Using the Web <http://www.polaris.edu/Iltli/WEB.htm#ref>

5. Consequences of Misuse

- Discuss or review the school's "Acceptable Use Policy"

6. Search Engines

-Demonstrate & discuss keyword searching <http://www.december.com/web/text/nar-keyword.html>

-Check Search Engines & searching strategies

<http://www.internet4classrooms.com/search.htm>

<http://www.searchengineshowdown.com/strat/>

-Assign a lesson such as the "Lincoln Web Search" where students search the website

<http://www.netins.net/showcase/creative/lincoln/sites/sites.htm>

7. Evaluate Electronic Information Sources

-Evaluating Web Pages - <http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Evaluate.html>

(This also has a link to a "Web Evaluation Checklist")

-Evaluating Information Sources <http://www.libraries.wright.edu/services/tutorials/termpaper/evaluate1.html>

-Critical Thinking about sites on the Internet <http://www.ithaca.edu/library/Training/hott.html>

8. Crediting Your Sources

-Citing Internet Sources <http://www.noodletools.com/login.php> or

<http://www.bedfordstmartins.com/online/citex.html>

9. Use Computer Simulations

-Use the Internet to search for Simulation Software or try the following websites:

<http://illuminations.nctm.org/Lessons.aspx>

<http://illuminations.nctm.org/mathlets/index.html>

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

<http://www2.alliance.brown.edu/voices/4qrt1999/almost.shtml>

-The Cereal Puzzle & simulation <http://www.mste.uiuc.edu/reese/cereal/intro.html>

10. Use a Variety of Software...

Consider these items when determining what software to use when integrating web-based projects:

What are my curriculum objectives (content)?

What technical skills do I want students to develop?

What web sites support and facilitate the project?

Where are there opportunities for students to word process?

What art projects are incorporated into my unit?

Will we use a scanner or digital camera?

Are there videos, music, or slides to share with students?

Will the students present their results with a multimedia presentation?

Will students be creating a group or individual project?

What technology components do I want to include?

What is the project timeline?

How will I assess student progress?

-Integrating the internet into the classroom curriculum <http://www.cyberbee.com/intclass.html>

-Research Process Helper - <http://www3.sympatico.ca/sandra.hughes/sandra.hughes/research/default.html>

11. Use Appropriate & Varied Software...

-Lesson plans for utilizing various software and technology

http://www.internet4classrooms.com/integ_tech_lessons.htm

-Technology tutorials and lesson plans for numerous software programs

<http://www.internet4classrooms.com/on-line2.htm#ins>

12. Practice Composition & Editing Helpful sites:

-Guide to writing a basic essay <http://members.tripod.com/~lklivingston/essay/>

-Check out the Language Arts links at this site <http://www.wilmette39.org/resources/teachers/default.html>

-Interactive grammar website for student review <http://www.chompchomp.com/exercises.htm>

-Parts of speech help <http://www.eduplace.com/tales/help.html>

-ABCs of the Writing Process <http://www.angelfire.com/wi/writingprocess/>

-Editing and proofreading <http://writing.colostate.edu/guides/processes/editing/>

<http://leo.stcloudstate.edu/acadwrite/genproofed.html>

-Assign word processing reports and use peer editing-Peer editing checklist

http://www2.scholastic.com/content/collateral_resources/pdf/m/techtutor/PeerEditiChecklist.pdf

<http://amarris.homestead.com/files/PeerEditingChecklist-ContrastParagraph.htm>

13. Format Documents

-Assign a word processing lesson to check students' ability to:

Explain the difference between character, paragraph, and page formats.

Reverse or repeat the effects of the last command using the Undo and Redo commands.

Demonstrate techniques for selecting text.

Delete selected text.

Apply character formats, such as different fonts and sizes.

Apply paragraph formats, such as alignment and line spacing.

Apply page formats, such as margins and headers and footers.

Print preview a document.

Insert page numbers into headers and footers.

Insert page breaks.

Position text using tabs and tab stops.

14. Publish to the Internet

-Publishing Student Work to the Web http://www.gse.upenn.edu/pln/articles/grossman_publish.html

-“Kid Pub” Publish My Book <http://www.kidpub.com/publish-my-book>

-“Wacky Web Tales” <http://www.eduplace.com/tales>

-Publish Word Document As Web Page <http://www.valdosta.edu/~djudd/howtodoc.html>

15. Design, Develop, Publish & Present...

-Publishing Student Work to the Web http://www.gse.upenn.edu/pln/articles/grossman_publish.html

-“Kid Pub” Publish My Book <http://www.kidpub.com>

-Publish Word Document As Web Page <http://www.valdosta.edu/~djudd/howtodoc.html>

16. Apply Effective Visual Compositions...

-PowerPoint Visual Effects (Advanced – pick small sections of this P/P to show students-

<http://www.slideshare.net/mjamesno/how-to-visual-effects-in-powerpoint-2003>

-PowerPoint Presentation Guidelines <http://cms.westport.k12.ct.us/cmslmc/resources/powerpointtips.ppt>

or http://library.med.utah.edu/ed/eduserVICES/handouts/PowerPoint_Web/PPT2003_basic_tutorial.pdf

-Power Point 2000 Tutorial – <http://www.fgcu.edu/support/office2000/ppt/>

-PowerPoint 2007 Tutorial <http://www.fgcu.edu/support/office2007/ppt/index.asp>

17. Spreadsheets to Display and Calculate...

-Spreadsheet – A Variety of Activities! (can be adopted for upper grade lessons)

<http://sln.fi.edu/fellows/fellow4/may99/spreadsheet.html>

-Using Spreadsheets to Explore Real-World Data (this site has multiple links)

<http://homepage.mac.com/charlenechausis/spreadsheets.html>

18. Use Spreadsheets to Predict Various Scenarios...

- Communicating through Spreadsheets <http://www.knowledge.state.va.us/cgi-bin/lesview.cgi?idl=39>

-I want a credit card, or do I? <http://score.kings.k12.ca.us/lessons/crcard.htm>

-Do more wins mean more fans? <http://score.kings.k12.ca.us/lessons/ballpark.htm>

-SCORE Mathematics Lessons (Gr. K-7) <http://score.kings.k12.ca.us/lessons.html>

19. Use and Manipulate Data ... (Using Charts)

-Presenting and Graphing Data in Appropriate Charts

<http://www.mste.uiuc.edu/courses/ci430fa00/school/3/stat/presentdata.htm>

-Data Presentation http://scene.asu.edu/habitat/data_present.html

20. Demonstrate Knowledge of Changes in Technology

-"A Day in the Life" Technology changes over the past 50 years –lesson plan

http://www.media-awareness.ca/english/resources/educational/lessons/elementary/ethics/day_in_the_life.cfm

-Imagining the Future (download the activity sheets)

http://cybersmartcurriculum.org/assets/files/activitysheets/4-5/Imagining_The_Future.pdf

-Timeline of Computer History

http://www.computer.org/portal/cms_docs_computer/computer/timeline/timeline.pdf

-Computer History Museum <http://www.computerhistory.org/>

-History of Word Processors

<http://www.cs.umd.edu/class/spring2002/cmssc434-0101/MUIseum/applications/wordhistory.html>

-The First Spreadsheet <http://inventors.about.com/library/weekly/aa010199.htm>

-A Brief History of Spreadsheets

<http://www.cs.umd.edu/class/spring2002/cmssc434-0101/MUIseum/applications/spreadsheethistory1.html>

-Computers in Business http://www.geocities.com/r_mangion/

21. Self-directed learning and distance learning...

-E-Tutor <http://www.e-tutor.com/tour/welcome.html> (subscription site)

NAME	WEB ADDRESS
Class.Com	http://www.class.com
Distance Learning Resource Network	http://www.dlrn.org/index.html
ePals	http://www.epals.com

Peterson's

<http://www.petersons.com/dlearn/>

TeleCampus

<http://telecampus.net>

ferencing Adventures <http://www.kn.pacbell.com/wired/vidconf/adventures.html>

-Video-Conferencing for Learning <http://www.kn.pacbell.com/wired/vidconf/>

Digital Camera Resources

Ideas for Using Digital Cameras in Your Classroom <http://coekate.murraystate.edu/camera/ideas.htm>

History of Photography <http://inventors.about.com/od/pstartinventions/a/stilphotography.htm>

1001 Uses for a Digital Camera <http://pegasus.cc.ucf.edu/~ucfcasio/qvuses.htm>

Teacher to Teacher <http://www.brunswick.k12.me.us/Ion/Ionlinks/digicam/teacher/home.html>

Using Digital Cameras for Classroom Projects <http://www.4teachers.org/tecalong/anderson/index.shtml>

Going Digital in the Classroom <http://www.forsythcountyschools.org/its/sbeck/digital/goingdigital.htm>

Photography Field Trip (Gr. 2-5) <http://www.virtualblackboard.com/cross/photo/index.htm>

"Digitizing the Primary Classroom" http://viking.coe.uh.edu/~msalley/quest1/articles/digit_class.pdf

Using the Digital Camera in the Primary Classroom

http://www.hardin.k12.ky.us/res_techn/TEC/digitalcamera/primary.htm

Using Digital Cameras and Scanners in Your Classroom (multiple links)

<http://coekate.murraystate.edu/camera/resources.htm>

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Using Scanners in the Classroom

Self-Esteem Builder

The next time Timmy makes that amazing drawing, briefly borrow it and drop it in your scanner. Watch his eyes light up as a small crowd of children gather around the monitor to see his picture appear on the computer screen — in living color. Once it's scanned, you can return the original to him, and then print out as many copies as you like.

Look How I've Grown!

Ask children to gather behind the scanner or a photocopier. One at a time, let them take turns scanning their hands. They can do this at the start and end of the year and compare the growth of their hands over time. (Note: Keep some glass cleaner handy to remove the smudges after you finish!)

Classroom Slide Show

Once you've scanned in some work, it is easy to incorporate it into your classroom newsletter or Web site. You might want to feature a story dictated by one of the children in your group; perhaps you'd like to share the details of a field trip experience with parents. The possibilities are endless.

Electronic Portfolio

Every day, you're aware of the amazing things children create. The trick is to document them. Your scanner helps with the documentation. At the start of the year, make a folder for each child in order to keep things organized. Thankfully, the computer dates each file for you, which is very handy. You can print out what you need for parent conferences.

Beyond Paper

Did you know you can scan all sorts of things? For example, fabric or wallpaper can make a great background for a collage. Put a penny on the scanner and play with the settings to enlarge it to the size of a dinner plate! This can be a fun way for children to explore the details of small objects.

Grades 6-12 Additional Internet Vocabulary

Blog Short for "Web Log," this term refers to a list of journal entries posted on a Web page. Anybody who knows how to create and publish a Web page can publish their own blog. Some Web hosts have made it even easier by creating an interface where users can simply type a text entry and hit "publish" to publish their blog.

Capacities on a computer or Internet:

Bit (Binary Digit) The smallest unit of computerized data.

Byte A set of Bits that represent a single character. Usually there are 8 Bits in a Byte.

Kilobyte A thousand Bytes. Actually, usually 1024 (2^{10}) bytes.

Megabyte A million Bytes. Actually, technically, 1024 *kilobytes*.

Gigabyte 1000 *Megabytes*.

Terabyte 1000 *Gigabytes*.

T-1 A *leased-line* connection capable of carrying data at 1,544,000 *bits-per-second*.

T-3 A *leased-line* connection capable of carrying data at 44,736,000 *bits-per-second*.

Computer Virus Computer viruses are small programs or scripts that can negatively affect the health of your computer. These malicious little programs can create files, move files, erase files, consume your computer's memory, and cause your computer not to function correctly. Some viruses can duplicate themselves, attach themselves to programs, and travel across networks.

Cookie The most common meaning of "Cookie" on the Internet refers to a piece of information sent by a Web *Server* to a Web *Browser*. It saves information on your computer, such as your login or registration information, online "shopping cart" information, user preferences, etc. The Web Server can access this information the next time you visit that same site. Depending on the type of Cookie used, and the Browsers' settings, your Browser may accept or not accept the Cookie, and may save the Cookie on your hard drive for either a short time or a long time. Cookies are usually set to expire after a predetermined amount of time

Domain Name The unique name that identifies an Internet site. Domain Names always have 2 or more parts, separated by dots. The part on the left is the most specific, and the part on the right is the most general. The part on the right defines the type of site, such as .com (commercial) .gov (government) .edu (educational) .org (non-profit organization), etc.

FAQ (Frequently Asked Questions) FAQs are documents that list and answer the most common questions on a particular subject.

Fire Wall A combination of hardware and software that separates a *Network* into two or more parts for security purposes.

GIF (Graphic Interchange Format) Type of Graphics File

HTML (HyperText Markup Language) The coding language used to create *Hypertext* documents for use on the *World Wide Web*. It surrounds a block of text with codes that indicate how it should appear.

HTTP (HyperText Transfer Protocol) The procedure for moving *hypertext* files across the *Internet*.

ISP (Internet Service Provider) An institution that provides access to the Internet in some form, usually for a price, such as SBC, SNET, AOL, etc.

Java Java is a network-friendly programming language invented by Sun Microsystems. A very common use of Java is to create programs that can be safely downloaded to your computer through the Internet and immediately run without fear of viruses or other harm to your computer or files. Using small Java programs (called "*Applets*"), Web pages can include functions such as animations, calculators, and other fancy tricks.

JPEG (or **JPG**) This is a commonly used format for image files.

LAN (Local Area Network) A computer network limited to the immediate area, usually the same building or floor of a building.

Modem (MOdulator, DEModulator) A device that connects a computer to a phone line.

PDF (Portable Document Format) A file format designed to enable printing and viewing of documents with all their formatting (typefaces, images, layout, etc.) appearing the same regardless of what operating system is used, so a PDF document should look the same on Windows, Macintosh, etc.

Plug-in A (usually small) piece of software that adds features to a larger piece of software.

Podcast The name "podcast" combines the terms iPod and broadcast into a single catchy word. As the name suggests, podcasts are audio and video broadcasts that can be played on an iPod. However, because podcasts are downloaded using Apple iTunes and can be played directly within the program, you don't actually need an iPod to listen to a podcast.

Server A central computer that runs programs and shares them with other computers on the network. The term can refer to a particular piece of software, such as a mail server, e.g. "Our mail server is down today; that's why e-mail isn't getting out."

Spam (or Spamming) An inappropriate attempt to use **email** to send the same message to a large number of people who didn't ask for it.

Spyware A somewhat vague term generally referring to software that is secretly installed on a users computer and that monitors use of the computer in some way without the users' knowledge or consent. Most spyware tries to get the user to view advertising and/or particular *web pages*. Some spyware also sends information about the user to another machine over the Internet. Spyware is usually installed without a users' knowledge as part of other software, especially music-sharing software obtained in a *download*.

USENET A world-wide system of discussion groups, with comments passed among hundreds of thousands of machines. USENET is completely decentralized, with over 10,000 discussion areas, called *newsgroups*.

WAN (Wide Area Network) Any *internet* or *network* that covers an area larger than a single building or campus.

Webcam The term webcam is a combination of "Web" and "video camera." Webcams are typically small cameras that either attach to a user's monitor or sit on a desk. Webcams typically come with software that allows the user to record video or stream the video on the Web. Webcams can also be used for video chat sessions with other people.

Wi-Fi (Wireless Fidelity) A popular term for a form of wireless data communication, basically Wi-Fi is

a "Wireless" connection to the Internet. It is available at many public libraries so that you can connect directly to the internet with your own laptop, or other portable computer.

Wiki A wiki is a Web site that allows users to add and update content on the site using their own Web browser. This is made possible by Wiki software that runs on the Web server. Wikis end up being created mainly by a collaborative effort of the site visitors. Came from a Hawaiian word meaning "speedy." A great example of a large wiki is the Wikipedia, a free encyclopedia in many languages that anyone can edit.

Teaching and Learning with Technology – Language Arts

PERFORMANCE INDICATORS	NOTES	Assessment
<p><u>Grades 6-12:</u></p> <ol style="list-style-type: none"> 1. Create and use graphic organizers 2. Use technology to organize and store information 3. Use libraries (school, public, Online) to access information 4. Find specific information from a variety of text and electronic sources 5. Synthesize information found in text and graphs or charts 6. Create outlines to organize information 7. Demonstrate the use of a variety of graphic organizers <p>BY THE END OF GRADE 6, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Select and use appropriate technology for reading and research tasks 2. Use informational text to acquire knowledge 3. Evaluate evidence and sources of information (including Internet sources) 4. Use telecommunications to collaborate with and learn from others (students, teachers, researchers, and experts) 5. Evaluate electronic and text information sources and make decisions about the accuracy and relevance of such information 6. Use directories, indices, and keywords to search for information pertaining to all curriculum areas (Internet, CD-ROM, references, library catalogs) 7. Participate in formal and informal literature and book groups and blogs. (These can be within the classroom or online. Teachers and parents should carefully supervise online communications.) 8. Use Internet to research and communicate with authors. 9. Use telecommunications to collaborate with and learn from others (teacher-supervised blogs, e-mail, text-messaging) 10. Evaluate electronic information sources 11. Evaluate the accuracy and relevance of such 		

information (understand how to read URLs, websites, etc.)

Use technology in all phases of writing:

12. Use technology to review grammar and punctuation skills and typing speed and accuracy
13. Use technology to carry out fundamentals of writing including such activities as brainstorming, creating and revising drafts, proofreading, and collaborating with peers both proximate and remote
14. Explore the use of a variety of tech tools (digital cameras, computer presentation systems) to enhance and improve written work
15. Use technology to review grammar and punctuation skills
16. Prepare and present an age appropriate multimedia presentation
17. Use technology to format speeches
18. Create visual aids – graphs, charts, etc.
19. Generate criteria for evaluation of own oral presentations and those of others

BY THE END OF GRADE 7, THE STUDENTS WILL:

1. Select and use appropriate technology for reading and research tasks
2. Use directories, indexes, and keywords to search for information pertaining to units of study (Internet, CD-ROM references, library catalogs)
3. Use informational text to acquire knowledge
4. Form opinions based on research from a variety of sources
5. Evaluate evidence and sources of information (including Internet sources)
6. Use wikis, blogs, podcasts, etc. to collaborate with and learn from others (students, teachers, researchers, and experts)
7. Evaluate electronic and text information sources and make decisions about the accuracy and relevance of such information

8. Use directories, indices, and keywords to search for

information pertaining to all curriculum areas (Internet, CD-ROM, references, library catalogs)

9. Use technology to increase comprehension, locate information, collect data
10. Use telecommunications to collaborate with and learn from others (teacher-supervised blogs, e-mail, text-messaging)
11. Evaluate electronic information sources and evaluate the accuracy and relevance of such information (understand how to read URLs, websites, etc.)

Use technology in all phases of writing:

12. Use technology to carry out fundamentals of writing including such activities as brainstorming, creating and revising drafts, proofreading, and collaborating with peers both proximate and remote
13. Explore the use of a variety of tech tools (digital cameras, computer presentation systems) to enhance and improve written work
14. Use word processing effectively
15. Distinguish between legitimate and faulty sources on the World Wide Web
16. Access Internet and use it as a source of information
17. Send and receive email
18. Use technology to review skills and increase typing speed and accuracy
19. Prepare and present a multimedia presentation
20. Use technology to format presentations and create visual aids
21. Listen to speeches on the Internet with themes centered on human rights and use those speeches as models in their own presentation on similar issues. (Social Studies, Religion. Listening Skills)
22. Prepare and present a multimedia presentation
23. Use technology to format presentations and create visual aids

BY THE END OF GRADE 8, THE STUDENTS WILL:

1. Select and use appropriate technology for reading and research tasks
2. Use directories, indexes, and keywords to search for information pertaining to units of study (Internet, CD-

<p>ROM references, library catalogs)</p> <ol style="list-style-type: none"> 3. Use visuals in reports (charts, maps, graphs, slides etc.) to extend and enhance meaning 4. Compose a research paper in a curriculum area (<i>Local high schools should be contacted to determine the format used.</i>) Publish, with teacher supervision, to the Internet. 5. Use word processor, spread sheet and presentation software effectively 6. Distinguish between legitimate and faulty sources on the World Wide Web 7. Access Internet and find multiple sources of information on a topic 8. Send and receive emails related to the classroom curriculum 9. Use technology to review grammar and punctuation skills and increase typing speed and accuracy <p><u>Use technology in all phases of writing:</u></p> <ol style="list-style-type: none"> 10. Increase typing speed and accuracy in the writing process 11. Use technology to carry out fundamentals of writing including such activities as brainstorming, creating and revising drafts, proofreading, and collaborating with peers both proximate and remote 12. Use a variety of tech tools (digital cameras, computer presentation systems) to enhance and improve written work 13. Use technology to communicate with peers, authors, political and church leaders 14. Use technology to format presentations and create visual aids – graphs, charts, etc. 15. Interpret maps, graphs, charts as part of an oral presentation 		
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Teaching and Learning with Technology – Math

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 6, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Generate a table of equal ratios and graph the ordered pairs (1, 4) 2. Represent geometric and numeric patterns using words, tables, graphs and equations (1, 4) 3. Recognize misleading graphs (1, 4) 4. Use technology to create spreadsheets and convert information into graphs (1, 4) 5. Use a table to explore functions and graph them using a spreadsheet. (1, 4) 6. Use, read, create using spreadsheets, interpret, and compare a variety of charts, and graphs including Venn diagrams, histograms, broken line graphs, bar graphs, picture graphs, circle graphs, stem and leaf, and scatter plots. (1, 4) 7. Use electronic devices to collect, analyze, and illustrate data (6) 8. Utilize simulation software (either software program or online) <p>BY THE END OF GRADE 7, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Determine the nature of changes in linear relationships using graphs and tables. (1, 4) 2. Use graphs, tables, equations and verbal descriptions to represent and analyze changes in linear and nonlinear relationships. (1, 4) 3. Use tables and graphs to measure and describe changes. (1, 4) 4. Graph linear equations on an xy-axis. (1, 4) 5. Graph functions from ordered pairs. (1, 4) 6. Interpret and draw graphs of functions. (1, 4) 7. Graphically find the solution to a system of equations. (1, 4) 8. Graph inequalities on the coordinate plane. (1, 4) 9. Utilize simulation software (either software program or online) (6) <p>Grade 7-8</p>		

1. Create graphs describing the inequality of the consumption of the world's resources and design service projects that address local and global injustice. (1, 4)
2. Apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) to geometric figures represented on a graph (1, 4)
3. Organize and display data using graphical representations (1, 4)
4. Recognize misleading graphs (1, 4)
5. Use electronic devices to collect and illustrate data (1, 4)
6. Utilize simulation software (either a program or online) (6)

BY THE END OF GRADE 8, THE STUDENTS WILL:

1. Use a table, graph or spreadsheet to evaluate, model, and analyze algebraic expressions (1, 4)
2. Solve compound inequalities and interpret their solutions (1, 4)
3. Graph quadratic functions. (1, 4)
4. Solve quadratic equations by graphing, completing the square, and using the quadratic formula. (1, 4)
5. Graph rational numbers on a number line. (1, 4)
6. Compare and contrast the graphs of lines with the same slope versus those with different slopes. (1, 4)
7. Interpret slope and y-intercepts from contextual situations, graphs, and linear equations. (1, 4)
8. Graph inverse variation. (1, 4)
9. Solve systems of inequalities by graphing. (1, 4)
10. Write, graph and solve problems as variation equations. (1, 4)
11. Graph inequalities on the coordinate plane. (1, 4)
12. Solve systems of equations by graphing. (1, 4)
13. Use graphing calculator to investigate graphs of inequalities. (1, 4)

<p>14. Use tables, graphs, and equations to represent mathematical relationships and solve real-world problems. (1, 4)</p> <p>15. Use simulation software (either a program or online) (6)</p>		
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Teaching and Learning with Technology – Science

PERFORMANCE INDICATORS	NOTES	Assessment
<p>GRADES 1-12: Identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses</p> <p>BY THE END OF GRADE 6:</p> <ol style="list-style-type: none"> 1. Compare and contrast ice and ice caps in the Arctic region versus the Antarctic region (use charts, graphs, etc.) 2. Create graphs describing the inequality of the consumption of the world's resources and design service projects that address local and global injustice. (3, 4, 5, 6) ((Math, Religion, Science) 3. Identify environmental resources and determine means to apply Catholic social teaching to practices of conservation. (3, 5) 4. Research online sources and explain the need to balance procuring energy with the responsibility to protect God's creation. (3, 5) (Religion, Science) 5. Compare and contrast the bodies the orbit the sun (use charts, graphs, etc.) 6. Examine how technology allows astronomers' to study space from the Earth as well as space 7. Chart and diagram plants that have been watered versus those that have not been watered 8. Plant seeds and chart growth 9. Visit websites for international research organizations (e.g., National Oceanic and Atmospheric Administration, etc.) to view images and learn about the atmosphere and hydrosphere 10. Using examples from the fossil record, compare and contrast modern environments dominated by mammals with Mesozoic environments dominated by large reptiles. (use charts, graphs, etc.) 11. Compare and contrast how weathering and erosion create and shape valleys and floodplains (use charts, graphs, etc.) 		

12. Visit web sites showing recent images of the photosphere of the sun
13. Identify various media and technologies that influence health
14. Recognize the persuasive tactics used by various types of media including Internet usage/safety
15. Use online videos or simulations to better understand the environment

BY THE END OF GRADE 7:

1. Use charts and graphs to show the numbers of humans in different parts of the world
2. Compare and contrast positive versus negative peer pressure as related to health and safety (charts, graphs, essays, etc.)
3. Utilize simulation software (either a program or online) to better understand the workings of the human body

BY THE END OF GRADE 8:

1. Use a graph of measurements for mass versus volume to determine the density of a material
2. Record and plot the change in temperature with time for candle wax and indicate how the graph shows temperature of the liquid-solid transition
3. Measure, tabulate results, and graph findings for position and time of an object with motions such as free falls, periodic motions of a spring or a pendulum, or projectile paths
4. Measure pendulum period as a function of length, L , and describe in words the relationship you see from a graph
5. Measure position as a function of time for an object accelerating due to gravity (e.g., ball on ramp) and describe the change in slope (velocity) on a graph of position as a function of time
6. Calculate the average speed of a moving object and illustrate the motion of objects in graphs of distance over time
7. Design a chart showing the photosynthesis and respiration relations
8. Design an energy chart showing energy flow within the ecosystem
9. Utilize online videos or simulations to explore the physical world (motion, forces, etc.)

Teaching and Learning with Technology – Social Studies

PERFORMANCE INDICATORS	NOTES	Assessment
<p>GRADES 1-12:</p> <ol style="list-style-type: none"> 1. Identify and describe examples in which technology has changed the lives of people, such as in homemaking, childcare, work, transportation, and communication; (Grades 2 - 12) 2. Use online sources to learn more about their God, their faith and their role in the mission of the Church. (3,5) (Religion) 3. Research online sources to understand and apply the principles of Catholic social teaching to global events and conflicts and to the use and distribution of resources. (2, 3, 5) (Religion, Social Studies) 4. Identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses (Grades 1 - 12) 5. Examine the effects of changing technologies in the global community (Grades 3-12) 6. Suggest ways to monitor technology in order to protect the physical environment, individual rights and the common good (Grades 5-12) 7. Send emails to civic leaders that reflect age appropriate understanding of Catholic social teaching especially as it relates to the obligation of government to provide for the common good. (2, 4, 5, 6) <p>BY THE END OF GRADE 6:</p> <ol style="list-style-type: none"> 1. Compare and contrast ancient civilizations: (Rome, Greece, China, India, etc.) with one another and with modern U.S. civilization (chart, table, essay, etc.) 2. Compare and contrast an issue of public concern from multiple points of view (i.e. government service in Sparta and Athens) (chart, table, essay, etc.) 3. Compare and contrast taxation between and among medieval and modern times (chart, table, essay, etc.) 4. Compare and contrast how the underprivileged, the poor, and women were treated in ancient and medieval societies (chart, table, essay, etc.) 5. Compare and contrast geographical features of ancient and medieval lands with one another and 		

<p>with modern world (chart, table, essay, etc.)</p> <ol style="list-style-type: none"> 6. Describe how technology (tools and processes) changed the way people lived in ancient and medieval times 7. Compare and contrast the ways people, products, and ideas are moved across the world between and among ancient and modern societies (Use tables, charts, essays, etc.) 8. Compare and contrast modern and ancient regions (landforms, vegetation, etc.) using tables, charts, essays, etc. 9. Compare and contrast early peoples and cultures including, but not limited to: <ol style="list-style-type: none"> a. Ancient Egypt b. Mesopotamia c. Ancient India d. China e. Ancient Greece f. Ancient Rome g. Arabia h. Ancient America (Use chart, table, essay, etc.) 10. Work in groups to determine how ancient or medieval cultures might interpret modern events or technology <p>BY THE END OF GRADE 7:</p> <ol style="list-style-type: none"> 1. Compare and contrast the effect religion had on life in the colonies (chart, table, essay, etc.) 2. Compare the impact of industrialization with the growth of modern technology 3. Compare and contrast the strategies used by the north and south at the start of the Civil War (chart, table, essay, etc.) 4. Compare and contrast Lincoln's plan for Reconstruction with that of Congress (chart, table, essay, etc.) <p>BY THE END OF GRADE 8:</p> <ol style="list-style-type: none"> 1. Compare and contrast the administrations of Harding and Coolidge (chart, table, essay, etc.) 2. Compare and contrast the role of unions in the 1920's and today (chart, table, essay, etc.) 		
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<ol style="list-style-type: none"> 3. Compare and contrast the arms race between the United States and the Soviet Union (chart, table, essay, etc.) 4. Compare and contrast the strategy of Martin Luther King and Malcolm X on civil rights (chart, table, essay, etc.) 5. Compare and contrast American viewpoints of the Vietnam War (chart, table, essay, etc.) 6. Compare and contrast the administrations of President Reagan and President George H.W. Bush (chart, table, essay, etc.) 7. Identify the impact of computer technology on daily life 8. Describe scientific advances made in medical technology and the moral issues raised by them 9. Create, use, and interpret data bases, charts, and tables (census and land use data and topographic information) 10. Use text and electronic thematic maps and graphs (e.g., population patterns, economic features, migration patterns, rainfall, etc.) in the study of: <ol style="list-style-type: none"> a. Canada and the U.S. b. Latin America c. Europe d. Russia and Northern Eurasia e. Africa f. Asia g. Australia, Oceania, and Antarctica 11. Compare and contrast land and water (chart, table, etc.) 12. Compare and contrast information found on different types of maps, electronic and text (chart, table, essay, etc.) 13. Compare religion and education by using maps and other tools to identify human characteristics and place (i.e., language, politics, population, land use, levels of technology, etc.) using charts, tables, essays, etc. 14. Recognize and compare and contrast place names over time (i.e., Formosa-Taiwan; Palestine, Israel, Occupied Territory, Russia- USSR) (chart, table, essay, etc.) 		
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<p>15. Analyze the importance of trade and other connections between regions in the U.S. and the world using a variety of maps, graphs, and media</p> <p>16. Trace the role of technology in changing culture groups' perception of their physical environments (e.g., healthcare, developing nations)</p> <p>17. Describe the role of technology in changing the physical environment of agricultural activities</p>		
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Grades 9-12
TECHNOLOGY INTEGRATION

STUDENT EXPECTATIONS

- I. Design, develop, and test a digital learning game to demonstrate knowledge and skills related to curriculum content. (1, 4)
- II. Create and publish an online art gallery with examples and commentary that demonstrate an understanding of different historical periods, cultures, and countries. (1, 2)
- III. Select digital tools or resources to use for a real-world task and justify the selection based on their efficiency and effectiveness. (3, 6)
- IV. Employ curriculum-specific simulations to practice critical-thinking processes. (1, 4)
- V. Identify a complex global issue, develop a systematic plan of investigation, and present innovative sustainable solutions that will fulfill our mission to build community, and be of service. (1, 2, 3, 4)
- VI. Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs. (4, 5, 6)
- VII. Design a Web site that meets accessibility requirements. (1, 6)
- VIII. Model legal and ethical behaviors when using information and technology by properly selecting, acquiring, and citing resources. (3, 5)
- IX. Create media-rich presentations for other students on the appropriate and ethical use of digital tools and resources. (1, 5)
- X. Configure and troubleshoot hardware, software, and network systems to optimize their use for learning and productivity. (4, 6)

Technology Operations and Concepts

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 12, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs. (4, 6) 2. Make informed choices among technology systems, resources, and services. (6) 3. Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole. (5, 6) 4. Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information. (5) 5. Use technology tools and resources for managing and communicating personal/professional information (e.g., finances, schedules, addresses, purchases, correspondence). (1, 2) 6. Evaluate technology-based options, including distance and distributed education, for lifelong learning. (6) 7. Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity. (4, 2) 8. Select and apply technology tools for research, information analysis, problem-solving, and decision-making in content learning. (3, 4) 9. Investigate and apply expert systems, intelligent agents, and simulations in real-world situations. (4, 6) 10. Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce, and disseminate information, models, and other creative works. (1, 2) 		

Teaching and Learning with Technology – Language Arts

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 12, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Conduct web searches to obtain information 2. Analyze web sites for authenticity 3. Determine the best tool for locating information electronically and use key word descriptors and Boolean logic to perform advanced searches 4. Access specific information from print and non-print resources by using internal organizers (e.g. indexes, cross references) 5. Distinguish between legitimate and faulty sources on the Internet 6. Develop and use personal and established criteria for selecting materials of appropriately 7. Prepare time lines, charts, or other graphic organizers 8. Use audio tape for timed reading 9. Use telecommunications to collaborate with peers, experts, and others to research information 10. Use technology to access information 11. Use electronic and text dictionaries and thesauri 12. Write electronic messages reflective of their purpose and audience 13. Send and receive email using Standard English 14. Utilize technological inquiries to enhance content area skills 15. Produce a variety of products using advanced personal productivity software 16. Write online journals and publish works to the Internet in accordance with acceptable use policies of individual schools and the Office of Catholic Schools 17. Access information from a variety of sources, 		

including but not limited to technological sources		
18. Utilize the Internet as a field for primary source information		
19. Engage in electronic peer revision and editing		
20. Use graphic organizers to structure ideas		
21. Use online research and note-taking skills		

Teaching and Learning with Technology – Math

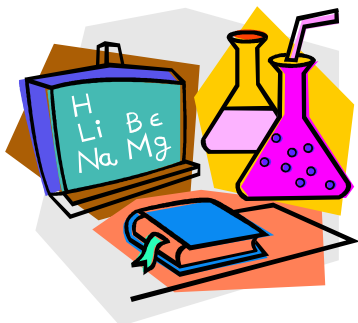
PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 12, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Use technological tools such as spreadsheets, probes, computer algebra systems, and graphing utilities to organize and analyze large amounts of numerical information. (1, 4) 2. Use a table, graph, or spreadsheet to evaluate algebraic expressions. (1, 4) 3. Use a spreadsheet to generate number sequences. (1, 4) 4. Determine the nature of changes in linear relationships using graphs and tables. (1, 4) 5. Use graphs, tables, equations and verbal descriptions to represent and analyze changes in linear and nonlinear relationships. (1, 4) 6. Use tables and graphs to measure and describe changes. (1, 4) 7. Graph linear equations on an xy-axis. (1, 4) 8. Graph functions from ordered pairs. (1, 4) 9. Interpret and draw graphs of functions. (1, 4) 10. Graphically find the solution to a system of equations. (1, 4) 11. Graph inequalities on the coordinate plane. (1, 4) 12. Apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) to geometric figures represented on a graph (1, 4) 13. Use a table, graph or spreadsheet to evaluate algebraic expressions (1, 4) 14. Solve compound inequalities and graph their solutions (1, 4) 		

15. Graph quadratic functions. (1, 4)
16. Solve quadratic equations by graphing, completing the square, and using the quadratic formula. (1, 4)
17. Solve quadratic equations by graphing, finding the square root, completing the square. (1, 4)
18. Graph rational numbers on a number line. (1, 4)
19. Graph exponential functions
20. Compare and contrast the graphs of lines with the same slope versus those with different slopes. (1, 4)
21. Interpret slope and y-intercepts from contextual situations, graphs, and linear equations. (1, 4)
22. Graph inverse variation. (1, 4)
23. Solve systems of inequalities by graphing. (1, 4)
24. Write, graph and solve problems as variation equations. (1, 4)
25. Graph inequalities on the coordinate plane. (1, 4)
26. Solve systems of equations by graphing. (1, 4)
27. Use graphing calculator to investigate graphs of inequalities. (1, 4)
28. Use tables, graphs, and equations to represent mathematical relationships and solve real-world problems. (1, 4)
29. Collect real data and create meaningful graphical representations of the data (1, 3, 4)
30. Estimate an unknown value between data points on a graph (interpolation) and make predictions of extending the graph. (extrapolation) (1, 4)
31. Solve problems using finite graphs

Teaching and Learning with Technology – Science

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 12, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Use technological tools such as spreadsheets, probes, computer algebra systems, and graphing utilities to organize and analyze large amounts of numerical information. (1, 4) 2. Evaluate the risks and benefits of chemical technology in light of the call of humans to be stewards of creation 3. Explore, describe, and evaluate the effect of science and technology on our lives especially in terms of recyclable and non-recyclable materials and the effect they have on the balance of the Earth systems 4. Explain how new technologies and changes in lifestyle can have positive and/or negative effects on the environment 5. Identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses 		

Integrating Technology into the Chemistry Classroom



A variety of technology products are available for use in enhancing any chemistry curriculum. The information on this page contains websites dedicated to chemistry projects, research, simulations, and references.

Chemistry Websites (Confirmed Feb. 2009)

[The OpenScience Project](#)

[Chemistry Software & Shareware from Chemware](#)

[Science Portfolios](#)

[Frank Potter's Science Gems - Physical Science III](#)

[Frank Potter's Science Gems](#)

[Catalog of the Scientific Community- 631 biographies](#)

[ChemWeb On-Line](#)

[Selected Chemistry Websites](#)

[Chemistry Hypermedia Project - Home Page](#)

[General Chemistry Topic Review](#)

[Eric Weisstein's World of Chemistry](#)

[The Comic Book Periodic Table of the Elements](#)

[K-12 Busy Teachers's Website \(Chemistry\)](#)

[WinSite Education Center-Chem](#)

[Periodic Table Quiz](#)

[Chemist's Tools](#)

[Chemistry Resource Center](#)

[Chemistry 101](#)

Integrating Technology into the Life Science Classroom



A variety of technology products are available for use in enhancing any biology curriculum. The Information in this section is confined to computer-related materials.



Considerable software is available for biology. A few excellent programs presently utilized are preview as follows:

Graphing Analysis:

This program allows students to enter data into easy-to-use charts that can be displayed in a variety of graph types at the touch of a key.

Created and sold by: Vernier Software, 2920 SW 89th Street, Portland, OR 97225, Phone (509) 297-5317. It costs about \$49. This price includes one disk and a site license that allows that use of multiple computers in a school. This is one of the best buys around. Integrated applications like Microsoft Works and Claris Works also have the capability of producing graphs from data entered in a spreadsheet. Be aware that if the data is not available for every equal interval, the graph will be incorrect. This software is more difficult for students to use than software package created specifically for graphing.

A.D.A.M. The Inside Story:

This award-winning multimedia experience lets students discover the secrets of the human body. Students can learn about the body's structure and systems with detailed illustrations, animation and live action video. Requires a CD-ROM drive. For grades 5-8 or 9. Priced at \$39 each in the MacWarehouse catalog. Phone 1-800-255-6227. They are also available for IBM compatibles through A.D.A.M. Essentials, School Edition for grades 9-12 is \$129. Call ADAM at 1-800-755-ADAM.

Nine Month Miracle:

Produced by the makers of A.D.A.M., this program runs through a month-by-month tour of human embryo development. The video excerpts, in-body photography and medically accurate animation are excellent and captivating. Requires a CD-ROM drive. Priced at \$39 each in the MacWarehouse catalog, Phone 1-800-255-6227. School edition for grades 9-12 is \$129. Call ADAM at 1-800-755-ADAM. Ask about the 20% discount that ADAM regularly runs for its school editions in March and April for most years. Both are available for IBM compatible machines.

Biology Simulations:

LOGAL has a number of excellent award winning science simulation programs that allows "students to observe and manipulate visual models, conduct and analyze experiments, collect and analyze data and teachers can design their own learning labs and projects." There are biology programs available titled, *Genetics, Cardiovascular System, Population Ecology* and *Photosynthesis*. Available from LOGAL

Software Inc. Call 1-800-LOGAL-USA for a catalog. Also ask for the free science series demo CD-ROM disk.

Progressive Science Instruction: Life Sciences

This one semester interactive computer course is available in two versions:

- 1) For use with an Optical Data Corporation Laser Disk and
- 2) Can be used without the laser disk.

This interactive program is available in English or Spanish. The Spanish version is for Spanish speaking students with limited proficiency in English. These students can simultaneously learn English and biology, progressing through the five units on the human body. A laboratory manual is available in both Spanish and English. Available in Macintosh and DOS formats. Lead Author: Ron Thompson. Available from: Integrated Learning Systems, Inc., 1992, 9838 N.E. 16th Street, Bellevue, WA 98004. Call (206) 455-3184 or call Ron Thompson at (206) 230-8360.

Teacher Production Tools:

A wide variety of word processing software is available that can simplify the creation of assignments, tests, quizzes and letters. An integrated application like Microsoft Works is useful because they include word processing, graphics creation, spread sheets and databases, all in one program. It is the opinion of some that creation software is not worth the expenditure and some programs place limitations on format. A good word processor with a graphic component works just fine.

Two other useful categories are as follows:

Grading Programs

A good grading program can save a teacher a great deal of time that can be better used with students or in planning lessons. Many good programs are available. GradeMachine is a program that has been highly rated. Call Misty City at 1-800-795-0049. Price is \$79 or \$99 for the deluxe version. Site licenses for buildings or districts are available which reduce the cost per program dramatically.

CLS Curriculum Orchestrator

CLS Curriculum Orchestrator is one of the best all around programs found to assist in lesson planning. One of the major problems was that once the topics were entered for the year, a change like a snow day or special assembly would throw off the entire remainder of the year.

CLS Curriculum Orchestrator's calendar allows the teacher to add in these types of emergencies and the calendar adjusts for the remainder of the year. If it takes more or less time to complete a lab or topic than originally entered in the calendar, you can add or delete days in the calendar for the topic and the dates for all other future activities will change accordingly. The program allows for detailed lesson plan development and teachers can select topics and get a list of resource materials and providers. Another feature allows the educator to match teaching plans with popular curriculum frameworks and guiding documents. Other helpful planning features are included. The cost for the software is \$149 per copy. Each additional copy may be purchased for \$49 if a multiple order is placed.

Laser disks and Interactive video

The two main producers of quality laser disks for biology are Optical Data Corporation and VideoDiscovery. Both companies produce a wide variety of titles for biology. Some disks require CD-ROM drive while others require a laser disk player connected to the computer.

Call either or both companies and request a catalog. VideoDiscovery 1-800-584-3472. Optical Data Corporation 1-800-524-2481

Computer Probeware and Software

Sensing probes of various types are available with software and student lab activity exercises. Probes for measuring temperature, pH, dissolved oxygen, light transmission (measures rate of chemical or enzyme reactions) are all available. Experiments can be left set up for days and data collected every minute. The data is transmitted to the computer where it can be displayed in a variety of graphical ways and can be printed. Many companies produce these products. Catalogs can be acquired from:

AccuLab Products Group (415) 325-5898

Leap Systems (303) 674-9651

PASCO Scientific 1-800-772-8700

Vernier Software (509) 297-5317 (good prices)

Portable Probeware Systems

Portable probeware is a relatively new product and has interesting potential both for field trips and for use in the laboratory. Small battery powered units, no longer than a paperback book, have accompanying probes that can be taken into the field or used in the classrooms to collect data for experiments. Once data is collected using the small portable logging units, they can later be connected to your computer and the data can be transferred to and viewed on your screen or printed in a variety of formats. In a one-computer classroom, many small, remote logging units can be used at lab tables to conduct experiments and the data can be later transferred to the single computer for viewing, analysis or printing. The portable logging units can be left in a place for a day, week or month, while it is collecting data. The accompanying software allows for a variety of on-screen analysis features. Sensing probes for measuring temperature, pH, dissolved oxygen, light transmission are all available. Such a unit may be acquired from Data Harvest Educational. Call 1-800-436-3062 for a catalog.

Teaching and Learning with Technology – Social Studies

PERFORMANCE INDICATORS	NOTES	Assessment
<p>BY THE END OF GRADE 12, THE STUDENTS WILL:</p> <ol style="list-style-type: none"> 1. Identify and describe examples in which science and technology have led to changes in the physical environment, such as the building of dams and levees, offshore oil drilling, medicine from rain forests, and loss of rain forests due to extraction of resources or alternative uses (Grades 2-12) 2. Identify and describe examples in which technology has changed the lives of people, such as in homemaking, childcare, work, transportation, and communication. (Grades 2-12) 3. Examine the effects of changing technologies in the global community (Grades 3-12) <p><u>Grade 9-12</u></p> <ol style="list-style-type: none"> 1. Apply their understanding of historical periods, issues and trends to examine such historical themes as beliefs and institutions; conflict and conflict resolution; human movement and interaction; and science and technology in order to understand how the world came to be the way it is. 2. Use geographic tools and technology to explain the interaction of humans and the larger environment and the evolving consequences of those interactions. 3. Use maps, globes, charts and databases to analyze and suggest solutions to real world problems 4. Compare and contrast the characteristics and effects of different market structures, including pure competition, monopolistic competition, oligopoly and monopoly (chart, table, essay, etc.) 5. Compare and contrast different types of taxes, including progressive, regressive and proportional taxes (chart, table, essay, etc.) 		

Technology Assessment and Rubric Information Source:

<http://school.discoveryeducation.com/schrockguide/assess.html>

Fine Arts and Technology Resources

VISUAL ARTS

Vatican art work <http://www.Christusrex.org>

Art and Technology Resources

<http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Technology>

Fine Art Images <http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Fine%20Art>

Art History <http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#History>

Art History Timelines <http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Timelines>

Art Internet Resources <http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Links>

Visual Literacy <http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Literacy>

Educational Resources <http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Resources>

Art Education Resources

<http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Art%20Education%20Resources>

Art Lesson Plans <http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Plans>

Perspective – Drawing – Design

<http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Perspective>

Color Theory – Using Color <http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Color>

"Know the Artist" Internet Research Lesson

The Art Teacher's Guide to the Internet by Craig Roland. Must have book from [Davis Publications](#). Compilation of the best resources on line plus steps to building your own web site. See the [companion web site](#) for teacher files, student activities and more.

LT Technologies - Kid Pix Classroom applications for math, science, social studies and language arts. KidPix For educators and parents.

[KidPix Tutorial and Lesson Plans](#) - Links compiled by Harold Olejarz

Kings Park Elementary School Technology Lessons

Giga Palette Site dedicated to the collaboration of the Visual Arts and Technology. Innovative projects that promote creative self-expression and divergent thinking. Excellent lesson plans for middle school.

Harold Olejarz -- From Prints to Pixels - Using Digital Images in the Classroom. Links to image sites and lessons plans using digital images.

[Creating and Managing a Class Web Site](#), an online tutorial for teachers interested in web page development. Harold Olejarz

[Digital Imaging](#) - Seventh-grade students use digital cameras, scanners, imaging software, printers and computers to explore the artistic potential of new imaging technology and solve visual problems. Harold Olejarz

[PhotoShop Elements Tutorials and Lesson Plans](#) - Links compiled by Harold Olejarz

[Digital Video](#) - Students learn to become more media literate. They learn to plan and produce video projects, decode images and messages within media and decide what makes a powerful and effective message. Harold Olejarz.

[Digital Video Presentation](#) - Software suggestions and lesson ideas - by Harold Olejarz. Forms - student handouts available too.

[Middle School Lesson Plans](#) from Alix Peshette, R.W. Emerson Jr. High in Davis, California. Check out her computer science program. Excellent online lessons and [links to fun activities for kids](#).

[Middle School Lessons](#) - from Renee Berge, Mitchell Middle School. Digital photo editing, Clay animation and more.

[Adobe Digital Kids Club: Lessons and Activities](#) Lessons use Photoshop Elements

[Teach Animation](#) - Karin Gunn, animation and photography teacher at West Port High School, Ocala, FL, has created a website designed to help teachers teach animation in the classroom. The site includes examples of student animation projects - using low tech and high tech methods. See [Current Student Examples](#)

[Technology Lesson Plans](#) Computer graphics lessons using PC Paint -- by Carolyn Roberts- Kinston High School. See how [Renee Berge \(Mitchell Middle School\)](#) has used these plans - [More PC Paint projects](#).

[Microsoft Paint Lesson Plans](#) Lessons from classes taught by Diana Hunter -- adjunct instructor for Ivy Tech State College and OASIS (Older Adult Services and Information Systems). Easy to follow [Tessellation by Kenneth Cole](#).

[PowerPoint Tutorials](#) - from [Internet4Classrooms](#). Both basic and advanced skills are included in these on-line tutorials for PowerPoint

[Artists E-Reports](#) - from Lazelle Parker, Cave Springs Jr. High. Students created a report of 19th or 20th century artists. Resources online.

[Creating a Class Web Site](#) This site is designed to help teachers create a class web site - by Kerry Marquis.

[Web Class Page](#) - Curriculum by Woody Duncan. Lessons using PhotoShop and Web page design using Netscape Composer.

[Video Production](#) G. Osborne, Instructor, Emerald Ridge High School.

[WhyArt.com: Transforming Education Through Art](#). Lessons for Middle School students integrating technology. Lessons by Michael Garrish.

[Discover Design](#) Design site -product design. Create a watch online and more fun activities. Great site to use with middle school students!

[ThinkQuest Library](#) Resource for quality sites designed by students for students. List of sites for [the Arts](#).

[Art and Technology](#) -- Encouraging Technology Innovation in Art Education. Site created by Bettie Lake.

[Art In Technological Times](#): San Francisco Museum of Modern Art. [A technological challenge?](#) Lots of special effects!

[Teachable Moment: Photographic Truth in the Digital Era](#) Gain visual awareness -- Advances in digital technology mean that anyone with a computer and image-manipulation software can easily cut and paste a wide range of images into an apparently seamless whole. Learn to separate truth from fabrication in photos that appear to be real. [Search site for more lessons.](#)

[3-D Digital manipulation with Rhino-ceros® Software](#)

[Adobe PhotoShop® Artist's site](#) - Craig Mullins

[Photoshop® artist - Derek Lea](#) - artist from Toronto, Ontario, Canada. His illustration work is a unique combination of original photography, traditional illustration, and digital art.

[Good Tutorials - Adobe Photoshop Tutorials](#) Links to 2085 tutorials around the web. Note: [Site has banner advertising. Took a long time to load last I checked - preview first.](#)

[The Digital Photography Exhibit](#) An international juried exhibit exploring new work created by artists who work with cameras and computers. ([Click here for more Digital Photography resources](#))

[Aardman](#) Aardman Animations was founded in 1972 by David Sproxton and Peter Lord. The legendary clay character **Morph** made his first appearance in 1976, in *Take Hart*. Go to "Culture" and then "Meet the People" you get a behind the scenes look at production. [See some videos online](#) (check ads before using with students).

[Clay Animation "How to" page.](#) Click on next to move to more "how to do claymation" or click on index to find out what all is available on this site.

[Jim McNeill's Movies](#) So much fun, you will want to see them all! Mr. McNeill says the software is easy to learn.

[Ani-Mato](#) Animation, Stop Motion and 3-D Movies. Fun site by Jan-Eric Nystrom.

[Catapult Productions- 3-D Animations](#)

[Animation Bureau](#) site include 3-D animation and some video clips.

[Constructor Software](#) Online--combines math-science and art. Fun to play.

[Museum of Web Art](#) Things that move, wallpaper backgrounds, Flash entry pages--and more. Award winning work from around the WWW.

[Math Art Gallery-- knots and 3-D fractals-](#) animations

[Visual Music by Brian Evans](#) - Digital Fine art

[Digital Photography](#) Short course--information on a number of topics

[Kathy Schrock's Home Page](#) Teacher reference site for integrating technology into the curriculum.

[Just Imagine Art Gallery](#)

Features: Online gallery of digital art in the fantasy / science fiction - surreal work by artist Dan Campbell

[Minnesota Arts Collection of Digital Art and Computer Art](#) Collection curated by James Michael Lawrence.

[Whitney Museum ARTPORT](#) - Web art gallery - portal includes current "gate pages", that point to the work of selected artists and change monthly, along with an archive of gate pages dating back to 2001.

<http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Links>

Angels on the Web *<http://www.isidore-of-seville.com/angels/>*

Annotated web directory to information on angels in the Christian, Jewish and Muslim faiths. Includes a categorized collection of thumbnails and links to over 550 images of Angels from Medieval manuscripts to contemporary computer art.

Art a GoGo *<http://www.artagogo.com/>*

"Art over easy" -- this site provides links to museums, events, exhibitions, and ways to learn about art in an easy-to-read, jargon-free style.

Art History Resources on the Web *<http://witcombe.sbc.edu/ARTHLinks.html>*

This comprehensive Art History resource organizes links by civilization and then by subheadings, such as Prehistoric Art with Paleolithic, Mesolithic, and Neolithic Art subheadings. It proceeds through Ancient Near East, Ancient Egypt, Ancient Greece, Ancient Rome, Art in Early Europe, Art in the Middle Ages, into the Renaissance, and so on. It then organizes contemporary links by country and also offers links to art museums and galleries.

Art Industri *<http://www.artindustri.com/>*

"The world of art at your fingertips." A comprehensive site with everything you ever wanted to know about art. Includes directories of artists, icons and motifs, movements, resources, and more.

The Artchive *<http://www.artchive.com/>*

Over 2,000 scanned images of fine art, historical background on art and artists, theory and criticism, and rotating "gallery" exhibitions.

Artcyclopedia *<http://www.artcyclopedia.com/>*

Over 700 leading arts sites indexed to create a searchable, thorough database of online images of visual art and the locations of the original works worldwide.

ArtNet *<http://www.artnet.com/>*

Excellent resource for images, artist biographies, auction results, art books for sale, galleries and museum exhibitions, and art research resources, with a focus on contemporary art and artists.

AskART *<http://www.askart.com/AskART/index.aspx>* AskART.com is the world's most comprehensive database about North American artists. Information includes dates, states, methods, biographies, subjects for which best known, a decade by decade breakdown of 20th century literature in which they are referenced, and total number of auction lots sold and unsold of their works." Also find dealers who are affiliated with each artist, museums where their works are held, and, for some artists, image galleries of their works.

The British Museum *<http://www.britishmuseum.org/default.aspx>*

Images of famous works owned by the British Museum are pictured here, along with the history of the museum and general information about collections, exhibits, departments, tours, and events. Educational materials about the cultures represented in the Museum's collections are also available here.

The Cranky Librarian <http://crankylibrarian.com/>

Search for public domain books and art works online here, as well as searching by author and artist.

Education by Design: The Bienes Center's WPA Museum Extension Project Collection

<http://digital.browardlibrary.org/wpa/>

An online exhibit and digital database of over 700 educational and visual aids from a collection at the Broward County (FL) Main Library produced under the Works Administration Program (WPA) between 1935 and 1943. The site also includes a brief history of the WPA and a select bibliography.

The Hermitage Museum <http://www.hermitagemuseum.org/>

The official website of the Hermitage Museum has online exhibits and a lot of information. Available in English or Russian.

Latin American Art Directory: South American, Central American, Mexican and Caribbean Art Gallery <http://www.latinart.com/index.cfm>

The Latin American Art Directory is an online journal for Latin arts and culture. This site allows you to read biographies and interview transcripts with famous Latin American artists; read current articles on issues in the Latin America artists' community; view and review Latin art collections from major museums; and browse a directory of museums and other institutions housing Latin art collections. Available in both English and Spanish.

Making Sense of Marcel Duchamp <http://www.understandingduchamp.com/>

This is a multimedia timeline of the works of the sculptor, painter and author, Marcel Duchamp. Through animation, you can interact with Duchamp's artworks. Look for the bibliography at the end of the timeline.

The National Museum of Women in the Arts <http://www.nmwa.org/>

"The only museum in the world dedicated exclusively to recognizing the contributions of women artists. In the pages that follow you will discover a wealth of information about the museum, selected artists, our collection, and many services. You may choose to examine images of works from our permanent collection. Artist profiles feature the lives of selected women artists and corresponding bibliographies lead you to new sources of information."

Off the Map: Tour Backyard Paradises Off the Map, provided by PBS, provides video tours of unique individual works of visual art such as Bottle Village, Windmill Park, Salvation Mountain, the Forevertron, and their unique creations, with special information and biographies about the individuals who created them. This site requires Flash.

Pictures Catalogue: The National Library of Australia's Pictorial Collection

<http://www.nla.gov.au/catalogue/pictures/>

"This catalogue contains descriptions of paintings, drawings, prints, photographs and three-dimensional objects held in the Pictorial Collection of the National Library of Australia. The emphasis is on Australian material, with some material relating to New Zealand, Antarctica, Papua New Guinea and the Pacific. The main time period covered is late eighteenth century to the present day. The Collection includes thousands of portraits of significant Australians. The Pictorial Collection contains approximately 45,000 paintings and 550,000 photographs; most of this material has been catalogued with individual descriptions or collection summaries. All these descriptions and summaries can be searched on this database. Of the material that has been catalogued, over 30,000 items have been digitized. These images are available through this catalogue, for research and study purposes."

Smithsonian Archives of American Art <http://artarchives.si.edu/home.cfm>

Featuring the extensive collections of the Archives of American Art, this website offers access to "an endless treasure trove of raw material for art historians and scholars in other fields to explore."

Taoism and the Arts of China <http://www.artic.edu/taoism/>

This site provides essays on the Taoist tradition, illustrated by works from the Art Institute of Chicago's *Taoism and the Arts of China* exhibit. Glossary links within the text assist the reader in understanding the important terms and concepts associated with Taoism. The site also includes lesson plans and an extensive list of references.

[the-artists.org](http://www.the-artists.org/) <http://www.the-artists.org/>

The-artists.org features an "extended database of 20th Century and contemporary visual artists. The masters of the past hundred years are represented with their portrait, dates and places of birth and death, with links to web resources to find anything you want to know about them, with images of their work, comprehensive biographies and articles, and if it exists, the artist's personal website."

University of Virginia, Bayly Art Museum: Virtual Exhibitions <http://www.uva.edu/~bayly/>

Five online exhibitions: "Universes in Collision: Men and Women in 19th-Century Japanese Prints", "In Our Time: Contemporary Art from the Bayley Art Museum Collections", "The Power of Woe, the Power of Life: Images of Women in Prints from the Renaissance to the Present", "African Art: Aesthetics and Meaning", and "The Art of the African Mask". Each exhibit includes extensive text and digital images. "In Our Time" exhibit includes QuickTime VR(QTVR) interactive browsing.

WebMuseum <http://www.ibiblio.org/wm/>

The WebMuseum is a non-profit collaborative effort on the part of many museums and galleries worldwide to provide access to visual images that are out of copyright. Images, exhibitions, an index of artists, and a glossary of art terms may be found here.

Internet Public Library www.internetpubliclibrary.org

MUSIC

African-American Sheet Music, 1850-1920 <http://memory.loc.gov/ammem/award97/rpbhtml/>

"This collection consists of 1,305 pieces of African-American sheet music dating from 1850 through 1920. The collection includes many songs from the heyday of antebellum black face minstrelsy in the 1850s and from the abolitionist movement of the same period. Numerous titles are associated with the novel and the play Uncle Tom's Cabin. Civil War period music includes songs about African-American soldiers and the plight of the newly emancipated slave. Post-Civil War music reflects the problems of Reconstruction and the beginnings of urbanization and the northern migration of African Americans. African-American popular composers include James Bland, Ernest Hogan, Bob Cole, James Reese Europe, and Will Marion Cook. Twentieth century titles feature many photographs of African-American musical performers, often in costume. Unlike many other sorts of published works, sheet music can be produced rapidly in response to an event or public interest, and thus is a source of relatively unmediated and unrevised perspectives on quickly changing events and public attitudes. Particularly significant in this collection are the visual depictions of African Americans which provide much information about racial attitudes over the course of the nineteenth and early twentieth centuries."

All Music Guide <http://www.allmusic.com/>

This is "a complete online database of recorded music." It has a search engine that allows searching by artist name, album title, song title, label, and musical style. Biographies, full discographies, and album reviews are available for artists. Essays and a glossary are provided as is a unique feature: music maps, which trace a particular style's development from other musical styles.

American Music Resource <http://www.uncg.edu/mus/courses/flmccart/amr/index.html>

AMR contains bibliographies, lists and text files about all styles of American music and related issues. The collection is indexed by subject-name (i.e. the last names of composers) or topic-name (e.g. Electro-acoustic music).

Carolina Classical Connection <http://www.carolinaclassical.com/links.html>

"An index of Classical Music Web site links covering all historical periods from the Middle Ages through the 20th Century."

Center for Black Music Research *<http://www.cbmr.org/>*

"CBMR is a research organization conducting musicological research in all genres of black music throughout the world. The site includes excellent [capsule definitions](#) of the styles and genres studied at CBMR, including African American styles such as blues and jazz, as well as African Music and Afro-Caribbean styles." The site also includes [extensive bibliographies](#) and some information about CBMR's holdings.

The Ceolas Celtic Music Archive *<http://www.ceolas.org/ceolas.html>*

Information about Celtic/Irish music, including discographies of Celtic artists and upcoming tour schedules, and information about Celtic instruments.

Choral Public Domain Library *http://www.cpd.org/wiki/index.php/Main_Page*

"The largest website devoted exclusively to free choral sheet music. Begun in December 1998, the site has over 140 contributors and 3,200 scores." Search by title or composer, or browse in the following categories: chant, medieval, renaissance, baroque, classical, romantic, early-20th, or modern.

Classical Music Home Page *<http://www.classical.net/music/>*

"The purpose of this home page is to provide a point-of-entry into various informational files about classical music, as well as links to other interesting web sites." Sections include: [Basic Repertoire List](#), [Classical CD Buying Guide](#), [Recommended Recordings](#), and [Composer Data. Searchable.](#)

Composer Biographies *<http://www.cl.cam.ac.uk/users/mn200/music/composers.html>*

A site of brief biographical sketches of some of the more well-known classical composers.

Dr. Estrella's Incredibly Abridged Dictionary of Composers

<http://www.stevenestrella.com/composers/index.html>

"A chronological listing of famous composers of Western Music. Each listing contains accurate birth and death dates and the country of origin. Several of the entries also are linked to biographical essays and other sites on the web." Organized by musical period and by composer name.

DW3 Classical Music Resources <http://www.lib.duke.edu/dw3/SPT--BrowseResources.php?ParentI...>

"DW3 (Duke World Wide Web) Classical Music Resources is a comprehensive collection of classical music resources on the Web with links to more than 1,600 non-commercial pages/sites in over a dozen languages. The site is comprised of 107 well organized, subject-specific pages and features a powerful, easy-to-use internal search engine; multiple access points for hundreds of entries, including "see" and "see also" references; and composer-specific pages and links organized by historical period for enhanced browsing."

8notes.com <http://www.8notes.com/>

An extensive collection of free, downloadable sheet music and lessons. Categorized by instrument and musical styles (popular, classical, film, Christmas, etc.). Also includes short pieces and riffs. Site has a search function, chat forum, and newsletter.

Eric's Treasure Trove of Music <http://www.treasure-troves.com/music/> Contains detailed articles that explain concepts in music theory.

Essentials of Music <http://www.essentialsofmusic.com/>

Basic information about classical music. Biographies of seventy composers, overview of the six main periods in Western music, and a glossary of terms.

Etext Center - Negro Spirituals <http://etext.lib.virginia.edu/toc/modeng/public/HigSpir.html>

The online text from the Electronic Text Center at the University of Virginia Library. These spirituals were originally collected by Thomas Wentworth Higginson (1823-1911).

Folk Alley <http://www.folkalley.com/>

Listen to streaming folk music 24 hours a day. This online radio station plays only folk, world, and acoustic music. Free registration is required.

A Guide to Medieval and Renaissance Instruments

<http://www.music.iastate.edu/antiqua/instrumt.html>

This site showcases Musica Antiqua's large replica instrument collection by supplying photos, descriptions, original quotes, additional sources, and sounds of the instruments used in performing early music.

Historic American Sheet Music Project <http://scriptorium.lib.duke.edu/sheetmusic/>

"The Historic American Sheet Music Project provides access to digital images of 3,042 pieces from the collection, published in America between 1850 and 1920."

Huapala: Hawaiian Music and Hula Archive <http://kaiu@huapala.org/>

An extensive collection of traditional Hawaiian song, dance, and tradition.

[International Music Archives](http://www.eyeneer.com/World/index.html) *http://www.eyeneer.com/World/index.html*

An educational resource providing extensive information about the music of our planet." The articles include information about countries and region and their musical styles. Other articles discuss the world musics, international instruments, and profiles of artists. Most articles include related sound samples and photographs.

The Lied and Song Texts Page *http://www.recmusic.org/lieder/*

"WWW archive of thousands of texts to Kunstlieder and other art songs in Czech, Dutch, English, Finnish, French, German, Hebrew, Italian, Latin, Norwegian, Polish, Portuguese, Romanian, Russian, Slovak, Spanish, and Swedish."

Max Hunter Folk Song Collection *http://maxhunter.missouristate.edu/*

A large collection of Ozark Mountain folk songs recorded between 1956 and 1976. They were collected by Max Hunter, a traveling salesman. The songs are available as printed lyrics or in audio format. Some include sheet music.

MHN Instrument Encyclopedia *http://www.si.umich.edu/CHICO/MHN/enclpdia.html*

A Yahoo! Pick of the Week (10-26-98), the Instrument Encyclopedia "Begins with more than 140 artifacts from the Sterns Collection at the University of Michigan" and "features musical instruments from around the world." Searchable by name, geographic region, building materials used and the Sachs Hobostel classification scheme, the database provides users with instrument images, textual descriptions and an occasional sound file. Please Note: a frames-capable browser is required.

The Mozart Project *http://www.mozartproject.org/*

Contains a biography of Mozart (with chronology and family tree), a listing of his compositions (by date and category), selected essays about him and his music, plus reviews of books on Mozart. Also includes links to more Mozart resources online.

MPA Copyright Search Resource Guide *http://www.mpa.org/*

"Are you looking for the publisher of a piece of music?" This website serves as a guide to other databases that may help you find the music copyright information that you are looking for.

The Muse's Muse *http://www.musesmuse.com/*

A resource for songwriters with a monthly newsletter, articles, sample songs, a list of music organizations, and links to related sites.

Music for the Nation: American Sheet Music, 1870-1885 *http://memory.loc.gov/ammem/smhtml/*

"Consists of over 47,000 pieces of sheet music registered for copyright during the years 1870 to 1885. Included are popular songs, piano music, sacred and secular choral music, solo instrumental music, method books and instructional materials, and music for band and orchestra." Search by keyword or browse indexes of authors, titles, or subjects. The sheet music is viewable online as page images.

Music Notes *http://library.thinkquest.org/15413/*

Subtitled "An Interactive Online Musical Experience," this detailed and well-researched Web site covers many aspects of music, including music theory and history, musical styles, music professions, and musical instruments. There is also a glossary of musical terms and a list of the resources used to create the site. Interactive games allow you to test your knowledge. This site, which was created by high

school students for ThinkQuest, provides good introduction for beginners, but is also helpful to those who are more knowledgeable about music.

MusicSearch <http://www.musicsearch.com/>

A large, searchable directory of music-related Internet sites, with descriptions provided by the sites.

PD Info: Public Domain Music <http://www.pdinfo.com/>

"A reference site to help the ordinary person identify public domain songs and public domain music... royalty free music you can use anywhere and any way you choose... performance, sing-along, film, video, advertising, business, or personal." Includes info on copyright and public domain, an FAQ, and a song list of titles in the public domain.

Pianonet.com <http://www.pianonet.com/>

"As the official Web site of the National Piano Foundation, PianoNet is your comprehensive guide to everything about pianos—their history, their manufacture, noted artists, important publications and more."

Russian Folk Songs <http://russia-in-us.com/Music/Folk/>

Songs from Russia (and a few from Ukraine) in .ra format.

Sheet Music from Canada's Past <http://www.collectionscanada.gc.ca/sheetmusic/>

"This site is a source of sheet music published in Canada before 1921, selected from the National Library of Canada's historical collection. This website currently features sheet music published before Confederation (1867) and during the era of the First World War (1914-1920), selected from the historical collection of the National Library of Canada. Future phases will include digitized sheet music published between 1867 and 1913." Scores can be searched or browsed, and are downloadable in Adobe Acrobat (PDF) format.

Southern Mosaic: The John and Ruby Lomax 1939 Southern States Recording Trip

<http://memory.loc.gov/ammem/lohtml/lohhome.html>

"Covering a three-month period in 1939, the John and Ruby Lomax 1939 Southern States Recording Trip documents a wide variety of musical styles from eight different states." This online presentation provides access to over 600 audio recordings of folksongs, related photos and other graphic images, as well as transcribed, searchable text for all the print material in the Lomax collection.

[The Symphony: An Interactive Guide](http://library.thinkquest.org/22673/index.html) <http://library.thinkquest.org/22673/index.html>

"The aim of The Symphony: An Interactive Guide is to provide a comprehensive resource for people wanting to expand their knowledge of the symphony - Western art music's richest and most important genre. The site features comprehensive biographies of the major symphonic composers, browseable by country or by an alphabetical list. And thanks to the Queensland Youth Symphony Orchestra and their conductor John Curro, live recordings of nine great symphonies can be heard on this site via RealAudio. "Also included is a timeline showing musical events in their historical context, an explanation of musical forms and structures, and a complete guide to the instruments of the orchestra." A glossary of related terms is also included.

MUSIC RESOURCES/Books:

Lois Choksy:

- **The Kodaly Method I: Comprehensive Music Education** ISBN-10: 0139491651 / ISBN-13: 978-0139491658
- **The Kodaly Method II: Folksong to Masterwork** ISBN-10: 0139491732 / ISBN-13: 978-0139491733
- **The Kodaly Context** ISBN-10: 0135166667 / ISBN-13: 978-0135166666
- **120 Singing Games and Dances for Elementary Schools** ISBN-10: 0136350380 / ISBN-13: 978-0136350385

K. S. Dniel: **Kodaly Approach (Teacher Edition for Workbook 1,2,3)** ISBN-10: 0769253474 / ISBN-13: 978-0769253473

Doug Goodkin: **Play, Sing & Dance: An Introduction to Orff Schulwerk** ISBN-10: 190245507X / ISBN-13: 978-1902455075

Katalin Komlos: **150 American Folk Songs: To Sing, Read and Play** ISBN-10: 0913932043 / ISBN-13: 978-0913932049

Pamela Conn Beall / Susan Hagen Nipp: **Wee Sing America (Wee Sing)** ISBN-10: 0843112794 / ISBN-13: 978-0843112795

We Will Sing: Choral Music Experience for Classroom Choirs Boosey & Hawkes (Publisher)
ISBN-10: 0913932507 / ISBN-13: 978-0913932506

Doreen Rao & William Perison: **Circle of Sound (Paperback)** ISBN-10: 0913932701 / ISBN-13: 978-0913932704

DRAMA AND PERFORMANCE

All Magic Guide <http://allmagic.com/allmagicguide/>

Online guide for stage magic practitioners, both amateur and professional. Searchable.

Applied and Interactive Theatre Guide <http://www.tonisant.com/aitg/>

This site supports "theatre professionals throughout the world [who are] working to bring their skills as change agents, as awareness builders, and as empathy masters to

The Aural Imagination <http://homepages.enterprise.net/micpool/>

A resource for students of theatre sound design. Formerly "Mic Pool's Theatre Sound and Music Page," it has been redesigned to emphasize the educational material for student sound engineers.

Based on the Book <http://www.mcpl.lib.mo.us/readers/movies/>

'Based on the Book' is a compilation of over 1,000 book titles, short stories, and plays that have been made into motion pictures. Utilizing the Internet Movie Database as the authority on release dates, all movies in this collection have been released since 1980.

The Costume Page <http://members.aol.com/nebula5/costume.html>

This page offers over 2000 links to information about costumes including costume history, the making and wearing of costumes, costume buying guides, and Halloween costume suggestions. One section offers dozens of links to ethnic and folk costume material. This site is geared to those in theatre, students, researchers, and many others.

The Costumer's Manifesto <http://www.costumes.org/>

Just about anything you need to know about costuming: advice and how-to, photo references, designs, and many, many links.

La Couturiere Parisienne Costume and Fashion Site <http://www.marquise.de/>

History of European costume from the Renaissance through the 20th century, with illustrations, images, descriptions and many sewing patterns.

Didaskalia <http://www.didaskalia.net/>

An electronic resource and journal dedicated to the study of ancient Greek and Roman drama in performance.

The English Server Drama Collection <http://drama.eserver.org/>

A collection of both long and short English drama plays and criticism (complete scripts) that includes authors like: Shakespeare (complete works,) Shaw, Johnson, Gay, Moliere, Biggs and Sophocles. Also has links to other theatre sites.

Eye on the Industry <http://www.caryn.com/biz/>

A compilation of Web resources available to assist people in the entertainment industry. Sections include: Actors Area, Independent Film, Industry Buzz, Writers Resources, Book & Movie Recommendations, Filmmakers Alliance, and Newsgroup/Discussion.

FX Glossary: A compendium of common FX terms

<http://www.character-shop.com/glossary.html> Glossary of terms and techniques used in movie, TV, and theatre special effects.

Glossary of Technical Theatre Terms <http://www.theatrecrafts.com/glossary/glossary.shtml>

Hundreds of British (and American) technical theatre terms, explained. From the University of Exeter Drama Department.

Harlem Renaissance <http://www.fatherryan.org/harlemrenaissance/>

This site portrays the "Harlem Renaissance as a cultural movement that allowed African-Americans to show their creative abilities to the world." It includes visual, theatre, music and performing arts displays. Contains links to other Harlem Renaissance sites.

The History of the Australian Theatre <http://www.hat-archive.com/index.html>

Covers Australian Theatre history with articles, pictures, and programs.

The Improv Page <http://www.improvcomedy.org/>

"A clearinghouse for information about improvisational theatre. Improvisation is a form of theatre in which no script is used. Instead, the actors create the dialog and action themselves, as they perform." Includes links to improv groups, a short history, an improv glossary, and an annotated bibliography.

McCoy's Guide to Theatre and Performance Studies

http://www.stetson.edu/csata/custom/thr_guid.html

Annotated guide to theatre- and performance-related Internet resources, including Web sites, newsgroups and e-mail lists.

Milieux: The Costume Site <http://milieux.com/costume/>

A directory of links about all the costume-related topics one could imagine. Research the history of various arms and armor, find instructions on making period costumes and links to suppliers, resources for costume materials, and organizations. There is also a section that has drawings of costumes used in various plays or theatre productions. A good site for theatre groups and science fiction and fantasy fans.

The New Deal Stage: Selections from the Federal Theatre Project, 1935-1939

<http://memory.loc.gov/ammem/fedtp/fthome.html>

"This online presentation includes over 13,000 images of items selected from the Federal Theatre Project Collection at the Library of Congress. Featured here are stage and costume designs, still photographs, posters, and scripts for productions of Macbeth and The Tragical History of Dr. Faustus as staged by Orson Welles, and for Power, a topical drama of the period (over 3,000 images). Also included are 68 other playscripts (6,500 images) and 168 documents selected from the Federal Theatre Project Administrative Records (3,700 images). The Federal Theatre Project was one of five arts-related projects established during the first term of President Franklin Delano Roosevelt under the Works Progress Administration (WPA)."

[Playwrights Guild of Canada](http://www.playwrightsguild.ca/pgc/main.asp) *http://www.playwrightsguild.ca/pgc/main.asp*

"Playwrights Guild of Canada (formerly Playwrights Union of Canada) is a national association of professional and emerging playwrights." It was established in 1972 as the Playwrights Co-op with its stated purpose to publish and distribute scripts to encourage more productions of Canadian plays. By 2006, the guild provides programs and services that support, promote, and advocate for over 500 members. The PGC also contains the Women's Caucus, established to meet the particular needs of women playwrights. Check the site for programs, playwrights, plays, and other links of interest. You may browse the digital library of Canadian plays as a visitor.

The Pulitzer Prizes *http://www.pulitzer.org*

Information about the Pulitzer prizes for American journalism, letters, drama and music can be found here with the lists of prize winners since 1917.

Riggers Page *http://www.rigging.net/*

Technical information about stage rigging equipment; includes rigging formulas. Illustrated.

The Shakespeare Art Museum *http://shakespeare-art-museum.com/*

Featuring the writings and visual works (oil paintings, graphics, and watercolors) of visual artist Hannah Tompkins, these works based on the plays and themes of William Shakespeare were displayed at the Shakespeare Art Museum in Ashland Oregon. The Museum was founded in 1984 as a non-profit organization by Wolf Tomkins and Hannah Tompkins. "At the museum, Hannah often gave gallery talks and tours sharing her wit and wisdom of the Shakespearean experience." The museum closed in 1990 and Hannah died of cancer five years later. This online art museum displays Tompkin's oil paintings, multi-color graphics, and watercolors with her text and descriptions, all dealing with the works and themes of Shakespeare.

Small-Cast One-Act Guide Online *http://www.heniford.net/1234/index.htm*

"Small-Cast One-Act Guide Online is a free resource for playwrights, actors, dramaturgs, agents, producers, publishers, students, and librarians. This site accesses one-act plays in all media worldwide, citing over 600 scripts in many languages for four or fewer actors." Through a variety of indexes (author, title, genre, cast size/gender), users of the site can find citations for one-act plays, including synopses, author information, and publication information. A glossary of genres and a directory of play publication houses are also included.

Stage Lighting Math *http://www.le-us.com/stagemath.html*

"A collection of math formulas that can prove useful to lighting designers and electricians."

[Stage Lighting Tech Pages](http://freespace.virgin.net/tom.baldwin/index.html) *http://freespace.virgin.net/tom.baldwin/index.html*

The Stage Lighting Tech Pages are "for anyone involved in performance lighting needing information fast. These pages contain links to the sites of equipment manufacturers, hire companies, organizations and other sites on the internet dedicated to lighting. There are also pages of technical information, such as connector pin outs, channel listings for intelligent lighting, dimensions of lanterns and so on." There is also an illustrated glossary of over 360 technical terms.

Stagecraft Frequently Asked Questions *http://www.faqs.org/faqs/theatre/stagecraft/faq/*

Frequently asked questions from the rec.arts.theatre.stagecraft and alt.stagecraft newsgroups. The questions are sorted by lighting, sound, props, etc.

The Stephen Sondheim Stage *http://www.sondheim.com/*

The Stephen Sondheim Stage is a site devoted to the works of Stephen Sondheim. It contains a library of information about Sondheim's works, as well as music clips, interviews with Sondheim and the latest news about him.

The Theatre Design and Technical Jobs Page *http://backstagejobs.com/*

"This site is designed to help the "behind-the-scenes" people in the live entertainment industry find work, and to help entertainment groups fill their job openings."

TheatreCrafts.com *http://www.theatreCrafts.com/*

"The aim of theatreCrafts.com is to eventually be the best resource for practical information and advice about technical theatre. It's designed to be of use to theatre people at all levels."

Tony Awards Online *http://www.tonyawards.com/en_US/*

The Tony Awards site lists the most recent Tony Award nominees and winners and includes photos and video interviews from the latest awards ceremony. Also offers related feature articles.

The World of Mime Theatre *http://www.mime.info/*

"Information on mime as a theatre art: articles, resources, contacts, and a calendar of upcoming events."

DANCE

American Ballet Theatre *http://www.abt.org/*

ABT homepage featuring a ballet dictionary, company archives with information on past shows and choreographers, dancer bios, and a variety of other information about the company.

An American Ballroom Companion: Dance Instruction Manuals ca. 1600 - 1920

<http://lcweb2.loc.gov/ammem/dihtml/dihome.html>

"An American Ballroom Companion presents a collection of over two hundred social dance manuals at the Library of Congress. The list begins with a rare late fifteenth-century source, Les basses danses de Marguerite d'Autriche (c.1490) and ends with Ella Gardner's 1929 Public dance halls, their regulation and place in the recreation of adolescents. Along with dance instruction manuals, this online presentation also includes a significant number of antidance manuals, histories, treatises on etiquette, and items from other conceptual categories. Many of the manuals also provide historical information on theatrical dance. All illuminate the manner in which people have joyfully expressed themselves as they dance for and with one another. Search by Keyword; Browse by Subject, Author, Title."

Ballet Dictionary *<http://www.abt.org/education/dictionary/index.html>*

The American Ballet Theatre's dictionary of ballet terms. Site features a video accompaniment for many of the entries, including demonstrations of dance movements. Video viewing requires QuickTime plug-in.

CyberDance Ballet on the Net *<http://www.cyberdance.org/>*

This is a good site for updated information on ballet companies, dance education, news, people, organizations, international information and links to other dance related sites. There are links to ballet company web pages and biographies and photographs of dancers. There is also a glossary of dance related terms.

Esflamenco.com *<http://www.esflamenco.com/enindex.html>*

Covers Spanish flamenco culture: dancing, guitar playing, and singing.

Learn to Ballroom Dance Online at Dancetv.com *<http://www.dancetv.com/>*

"If you have always wanted to learn how to ballroom dance but never knew where to start, this is the right place for you. You can start learning the Waltz, Fox Trot and Swing by looking at our Learn-Online sections, or you can browse through our Dance Tips section."

New York City Ballet *<http://www.nycballet.com/index.html>*

The homepage of the New York City Ballet provides information about performers, current performances, news items, and the American School of Ballet. It includes photos, trivia, puzzles, links to the costume shop and gift shop, and a dance bibliography.

Pow Wows *<http://www.powwows.com/>*

Discusses the history, etiquette, costumes, drums, and music of Pow Wow dancing. It has articles that describe specific women's dances and men's dances. It also features a calendar of events.

[Renaissance Dance](http://www.rendance.org/) *http://www.rendance.org/*

"Here you will find information on everything to do with European dance from the 15th to early 17th centuries." This site includes drawings and photographs from primary and secondary sources and a comprehensive bibliography.

Sapphire Swan Dance Directory *http://www.sapphireswan.com/dance/*

This directory features links to pages about almost every type of dance. They include: Ballet, Ballroom, Contra, Folk, Morris, Historical, Morns, Square, Tango, Swing, and Lindy. The links are from all over the world, from The New York Ballet to St. Petersburg. The dance schools have dates, times, and the cities and the theatres that they are performing at this year. Need help with ballet terms or how about finding your perfect costume to Tango in? Want to take dance lessons? You can find a dance school that suits you, and one that is close to where you live. They also have links to the best and latest dance products from big dance companies. These are all found in the Dance Directory. So, if you love dancing this site is just for you!

[Southern Native American Pow Wows](http://library.thinkquest.org/3081/) *http://library.thinkquest.org/3081/*

Discusses the songs and song format, drums, dance styles, and arena of Pow Wow dancing. It includes RealAudio sound files of songs and music. There are also many pictures of dance and costumes. Includes a glossary for new terminology and also includes a crafts/how-to section with instructions on how to make Native American craft items.

Tap Dance Homepage *http://www.tapdance.org/tap/taphome.htm*

Learn about tap dancing with the glossary of terms and notation, brief history of tap, tap steps, a directory of tap companies and performers, tap dance calendar, and more on this site.

The Pontic Music Homepage *http://www.scimitarmusic.com/pontos/*

Resources relating to the Greeks of Pontos who were settled mostly in Macedonia after the 1922 Treaty of Lausanne. Instruments including the kemenche, a type of lyra, and the tulum, a type of bagpipe, are discussed as well as dance forms including dipat, kochari, and serra.

Western Square Dancing *http://www.dosado.com/*

Information and resources about square dancing, including clubs and schools, call lists and definitions, software, articles and humor, a caller's corner, and links to other square dancing resources.

Lesson Aids:

[Art Teacher Helpers](#) Art on a Cart? Need a quick idea? Check Michal Austin's helpful hints pages- from [The Art Kids](#)

[Preschool Printables.com](#) Lots of ideas and resources for preschool educators. Check out [Journal pages](#), [No Line Coloring](#), [People](#) and so much more....lots of ideas for journal pages for little ones.

[FREE Art coloring pages](#) - many master works of art from Edupics.com.

[Quia Art Activities](#)- scavenger hunts, matching games, fun activities. (These have not been evaluated - check them out yourself)

[Puzzle Search Puzzlemaker](#) Puzzlemaker is a puzzle generation tool for teachers, students and parents. Create and print customized word search, crossword and math puzzles using your word lists.

[Crafts links page - lots of fun projects](#)

[Recipes just for kids.](#)

<http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Links>

Fine Art Images

[Art Images for College Teaching](#): Ancient, Medieval, Renaissance, Modern, Non-Western "AICT is a royalty-free image exchange resource for the educational community."

[Carol \(Jackson\) Gerten Fine Art](#) Scanned art images - some biographical information about artists. [Carol Gerten Mirror Site](#)

[Mark Harden Artchive](#)- scanned art images

[Olga's Gallery Listing of artists](#) This site has many quality images-- If the pop-up windows get annoying - try [downloading POW](#) to block the ads (Google tool bar will also block pop-ups). [World Literature in Painting Greek and Roman myths](#) references.

[Web Gallery of Art](#) is a virtual museum and searchable database of European painting and sculpture of the Gothic, Renaissance and Baroque periods

[World Art Treasures Slide collection](#) of art form Egypt, China, Japan, India, and Europe

[Web Museum Famous Painters by artist Theme Index Mirror sites](#)

[Images from History](#) Images from the history of world art and archeology for use in the classroom. From University of Alabama at Birmingham.

[Art Serve: Australian National University](#) Art & Architecture - 165,000 images -- mainly from the Mediterranean Basin, Japan, India & Cambodia.

[Artincontext.org - Images by Genre](#) - "Never knew there were so many genres in art--you may be surprised at this list with samples of each--also searchable by medium" (link contributed by Joseph Augusta)
[Also search by discipline](#)

<http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Links>

Art History Timelines

[American Cultural History - The 19th Century](#) - Through the decades - from Kingwood College Library

[American Cultural History - The 20th Century](#) - through the decades - from Kingwood College Library (90's were blank last I checked)

[North Carolina Museum of Art](#) Click on Teacher's Resources --then click on Timeline - complete with pictures from their collection.

[The Arts in the Western Tradition](#) from North Park University.

[Art History Timeline](#) from Sanford--kid friendly adventure!

[Timeline of Art History](#) Metropolitan Museum of Art - NOW up to 2000 AD. Check [Special Topics](#).

[Modern Art Timeline](#) - from [The-Artist.org](#). Click on movement to get suggested artists. Of course many movements overlap.

[Web Museum - Painting Timeline](#) Gothic through the 1960's...Plus Japanese art and architecture.

[Brief Timeline of American Literature and Events](#) Excellent correlation from pre-1620 to 1920.

[Music Timeline](#) [19th and 20th Century Art/History Timeline](#) World events and literature. From Duke University.

<http://www.princetonol.com/groups/iad/lessons/middle/arted.htm#Links>

The Diocese of Dallas is aligned with the ISTE's National Educational Technology Standards (NETS.S) and *Student Performance Indicators*

STRAND #1 *TEACHING AND LEARNING WITH TECHNOLOGY*

1. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Students will:

- a. apply existing knowledge to generate new ideas, products, or processes.
- b. create original works as a means of personal or group expression.
- c. use models and simulations to explore complex systems and issues.
- d. identify trends and forecast possibilities.

2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

Students will:

- a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- c. develop cultural understanding and global awareness by engaging with learners of other cultures.
- d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information.

Students will:

- a. plan strategies to guide inquiry.
- b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources & media.
- c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- d. process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

Students will:

- a. identify and define authentic problems and significant questions for investigation.
- b. plan and manage activities to develop a solution or complete a project.
- c. collect and analyze data to identify solutions and/or make informed decisions.
- d. use multiple processes and diverse perspectives to explore alternative solutions.

STRAND #2 *ETHICS AND SAFETY*

5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Students:

- a. advocate and practice safe, legal, and responsible use of information and technology.
- b. exhibit a positive attitude toward using technology that supports collaboration, and productivity.
- c. demonstrate personal responsibility for lifelong learning.
- d. demonstrate personal responsibility for digital citizenship.
- e. value and live the faith traditions of their Catholic education and are confident in using technology both morally and responsibly.
- f. use technology to fulfill their mission to spread the Good News, build community, and be of service.

STRAND #3 *TECHNOLOGY OPERATIONS AND CONCEPTS*

6. Technology Concepts, Systems, and operations

Students demonstrate a sound understanding of technology concepts, systems, and operations.

Students:

- a. understand and use technology systems.
- b. select and use applications effectively and productively.
- c. troubleshoot systems and applications.
- d. transfer current knowledge to learning of new technologies