



Archdiocese of Philadelphia Elementary Technology Standards

Kindergarten - Grade 8

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FORWARD

These guidelines are written in a general fashion so as not to endorse any one particular computer platform. Teachers should become familiar with their school's computer platform and appropriate software for their students.

The Archdiocese of Philadelphia has adopted the International Society for Technology in Education (ISTE) publication, as its standard. This publication, National Education Technology Standards for Students - Connecting Curriculum and Technology should be used in conjunction with the standards for grades Kindergarten through Grade 8 as a resource. The ISTE web site is www.iste.org. The skills presented were derived from Microsoft© MOUS (Microsoft Office User Specialist) certification requirements and ISTE standards. The skills are listed by grade and application.

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PHILOSOPHY

(National Educational Technology Standards – 2)

"... everything created by God is good, and nothing is to be rejected . . . for it is made holy by the invocation of prayer." 1 Timothy 4:4

These guidelines are based on the above concept that we must use, with wisdom, all of the tools that are at our disposal. As educators it is our responsibility to give all students the opportunity to augment their education with as many tools as possible. We, as teachers must use the technology available to us in developing the techniques necessary for our students to become functionally successful in today's community and tomorrow's world. In order to accomplish this goal the guidelines stress engaged learning through a progression of skills to achieve higher order thinking skills and the importance of the teacher as a facilitator rather than as a master. These guidelines emphasize the use of the computer as a tool.

Students are exposed to a diversity of ideas, procedures, critical thinking, problem solving and creative responses. The student learns the skills by doing meaningful activities that use the skill. When the student has the ability to assist peers in achieving a skill, the student has attained a greater degree of competency. The computer allows the student to become an active partner in the learning process.

Integrating the computer throughout the curriculum enables the students to easily transfer concepts and skills learned in one area, such as integrated language arts to any writing assignment in another part of the curriculum. Such integration focuses on the importance of the total education of the student, and requires the support and cooperation of the entire faculty.

Most educators agree that schools need to place an emphasis on higher order thinking skills and project-based learning. Perusing databases, manipulating spreadsheets, creating multimedia projects, and exploring webquests provide the medium for problem solving, engaged learning and empowering students.

The teacher's role in the use of technology in education is multifaceted. The teacher should be a resource for the school community as they strive to meet the challenge of living in an ever-increasing world of technology. As the students become more proficient in the use of the computer, it is important that the teacher recognize that the computer provides an opportunity to enhance the learning in every curriculum area.

These guidelines are only a means to assist the teacher to make the words of Timothy come alive. Technology needs to be used if the students are to be wholly educated and prepared to interact, with self-worth and accountability in today's evolving society.

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ARCHDIOCESAN POLICY

(National Educational Technology Standards – 2)

It is the intent of the elementary schools in the Archdiocese of Philadelphia to adhere to the provisions of copyright and privacy laws in the area of computers and computer software. It is also the intent of the diocesan schools to comply with the license agreements and/or policy statements contained in the software packages used throughout the diocese. In circumstances where the interpretation of the copyright law is ambiguous, the diocese will look to the applicable license agreement to determine the appropriate use of the software.

We recognize that computer software piracy is a major problem for the industry and violations of the copyright laws contribute to higher costs and greater efforts to prevent copying and/or lessen incentives for the development of effective educational uses of computers and computer software. Therefore, in an effort to discourage violation of copyright laws and to prevent such illegal activities we suggest:

1. The ethical and practical implications of software piracy will be taught to educators and school children in all schools in the Archdiocese of Philadelphia. It is suggested that in the elementary area this will begin in Grade One and be reviewed each year.
2. All employees of the schools in the Archdiocese of Philadelphia will be informed that they are expected to adhere to section 117 of the 1976 Copyright Act as amended in 1980, governing the use of software (e.g., each building principal will devote one portion of a faculty meeting to the subject each year). The term "fair use" as it is interpreted in the U. S. Congress, Office of Technology Assessment of April 1984, will be reviewed. The concept of computer privacy as set down in United State Code 18 Section 1030 in the Computer Fraud and Abuse Act of 1984 should be reviewed, as well as the 1988 Supreme Court ruling in Hazelwood School District vs. Kuhlmeir dealing with information sent out over a network system.
3. When permission is obtained from the copyright holder to use software on a disk-sharing system (network), efforts will be made to secure this software from being copied.
4. Under no circumstances will illegal copies of copyrighted software be made or used on school equipment.
5. The principal of each school is responsible for establishing practices, which will enforce this diocesan copyright and privacy policy at the school level.

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RESPONSIBLE USE OF TECHNOLOGY POLICY

for the Catholic Schools of the Archdiocese of Philadelphia

PURPOSE

Technology is a valuable educational vehicle. This school is committed to teach its faculty, staff, students, and school community to work with technology and to ensure responsible use of technology.

GOAL

The school's goal is to prepare its members for life in an electronic, global community. To this end, the school will:

- provide a variety of electronic tools
- teach technology skills
- integrate technology with curriculum
- encourage critical thinking and problem solving skills
- facilitate evaluation and synthesis of information
- encourage ethical practices

RESPONSIBILITIES OF USER

This school will make every effort to provide a safe environment for learning with technology including Internet safeguards. The faculty, staff, students, and school community are granted the privilege of using the computer hardware and software, peripherals, and electronic communication tools including the Internet. With this privilege comes the responsibility to use the equipment correctly, respect the name and intellectual property of others, and follow the policies outlined below.

TECHNOLOGY GUIDELINES

- **Training:** All users are required to take simple training on the proper use and handling of school's hardware/software.
- **Authorization:** Students will use the computers during technology class. Permission must be received before using any hardware/software in any area of the school.
- **Monitoring:** The school has the right to monitor all activities.
- **Security:** Any attempt to circumvent system security, guess passwords, or in any way gain access to secured resources or another's files is forbidden.
- **Integrity:** Users are to respect the rights of others. Users are not to cut, copy, or plagiarize Internet content. Assume everything is copyrighted unless it specifically indicates otherwise.

- **Use of Software:** Users will not install, move, delete, download, upload, reconfigure, or modify any software or files on school equipment without permission.
- **Use of Hardware:** Users will not move, repair, reconfigure, modify, or attach external devices to the systems without permission.
- **Misuse:** Use of equipment to harass, threaten, deceive, intimidate, offend, embarrass, or annoy anyone is strictly forbidden.
- **Violations:** Violating license agreements, copying disks, CD-ROMs, or other protected media, is strictly forbidden.
- **Reporting:** Any damage or change to the school's hardware/software that is noted by the user should be immediately reported.
- **Electronic Devices:** Use of additional electronic devices including but not limited to personal digital assistants (PDA), calculators, gaming devices, cellular phones, and pagers will be determined by the administrator of the school. The school's technology policy regarding authorization, use, responsibility, integrity, intellectual property, and monitoring will be applied to these devices.
- **Administrative Rights:** The Office of Catholic Education or the school administration at any time may add additional rules and restrictions.

INTERNET/TELECOMMUNICATONS GUIDELINES

- **Internet Training:** All users are required to take simple Internet training (how to sign on, log off, etc.).
- **Educational Purpose:** Internet use is for educational research purposes. A teacher assignment is expected. Expressed permission is required.
- **Intellectual Property:** Transferring copyrighted material to or from a school without expressed permission of the owner is a violation of Federal Law. The user is deemed responsible to see that this does not occur. Assume everything is copyrighted unless the source specifically indicates otherwise. Always cite the sources.
- **Personal Responsibility:** The user is responsible for the sites he or she visits. He or she may not deliberately visit a site known for unacceptable material or encourage others to do so.
- **Reporting:** In the event that the user encounters an unacceptable site for material, the user is required to turn the monitor off or click the Internet back button and tell the teacher immediately.

- **Unauthorized Use:** Use of the Internet for commercial gains or profits is not allowed from an educational site.
- **Monitor Activities:** The school has the right to monitor all Internet/Telecommunication activities.
- **Administrative Rights:** The Office of Catholic Education or the school administration at any time may add additional rules and restrictions.
- **Email:** Use of the Internet for faculty, staff, students or school community email will be at the discretion of the school administration. All of the above rules and restrictions also apply to use of the Internet for email.

Violation of the above rules will be dealt with by the administration of the school.

Violation of these rules may result in any or all of the following:

- Issuance of demerits/detentions
- Loss of use of school hardware/software
- Loss of use of the school network, including Internet access. The student will be expected to complete work on a non-networked, stand-alone computer system.
- Disciplinary action including dismissal, and/or legal action by the school or other involved parties.

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Responsible Use of Technology

Student Internet Access Contract

I understand that when I am using the Internet or any other computer/telecommunications device, I must adhere to all rules of courtesy, etiquette and laws regarding the copying of information as prescribed by either Federal, State, or local laws, the Archdiocese of Philadelphia and

_____ (school name).

My signature below and that of my parents(s) or guardian(s) mean that I agree to follow the guidelines of this *Responsible Use Policy* for Internet access at all Catholic schools.

Student Name/ID _____

Student Signature _____

Date _____

Parent or Guardian: We ask that you review this policy with your child and sign this Student Access Contract.

I hereby release _____ (school name) and the Archdiocese of Philadelphia, its personnel and any other institutions with which it is affiliated, from any and all claims and damages of any nature arising from my child's use of, or inability to use, the Internet Access, including but not limited to claims that may arise from the unauthorized use of the system to purchase products or services.

I will instruct my child regarding any restrictions against accessing materials that are in addition to the restrictions set forth by this *Responsible Use Policy*. I will emphasize to my child the importance of following rules for personal safety.

As the parent or guardian of this student, I have read the *Responsible Use Policy* for _____ (school name). I hereby give my permission for my child to use the Internet and will not hold _____ (school name) or the Archdiocese of Philadelphia liable as a result of my daughter's/son's use of the Internet on school premises. I understand that my child has agreed not to access inappropriate material on the Internet.

Parent/Guardian Name

Parent/Guardian Signature

Date

Responsible Use of Technology

Faculty and Staff Internet Access Contract

I understand that when I am using the Internet or any other computer/telecommunications device, I must adhere to all rules of courtesy, etiquette, privacy and laws regarding the copying information as prescribed by either Federal, State, or local laws, the Archdiocese of Philadelphia and _____ (school name).

My signature below indicates that I agree to follow the guidelines of this *Responsible Use Policy* for Internet access at all Catholic schools.

Name

Signature

Date

ETHICS AND TECHNOLOGY

(National Educational Technology Standards – 2)

Very often, the ethical questions faced by teachers and students alike in today's fast moving and technologically changing society are vast and need answers rooted in a deep sense of faith. It seems so much easier to just copy what you need or want to conclude an assignment than to examine the ethics of the act. It is wrong to claim ignorance of a law or statute or to blame the emotions, such as: stress, panic, fear, etc. The illegality of copying materials which are not your own and claiming them as such, must be addressed. The morality of this does not change with the advent of technology. The issues are more than piracy (the direct unauthorized copying and/or distribution of software and other technologies). They also include invasions of privacy, tampering with electronically-stored records (directly or through viruses), embezzlement via the computer, information destruction and telecommunication abuse.

The government also has concerns about this problem and its potential for growth. They see the school, especially at the elementary level, as a very good starting point to combat this potential problem. In an unpublished exchange between the Department of Education and the National Institute of Justice in 1990, the following statement appears:

"...given increased computer use in schools, the pool of potential abusers is growing substantially . . . The nature of the technology can invite abuse if users are not educated to understand the implications and consequences of their actions."

pp 3-4 Ethical Use of Information Technologies in Education; U. S. Dept. of Justice

In the words of Christ himself, where he constantly reminded the people of the importance of the law; in St. Paul's writings, where he is constantly battling the Pharisees over the observance of the law, we are reminded that we are "not free from God's law but under the law of Christ" (1 Cor. 9:21). Teachers are responsible for cultivating a good conscience in their students so that as new situations arise, the students will be able to comprehend and deal with it accordingly. Education with an emphasis on Christian values is one answer to the reduction of computer crime.

DISCUSSION TOPICS

1. Check your Religion Guidelines and your Religion text for ways that they use to address this problem.
2. Often a person feels that because they are using an electronic device, they will be able to escape detection. Since the electronic device becomes less traceable than a concrete object, such as a book, the abuse occurs without much concern for ownership. This reduction in fear is often used to smooth the conscience and is referred to as psychological distancing.

3. There is some confusion over who owns intellectual property, especially when something is created as a group project or through cooperative learning in a telecommunications project. It must be stressed that all authors are owners of this information.
4. The purchasing of software also causes some confusion as to the true owner. When you purchase a piece of software, you are not buying the program. You have purchased the right to use the software. In the licensing agreement it is stated that right can be revoked. The true ownership of intellectual property, such as the purchasing of a software program, is limited, especially when compared to the ownership of physical property such as a bicycle. The differences between the two should be used as a topic in a discussion group.
5. Schools play a major role in enforcing the freedom to use intellectual materials. The use of these intellectual materials, when they have been produced by another person, company or perhaps a telecommunication group requires permission by the true owners or authors of the intellectual materials.
6. School and Archdiocesan policies must be clearly addressed and these ethical issues must be incorporated into the curriculum.
7. Respect for privacy, confidentiality and intellectual creativity and the protection afforded under law should be discussed.
8. The ethics issued should be reinforced wherever computers are used throughout the curriculum: integrated language arts, reading, social studies, library, science and math. This will help to strengthen the concept in the mind of the student.
9. Students and teachers should be made aware of the differences between the following software packages:
 - a. legal back up copy
 - b. lab pack
 - c. site license
 - d. network/single version
 - e. school/home version
 - f. downloadable software and shareware
10. Computer viruses and their far-reaching effects are some of the unethical practices common today. A computer virus is a small program that is secretly inserted into a standard computer software program and can contaminate other computers simply by being legally shared. The virus can simply display a message, or it can destroy data and create havoc in a system.
11. Address the proliferation of SPAM, pop-ups, cookies and the use of spyware and malware (*malicious software*).
12. Become aware of the term "fair use" as it pertains to the Copyright laws and all current revisions.

13. The school, the teacher and the parent are the best model for the correct use of software, privacy, etc. Students must understand the grave legal ramifications connected with the violation of these ethical standards.

SOME SUGGESTED STUDENT ACTIVITIES:

A variety of strategies and activities can be used to enhance the ethics information. Assigned readings, computer-based activities, writing assignments, role-playing, classroom discussions, and art assignments are some suggestions.

- 📖 Use the month of October - National Computer Awareness Month to stress the ethical concepts of computer usage. The Halloween theme for October offers an excellent time to introduce students to the motto, "Computer PIRATES don't go out for Halloween, they go to Jail!" (Thanks to Diane Nicolo for this motto.)
- 📖 Create a collage of permitted computer use activities.
- 📖 Create a wanted poster for a typical violator of computer ethics and explain what was the crime committed.
- 📖 Create a Bill of Rights for computer use.
- 📖 Create a questionnaire dealing with violations of a student's rights and get the children to express how they feel about these infringements? How do these same things apply to computer use?
- 📖 Review with the class different types of license agreements as found in software catalogs.
- 📖 Have students conduct a survey of other peoples' attitudes about computer ethics.
- 📖 Invite a professional software writer or creator of software to come and speak to the students about how they are paid and what piracy does to the software market.
- 📖 Have students create scenarios to depict software violations and how to curtail these practices.
- 📖 Have children list their five favorite pieces of property and why they would not want someone else to claim these as their property.
- 📖 Invite a lawyer to class to discuss the legal ramifications of unethical computer uses.
- 📖 Have children read the fine print of a licensing agreement to understand that they have only purchased the right to use the software.

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COMPUTER CARE AND SAFETY

(National Educational Technology Standards – 2)

1. Copies of the current and updated inventories of all serial numbers of hardware and software should be in the computer room, office and one off-site location.
2. All computer labs should be secured.
3. Every school must have a virus detecting and repairing program.
4. Pennsylvania's state law, Children's Internet Protection Act (CIPA), requires a filtering program in order to access the Internet.
5. Keep the environment dust and lint free.
6. Keep all magnetic materials away from the computer. Magnetic materials can harm disks. This includes paper clips, any magnetic holders, magnetic tools, such as a screwdriver, or magnetic-tipped scissors.
7. Eliminate all extension cords.
8. Keep all monitors at eye level.
9. Keep computers away from extremes of heat and cold. An air-conditioned environment is recommended all summer. Never place any computer near a radiator or chalkboard area.
10. Store removable media in a proper place.
11. Keep your computer area food and drink free.
12. Clean your computers with a damp cloth on a regular basis.
13. Do not turn your computer off and on unnecessarily; use a power surge protector.
14. Clean mouse according to manufacturers' directions.
15. Use the manufacturer's recommendations for cleaning the disks and the drives.
16. Fire extinguishers for electricity should be visible in any room where computers are housed. Be sure it is for electrical fires - Halon.
17. Hands should be clean and free from any stickiness before using the computer.
18. CDs and DVDs should be handled and inserted into the computer properly.
19. Do not remove media from a disk drive while the drive is active and the light is on.

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CLASSROOM PRAYER

Jesus, Lord of Light, we often describe You as the Way, the Truth and the Light. Guide us in this exciting realm of electric generated light and programmed pathways. Here, as in all things, we seek Your truth. Amen.

SPECIAL PETITION

St. Isidore of Seville, Patron Saint of Technology, pray for us.

Acknowledgments

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NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS FOR STUDENTS

Technology Foundation Standards for Students

The technology foundation standards for students are divided into six broad categories. Standards within each category are to be introduced, reinforced, and mastered by students. These categories provide a framework for linking performance indicators within the Profiles for Technology Literate Students to the standards. Teachers can use these standards and profiles as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

Technology Foundation Standards for Students

1. Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

2. Social, ethical, and human issues

- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

3. Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

4. Technology communications tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

5. Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

6. Technology problem-solving and decision-making tools

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

***Please Note**

The following list of skills is the criteria to achieve the MOUS Core Certification Standards and the National Educational Technology Standards. Even though these are the standards, the ability to accomplish them will vary according to the availability of equipment. Striving to attain these goals should be the aim of every Archdiocesan School.

Use column provided to indicate the date that each competency standard is taught.

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ARCHDIOCESE OF PHILADELPHIA STANDARDS GRADES K-8

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
Keyboarding						
0.00	Introduce appropriate terms/vocabulary	Keyboarding	All	1		
0.01	Left side of keyboard	Keyboarding	K	1		
0.02	Right side of keyboard	Keyboarding	K	1		
0.03	Keys and spacing	Keyboarding	K	1		
1.00	Review skills from previous grades	Keyboarding	1	1		
1.01	Left side of keyboard	Keyboarding	1	1		
1.02	Right side of keyboard	Keyboarding	1	1		
1.03	Two hands on keyboard	Keyboarding	1	1		
1.04	Special Keys	Keyboarding	1	1		
2.00	Review skills from previous grades	Keyboarding	2	1		
2.01	Left side of keyboard	Keyboarding	2	1		
2.02	Right side of keyboard	Keyboarding	2	1		
2.03	Two hands on keyboard	Keyboarding	2	1		
2.04	Special Keys	Keyboarding	2	1		
2.05	Knowledge of what keys make up home row	Keyboarding	2	1		
3.00	Review skills from previous grades	Keyboarding	3	1		
3.01	Left side of keyboard	Keyboarding	3	1		
3.02	Right side of keyboard	Keyboarding	3	1		
3.03	Special Keys	Keyboarding	3	1		
3.04	Home Row	Keyboarding	3	1		
3.05	QWERTY Row	Keyboarding	3	1		
3.06	Bottom Row	Keyboarding	3	1		
4.00-8.00	Review skills from previous grades	Keyboarding	4-8	1		
4.01-8.01	Reinforce and encourage proper keyboarding skills to develop touch-typing mastery	Keyboarding	4-8	1		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
Database						
0.00	Introduce appropriate terms/vocabulary	Database	All	1, 5, 6		
4.01	Examine ready-made or teacher-made databases	Database	4	1, 5, 6		
4.02	Navigate through records in a table, list or form view	Database	4	1, 5, 6		
4.03	Find records	Database	4	1, 5, 6		
4.04	Sort records	Database	4	1, 5, 6		
5.00	Review skills from previous grades	Database	5	1, 5, 6		
5.01	Plan a database: choose a topic (e.g. Saints); identify the fields (e.g. feast day)	Database	5	1, 5, 6		
5.02	Begin to create a database by entering fields	Database	5	1, 5, 6		
5.03	Enter appropriate data for records	Database	5	1, 5, 6		
5.04	Find specific data, sort records and apply filters to data	Database	5	1, 5, 6		
6.00	Review skills from previous grades	Database	6	1, 5, 6		
6.01	View single and multiple records	Database	6	1, 5, 6		
6.02	Insert and delete records	Database	6	1, 5, 6		
6.03	Insert and delete fields	Database	6	1, 5, 6		
6.04	Modify format properties; font, style, size, color, etc.	Database	6	1, 5, 6		
6.05	Preview and print the data	Database	6	1, 5, 6		
7.00	Review skills from previous grades	Database	7	1, 5, 6		
7.01	Use the clipboard (cut, copy, paste)	Database	7	1, 5, 6		
7.02	Print the data in various forms and views	Database	7	1, 5, 6		
8.00	Review skills from previous grades	Database	8	1, 5, 6		
8.01	Create, modify and print original reports	Database	8	1, 5, 6		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
Spreadsheet						
0.00	Introduce appropriate terms/vocabulary	Spreadsheet	All	1, 5, 6		
5.01	Understand the structure of a spreadsheet: columns, rows, cells	Spreadsheet	5	1, 5, 6		
5.02	Enter text, dates, and numbers	Spreadsheet	5	1, 5, 6		
5.03	Introduce how to format cells	Spreadsheet	5	1, 5, 6		
5.04	Modify row height and column width when necessary	Spreadsheet	5	1, 5, 6		
5.05	Clear cell content	Spreadsheet	5	1, 5, 6		
5.06	Edit cell content	Spreadsheet	5	1, 5, 6		
5.07	Use Undo and Redo	Spreadsheet	5	1, 5, 6		
5.08	Use Save	Spreadsheet	5	1, 5, 6		
5.09	Locate and open an existing workbook (file)	Spreadsheet	5	1, 5, 6		
5.10	Enter formulas in a cell using the formula bar	Spreadsheet	5	1, 5, 6		
5.11	Insert and delete rows and columns	Spreadsheet	5	1, 5, 6		
5.12	Preview and print worksheets and workbooks (files)	Spreadsheet	5	1, 5, 6		
5.13	Change page orientation and scaling	Spreadsheet	5	1, 5, 6		
5.14	Set/clear print area	Spreadsheet	5	1, 5, 6		
5.15	Use Save As (different name, location, format)	Spreadsheet	5	1, 5, 6		
5.16	Check spelling	Spreadsheet	5	1, 5, 6		
5.17	Rename a worksheet	Spreadsheet	5	1, 5, 6		
5.18	Use AutoSum	Spreadsheet	5	1, 5, 6		
6.00	Review skills from previous grades	Spreadsheet	6	1, 5, 6		
6.01	Use basic functions (AVG, SUM, COUNT, MIN, MAX)	Spreadsheet	6	1, 5, 6		
6.02	Use toolbar functions for currency, decimal, percent, etc.	Spreadsheet	6	1, 5, 6		
6.03	Explore advanced features of cell formats (borders, shading, patterns, text wrap, number options, etc.)	Spreadsheet	6	1, 5, 6		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
6.04	Cut, copy, paste, paste special and move selected cells using clipboard	Spreadsheet	6	1, 5, 6		
6.05	Work with series (Auto Fill)	Spreadsheet	6	1, 5, 6		
6.06	Enter multiple operation formulas in a cell using the formula bar	Spreadsheet	6	1, 5, 6		
6.07	Revise formulas	Spreadsheet	6	1, 5, 6		
6.08	Enter functions using formula bar (function menu)	Spreadsheet	6	1, 5, 6		
6.09	Clear cell formats	Spreadsheet	6	1, 5, 6		
6.10	Insert and delete selected cells	Spreadsheet	6	1, 5, 6		
6.11	Rotate text	Spreadsheet	6	1, 5, 6		
7.00	Review skills from previous grades	Spreadsheet	7	1, 5, 6		
7.01	Freeze and unfreeze rows and columns	Spreadsheet	7	1, 5, 6		
7.02	Insert and remove a page break	Spreadsheet	7	1, 5, 6		
7.03	Move and copy worksheets (file)	Spreadsheet	7	1, 5, 6		
7.04	Move between worksheets in a workbook (files)	Spreadsheet	7	1, 5, 6		
7.05	Set up headers and footers	Spreadsheet	7	1, 5, 6		
7.06	Use references (absolute and relative)	Spreadsheet	7	1, 5, 6		
7.07	Enter a range within a formula by dragging	Spreadsheet	7	1, 5, 6		
7.08	Use chart wizard to create a chart / Preview and print charts	Spreadsheet	7	1, 5, 6		
7.09	Modify charts	Spreadsheet	7	1, 5, 6		
7.10	Use logical function (IF)	Spreadsheet	7	1, 5, 6		
7.11	Use find and replace	Spreadsheet	7	1, 5, 6		
7.12	Insert, move, and delete an object (picture)	Spreadsheet	7	1, 5, 6		
7.13	Use the Help Menu (Office Assistant)	Spreadsheet	7	1, 5, 6		
7.14	Use templates to create a new workbook (file)	Spreadsheet	7	1, 5, 6		
8.00	Review skills from previous grades	Spreadsheet	8	1, 5, 6		
8.01	Adjust margins to center on page	Spreadsheet	8	1, 5, 6		
8.02	Hide and unhide rows and columns	Spreadsheet	8	1, 5, 6		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
8.03	Use style in Format menu to make spreadsheet uniform	Spreadsheet	8	1, 5, 6		
8.04	Use Paste Function on the toolbar to insert a function	Spreadsheet	8	1, 5, 6		
8.05	Use the Format Painter	Spreadsheet	8	1, 5, 6		
8.06	Merge cells	Spreadsheet	8	1, 5, 6		
8.07	Create hyperlinks	Spreadsheet	8	1, 5, 6		
Word Processing						
0.00	Introduce appropriate terms/vocabulary	Word Processing	All	1, 3		
0.01	Open a word processing program	Word Processing	K	1, 3		
0.02	Develop knowledge of toolbars and mouse symbols	Word Processing	K	1, 3		
0.03	Recognize letter names	Word Processing	K	1, 3		
0.04	Match upper and lower case	Word Processing	K	1, 3		
0.05	Identify letters and numbers on the keyboard	Word Processing	K	1, 3		
0.06	Enter text (all lower case)	Word Processing	K	1, 3		
0.07	Insert and delete text	Word Processing	K	1, 3		
0.08	Close a program	Word Processing	K	1, 3		
1.00	Review skills from previous grades	Word Processing	1	1, 3		
1.01	Open a word processing program	Word Processing	1	1, 3		
1.02	Enter text	Word Processing	1	1, 3		
1.03	Insert only one space between words	Word Processing	1	1, 3		
1.04	Select and change font and point size from the formatting toolbar	Word Processing	1	1, 3		
1.05	Delete/Backspace text	Word Processing	1	1, 3		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
1.06	Position the cursor and insert text	Word Processing	1	1, 3		
1.07	Give a file a name that is appropriate and descriptive	Word Processing	1	1, 3		
1.08	Use Save As and Save	Word Processing	1	1, 3		
1.09	Use open to locate an existing document	Word Processing	1	1, 3		
1.10	Close document/ exit program	Word Processing	1	1, 3		
2.00	Review skills from previous grades	Word Processing	2	1, 3		
2.01	Enter sentences	Word Processing	2	1, 3		
2.02	Position cursor and insert text in sentence	Word Processing	2	1, 3		
2.03	Use proper spacing after end punctuation – one space after all punctuation marks	Word Processing	2	1, 3		
2.04	Highlight text in document	Word Processing	2	1, 3		
2.05	Select and change font and point size from the format menu	Word Processing	2	1, 3		
2.06	Change text alignment	Word Processing	2	1, 3		
2.07	Use Save As and Save to designated location	Word Processing	2	1, 3		
3.00	Review skills from previous grades	Word Processing	3	1, 3		
3.01	Use proper spacing after punctuation (, ; : and at end of sentences) – one space	Word Processing	3	1, 3		
3.02	Use proper paragraph formatting (tab, enter)	Word Processing	3	1, 3		
3.03	Understand concept of Word Wrap; Distinguish from hard return	Word Processing	3	1, 3		
3.04	Apply font formats (style) Bold, Italic, Underline and change text color	Word Processing	3	1, 3		
3.05	Use the Undo and Redo command	Word Processing	3	1, 3		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
3.06	Use the Spell Check	Word Processing	3	1, 3		
3.07	Use the Thesaurus	Word Processing	3	1, 3		
3.08	Insert date and time	Word Processing	3	1, 3		
3.09	Print a document	Word Processing	3	1, 3		
3.10	Locate and open an existing document from various locations	Word Processing	3	1, 3		
3.11	Insert graphics into a document (Word Art, Clip Art, Images)	Word Processing	3	1, 3		
3.12	Use Save As and Save (to a designated drive or disk)	Word Processing	3	1, 3		
4.00	Review skills from previous grades	Word Processing	4	1, 3		
4.01	Use Cut, Copy and Paste	Word Processing	4	1, 3		
4.02	Explain the concept of Clipboard and demonstrate its use	Word Processing	4	1, 3		
4.03	Find and Replace text	Word Processing	4	1, 3		
4.04	Align text in paragraphs (Center, Left, Right, Justified)	Word Processing	4	1, 3		
4.05	Use Print Preview	Word Processing	4	1, 3		
4.06	Create and modify headers and footers	Word Processing	4	1, 3		
4.07	Use Save As (different name and location)	Word Processing	4	1, 3		
4.08	Know difference between Insert and Overstrike mode	Word Processing	4	1, 3		
4.09	Format clipart to change size and position	Word Processing	4	1, 3		
5.00	Review skills from previous grades	Word Processing	5	1, 3		
5.01	Create a folder	Word Processing	5	1, 3		
5.02	Insert page breaks	Word Processing	5	1, 3		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
5.03	Add bullets and numbering	Word Processing	5	1, 3		
5.04	Set line spacing options (single, 1.5, double)	Word Processing	5	1, 3		
5.05	Change margins	Word Processing	5	1, 3		
5.06	Create and modify page numbers	Word Processing	5	1, 3		
5.07	Use the drawing toolbar	Word Processing	5	1, 3		
6.00	Review skills from previous grades	Word Processing	6	1, 3		
6.01	Use the Grammar feature	Word Processing	6	1, 3		
6.02	Apply shading to paragraphs and borders to paragraphs and pages	Word Processing	6	1, 3		
6.03	Create and format tables	Word Processing	6	1, 3		
6.04	Add borders and shading to tables	Word Processing	6	1, 3		
6.05	Revise tables (insert and delete rows and columns, change cell formats)	Word Processing	6	1, 3		
6.06	Modify table structure (merge cells, change height and width)	Word Processing	6	1, 3		
6.07	Rotate text in a table	Word Processing	6	1, 3		
7.00	Review skills from previous grades	Word Processing	7	1, 3		
7.01	Apply character effects (superscript, subscript, strikethrough, small caps and outline)	Word Processing	7	1, 3		
7.02	Insert symbols	Word Processing	7	1, 3		
7.03	Create and apply frequently used text with Auto Correct	Word Processing	7	1, 3		
7.04	Use indentation options (left, right, first line and hanging indent)	Word Processing	7	1, 3		
7.05	Use Tabs command (center, decimal, left and right)	Word Processing	7	1, 3		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
7.06	Set tabs with leaders	Word Processing	7	1, 3		
7.07	Create a multi-column document	Word Processing	7	1, 3		
7.08	Create sections with formatting that differs from other sections	Word Processing	7	1, 3		
7.09	Create hyperlinks	Word Processing	7	1, 3		
7.10	Copy formats using a tool such as Format Painter	Word Processing	7	1, 3		
8.00	Review skills from previous grades	Word Processing	8	1, 3		
8.01	Create an outline style numbered list	Word Processing	8	1, 3		
8.02	Use templates to create a new document	Word Processing	8	1, 3		
Multimedia						
Please note:	A multimedia program could combine text, graphics, sound, video, and animation. Some examples of multimedia programs are: PowerPoint, HyperStudio, Microworlds, Kid Pix, Multimedia Workshop, Tool Factory, and Scholastic Keys.	Multimedia	All	1, 3, 4		
0.00	Introduce appropriate terms/vocabulary	Multimedia	All	1, 3, 4		
0.01	Open a multimedia program	Multimedia	K	1, 3, 4		
0.02	Explore toolbar	Multimedia	K	1, 3, 4		
0.03	Create a simple project on one slide/screen/page/card (terminology will be determined by program)	Multimedia	K	1, 3, 4		
0.04	Understand use of tools – pencil, pen, spray can, paint bucket	Multimedia	K	1, 3, 4		
0.05	Ability to change thickness of tool	Multimedia	K	1, 3, 4		
0.06	Use of paint bucket to fill an object/graphic with color	Multimedia	K	1, 3, 4		
0.07	Use of various text options (textbox, pen, pencil, spray can)	Multimedia	K	1, 3, 4		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
0.08	Stamp/Insert graphics	Multimedia	K	1, 3, 4		
0.09	Close a multimedia program	Multimedia	K	1, 3, 4		
1.00	Review skills from previous grades	Multimedia	1	1, 3, 4		
1.01	Open a multimedia program	Multimedia	1	1, 3, 4		
1.02	Open an existing project/file	Multimedia	1	1, 3, 4		
1.03	Explore toolbar	Multimedia	1	1, 3, 4		
1.04	Create a simple project on one slide/screen/page/card (terminology will be determined by program)	Multimedia	1	1, 3, 4		
1.05	Understand use of tools – pencil, pen, spray can, paint bucket	Multimedia	1	1, 3, 4		
1.06	Ability to change thickness of tool	Multimedia	1	1, 3, 4		
1.07	Use of paint bucket to fill an object/graphic with color	Multimedia	1	1, 3, 4		
1.08	Use of various text options (textbox, pen, pencil, spray can)	Multimedia	1	1, 3, 4		
1.09	Stamp/Insert graphics	Multimedia	1	1, 3, 4		
1.10	Save a project	Multimedia	1	1, 3, 4		
1.11	Close a multimedia program	Multimedia	1	1, 3, 4		
2.00	Review skills from previous grades	Multimedia	2	1, 3, 4		
2.01	Create a two slide project	Multimedia	2	1, 3, 4		
2.02	Connect two slides using buttons	Multimedia	2	1, 3, 4		
2.03	Save a project	Multimedia	2	1, 3, 4		
2.04	Save using a different name (Save As)	Multimedia	2	1, 3, 4		
2.05	Print a project	Multimedia	2	1, 3, 4		
3.00	Review skills from previous grades	Multimedia	3	1, 3, 4		
3.01	Create a project of three or more slides	Multimedia	3	1, 3, 4		
3.02	Add pre-recorded sound to a project	Multimedia	3	1, 3, 4		
3.03	Navigate through project using the features of a multimedia program	Multimedia	3	1, 3, 4		
3.04	Add relevant clip art or picture (graphic) to enhance project material	Multimedia	3	1, 3, 4		
3.05	Add transitions to project	Multimedia	3	1, 3, 4		
4.00	Review skills from previous grades	Multimedia	4	1, 3, 4		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
4.01	Create, place, and adjust the size of a textbox	Multimedia	4	1, 3, 4		
4.02	Edit content of textbox by changing font size, color, and style	Multimedia	4	1, 3, 4		
4.03	Change background items (color, texture, graphic/object)	Multimedia	4	1, 3, 4		
4.04	Delete a slide from project	Multimedia	4	1, 3, 4		
4.05	Understand concept of different views of slides	Multimedia	4	1, 3, 4		
4.06	View a project as a presentation	Multimedia	4	1, 3, 4		
4.07	Rearrange slide/cards in a project using the slide sorter or project view or storyboard	Multimedia	4	1, 3, 4		
4.08	Save using Save As (different name, location, format)	Multimedia	4	1, 3, 4		
5.00	Review skills from previous grades	Multimedia	5	1, 3, 4		
5.01	Use template(s) to create project	Multimedia	5	1, 3, 4		
5.02	Add animation to project	Multimedia	5	1, 3, 4		
5.03	Create a graphic and add to project	Multimedia	5	1, 3, 4		
5.04	Add sound to a project	Multimedia	5	1, 3, 4		
5.05	Import photo (digital camera, scanner, processed CD) if available	Multimedia	5	1, 3, 4		
5.06	Create a hyperlink to a web address	Multimedia	5	1, 3, 4		
5.07	Add bullets to list items	Multimedia	5	1, 3, 4		
5.08	Change bullet type	Multimedia	5	1, 3, 4		
6.00	Review skills from previous grades	Multimedia	6	1, 3, 4		
6.01	Add (record) narration to project if equipment is available	Multimedia	6	1, 3, 4		
6.02	Print various views of project - slides/cards etc.	Multimedia	6	1, 3, 4		
7.00	Review skills from previous grades	Multimedia	7	1, 3, 4		
7.01	Create a menu to navigate through project	Multimedia	7	1, 3, 4		
7.02	Control timing of text, graphics, sound, and transitions of project	Multimedia	7	1, 3, 4		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
7.03	Create a series of screens showing object changing in simple animation	Multimedia	7	1, 3, 4		
7.04	Import movie(s) to presentation	Multimedia	7	1, 3, 4		
7.05	Download video from a source and save in project	Multimedia	7	1, 3, 4		
8.00	Review skills from previous grades	Multimedia	8	1, 3, 4		
8.01	Create a user template	Multimedia	8	1, 3, 4		
8.02	Create a menu to navigate through project	Multimedia	8	1, 3, 4		
8.03	Control timing of text, graphics, sound, and transitions of project	Multimedia	8	1, 3, 4		
8.04	Create a series of screens showing object changing in simple animation	Multimedia	8	1, 3, 4		
8.05	Import movie(s) to presentation	Multimedia	8	1, 3, 4		
8.06	Capture video from sources, such as, a digital camera/video camera and save in digitized form if available	Multimedia	8	1, 3, 4		
8.07	Add digitized movie to project	Multimedia	8	1, 3, 4		

Research and Communication

Please note:	Students and parents must sign and return the Acceptable Use Policy EACH year. (Student explanation should be age- appropriate)	Research and Communication	All			
0.00	Introduce appropriate terms/vocabulary	Research and Communication	All	1, 5, 6		
1.01	Define the Internet (Age-Appropriate Language)	Research and Communication	1	1, 5, 6		
1.02	Open Browser	Research and Communication	1	1, 5, 6		
1.03	View Web Pages with teacher and classmates	Research and Communication	1	1, 5, 6		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
2.00	Review skills from previous grades	Research and Communication	2	1, 5, 6		
2.01	Internet Navigation: _____ Understand browser _____ Recognize Home page _____ Navigate page _____ Select a hyperlink	Research and Communication	2	1, 5, 6		
2.02	Explain Internet care and caution	Research and Communication	2	1, 5, 6		
2.03	Peruse Electronic Encyclopedias	Research and Communication	2	1, 5, 6		
2.04	Use Find/Search Tool in electronic encyclopedia with teacher directed topics	Research and Communication	2	1, 5, 6		
3.00	Review skills from previous grades	Research and Communication	3	1, 5, 6		
3.01	Locate or Insert URL	Research and Communication	3	1, 5, 6		
3.02	Understand common domain extensions	Research and Communication	3	1, 5, 6		
3.03	Utilize Navigation tools on the toolbar: Home, Back, Forward, Refresh, Print	Research and Communication	3	1, 5, 6		
3.04	Recognize Links and follow them logically	Research and Communication	3	1, 5, 6		
3.05	Select and Print information	Research and Communication	3	1, 5, 6		
3.06	Use electronic/web resources (encyclopedias, dictionaries, almanacs, etc.) to research teacher directed or student selected topics	Research and Communication	3	1, 5, 6		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
4.00	Review skills from previous grades	Research and Communication	4	1, 5, 6		
4.01	Introduce a brief history of the Internet	Research and Communication	4	1, 5, 6		
4.02	Discuss Copyright Issues (Age-Appropriate Language)	Research and Communication	4	1, 5, 6		
4.03	Discuss Communication using the Internet (email elements, netiquette, cautions)	Research and Communication	4	1, 5, 6		
4.04	Use an Atlas and Timeline in Electronic Encyclopedias	Research and Communication	4	1, 5, 6		
4.05	Explain Search Engines: ____What they are ____How they work ____Different types ____Searching skills	Research and Communication	4	1, 5, 6		
4.06	Cite electronic sources (MLA/Age-Appropriate)	Research and Communication	4	1, 5, 6		
4.07	Implement directed research: scavenger hunt	Research and Communication	4	1, 5, 6		
4.08	Introduce multitasking/ note-taking – Internet	Research and Communication	4	1, 5, 6		
4.09	Note-taking: Select information from electronic sources: Encyclopedias or Internet, copying and pasting to a word processing program, saving, and printing	Research and Communication	4	1, 5, 6		
5.00	Review skills from previous grades	Research and Communication	5	1, 5, 6		
5.01	Explain connection types and requirements	Research and Communication	5	1, 5, 6		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
5.02	Explain service provider (ISP)	Research and Communication	5	1, 5, 6		
5.03	Use Right click to open selected menu functions	Research and Communication	5	1, 5, 6		
5.04	Set Favorites/Bookmarks	Research and Communication	5	1, 5, 6		
5.05	Explore history of links	Research and Communication	5	1, 5, 6		
5.06	Use Boolean search techniques	Research and Communication	5	1, 5, 6		
5.07	Explore directed research: Webquest, Online Interactivities	Research and Communication	5	1, 5, 6		
5.08	Develop multitasking/note-taking skills using Internet	Research and Communication	5	1, 5, 6		
5.09	Discuss ethics of web content: violence, hate, etc. (Note – In a URL the information after a tilde (~) reflects one’s personal opinion)	Research and Communication	5	1, 5, 6		
6.00	Review skills from previous grades	Research and Communication	6	1, 5, 6		
6.01	Discuss ways to communicate using the Internet such as Instant Messaging, Chat Rooms and Newsgroups (Students should know what they are but need not use them in school)	Research and Communication	6	1, 5, 6		
6.02	Discuss ethics of creating your own site	Research and Communication	6	1, 5, 6		
6.03	Evaluate a website for accuracy, comprehensiveness, relevance, bias, point of view, etc.	Research and Communication	6	1, 5, 6		

Skill Number	Standard	Application	Grade Level	National Standard(s)	Date Skill Addressed	Resources
7.00	Review skills from previous grades	Research and Communication	7	1, 5, 6		
7.01	Read and discuss a comprehensive history of the Internet	Research and Communication	7	1, 5, 6		
7.02	Download information/plugin (teacher-directed)	Research and Communication	7	1, 5, 6		
7.03	Create a Website: insert text, graphics, and link pages	Research and Communication	7	1, 5, 6		
8.00	Review skills from previous grades	Research and Communication	8	1, 5, 6		
8.01	Develop Web Page advanced skills: for example, create tables, animated clip art, create a banner running across the top	Research and Communication	8	1, 5, 6		

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TELECOMMUNICATIONS

I. Introduction

A. Definition of the Internet

The Internet is a network of networks linking computers throughout the world by connecting them through satellites and high-speed data transfer. The Internet can be an important part of student research; however, students must be aware of the fact that the information is not always accurate at every site. For example, the tilde (~) in a web address reflects someone's personal folder on that web server and warrants careful consideration before counting it as fact.

B. Short History

In 1957 the United States created the Advanced Research Projects Agency Network within the Department of Defense. The main purpose of this agency was to establish a lead in science and technology applicable to the military. The Department of Defense in 1969 commissioned the ARPANET to research computer networking. The military wanted to design a computer network that would withstand a partial destruction (nuclear attack) and still function as a network. The agency reasoned that the central control of the information through one or a few hub computers would enable the system to be easily accessible to attack. The ideas were to have each computer on the network communicate with every other computer on the network. In this manner if one point of the network were destroyed, the others would reroute communications through different pathways.

By 1971 there were 15 individual nodes of ARPANET on line having 23 host computers tied together. The first email program was created in 1972 to send messages across the Internet. The following year the first international connections were made from to Norway and England.

In 1982 the ARPANET approved Transmission Control Protocol and Internet Protocol (TCP/IP) as a standard for communication. From this came the definition of Internet as a connected set of networks.

The National Science Foundation created the NSFNet backbone on ARPANET. The NSFNet backbone created 5 supercomputer centers allowing academic researchers access to high power computers. The NSF built its own network based on the Internet Protocol (IP) connecting the 5 region centers. The individual university networks chained together and were linked to the closest regional center.

The first K-12 schools were connected to the system in 1988. The most active Internet mailing list known as Kidsphere went on line in 1989. At Ohio University the first commercial online service (CompuServe) was created and the first email relay began.

In 1990 the Internet became the official network and ARPANET went out of existence. The World Wide Web (WWW) was created in 1992 by CERN (Conseil Européen pour la Recherche Nucléaire), a company based out of Switzerland. From 1993 to the present the Internet has been a major communication means for businesses as well as educational institutions. Today, FTP (File Transfer Protocol) software is commonly used to transfer large files and also to place documents on a host computer.

C. Copyright Issues

Internet pages are copyrighted automatically. The student cannot safely post (and therefore re-copyright) anything for the general public without permission – even if credit is given.

II. Internet Access

A. Basic Requirements

1. Computer Components

Currently, computers are capable of Internet access. Generally speaking, the faster the computer (processor) and the more RAM the better for Internet access. Older, slower machines can do the job but at a considerably slower rate. The graphic content on the Internet today demands more and more speed and RAM to view and/or download information at a desirable rate.

2. Connectivity

There are various means of connecting to the Internet. They are listed below in the order of speed of data transfer from slowest to fastest.

- ✎ Standard phone line and modem
- ✎ DSL (Digital Subscriber Line) - uses a typical phone line but splits it for dedicated Internet service
- ✎ Cable – provided by the local cable company
- ✎ T1 Line (fractional or full)

3. Modem/Router

A modem/router is a device that attaches to a computer, either internally or externally, that acts as a translator. It takes the digital information produced by a computer and "modulates" it so it can be transmitted over a phone line to another computer. Another modem/router "demodulates" the information so the receiving computer can understand it. These devices determine the speed at which the information is transmitted between computers. This is expressed as baud rate or BPS (bits per second).

4. Internet Service Provider

An Internet Service Provider (ISP) is an organization that provides access to the Internet. A fee is usually required for this service. There are literally thousands of Internet Service Providers from which to choose. NOTE: When selecting an ISP, be sure local access numbers are available or you will be charged for long distance service (applicable only if you are connecting via a phone line and modem.)

5. Browser

A browser is necessary to navigate the Internet. The two most common browsers are Netscape® Communicator/Navigator and Microsoft® Internet Explorer. Safari is available for Mac users. These programs are either preinstalled on the computer or provided by the ISP.

Bookmarks/Favorites are frequently visited sites that are indexed by the user. Bookmarks are used by Netscape and Favorites are used by Internet Explorer. Bookmarks/Favorites are menu items. The user may organize these into folders by topic. One may change the name of the bookmark/favorite to a name that is familiar to the user.

B. Surfing the Net

1. URL (Uniform Resource Locator) - URLs are the Internet addresses that provide a standard format for accessing websites.

http://www. archdiocese-phl.org

1 2 3 4

1. http: stands for Hypertext Transfer Protocol. It transports the hypertext information.
2. www: represents a website on the Worldwide Web.
3. archdiocese-phl: represents the server, a computer, where the website resides.
4. .org: extension that indicates the type of site. Together the server name (3) and the indicator or domain extension (4) create the domain name.

Some common domain extensions are:

.edu	Higher Education
.org	Non-profit organization
.gov	Government
.com	Commercial enterprises
.net	Network
.mil	Military
.int	International
.biz	Business
.pro	Professionals
.tv	Television

2. Home Page

A Home Page is a page on the World Wide Web (web page) that serves as a starting point for any site. It is the primary page that appears when first logged onto the Internet. Every web site has its own primary page.

Every home page is a web page but not every web page is a home page. A web page can contain text, graphics, hyperlinks, audio, video or input forms.

3. Hyperlinks – Hyperlinks are pathways to other sites. For example:

<http://www.archdiocese-phi.org>
<http://www.harvard.edu>
<http://www.phillynews.com>
<http://www.NASA.gov>
<http://sln.fi.edu>

Hyperlinks are usually underlined text or may be graphics. A hyperlink is identified when the pointer changes to another symbol, such as a hand.

4. Search Engines

The basic search tool is the search engine. No single search engine covers 100% of the Internet. Since the information is so voluminous, what cannot be found through one search engine might be found through another. Every search engine has its own criteria. Links are provided for more advanced searches.

In order to use a search engine, type a keyword in the text entry box and click on Search. The search engine looks through its database for matches to the keyword.

Ask Jeeves <http://ajkids.com>
Google <http://google.com>

In the process of searching error messages may occur. The most common messages are:

- This page cannot be displayed – This occurs when the URL is misspelled or the connection is hung up.
- Server not found (Error 404) - there is something wrong with the address used or that the site has been removed from the server.

The Archdiocesan policy states that all student activities on the Internet must be diligently monitored at all times. Pennsylvania's state law, Children's Internet Protection Act (CIPA), requires a filtering program installed on school computers before accessing the Internet or risk losing their federal funding.

Some ISPs filter adult materials through their preferences profile. There are software programs that can also filter such material; however, not all are totally foolproof. There is no substitute for supervision.

Help books and help screens are recommended. The individual situations are so different that the topic cannot be adequately addressed in a few pages. Changes occur daily.

III. Communicating over the Internet

A. Email - electronic mail should be limited to educational uses.

Internet communication has developed a language of its own which may include misspellings and incorrect grammar. Students need to understand that there is a difference between proper communication and internet language.

Some emails may contain attachments indicated by a symbol, such as a paper clip, or text. With the proliferation of computer viruses, attachments should ONLY be opened if the identity of the sender is known.

- To open the attached file/document click on the symbol or hyperlink.
- To create an attachment, refer to the email instructions of the browser in use.

B. Chat Rooms

Chatting is an electronic way of communicating. Chat rooms allow "real time talk" with other network users, worldwide. Chat rooms should be limited to educational uses.

Your teacher may structure a workable chat session using a classroom display monitor and a single Internet connection. In this situation, a class could converse with others, such as an author. Some newspapers (e.g. The Philadelphia Inquirer) publish a "What's Online" column containing websites where one can chat with authors, actors, sports figure, etc. online. With some planning as to questions to ask, a meaningful lesson can be developed. Since the class is funneling questions or answers through one good typist and since a website is being used, many of the problems associated with chat rooms are eliminated.

ISP chat rooms are what most students use at home. Every student needs to know how to protect oneself in these chat rooms, particularly the pitfalls involved. Students must be frequently reminded of the AUP contract that was signed and agreed upon for the Internet. These guidelines carry over to the home.

When using chat rooms, students should be warned to never provide any personal information, phone numbers, passwords or photos.

C. Instant Messaging (IMing)

Instant Messaging is a form of immediate communication using the Internet. Several companies provide free software and mechanisms for Instant Messaging. A school needs to carefully consider the consequences of using this form of communication before sanctioning its use.

D. Newsgroups

Newsgroups are global bulletin boards, which provide access to the most complete repository of information on a topic. They are similar to email except that you communicate through bulletin boards and your correspondence may be public to all members of the group. Newsgroups are not as instantaneous as email or a chat room interaction since posting is delayed. The reading and writing is done off-line.

In the Elementary School, Newsgroups should primarily be used for research in a Read Only mode.

There are numerous SIGs (Special Interest Groups), such as:

- email communication with live experts
- forums
- round tables
- groups on hobbies, travel and food

Newsgroups are organized into hierarchical categories. The categories are:

- comp. (computer topics)
- misc. (miscellaneous)
- news. (newsgroup-related stuff)
- rec. (recreation)
- SCI. (science),
- Soc. (society),
- talk. (discussion),
- alt. (alternative).

Netiquette for Newsgroups

- Know the Group's rules of acceptable behavior.
- Always include a subject line.

- Do not type in capitals. (SHOUTING)
- Keep article or follow-up posting brief, germane, non redundant and to the point.
- Post only what adds to the discussion.
- Do not post messages for individuals.
- Do not use fancy characters, formats, etc.
- Do not post advertisements unless that is the function of the group.

E. Creating a website

School Webpages can be an effective means of communication, however, the content should reflect both the laws of ethics and a respect for the privacy of the school community. There are software packages that facilitate the creation of web pages and easy uploading to the web. Examples of these programs are:

- Claris Home Page®
- Microsoft Front Page®

ISPs provide server space and page development assistance. Please check with the ISP provider for more information.

IV. Citing Internet Resources

All information retrieved from the Internet should be cited. Consult the Archdiocese Library guidelines.

For additional information on how to cite Internet references, consult the following websites.

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

<http://www.noodletools.com>

<http://www.liu.edu/cwis/cwp/library/workshop/citmla.htm>

V. Children's Internet Protection Act

CIPA Compliance Checklist

<http://www.sl.universalservice.org/reference/CIPA.asp>

Schools and libraries that plan on receiving E-rate discounts on Internet access and/or internal connection services after July 1, 2002, need to be in compliance with the Children's Internet Protection Act ("CIPA"). CIPA compliance means that schools and libraries are filtering their Internet services and have implemented formal Internet Safety Policies (also frequently known as Acceptable Use Policies).

The Federal Communications Commission ("FCC"), charged with administering CIPA for E-rate purposes, has established only the broadest guidelines for interpreting the filtering and policy requirements of the Act. The following checklist is designed as a simple, but unofficial, guide for determining whether a school or library meets the CIPA compliance guidelines.

Internet Filtering:

Basic Requirement: CIPA requires the implementation of a “technology protection measure” – generally referred to as an Internet filter – to block access to visual depictions deemed “obscene,” “child pornography,” or “harmful to minors.” Filtering is required for all Internet-enabled computers whether used by minors or adults. For E-rate purposes, filtering for adult Internet usage can be disabled for “bona fide research or other lawful purpose.”

Filtering Provisions	Yes (Y) or No (N)	Comments –Including filtering product name, if known
Filtering is incorporated with the service provided by the Internet Service Provider.		
Filtering is provided locally for all Internet-enabled computers on a networked basis.		
Filtering is provided individually on each Internet-enabled computer.		

CIPA compliance requires a “Y” in at least one of the Filtering Provision boxes listed above.

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Internet Safety Policy:

Basic Requirement: CIPA requires the public adoption and enforcement of an “Internet Safety Policy” covering the filtering discussed above. For minors, the policy must also address monitoring of online activities, the safety and security of all forms of direct electronic communications, unauthorized online access, and unauthorized disclosure of personal identification information.

Policy Provisions	Yes (Y) or No (N)	Comments
Filtering will be provided for all Internet-enabled computers used by students, patrons, and staff.		
Filtering will be disabled only for bona fide research or other lawful purposes.		
Online activities of minors will be monitored for appropriate use.		
Safe and secure use by minors of direct electronic communications (including e-mail, chat rooms, and instant messaging) will be assured.		
Unauthorized online access, including “hacking” and other unlawful activities, is prohibited.		
Unauthorized disclosure, use, and dissemination of personal identification information regarding minors are prohibited.		
The Policy was adopted with reasonable public notice and after at least one public meeting or hearing.		Meeting Type: _____ Meeting Date: _____

CIPA compliance requires a “Y” in all of the Policy Provision boxes listed above.

Checklist Completed By:

Checklist Certified By:

Printed Name: _____ Printed Name: _____

Title: _____ Title: _____

Signature: _____ Signature: _____

Date: _____ Date: _____

VOCABULARY

General Technology Vocabulary

Application software – Includes programs such as word processors, spreadsheets, and database management systems.

Central Processing Unit (CPU) – The heart of the computer, this is the component that actually executes instructions.

Computer – A machine that processes data according to a set of instructions that are stored internally either temporarily or permanently. The computer and all equipment attached to it are called *hardware*. The instructions that tell it what to do or anything that can be stored electronically is called *software*.

Hard drive – A magnetic disk on which you can store computer data. Storage is usually measured in MB (megabytes) or GB (gigabytes). Hard drives are usually internal but external drives can be installed.

Headphones – These may be used in lieu of the speakers.

Input device – Usually a keyboard or a mouse, the input device is the conduit through which and instructions enter a computer.

Keyboard – A set of keys used as an input device.

Mass storage device – Allows a computer to permanently retain large amounts of data. Common mass storage devices include disk drives, tape drives, zip drives and USB flash drive.

Memory – Enables a computer to store, at least temporarily, data and programs.

Monitor – A display screen used to present output from a computer, camera, VCR, or other video generator.

Mouse – A device that moves the cursor on the screen.

Output device – A display screen, printer, or other device that lets you see what the computer has accomplished.

Printer – A device that converts computer output into printed images. This output is also called printout or hard copy.

Speakers – Output devices used to control the sound in a program.

Storage – The ability of a device to hold data. Also known as mass storage. Some types of storage are

- CD-ROM** - **Compact Disc-Read-Only Memory**
- CD-R** - **Compact Disc-Recordable**
- CD-RW** - **Compact Disc-ReWritable**
- DVD** - **Digital Versatile Disc or Digital Video Disc**
- DVD-R** - **Digital Video Disc-Recordable**
- DVD-RW** - **Digital Video Disc-ReWritable**

System software – Includes the operating system and all the utilities that enable the computer to function.

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General Vocabulary for Applications

Copy – To take a picture of information on the screen to be used later in the document. Information is stored on the clipboard.

Cursor – A blinking symbol on the screen that shows where the next keystroke will appear. It can also be called a prompt.

Cut – To remove text/graphic from the screen

Delete – To erase

Formatted text – The way the text looks on the screen. Options are selected by the user.

Hyperlink – An element in an electronic document that links to another place in the same document or to an entirely different document or website.

Open – To transfer a file into an application

Paste – To transfer information into a document from the clipboard

Print – To create a paper copy of a document.

Save – To store a document onto a storage medium.

Save As – To store a document as a new file or to a new location.

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Word Processing Vocabulary

Alignment – Refers to text's relationship to a left/right margin or center of a line

Character – Can either be a letter, number or symbol

Clipboard – Special area of memory which temporarily holds information

Column - Layout of a page. A letter is one column and a newsletter is three.

Column Break – Stops the data input in the first column and continues the input into the next column

Data Disk – Term used to describe a formatted disk upon which files can be saved.

Document/file – Anything you write and save as one unit using your word processor

Default Mode – The action the computer will perform unless the user specifies differently.

Footer - Information that can be placed at the bottom of each page. It is not part of the main text.

Hard Copy – Information from the computer printed on the paper; also called a “printout.”

Hard Return – The enter/return key is pressed moving the cursor to the next line.

Header – Information that can be placed at the top of each page. It is not part of the main text.

Highlight – To drag the mouse to select text

Insert Mode – Moves existing text to the right to allow room for new text to fit in without disturbing the existing text.

Overstrike or Replace Mode – Replaces or writes over the old text.

Page Break – Creates a new page within the same document.

Tab – Key used to indent the text a specific number of inches.

Word Wrap – An automatic function, which ensures that the cursor will move down to the next line.

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Multimedia Vocabulary

Action - An event that a button or object carries when activated.

Automatic Timer - Activates an object automatically at a user specified amount of time.

Backgrounds - This is paint or clip art that is inserted to a slide or card.

Browse Tool - This tool allows a user to interact with a slide or card or stack.

Browsing and Navigating – Follows or creates a path along links between information.

Button - A link that is added to a card or slide, which is used to interact with another card/slide or stack.

Card/Slide – An individual page within a multimedia presentation.

Framed based animation - This is animation done by linking together several pictures into an electronic "flip book".

Fill Tool – This is a paint bucket tool. It is used to spill color within enclosed lines in a drawing.

Graphic -

Bitmap (BMP) – A file format that saves using pixels. Graphics saved in this format are extremely large but very detailed.

Graphics Interchange Format (GIF) - A compressed file format used for animated graphics. (Originated by CompuServe)

Joint Photographic Experts Group (JPEG) - A compressed file format for images that uses the smallest amount of space when saving. This is a popular format for photographs.

Moving Pictures Experts Group (MPEG) – A compressed file format for video.

Graphic Object – It is art that floats above a background. Once something becomes a graphic object, it cannot be painted over.

Graphic Tool – This tool is used to edit graphic objects.

Hypertext – It is text that carries out an action when clicked.

Lasso Tool – This tool lets you select a particular object without including the background.

Line Tool – This tool is used to draw straight line.

Links – The way information units are physically and conceptually connected and interrelated.

Magnifying Glass – This tool allows a card to be magnified (enlarged) for fine-tuning.

Media – Tools used to store, process, and communicate information

Multimedia – Computer based applications that allow the user to see and hear different types of information via one screen with audio support.

MPEG Third Layer (MP3) – format for making large music files smaller without degrading the audio quality

Nodes – Information units within a multimedia system.

Oval Tool – This tool creates ovals and circles.

Oval Selector – This tool allows you to select areas on a screen in this shape.

Pencil Tool – This tool is used to create fine details.

Rectangular Selector – This tool allows you to select areas on a screen in this shape.

Rectangular Tool – This tool creates rectangles and squares.

Scanner – Device that transfers printed text or graphic to computer format. Most scanned files are saved by default as bitmaps.

Sound Tool – This tool is for editing buttons that contain sound.

Storyboard – This is a graphic list of slides or cards.

Text Object – This is a box that can be placed on top of a card or slide, similar to a word processor, allowing a user to type in text.

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Database Vocabulary

Browse – To move through and examine a database without making changes

Database – A tool that allows you to organize and analyze information

Delete – Remove an existing record or field

Field – Category of information

File – A group of related records

Find – Search for data based on field information

Insert – Add a new record, field, graphic, hyperlink, sound or video

Layout – A design for printing data

Query – Filters out the information using a variety of criteria

Record – A set of fields about one item

Select – Choose data according to specific criteria

Sort – A function that organizes the data in a specific manner

Template – A file that includes the fields and no entries

View – To examine data in various forms

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Spreadsheet Vocabulary

Absolute Reference - A cell reference that doesn't adjust when you copy or move a formula. It includes a symbol (such as \$) before both the column letter and the row number (\$B\$5).

Active Cell - The cell that is highlighted and ready for data entry.

Argument - Used by a function to perform a set of calculations.

Average - Function that adds the values of cells in a range and divides the result by the number of cells.

Bar Chart - Chart that uses rectangles of varying heights to show values in a spreadsheet.

Cell - The intersection of a row and a column on a spreadsheet in which data can be entered. Cells are designated by their column letter and row number, such as A1, C2, H5.

Cell Indicator - Location at the top of the window that shows the location of the cell cursor.

Cell Name - Column letter and row number used to identify a cell. For example, C4.

Cell Cursor - Solid outline around a cell which is used to indicate the current cell. It can be moved from cell to cell by using the mouse or arrows keys on the keyboard. Data can be entered into a cell only when the cursor is located on it.

Cell Pointer – The spreadsheet mouse pointer. It is the shape of a white cross.

Cell Protection – The format menu has a Protection option. Clicking on that enables the current range or cell to be locked. A locked cell cannot be changed by user input. The data continues to remain unchangeable until unlocked.

Chart - Graphical representation of data stored in a spreadsheet.

Column - Appears vertically in a spreadsheet and is identified by letters at the top of the spreadsheet window.

Complex Formula - Formula containing more than one operation.

Formula Bar - Area at the top of the window where data entered from the keyboard is displayed as it is entered into the cell. Also displays the contents of the selected cell.

Formula - Equation consisting of numbers, other cell designators, and mathematical symbols in order to perform a mathematical operation. The result of the formula is displayed in the cell that holds the formula.

Function - A named and stored procedure that returns one value.

Label – Words or words and numbers that are entered into a spreadsheet cell.

Legend - Area of a chart or graph that explains what data is being represented by the colors or patterns used in the chart.

Line Chart - Chart that uses points that are connected by lines.

Mathematical Symbols - Add +, Subtract -, Multiply *, Divide /, Parenthesis (), and Equal Sign = denoting mathematical operations.

MAX - Function that displays the largest value in a series of cells.

MIN - Function that displays the smallest value in a series of cells.

Operand/Operator - The number or cell reference used in a spreadsheet or database formula.

Pie Chart - Chart that shows the relationship of parts to a whole; each part is represented as a slice of the pie.

Range - A highlighted group of cells.

Relative reference - In a formula in a spreadsheet, a reference to the contents that's adjusted by the program when you copy the formula to another cell or range of cells.

Row - Appears horizontally in the spreadsheet and is identified by numbers on the left side of the spreadsheet window.

Series - The set of data represented in a chart.

Sheet Tabs - Used to switch or open sheets in a workbook. The tab with a white background indicates the currently displayed sheet.

Sort - Operation that rearranges data so it is in a specified ascending or descending order, usually alphabetical or numerical.

Spreadsheet - Software program used to perform mathematical calculations. It can also represent data in a graph. It is a grid of rows and columns containing numbers and text. The purpose of a spreadsheet is to display information and solve problems that involve numbers.

Sum – Adds the values in the argument. =SUM(B2:D2)

Title - Used to describe what is in a chart.

Value - Type of data that can be entered into a spreadsheet cell and consists of numbers that can be manipulated by formulas.

Wizard – Instructional help that guides the user through a series of steps to accomplish a task.

Workbook - A collection of related worksheets kept in a single file. (Excel)

Worksheet - Sheets of rows and columns within which headings, values and formulas are entered.

X-Axis - In a graph, the categories axis, which is usually the horizontal axis.

Y-Axis - In a graph, the values axis, which usually is the vertical axis.

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Telecommunication Vocabulary

Bits per second – (bps) The measurement of the speed of data transfer in a communication system.

Boolean Search - George Boole, a Mathematician, who designed a method of symbolic logical language. This was adopted as a method of advanced searching on the web. Boolean operators are: AND, OR, NOT, ANDNOT, ORNOT, NOR, *(Wildcard). Boolean operators may not work on all search engines. (Check advanced help on search engines)

Browser - A client program used to read the Web.

Cache - Pronounced “cash.” A dedicated bank of high-speed memory or a reserved section of regular memory used to improve performance. The cache provides a temporary storage area for instructions and data that is closer to the CPU’s speed.

Charter - An official description of what a newsgroup is all about, whether it's moderated, and what kinds of topics the group will discuss. For specific information about a newsgroup, read the group's FAQ.

CIPA – Children’s Internet Protection Act

Cookie - A file containing identifying information on a user. To accept a cookie, means that you agree to share the information that is on that file with the parties that run the site from which the current request was submitted. Cookies are stored on the hard drive in the Windows folder in a Cookie folder.

Default - The original settings or instructions, usually set by the manufacturer, that a program uses unless explicitly changed by the user.

Demodulate – To filter out the data signal from the carrier. (See modulate)

Digital Transmission Line (DSL) — Part of a telephone line that handles high-speed data such as interactive TV and video.

Download/upload – To download is to transfer a file from another computer to the user’s computer. To upload is to send a file to another computer.

E-mail – (short form for electronic mail) Allows users to send and receive mail over the Internet.

Emoticon - (also smiley) Little faces made out of keyboard characters, used to express smiles :-), winks ;-), surprise :-0 and more. (If you don't see the faces, put your left ear on your left shoulder and look again.)

Expired - Article/time Newsgroup articles and web sites are stored for a limited time. An article that has been deleted and is no longer available has "expired."

FAQ (Frequently Asked Questions) - A list of answers to Frequently Asked Questions and other useful information. (When pronouncing, spell it out or rhyme "FAQ" with "back.")

Fiber-optic cable - Glass cabling designed to carry light pulses, often used for backbones. (large, fast network connecting other networks)

Firewall – A security measure on the Internet, protecting information, preventing access, or insuring that the users cannot do any harm to underlying systems.

GIF - Graphics Interchange Format - An extremely popular compressed graphics file format originated by CompuServe but readable in most platforms.

Global – Searching an entire body of information.

Hacker – A computer user who illegally visits networked computers to look around and cause damage.

Home Page – Default page that loads in whenever you start your Web browser. Your homepage usually is the home page of the company that provides your browser.

Hyperlink – A link to text, movies, graphics etc. which allows the user to move through a document or a web site or jump to another web site or document.

Hypertext markup language (HTML) - It is the hypertext language used in Web pages. It lets the text include formatting for the Web page.

Hypertext Transport Protocol (HTTP) - The Internet protocol that defines how a Web server responds to requests for files, made via anchors and URLs.

Internet – The global “network of networks” that connects more than 10 million computers. The Internet is virtual “space” in which users send and receive email, browse for information and receive programs.

Internet Service Provider (ISP) - Online services are the gatekeepers of the Internet. It provides you with the software and telephone/cable connection to get online. Examples of an ISP are America Online (AOL), AT&T, and MSN.

ISDN - Integrated Services Digital Network, a digital circuit-switched network that can carry both voice and data communication over a single cable.

JPEG - A compressed file format for images that is more efficient than GIF.

Keyword – The main idea or word used in defining a search.

Modem - **MOdulator-DEModulator** - A device that adapts a terminal or computer to a phone or cable line. It converts the computer's digital pulses into audio frequencies and converts them back into pulses at the receiving side.

Moving Pictures Experts Group (MPEG) – A compressed file format for video.

Netiquette – The rules of conduct for Internet users. Violating netiquette could result in flaming or removing you from a mailing list. Some service providers will even cancel a user's Internet account, denying him access to the Net.

Network – A group of computers linked together. Most school networks are known as LANs, or Local Area Networks because they are networks linking computers in one small area. The Internet could be referred to as a WAN or a Wide Area Network because it connects computers in more than one local area.

Newbie - A beginner. All experts were newbies once.

Newsgroup - (also group) An Internet discussion forum. All together, the thousands of newsgroups form a global bulletin board where people talk about every topic imaginable. Newsgroups are where you post articles.

Newsreader - The software you use to access newsgroups. A newsreader lets you read articles, respond to them and post your own.

Offline - 1.) Not currently connected to the Net. 2.) Said of a person no longer involved in a chat.

Online - Currently connected to the Net.

Plug-in – (also called Plug and Play) The ability to add a new computer component or feature with ease. True plug-ins are download as needed from sites requiring them from viewing web material.

Post - The act of sending an article to a newsgroup so that others can read and reply to it.

Protocol - An agreed upon set of rules which allows otherwise incompatible machines or software to communicate.

Read Only – Describes a file that when opened can be read but cannot be altered and saved.

Remove - The newsgroup command to unsubscribe from a newsgroup, to kill or erase a file or directory.

Reply - A response to an email message or a newsgroup post, and should include a reference to the original message.

Search Engine – A web site helps users find information. These search engines look through all the web sites that they keep track of to find the user’s data. Examples (Yahoo, AltaVista, Infoseek, Metacrawler)

Server - A computer that provides a resource on the network. Client programs access the servers to obtain data.

Signature - (also sig) Text added to the bottom of an article or e-mail to give the reader more information about the poster. Signatures can include e-mail and Web addresses, quotes, text art and more, though signatures should not be longer than 4 or 5 lines.

Spam - An article or advertisement that is sent to numerous internet addresses and has no inherent value.

Subscribe - Join a mailing list or start reading a newsgroup.

T1 line - A long distance digital point to point communication circuit developed by AT&T.

Transmission Control Protocol/Internet Protocol (TCP/IP) - This is the set of rules that are followed for transmitting data over the Internet.

Uniform Resource Locator (URL) – A unique address or location of a website. No two websites have the same address. www.nasa.gov

Web Browser - “Window of the Web” computer software program that has the ability to communicate with a web server to use the information stored on that server and display the information that was stored on that server. (Internet Explorer or Netscape)

Weblogs or Blogs – A Web page that serves as a publicly accessible personal journal for an individual. Typically updated daily, blogs often reflect the personality of the author.

World Wide Web - Also called the WWW or Web, an interlinked collection of hypertext documents (Web pages) residing on Web servers and other documents available via URLs.

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RECOMMENDED HELP AND ENRICHMENT

TYPING CURRICULUM

Success with Keyboarding Curriculum Guide in its 6th Edition

By: Drs. Carol and Joe Utay

Total Learning Centers

<http://totallearningcenter.com/>

APPROVED ELEMENTARY TECHNOLOGY RESOURCES

50 Quick & Easy Computer Activities for Kids. Tammy Worcester. 2003

Visions Technology in Education

www.toolsforteachers.com

All Technology Activity Books by Teacher Created Resources

www.teachercreated.com

Application Guidebooks and Tutorials by Lawrenceville Press

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

Empowering Students with Technology. Alan November. 2001

Skylight Professional Development

<http://www.skylightedu.com>

Integrated Computer Projects. Momorella & Hohenstein. 2003. Basic

Intermediate, Advanced

Thomson South-Western

www.swlearning.com

Keyboarding and Computer Applications. 2004. 4-up

Technology Applications Level I and II. 2004. 6-8

Prentice Hall

www.PHSchool.com

Learning with Computers Trabel & Hoggatt. 2004 Levels 3-5

Typing Time. Hoggatt & Shank 2003. 6-8

Thomson South-Western

www.swlearning.com

Making the Classroom Computer Connection Tammy Worcester. 1999

Rev. 2002.

Visions Technology in Education

www.toolsforteachers.com

National Educational Technology Standards for Students: Connecting Curriculum and Technology k-12

International Society for Technology in Education, 2000

www.iste.org

Step-By-Step series by Computer Literacy Press

<http://www.complitpress.com>

Technology Integration in the 21st Century Classroom. Tony Brewer. 2003

Visions Technology in Education

www.toolsforteachers.com

Workshop Series by Tom Snyder Productions

www.tomsnyder.com

TECHNOLOGY CONFERENCES

Pennsylvania Educational Technology Expo & Conference

(Formerly ~ PETC - (Pennsylvania Eastern Technology Conference))

This is a yearly conference. These conferences include every phase of technology. This year it will be held at the Hershey Lodge and Convention Center in Hershey, PA. This conference is usually held in February. Go to their website to take a look at what is going on. You can even download sessions if you can't attend.

<http://www.peteandc.org>

National Educational Computing Conference – NECC

<http://www.iste.org>

This conference is a forum in which to learn, exchange, and survey the field of educational technology. It is held annually at different sites throughout the United States.

FREEBIES

Fund Raiser

Computers for Education

Murfreesboro, TN

1-800-272-8260

This is a magazine promotion that earns your school points or cash for computer hardware, software or multimedia equipment. It is very easy to do and is very worthwhile doing. They will send you all you need to run the promotion. Students fill out a booklet with 9 names and addresses of potential magazine buyers. The best part is that no one has to purchase anything and you will still get the points or cash. A school of 700 can earn \$4,000.00 in just one week.

Technology Magazines

Technology & Learning - They also have a great web site

www.techlearning.com

The Journal

www.thejournal.com/freesub

Software

Dole 5 A Day Software

www.dole5aday.com

SUGGESTED SOFTWARE

PRODUCTIVITY / UTILITIES (check for most recent versions)

Microsoft Office - Microsoft

Scholastic Keys – Learning Suite that Interfaces with Microsoft Office for K to 5

AppleWorks/ Clarisworks- Apple Computer, Inc.

Inspiration/Kidspiration - Inspiration Software, Inc.

KEYBOARDING

UltraKey - Knowledge Adventure
Type to Learn - Sunburst
Mavis Beacon - Broderbund
JumpStart Typing - Knowledge Adventure
Read, Write and Type - The Learning Company
Kids Keys – Sunburst
Bernie's Typing Travels – Thompson Southwestern
Keyboarding and Computer Applications – Prentice Hall

TEACHER TOOLS

Grade Quick - Jackson Software
Wordsearch Studio - Nordic Software

SECURITY TOOLS

FoolProof - Riverdeep
McAfee Virus Scan - McAfee.com Corp.
Norton Virus Scan - Symantec Corp.

INTERNET FILTERS

We-blocker.com (free)
Cyber Patrol - SurfControl, Inc.
Cyber Sitter - Solid Oak Software Inc.

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RUBRICS
Performance Indicators for Technology Literate Students - Grades 4 to 8
Based on NETS
(National Educational Technology Standards)

	Exceeding 4	Developing Appropriately 3	Needs Improvement 2	Unsatisfactory 1
Students demonstrate the knowledge and use of the following:	Consistently	Frequently	Occasionally	Rarely
Comprehension: Understands basic computer operations and concepts				
Competence: Applies understanding of productivity, communications, research, problem solving and decision making tools				
Accountability: Practices ethical and responsible use of technology systems, information, and software				
Personal Responsibility: Completes work on time, in an appropriate manner				
Collaboration: Works effectively with others and contributes to the overall productivity of a group				

Sample: Skills and Application of Skills

Rubric for Technology -- Grades 4 to 8 Based on NETS (National Educational Technology Standards)

Name: _____ School: _____

Grade: _____ Room: _____ Date: _____

Project/Activity: Create a three card Hyperstudio Multimedia Presentation on a State of the United States with information on the general statistics of the state, the landforms, and the historical sites. Include graphics, text, sound, and transition buttons.

Performance Indicators		Exceeding 4	Developing Appropriately 3	Needs Improvement 2	Unsatisfactory 1
Student demonstrates the knowledge and use of the following:		Consistently	Frequently	Occasionally	Rarely
Comprehension: Understands basic computer operations and concepts	Create, place, and adjust the size of a textbox				
	Edit contents of textbox by changing font size, color, and style				
	Insert background items (color, texture, graphic/object)				
	Create and place transition buttons on each card.				
	Save using Save As (different name, location, format)				
	Use presentation mode to present project				
	Rows can be added or deleted as needed				

Project/Activity: Create a three card Hyperstudio Multimedia Presentation on a State of the United States with information on the general statistics of the state, the landforms, and the historical sites. Include graphics, text, sound, and transition buttons.

Performance Indicators		Exceeding 4	Developing Appropriately 3	Needs Improvement 2	Unsatisfactory 1
Student demonstrates the knowledge and use of the following:		Consistently	Frequently	Occasionally	Rarely
Comprehension: Understands basic computer operations and concepts (cont.)	Uses Electronic Encyclopedia to gather information				
	Uses specified websites to gather information				
	Explores the problem of what and how much information to include in project				
	Decides upon placement and design of project				
	Rows can be added or deleted as needed				
Accountability: Practices ethical and responsible use of technology systems, information, and software					
Personal Responsibility: Completes work on time, in an appropriate manner					
Collaboration: Works effectively with others and contributes to the overall productivity of a group					

Generic Form

Rubric for Technology -- Grades 4 to 8 Based on NETS (National Educational Technology Standards)

Name: _____ School: _____

Grade: _____ Room: _____ Date: _____

Project/Activity:		Exceeding 4	Developing Appropriately 3	Needs Improvement 2	Unsatisfactory 1
Performance Indicators		Consistently	Frequently	Occasionally	Rarely
Student demonstrates the knowledge and use of the following:					
Comprehension: Understands basic computer operations and concepts	Skill 1				
	Skill 2				
	Skill 3				
	Skill 4				
	Skill 5				
	Skill 6				
	Rows can be added or deleted as needed				
Competence: Applies understanding of productivity, communications, research, problem solving and decision making tools	Application of Skills A				
	Application of Skills B				
	Application of Skills C				
	Application of Skills D				
	Rows can be added or deleted as needed				
Accountability: Practices ethical and responsible use of technology systems, information, and software					
Personal Responsibility: Completes work on time, in an appropriate manner					
Collaboration: Works effectively with others and contributes to the overall productivity of a group					

CURRICULUM MAPPING

Curriculum Mapping is a planning technique that helps the teacher to establish a time frame for learning. The teacher is able to visualize the curriculum to be taught and the months, terms, or trimesters of the year wherein the content, skills, and standards will be presented.

Advantages:

- The teacher has a road-map for teaching content/skills.
- Provides organization for teaching.
- Helps teachers to assure sufficient time for teaching content/skills/standards.
- Stimulates correlation of activities to content/skills/standards.
- Encourages curricular integration.
- Facilitates analysis of content/skills/standards, i.e., teachers can ascertain what and how to present and assess material.
- Promotes uniformity in a school group such as a district or diocese.

Further reading:

- Curricular Mapping
<http://www.greece.k12.ny.us/instruction/ELA/6-12/Curriculum%20Mapping/Index.htm>
- Utah Educational Network Curricular Mapping
<http://www.uen.org/k-2educator/currmapping.shtml>

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CURRICULUM MAPPING TEMPLATE FOR TECHNOLOGY

SUBJECT AREA: TECHNOLOGY KINDERGARTEN						
Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	0.00	Introduce appropriate terms/vocabulary			NETS 1
	Keyboarding	0.01	Left side of keyboard			
	Keyboarding	0.02	Right side of keyboard			
	Keyboarding	0.03	Keys and Spacing			
	Word Processing	0.00	Introduce appropriate terms/vocabulary			NETS 1, 3
	Word Processing	0.01	Open a word processing program			
	Word Processing	0.02	Develop knowledge of toolbars and mouse symbols			
	Word Processing	0.03	Recognize letter names			
	Word Processing	0.04	Match upper and lower case			
	Word Processing	0.05	Identify letters and numbers on the keyboard			
	Word Processing	0.06	Enter text (all lower case)			
	Word Processing	0.07	Insert/delete text			
	Word Processing	0.08	Close a program			
	Multimedia	0.00	Introduce appropriate terms/vocabulary			NETS 1, 3, 4
	Multimedia	0.01	Open a multimedia program			
	Multimedia	0.02	Explore toolbar			
	Multimedia	0.03	Create a simple project on one slide/screen/page/card (terminology will be determined by program)			
	Multimedia	0.04	Understand use of tools – pencil, pen, spray can, paint bucket			
	Multimedia	0.05	Ability to change thickness of tool			
	Multimedia	0.06	Use of paint bucket to fill an object/graphic with color			
	Multimedia	0.07	Use of various text options (textbox, pen, pencil, spray can)			
	Multimedia	0.08	Stamp/Insert graphics			
	Multimedia	0.09	Close a multimedia program			

**SUBJECT AREA: TECHNOLOGY
GRADE ONE (1)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	1.00	Review skills from previous grades			NETS 1
	Keyboarding	1.01	Left side of keyboard			
	Keyboarding	1.02	Right side of keyboard			
	Keyboarding	1.03	Two hands on keyboard			
	Keyboarding	1.04	Special Keys			
	Word Processing	1.00	Review skills from previous grades			NETS 1, 3
	Word Processing	1.01	Open a word processing program			
	Word Processing	1.02	Enter text			
	Word Processing	1.03	Insert only one space between words			
	Word Processing	1.04	Select and change font and point size from the formatting toolbar			
	Word Processing	1.05	Delete/Backspace text			
	Word Processing	1.06	Position the cursor and insert text			
	Word Processing	1.07	Give a file a name that is appropriate and descriptive			
	Word Processing	1.08	Use Save As and Save			
	Word Processing	1.09	Use open to locate an existing document			
	Word Processing	1.10	Close document/exit program			
	Multimedia	1.00	Review skills from previous grades			NETS 1, 3, 4
	Multimedia	1.01	Open a multimedia program			
	Multimedia	1.02	Open an existing project/file			
	Multimedia	1.03	Explore toolbar			
	Multimedia	1.04	Create a simple project on one slide/screen/page/card (terminology will be determined by program)			
	Multimedia	1.05	Understand use of tools – pencil, pen, spray can, paint bucket			
	Multimedia	1.06	Ability to change thickness of tool			
	Multimedia	1.07	Use of paint bucket to fill an object/graphic with color			

**SUBJECT AREA: TECHNOLOGY
GRADE ONE (1)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Multimedia	1.08	Use of various text options (textbox, pen, pencil, spray can)			NETS 1, 3, 4
	Multimedia	1.09	Stamp/Insert graphics			
	Multimedia	1.10	Save a project			
	Multimedia	1.11	Close a multimedia program			
	Research and Communication	1.00	Introduce appropriate terms/vocabulary			NETS 1, 5, 6
	Research and Communication	1.01	Define the Internet (Age- Appropriate Language)			
	Research and Communication	1.02	Open Browser			
	Research and Communication	1.03	View Web Pages with teacher/class.			

**SUBJECT AREA: TECHNOLOGY
GRADE TWO (2)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	2.00	Review skills from previous grades			NETS 1
	Keyboarding	2.01	Left side of keyboard			
	Keyboarding	2.02	Right side of keyboard			
	Keyboarding	2.03	Two hands on keyboard			
	Keyboarding	2.04	Special Keys			
	Keyboarding	2.05	Knowledge of what keys make up the home row			
	Word Processing	2.00	Review skills from previous grades			NETS 1, 3
	Word Processing	2.01	Enter sentences			
	Word Processing	2.02	Position cursor and insert text in sentence			
	Word Processing	2.03	Use proper spacing after end punctuation – one space after all punctuation marks			
	Word Processing	2.04	Highlight text in document			
	Word Processing	2.05	Select and change font and point size from the format menu			
	Word Processing	2.06	Change text alignment			
	Word Processing	2.07	Use Save As and Save to designated location			
	Multimedia	2.00	Review skills from previous grades			NETS 1, 3, 4
	Multimedia	2.01	Create a two slide project			
	Multimedia	2.02	Connect two slides using buttons			
	Multimedia	2.03	Save a project			
	Multimedia	2.04	Save using a different name (Save As)			
	Multimedia	2.05	Print a project			
	Research and Communication	2.00	Review skills from previous grades			NETS 1, 5, 6
	Research and Communication	2.01	Internet Navigation a. Understand browser b. Recognize Home page c. Navigate page d. Select a hyperlink			
	Research and Communication	2.02	Explain Internet care and caution			

**SUBJECT AREA: TECHNOLOGY
GRADE TWO (2)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Research and Communication	2.03	Peruse Electronic Encyclopedias			NETS 1, 5, 6
	Research and Communication	2.04	Use Find/Search Tool in electronic encyclopedia with teacher directed topics			

**SUBJECT AREA: TECHNOLOGY
GRADE THREE (3)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	3.00	Review skills from previous grades			NETS 1
	Keyboarding	3.01	Left side of keyboard			
	Keyboarding	3.02	Right side of keyboard			
	Keyboarding	3.03	Special Keys			
	Keyboarding	3.04	Home Row			
	Keyboarding	3.05	QWERTY Row			
	Keyboarding	3.06	Bottom Row			
	Word Processing	3.00	Review skills from previous grades			NETS 1, 3
	Word Processing	3.01	Use proper spacing after punctuation (, ; : and at end of sentences – one space)			
	Word Processing	3.02	Use proper paragraph formatting (tab, enter)			
	Word Processing	3.03	Understand concept of Word Wrap; distinguish from hard return			
	Word Processing	3.04	Apply font formats (style) Bold, Italic, Underline and change text color			
	Word Processing	3.05	Use the Undo and Redo command			
	Word Processing	3.06	Use the Spell Check			
	Word Processing	3.07	Use the Thesaurus			
	Word Processing	3.08	Insert date and time			
	Word Processing	3.09	Print a document			
	Word Processing	3.10	Locate and open an existing document from various locations			
	Word Processing	3.11	Insert graphics into a document (Word Art, Clip Art, Images)			
	Word Processing	3.12	Use Save As and Save (to a designated drive or disk)			
	Multimedia	3.00	Review skills from previous grades			NETS 1, 3, 4
	Multimedia	3.01	Create a project of three or more slides			
	Multimedia	3.02	Add pre-recorded sound to a project			

**SUBJECT AREA: TECHNOLOGY
GRADE THREE (3)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Multimedia	3.03	Navigate through project using the features of a multimedia program			NETS 1, 3, 4
	Multimedia	3.04	Add relevant clip art or picture (graphic) to enhance project material			
	Multimedia	3.05	Add transitions to project			
	Research and Communication	3.00	Review skills from previous grades			NETS 1, 5, 6
	Research and Communication	3.01	Locate or Insert URL			
	Research and Communication	3.02	Understand common domain extensions			
	Research and Communication	3.03	Utilize Navigation tools on toolbar: Home, Back, Forward, Refresh, Print			
	Research and Communication	3.04	Recognize Links and follow them logically			
	Research and Communication	3.05	Select and Print information			
	Research and Communication	3.06	Use electronic/web resources (encyclopedias, dictionaries, almanacs, etc.) to research teacher directed or student selected topics			

**SUBJECT AREA: TECHNOLOGY
GRADE FOUR (4)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	4.00	Review skills from previous grades			NETS 1
	Keyboarding	4.01	Reinforce and encourage proper keyboarding skills to develop touch-typing mastery.			
	Word Processing	4.00	Review skills from previous grades			NETS 1, 3
	Word Processing	4.01	Use Cut, Copy and Paste			
	Word Processing	4.02	Explain the concept of Clipboard and demonstrate its use			
	Word Processing	4.03	Find and Replace text			
	Word Processing	4.04	Align text in paragraphs (Center, Left, Right and Justified)			
	Word Processing	4.05	Use Print Preview			
	Word Processing	4.06	Create and modify headers and footers			
	Word Processing	4.07	Use Save As (different name and location)			
	Word Processing	4.08	Know difference between Insert and Overstrike mode			
	Word Processing	4.09	Format clipart to change size and position			
	Multimedia	4.00	Review skills from previous grades			NETS 1, 3, 4
	Multimedia	4.01	Create, place, and adjust the size of a textbox			
	Multimedia	4.02	Edit content of textbox by changing font size, color, and style			
	Multimedia	4.03	Change background items (color, texture, graphic/object)			
	Multimedia	4.04	Delete a slide from project			
	Multimedia	4.05	Understand concept of different views of slides			
	Multimedia	4.06	View a project as a presentation			
	Multimedia	4.07	Rearrange slide/cards in a project using the slide sorter or project view or storyboard			

**SUBJECT AREA: TECHNOLOGY
GRADE FOUR (4)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Multimedia	4.08	Save using Save As (different name, location, format)			NETS 1, 3, 4
	Database	4.00	Introduce appropriate terms/vocabulary			NETS 1, 5, 6
	Database	4.01	Examine ready made or teacher made databases			
	Database	4.02	Navigate through records in a table, list or form view			
	Database	4.03	Find records			
	Database	4.04	Sort records			
	Research and Communication	4.00	Review skills from previous grades			NETS 1, 5, 6
	Research and Communication	4.01	Introduce a brief history of the Internet			
	Research and Communication	4.02	Discuss Copyright Issues (Age-Appropriate Language)			
	Research and Communication	4.03	Discuss Communication using the Internet (email elements, netiquette, cautions)			
	Research and Communication	4.04	Use an Atlas and Timeline in Electronic Encyclopedias			
	Research and Communication	4.05	Explain Search Engines: a. What they are b. How they work c. Different types d. Searching skills			
	Research and Communication	4.06	Cite electronic sources (MLA/Age-Appropriate)			
	Research and Communication	4.07	Implement directed research: scavenger hunt			
	Research and Communication	4.08	Introduce multitasking/note-taking – Internet			
	Research and Communication	4.09	Note-taking: Select information from electronic sources; Encyclopedias or Internet, copying and pasting to a word processing program, saving, and printing)			

**SUBJECT AREA: TECHNOLOGY
GRADE FIVE (5)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	5.00	Review skills from previous grades			NETS 1
	Keyboarding	5.01	Reinforce and encourage proper keyboarding skills to develop touch typing mastery.			
	Word Processing	5.00	Review skills from previous grades			NETS 1, 3
	Word Processing	5.01	Create a folder			
	Word Processing	5.02	Insert page breaks			
	Word Processing	5.03	Add bullets and numbering			
	Word Processing	5.04	Set line spacing options (single, 1.5, double)			
	Word Processing	5.05	Change margins			
	Word Processing	5.06	Create and modify page numbers			
	Word Processing	5.07	Use the drawing toolbar			
	Multimedia	5.00	Review skills from previous grades			NETS 1, 3, 4
	Multimedia	5.01	Use template(s) to create project			
	Multimedia	5.02	Add animation to project			
	Multimedia	5.03	Create a graphic and add to project			
	Multimedia	5.04	Add sound to a project			
	Multimedia	5.05	Import photo (digital camera, scanner, processed CD) if available			
	Multimedia	5.06	Create a live link to World Wide Web in presentation			
	Multimedia	5.07	Add bullets to list items			
	Multimedia	5.08	Change bullet type			NETS 1, 5, 6
	Database	5.00	Review skills from previous grade			
	Database	5.01	Plan a database: Choose a topic (e.g. Saints); identify the fields (e.g. feast day)			
	Database	5.02	Begin to create a database by entering fields			
	Database	5.03	Enter appropriate data for records			

**SUBJECT AREA: TECHNOLOGY
GRADE FIVE (5)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Database	5.04	Find specific data, sort records and apply filters to data			NETS 1, 5, 6
	Spreadsheet	5.00	Introduce appropriate terms/ vocabulary			NETS 1, 5, 6
	Spreadsheet	5.01	Understand the structure of a spreadsheet, columns, rows, cells			
	Spreadsheet	5.02	Enter text, dates, and numbers			
	Spreadsheet	5.03	Introduce how to format cells			
	Spreadsheet	5.04	Modify row, height and column width when necessary			
	Spreadsheet	5.05	Clear cell content			
	Spreadsheet	5.06	Edit cell content			
	Spreadsheet	5.07	Use Undo and Redo			
	Spreadsheet	5.08	Use Save			
	Spreadsheet	5.09	Locate and open an existing workbook (file)			
	Spreadsheet	5.10	Enter formulas in a cell using the formula bar			
	Spreadsheet	5.11	Insert and delete rows and columns			
	Spreadsheet	5.12	Preview and print worksheets and workbooks (files)			
	Spreadsheet	5.13	Change page orientation and scaling			
	Spreadsheet	5.14	Set/clear print area			
	Spreadsheet	5.15	Use Save As (different name, location, format)			
	Spreadsheet	5.16	Check spelling			
	Spreadsheet	5.17	Rename a worksheet			
	Spreadsheet	5.18	Use AutoSum			
	Research and Communication	5.00	Review skills from previous grades			NETS 1, 5, 6
	Research and Communication	5.01	Explain connection types			
	Research and Communication	5.02	Explain service provider (ISP)and requirements			
	Research and Communication	5.03	Use Right click to open selected menu functions			
	Research and Communication	5.04	Set Favorites/Bookmarks			
	Research and Communication	5.05	Explore history of links			

**SUBJECT AREA: TECHNOLOGY
GRADE FIVE (5)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Research and Communication	5.06	Use Boolean search techniques			NETS 1, 5, 6
	Research and Communication	5.07	Explore directed research: Webquest, On-line Interactivities			
	Research and Communication	5.08	Develop multitasking/note- taking skills using Internet			
	Research and Communication	5.09	Discuss ethics of web content: violence, hate, etc. (Note – In a URL the information after a tilde (~) reflects one's personal opinion)			

**SUBJECT AREA: TECHNOLOGY
GRADE SIX (6)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	6.00	Review skills from previous grades			NETS 1
	Keyboarding	6.01	Reinforce and encourage proper keyboarding skills to develop touch typing mastery.			
	Word Processing	6.00	Review skills from previous grades			NETS 1, 3
	Word Processing	6.01	Use the Grammar feature			
	Word Processing	6.02	Apply shading to paragraphs and borders to paragraphs and pages			
	Word Processing	6.03	Create and format tables			
	Word Processing	6.04	Add borders and shading to tables			
	Word Processing	6.05	Revise tables (insert and delete rows and columns, change cell formats)			
	Word Processing	6.06	Modify table structure (merge cells, change height and width)			
	Word Processing	6.07	Rotate text in a table			
	Multimedia	6.00	Review skills from previous grades			NETS 1, 3, 4
	Multimedia	6.01	Add (record) narration to project if equipment is available			
	Multimedia	6.02	Print various views of project - slides/cards etc.			
	Database	6.00	Review skills from previous grade			NETS 1, 5, 6
	Database	6.01	View single and multiple records			
	Database	6.02	Insert and delete records			
	Database	6.03	Insert and delete fields			
	Database	6.04	Modify format properties - font, style, size, color, etc.			
	Database	6.05	Preview and print the data			
	Spreadsheet	6.00	Review skills from previous grades			NETS 1, 5, 6
	Spreadsheet	6.01	Use basic functions (AVG, SUM, COUNT, MIN, MAX)			
	Spreadsheet	6.02	Use toolbar functions for currency, decimal, percent, etc.			

**SUBJECT AREA: TECHNOLOGY
GRADE SIX (6)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)	
	Spreadsheet	6.03	Explore advanced features of cell formats (borders, shading, patterns, text wrap, number options, etc.)			NETS 1, 5, 6	
	Spreadsheet	6.04	Cut, copy, paste, paste special and move selected cells using clipboard				
	Spreadsheet	6.05	Work with series (Auto Fill)				
	Spreadsheet	6.06	Enter multiple operation formulas in a cell using the formula bar				
	Spreadsheet	6.07	Revise formulas				
	Spreadsheet	6.08	Enter functions using formula bar (function menu)				
	Spreadsheet	6.09	Clear cell formats				
	Spreadsheet	6.10	Insert and delete selected cells				
	Spreadsheet	6.11	Rotate text				
	Research and Communication	6.00	Review skills from previous grades				NETS 1, 5, 6
	Research and Communication	6.01	Discuss ways to communicate using the Internet such as Instant Messaging, Chat Rooms and Newsgroups (students should know what they are but need not use them in school)				
	Research and Communication	6.02	Discuss ethics of creating your own site				
	Research and Communication	6.03	Evaluate a website for accuracy, comprehensiveness, relevance, bias, point of view, etc.				

**SUBJECT AREA: TECHNOLOGY
GRADE SEVEN (7)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	7.00	Review skills from previous grades			NETS 1
	Keyboarding	7.01	Reinforce and encourage proper keyboarding skills to develop touch typing mastery.			
	Word Processing	7.00	Review skills from previous grades			NETS 1, 3
	Word Processing	7.01	Apply character effects (superscript, subscript, strikethrough, small caps and outline)			
	Word Processing	7.02	Insert symbols			
	Word Processing	7.03	Create and apply frequently used text with Auto Correct			
	Word Processing	7.04	Use indentation options (left, right, first line and hanging indent)			
	Word Processing	7.05	Use Tabs command (center, decimal, left and right)			
	Word Processing	7.06	Set tabs with leaders			
	Word Processing	7.07	Create a multi-column document			
	Word Processing	7.08	Create sections with formatting that differs from other sections			
	Word Processing	7.09	Create hyperlinks			
	Word Processing	7.10	Copy formats using a tool such as Format Painter			
	Multimedia	7.00	Review skills from previous grades			NETS 1, 3, 4
	Multimedia	7.01	Create a menu to navigate through project			
	Multimedia	7.02	Control timing of text, graphics, sound, and transitions of project			
	Multimedia	7.03	Create a series of screens showing object changing in simple animation			
	Multimedia	7.04	Import movie(s) to presentation			
	Multimedia	7.05	Download video from a source and save in project			

**SUBJECT AREA: TECHNOLOGY
GRADE SEVEN (7)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Database	7.00	Review skills from previous grades			NETS 1, 5, 6
	Database	7.01	Use the clipboard (cut, copy, paste)			
	Database	7.02	Print the data in various forms and views			
	Spreadsheet	7.00	Review skills from previous grades			NETS 1, 5, 6
	Spreadsheet	7.01	Freeze and unfreeze rows and columns			
	Spreadsheet	7.02	Insert and remove a page break			
	Spreadsheet	7.03	Move and copy worksheets (file)			
	Spreadsheet	7.04	Move between worksheets in a workbook (files)			
	Spreadsheet	7.05	Set up headers and footers			
	Spreadsheet	7.06	Use references (absolute and relative)			
	Spreadsheet	7.07	Enter a range within a formula by dragging			
	Spreadsheet	7.08	Use chart wizard to create a chart / Preview and print charts			
	Spreadsheet	7.09	Modify charts			
	Spreadsheet	7.10	Use logical function (IF)			
	Spreadsheet	7.11	Use find and replace			
	Spreadsheet	7.12	Insert, move, and delete an object (picture)			
	Spreadsheet	7.13	Use the Help Menu (Office Assistant)			
	Spreadsheet	7.14	Use templates to create a new workbook (file)			
	Research and Communication	7.00	Review skills from previous grades			NETS 1, 5, 6
	Research and Communication	7.01	Read and discuss a comprehensive history of the Internet			
	Research and Communication	7.02	Download information/plugins (teacher-directed)			
	Research and Communication	7.03	Create a Website: insert text, graphics, and link pages			

**SUBJECT AREA: TECHNOLOGY
GRADE EIGHT (8)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Keyboarding	8.00	Review skills from previous grades			NETS 1
	Keyboarding	8.01	Reinforce and encourage proper keyboarding skills to develop touch typing mastery.			
	Word Processing	8.00	Review skills from previous grades			NETS 1, 3
	Word Processing	8.01	Create an outline style numbered list			
	Word Processing	8.02	Use templates to create a new document			
	Multimedia	8.00	Review skills from previous grades			NETS 1, 3, 4
	Multimedia	8.01	Create a user template			
	Multimedia	8.02	Create a menu to navigate through project			
	Multimedia	8.03	Control timing of text, graphics, sound, and transitions of project			
	Multimedia	8.04	Create a series of screens showing object changing in simple animation			
	Multimedia	8.05	Import movie(s) to presentation			
	Multimedia	8.06	Capture video from sources, such as, a digital camera/video camera and save in digitized form if available			
	Multimedia	8.07	Add digitized movie to project			
	Database	8.00	Review skills from previous grade			NETS 1, 5, 6
	Database	8.01	Create, modify and print original reports			
	Spreadsheet	8.00	Review skills from previous grades			NETS 1, 5, 6
	Spreadsheet	8.01	Adjust margins to center on page			
	Spreadsheet	8.02	Hide and unhide rows and columns			
	Spreadsheet	8.03	Use style in Format menu to make spreadsheet uniform			
	Spreadsheet	8.04	Use Paste Function on the toolbar to insert a function			
	Spreadsheet	8.05	Use the Format Painter			

**SUBJECT AREA: TECHNOLOGY
GRADE EIGHT (8)**

Timing Month or Trimester	CONTENT/ TOPIC	SKILL NUMBER	SKILL	SKILL CHECK LIST	ASSESSMENT	NETS (National Educational Technology Standards)
	Spreadsheet	8.06	Merge cells			NETS 1, 5, 6
	Spreadsheet	8.07	Create hyperlinks			
	Research and Communication	8.00	Review skills from previous grades			NETS 1, 5, 6
	Research and Communication	8.01	Develop Web Page advanced skills: for example, create tables, animated clip art, create a banner running across			

COMMENTS

Reflection and evaluation are vital tools for growth in any curriculum area. The Elementary Technology Curriculum Committee welcomes your comments, concerns, questions, and suggestions. Email the committee members at apetcc@yahoo.com.

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