

**Archdiocese of Cincinnati
Catholic School Office**

**Guidelines for
Implementation of ISTE and Ohio
Technology Standards and Competencies
2008-2011**



**Advisory Committee for Revision of the 2004-2007
Guidelines for Implementation of ISTE and Ohio
Technology Standards and Competencies**

2008-2011

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With appreciation for the shared wisdom of all
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Prologue

The purpose of the church is to spread the gospel of Jesus Christ. Administrators, teachers, parents, and students are empowered in this mission by means of effective use of technology. The following statements from official church documents affirm technology as a tool in the ministry of message, community, worship and service.

“Moreover, as the Church always must communicate its message in a manner suited to each age and to the cultures of particular nations and peoples, so today it must communicate in and to the emerging media culture. This is a basic condition for responding to a crucial point made by the Second Vatican Council: the emergence of ‘social, technical, and cultural bonds’ linking people ever more closely lends ‘special urgency’ to the Church’s task of bringing all to ‘full union with Christ’. Considering how important a contribution the media of social communications can make to its efforts to foster this unity, the Church views them as means ‘devised under God’s Providence’ for the promotion of communication and communion among human beings during their earthly pilgrimage.”

*“A New Era” – Pastoral Instruction/Pontifical Council
for Social Communication in 1992*

“Enjoying more leisure, as they sometimes do, men and women find that the remarkable development of technology and scientific investigation and the new means of communication offer them an opportunity of attaining more easily their cultural and spiritual inheritance and of fulfilling one another in the closer ties between groups and even between peoples.”

Declaration on Christian Education

“The student who is able to discover the harmony between faith and science will, in future professional life, be better able to put science and technology to the service of men and women, and to the service of God. It is a way of giving back to God what He has first given to us.”

The Religious Dimension of Education in a Catholic School

Sources

John Paul II, *Laborem Exercens*: Decree on the Instruments of School Communication: Declaration of Christian Education (Vatican II)

Pontifical Council for Social Communications: *Criteria for Ecumenical and Inter-religious Cooperation in Communications*, Vatican City 1989©, Office for Publishing and Promotional Services United States Catholic Conference, Washington, D.C.

**ARCHDIOCESE OF CINCINNATI
CATHOLIC SCHOOL OFFICE
Guidelines for Implementation of ISTE and
Ohio Academic Content Standards for Technology
2008-2011**

**GENERAL STATEMENTS REGARDING THE USE OF
INFORMATION and COMMUNICATION TECHNOLOGY (ICT)
IN THE SCHOOLS**

I. Integrating Information and Communication Technology into the Curriculum

- a. Technology is a tool used to accomplish curricular and productivity goals.
- b. The teaching of computer and other Information and Communication Technology (ICT) skills should be integrated into curriculum-related activities and not become a curriculum of its own.
- c. For optimal integration of technology into the curriculum, it is suggested that the instructor of the ICT applications should be the classroom teacher, the technology coordinator, the library media specialist, or either of these working very closely with the classroom teacher.
- d. In schools where the computer lab is the primary site of ICT instruction, classroom teachers are expected to accompany their students to the labs and be responsible for or assist with the instruction delivered there. They should also be responsible for or assist with any ICT instruction that takes place in their classrooms.
- e. Quality or lack of Information and Communication Technology resources may impact student enrollment.

II. Technology Coordinators/Classroom Teachers

- a. Job descriptions should be developed for the Technology Coordinator/Computer Teachers. ICT expectations for classroom teachers should be defined, and should be stated in teacher contracts. Teachers should have a clear idea of the ICT skills and curricular applications they are responsible for teaching, using the K-8 Guidelines for the Implementation of ISTE and Ohio Technology Standards and Competencies as a guide.
- b. Teachers should be able to use all forms of instructional technology offered by the school such as digital cameras, scanners, wireless laptop carts, interactive whiteboards, tablet PCs, PDAs, printers, distance learning equipment, iPods, and other.
- c. ICT-related professional development activities need to be ongoing, comprehensive, and inclusive of all forms of technology in the school. ICT training for teachers should focus on curriculum integration activities as well as personal and professional productivity.

III. Information and Communication Technology Assessment

- a. The Archdiocese of Cincinnati Catholic School Office Guidelines for Implementation of ISTE and Ohio Academic Content Standards for Information and Communication Technology is not a Graded Course of Study. Therefore, report card grades are not appropriate for ICT skills. Schools do, however, have the option to create an appropriate ICT skills assessment tool as a report card insert. Marks such as S, I, U, or E, NE, D, M (Satisfactory, Incomplete, Unsatisfactory; or Not Evident, Developing, Mastery) may be used on such an insert. [See appendix for suggested resources.]
- b. Students' ICT skills are developed to accomplish curricular tasks. Competency should be assessed in relation to those tasks.
- c. ICT assessment should not be based solely on technical knowledge or skills, nor on behavior in the computer class. The assessment process should be integrated into the particular subject area in which ICT is being applied. As ICT applications are being taught in a computer lab, the classroom teacher should be present to evaluate his/her students as with other subject area activities. Note: Schools with strong computer lab/computer teacher programs need not change that approach, just continue to concentrate on involving the classroom teacher as much as possible in the instructional and assessment processes.

IV. Information and Communication Technology Policies

- a. School administrators need to document, support and maintain policies to ensure the proper use of technology equipment and resources in the classrooms and computer labs. Consequences for inappropriate behavior, theft, or damage should be clearly understood, including responsibility for replacement, or for repair of damages. Schools annually need to communicate the policies and their consequences to students, teachers, and parents.
- b. Each student and parent must sign the Archdiocesan Responsible Use of Technology Policy each year. Signing the policy annually raises awareness of the policy and also provides for instances in which the legal parent/guardian may have changed since the previous year.
- c. All school-affiliated personnel using the Internet (teachers, administrators, staff, volunteers, etc.) must sign the Responsible Use of Technology Policy annually.
- d. Schools must keep on file the signed Responsible Use of Technology Policy for that year.

V. Information and Communication Technology Planning

- a. Each school should have a written Technology Plan and should evaluate it annually. Plans are current for three years. The Archdiocese Graded Courses of Study curricula should drive the planning. ICT planning should not drive curriculum. The plan should guide evaluation and optimal use of current technologies within the school, and explain in what ways ICT will assist achievement of curricular goals and objectives.
- b. School Technology Plans need both short and long-term goals.
- c. Catholic School Office (CSO) Guidelines for technology plans are found at <http://www.catholiccincinnati.org/schools/technology.htm>

- d. Revised school technology plans are submitted to the Catholic School Office every three years. The school's technology plan should also be filed in the school office and in the technology/ media coordinators' files for easy access by the technology committee. Many schools publish the technology plan on the school Webpage, minus the technology budget and information which may be considered confidential.
- e. If the school intends to apply for E-Rate discounts, the plan must reflect the E-Rate program's criteria for Technology plans, as found in CSO guidelines.
- f. Each school should have a functioning Technology Advisory Committee composed of the principal, pastor, tech/media coordinator, teacher(s), and other knowledgeable stakeholders. It should be clearly understood that this committee serves in an advisory capacity. The technology plan should clearly identify the final decision-making authority at the school regarding technology issues. This is usually the principal and/or the pastor in association with the technology coordinator. The committee should meet periodically throughout the year to address implementation status as well as direction and editing of the technology plan.
- g. Computers need to be available in both the classroom and computer lab environments for optimal integration of Information and Communication Technology into the curriculum.
- h. Because of toxic elements in electronic equipment, technology planning needs to address maintenance and removal of equipment in compliance with federal, state, and local hazardous and toxic waste disposal laws.

VI. Technology Budgeting and Funding

- a. Develop a comprehensive technology plan and then seek funding. Funding sources expect to see a plan.
- b. Grants from local funds may be more successfully obtained than funds from state and national sources.
- c. Use volunteers to research and write grants.
- d. All schools qualify and should apply for E-rate federal funding for technology. In order for a school to receive Ohio Internet connectivity subsidy funding (OneNet "426 funds", \$3000/year for Internet connectivity) schools must apply for E-Rate. Many schools contract with an E-Rate management company to file E-Rate paperwork. Fees vary for this service. [See Appendix for E-Rate management services.]
- e. Technology must appear as a line item in the school's budget. Include all technology-related expenses (facility, construction, hardware, software, professional development, maintenance, support, furniture, electricity, connectivity, asbestos abatement, disposal, staff salaries, security, and other). Remain cognizant of the Total Cost of Ownership (TCO) of the school's technology program.
- f. Prepare for large technology purchases through proper planning.
- g. Leasing equipment is an option to provide for the acquisition of hardware and ensures new equipment for future years, but requires long-range planning for cyclical financial commitment.
- h. Schools may wish to implement a student technology fee each year.
- i. Auxiliary Services Funding may be used for connectivity expenses as well as many other technology items as listed at <http://www.catholiccincinnati.org/schools/technology.htm>
- j. Provide adequate funding for the professional development of teachers in Information and Communications Technology (ICT) skills.

VII. Technology Hardware/Software

- a. Purchase equipment in accordance with the school's Technology Plan.
- b. Do not accept donated computer equipment unless it fits into the school's technology plan specifications. Research and take into consideration transfer privileges and requirements for hardware warranties and software licensing to maximize the cost-effectiveness and legality of donated computers.
- c. Purchasing a few newer computers is a better option than purchasing low-end, older computers that will not perform the needed applications.
- d. Before beginning any technology upgrade, address the school's infrastructure (electrical capacity, location and number of outlets, asbestos, phone lines, etc.). Also, consider all aspects of technology in the building (phones/fax, PA system, Internet access, wireless capability, hubs or routers, LCD projectors, copiers, printers, Hi-Def compatibility, and other), and esthetics.
- e. Purchase technology equipment and services only from reliable vendors.
- f. Schools may wish to consider leasing computers rather than purchasing. (See VI.g. above.)
- g. Consider outsourcing maintenance, technical support, and delivery of software applications.
- h. Consider laptops for teachers as a part of the school plan. The flexibility of laptops allows schools to provide a productivity tool for teachers and at the same time a classroom presentation and research tool. Consider purchasing sets of laptops for checkout by students and teachers to assist with curricular projects.
- i. Consider advantages of a thin-client lab.(This consists of central server(s) for processing activities, mainly focusing on conveying input - output between the user's monitor and the remote server. In contrast, a thick or "fat client" computer does as much processing as possible and passes only data for communications and storage to the server.)
- j. Evaluate all software and hardware before purchasing.
- k. Maintain an inventory of all technology hardware and software with the technology plan.
- l. Maintain a record of all software on each computer. Keep on file with the technology plan.
- m. Abide by copyright laws for software computer programs, music, videos, Internet resources, and all other copyrighted materials.
- n. Keep accurate records of hardware warranties.
- o. Keep accurate records of software licenses, technology contracts and grants, and E-rate program applications.
- p. Develop a technology disaster recovery plan and process.
- q. Implement a technology problem management process.
- r. Implement a technology change management process.
- s. In the event of a school closing or consolidation, place in the school office a file with the school technology plan, School Closing Technology Checklist (see Appendix), and all other important technology paperwork such as software licenses, E-Rate paperwork, and technology contacts information.

VIII. Internet

- a. The Children’s Internet Protection Act (CIPA) requires monitoring students on the Internet. Adherence to the Catholic School Office Responsible Use of Technology Policy assures fulfillment of this requirement.
- b. Each student, parent, educator and school-affiliated individual who uses the school’s technology must sign the Responsible Use of Technology Policy annually. (Refer to Section IV, Technology Policies.)
- c. Consider caching Web sites to be used at school through a proxy server, rather than having students always go out to the open Internet.
- d. Children’s Internet Protection Act (CIPA) compliance requires Internet filtering. Schools may provide for filtering of Internet sites either through the Internet Service Provider or with their own software. E-rate funding is dependent upon CIPA compliance with Internet filtering.
- e. Annually communicate Internet safety and privacy issues to the parents. Offer assistance concerning use of the Internet at home.
- f. Map the IP Address for each computer in the school. Have in place an emergency response plan should the need arise to identify a computer’s IP Address.

IX. Web Pages

- a. Each school should have a regularly updated Web site in order to communicate with its parents, students, prospective families, and the community at large.
- b. The school Web page should adhere to the Archdiocese of Cincinnati Catholic School Office Webpage Guidelines. The Guidelines are posted on the Principals News of the Catholic School Office Webpage, www.catholiccincinnati.org/schools/

STUDENT INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) MINIMUM COMPETENCIES Grades K-2

These competencies are to be mastered by the completion of Grade 2 in conjunction with ISTE NETSS (National Educational Technology Standards for Students) (Information and Communications Technology Standards), and Ohio Academic Content Standards for Technology. They are to be taught within the context of curriculum-related activities. NETSS 2007 and Ohio Academic Content Standards for Technology (OH ACST '03) correlations are noted.

Computer Operations

NETS♦S .07: Standard #6: Technology Operations and Concepts

OH ACST '03: Standard # 3: Technology for Productivity Applications

The student will

- a. Locate the power button.
- b. Identify basic parts of the computer (CPU, monitor, keyboard, mouse, printer, CD/DVD drives, microphone, headset, etc.).
- c. Use input devices (mouse, keyboard, etc.) and output devices (monitor, printer, etc.).
- d. Use basic vocabulary related to computer operation (cursor, menu bar, desktop, etc.).
- e. Demonstrate the proper use, care, and cleaning of hardware and software.
- f. Be able to enter required passwords or user identification, if necessary.

Productivity

NETSS .07: Standard # 3 Research and Information Fluency	OH ACST '03: Standard # 1: Nature of Technology
NETSS .07: Standard # 6 Technology Operations and Concepts	OH ACST '03: Standard #3: Technology for Productivity Applications

The student will

- a. Be aware of/understand that technology is a tool for learning.
- b. Use grade level programs for learning in a variety of subjects.
- c. Identify and use a toolbar.
- d. Produce short documents with teacher assistance using a word processing program; change font and size; apply Spell-check.
- e. Create a simple graphic using a paint or draw program.
- f. Close an application and return to the desktop.

Communication, Research and Thinking Skills

NETSS.07: Standard #2 Communication and Collaboration	OH ACST '03: Standard # 3:Technology for Productivity Applications
NETSS 07: Standard #3 Research and Information Fluency	OH ACST '03: Standard # 4:Technology & Communication Applications
	OH ACST '03: Standard # 5:Technology & Information Literacy

- a. Have an understanding of E-mail.
- b. Have an understanding of the Internet.
- c. Use Bookmarks or Favorites to access a teacher-selected Web address.
- d. Use the Internet for basic teacher directed curriculum-related research.
- e. Begin using Information and Communication Technology (ICT) resources for simple tasks.

Keyboarding

NETSS.07 Standard #6 Technology Operations and Concepts	OH ACST '03: Standard # 3:Technology for Productivity Applications
NETSS.07 Standard #5 Digital Citizenship	

- a. Locate letters and numbers on the keyboard.
- b. Begin demonstrating home row finger positioning.
- c. Learn main operating keys (space bar, enter, backspace, escape, etc.).

Social Ethical Legal

NETSS.07 Standard #1 Creativity and Innovation	OH ACST '03: Standard # 2:Technology & Society Interaction
NETSS.07 Standard #2 Communication and Collaboration	OH ACST '03: Standard # 5:Technology & Information Literacy
NETSS.07 Standard #5 Digital Citizenship	

- a. Practice responsible use and care of computer equipment and software.
- b. Work cooperatively and collaboratively with others on ICT projects.
- c. Be respectful of others when using and sharing equipment and resources.
- d. Understand and observe the Responsible Use of Technology Policy. (Teacher assistance is necessary at this level.)

- e. Gain an understanding / awareness of what it means to be safe in the use of the Internet.
- f. Practice Christian values in working collaboratively with Information and Communication Technology in the classroom.

NOTE: Concepts in Ohio Academic Content Standard #7, Designed World, are addressed in Archdiocesan Graded Courses of Study for Science, Mathematics, Social Studies, Health, and Religion. Refer to p. 12 of this document for explanation of Standard #7.

**STUDENT INFORMATION AND COMMUNICATION TECHNOLOGY
(ICT) MINIMUM COMPETENCIES
Grades 3-4**

These competencies are to be mastered by the completion of Grade 4 in conjunction with ISTE NETSS (National Educational Technology Standards for Students) (Information and Communications Technology Standards), and Ohio Academic Content Standards for Technology. They are to be taught within the context of curriculum-related activities. NETSS 2007 and Ohio Academic Content Standards for Technology (OH ACST '03) correlations are noted.

Computer Operations

NETSS .07: Standard #6: Technology Operations and Concepts	OH ACST '03: Standard # 1: Nature of Technology
	OH ACST '03: Standard # 3:Technology for Productivity Applications

- a. Use common input and output devices effectively.
- b. Solve simple operating problems.
- c. Know the difference between a stand-alone and a network computer.
- d. Have a basic understanding of a computer network.

Productivity

NETSS .07: Standard #1 Creativity and Innovation	
NETSS .07: Standard #2 Communication and Collaboration	OH ACST '03: Standard # 1: Nature of Technology
NETSS .07: Standard #3 Research and Information Fluency	OH ACST '03: Standard # 3:Technology for Productivity Applications
NETSS .07: Standard #6 Technology Operations and Concepts	

- a. Understand the use of technology as a tool for learning.
- b. Launch programs from the desktop.
- c. Use menus to open, close, and save files.
- d. Save to a Word document.
- e. Compose, edit, revise, and print documents using a word processing program.
- f. Load and save documents from removable media, hard drive or file server.
- g. Insert / change CDs.
- h. Use a simple spreadsheet.
- i. Access and edit an existing digital image from a clipart source or electronic source.
- j. Integrate graphics into a word processing document.
- k. Create a simple multimedia presentation.
- l. Develop file management skills: create folders; recognize and navigate a file management path to the local or network drive; retrieve folders and files.
- m. Demonstrate conscientious use of printers, copiers, ink or toner, and paper.

Communication, Research and Thinking Skills

NETSS 07: Standard #2 Communication and Collaboration	OH ACST '03: Standard # 3:Technology for Productivity Applications
NETSS 07: Standard #3 Research and Information Fluency	OH ACST '03: Standard # 4:Technology & Communication Applications
NETSS 07: Standard #4 Critical Thinking, Problem Solving, Decision Making	OH ACST '03: Standard # 5:Technology & Information Literacy
NETSS 07: Standard #5 Digital Citizenship	

- Read, write, and send E-mail, if the school provides it, for curricular purposes. Adhere to the Responsible Use of Technology Policy in the use of E-mail.
- Use electronic encyclopedias and other reference resources.
- Access supplied Web addresses.
- Navigate Web sites.
- Use the Internet for curriculum-related research.
- Use Information and Communication Technology (ICT) resources in problem-solving and decision-making activities.

Keyboarding

NETSS.07 Standard #6 Technology Operations and Concepts	OH ACST '03: Standard # 3:Technology for Productivity Applications
NETSS.07 Standard #5 Digital Citizenship	

- Use correct fingering positioning to key all letters.
- Emphasize accuracy, correct fingering and posture rather than number of words per minute.

Social Ethical Legal

NETSS.07 Standard #1 Creativity and Innovation	OH ACST '03: Standard # 2:Technology & Society Interaction
NETSS.07 Standard #2 Communication and Collaboration	OH ACST '03: Standard # 5:Technology & Information Literacy
NETSS.07 Standard #5 Digital Citizenship	

- Observe ICT lab/classroom rules and policies.
- Work cooperatively and collaboratively with others on ICT projects.
- Be respectful of others when using and sharing equipment and resources.
- Respect privacy and security of others' work.
- Understand and observe copyright laws.
- Understand and observe the Responsible Use of Technology Policy.
- Identify and discuss Internet safety concerns.
- Practice Christian values in working collaboratively with Information and Communications Technology in the classroom.

NOTE: Concepts in Ohio Academic Content Standard #7, Designed World, are addressed in Archdiocesan Graded Courses of Study for Science, Mathematics, Social Studies, Health, and Religion. Refer to p. 12 of this document for explanation of Standard #7.

STUDENT INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) MINIMUM COMPETENCIES Grades 5-6

These competencies are to be mastered by the completion of Grade 6 in conjunction with ISTE NETSS (National Educational Technology Standards for Students) (Information and Communications Technology Standards), and Ohio Academic Content Standards for Technology. They

are to be taught within the context of curriculum-related activities. NETSS 2007 and Ohio Academic Content Standards for Technology (OH ACST '03) correlations are noted.

Computer Operations

NETSS .07: Standard #2 Communication and Collaboration	OH ACST '03: Standard # 1: Nature of Technology
NETSS .07: Standard #6 Technology Operations and Concepts	OH ACST '03: Standard # 3: Technology for Productivity Applications

- a. Recognize and report basic technology and network problems, error messages.
- b. Define, understand, and be able to discuss computer and technology-related terms.

Productivity

NETSS .07: Standard #1 Creativity and Innovation	OH ACST '03: Standard # 1: Nature of Technology
NETSS .07: Standard #2 Communication and Collaboration	OH ACST '03: Standard # 3: Technology for Productivity Applications
NETSS .07: Standard #3 Research and Information Fluency	OH ACST '03: Standard # 4: Technology & Communication Applications
NETSS .07: Standard #6 Technology Operations and Concepts	OH ACST '03: Standard # 5: Technology & Information Literacy

- a. Format a document including fonts, tabs, headers, etc.
- b. Continue integrating graphics into word processing documents.
- c. Search and sort an existing database.
- d. Expand use of spreadsheet applications.
- e. Choose the appropriate productivity tool to accomplish a project.
- f. Expand use of file management and file pathways; learn file sharing techniques.
- g. Insert / eject flash drive.
- h. Select a network printer.
- i. Print landscape as well as portrait
- j. Limit printing to the page viewed or to a range of pages.
- k. Create a simple multimedia presentation using audio, video, and graphics.

Communication, Research and Thinking Skills

NETSS.07: Standard #2 Communication and Collaboration	OH ACST '03: Standard # 4: Technology & Communication Applications
NETSS.07: Standard #3 Research and Information Fluency	OH ACST '03: Standard # 5: Technology & Information Literacy
NETSS.07: Standard #4 Critical Thinking, Problem-Solving & Decision Making	

- a. Continue use of E-mail, if the school provides it, to send and receive information for curricular projects and to develop cultural understanding and global awareness by engaging with learners of other cultures. Adhere to the Responsible Use of Technology Policy in the use of E-mail.
- b. Use research tools including electronic encyclopedias, on-line databases, periodical indexes, etc. to retrieve information.
- c. Conduct an Internet search on a supplied topic. Learn search techniques.
- d. Develop research strategies for a curriculum-related project.
- e. Use ICT resources to accomplish a variety of tasks and solve authentic problems.

Keyboarding

NETSS.07 Standard #6 Technology Operations and Concepts	OH ACST '03: Standard # 3: Technology for Productivity Applications
NETSS.07 Standard #5 Digital Citizenship	

- a. Use correct finger positioning on the keyboard. Use correct posture.
- b. Achieve speed of 10-15 words per minute with reasonable accuracy (90%).

Social Ethical Legal

NETSS.07 Standard #1 Creativity and Innovation	OH ACST '03: Standard # 2:Technology & Society Interaction
NETSS.07 Standard #2 Communication & Collaboration	OH ACST '03: Standard # 5:Technology & Information Literacy
NETSS.07 Standard #5 Digital Citizenship	

- a. Observe ICT lab/classroom rules and policies.
- b. Work cooperatively and collaboratively with others on ICT projects.
- c. Be respectful of others when using and sharing equipment and resources.
- d. Respect privacy and security of others' work.
- e. Understand the concept of intellectual property; define and discuss consequences of plagiarism; observe copyright laws.
- f. Understand and observe the Responsible Use of Technology Policy.
- g. Further develop and discuss Internet safety issues with emphasis on interpersonal electronic communications including chatrooms, blogs, instant messaging, E-mail.
- h. Practice Christian values in working collaboratively with Information and Communication Technology

NOTE: Concepts in Ohio Academic Content Standard #7, Designed World, are addressed in Archdiocesan Graded Courses of Study for Science, Mathematics, Social Studies, Health, and Religion. Refer to p. 12 of this document for explanation of Standard #7.

STUDENT INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) MINIMUM COMPETENCIES Grades 7-8

These competencies are to be mastered by the completion of Grade 8 in conjunction with ISTE NETSS (National Educational Technology Standards for Students) (Information and Communications Technology Standards), and Ohio Academic Content Standards for Technology. They are to be taught within the context of curriculum-related activities. NETSS 2007 and Ohio Academic Content Standards for Technology (OH ACST '03) correlations are noted.

Computer Operations

NETSS .07: Standard #6 Technology Operations and Concepts	OH ACST '03: Standard # 1: Nature of Technology
	OH ACST '03: Standard # 3:Technology for Productivity Applications

- a. Use computer and network effectively.
- b. Be aware how peripherals are connected.
- c. Utilize knowledge of computer operations to learn new technologies.

Productivity

NETSS .07: Standard #1 Creativity and Innovation	OH ACST '03: Standard # 3:Technology for Productivity Applications
NETSS .07: Standard #2 Communication and Collaboration	OH ACST '03: Standard # 4:Technology & Communication Applications
NETSS .07: Standard #3 Research and Information Fluency	OH ACST '03: Standard # 5:Technology & Information Literacy
NETSS .07: Standard #6 Technology Operations and Concepts	

- a. Format a document to a particular set of instructions.
- b. Integrate word processing documents with graphics and spreadsheets.
- c. Utilize desktop publishing features in projects.

- d. Expand use of word processing and spreadsheet applications.
- e. Download files from the Internet.
- f. Develop an appropriate management system for organizing and storing data.
- g. Demonstrate consistently the use of file pathways, file location and management.
- h. Use presentation hardware and software effectively (LCD projector, laptop, interactive board, iPod, distance learning equipment).
- i. Produce an advanced multimedia presentation, including use of digital camera and video devices, demonstrating successful integration of ICT skills.
- j. Develop an understanding of advanced productivity capabilities with use of computer programs such as Microsoft Outlook, Word, Publisher, Excel, Access, or Apple templates.
- k. Copy and paste a section to print, as from a Webpage, into a word processing document, demonstrating conservation of resources.
- l. Learn duplex printing.
- m. Understand the difference between laser and inkjet printers.

Communication, Research and Thinking Skills

NETSS.07: Standard #1 Creativity and Innovation	OH ACST '03: Standard # 1: Nature of Technology
NETSS 07: Standard #2 Communication and Collaboration	OH ACST '03: Standard # 2: Technology & Society Interaction
NETSS 07: Standard #3 Research and Information Fluency	OH ACST '03: Standard # 3: Technology for Productivity Applications
NETSS 07: Standard #4 Critical Thinking, Problem-Solving & Decision Making	OH ACST '03: Standard # 4: Technology & Communication Applications
NETSS 07: Standard #5 Digital Citizenship	OH ACST '03: Standard # 5: Technology & Information Literacy
NETSS 07: Standard #6 Technology Operations and Concepts	OH ACST '03: Standard # 6: Design

- a. Engage in E-mail communication, if the school provides it for curricular purposes, and to develop cultural understanding and global awareness by engaging with learners of other cultures. Adhere to the Responsible Use of Technology Policy in the use of E-mail.
- b. Be able to choose the appropriate research tools for specific projects.
- c. Develop search skills using Internet search engines, subject guides, directories, and metasearch engines.
- d. Become proficient at defining a research strategy and conducting a research project.
- e. Be able to evaluate Web sites for authenticity and accuracy.
- f. Develop discriminatory skills when analyzing, evaluating, and synthesizing information gathered from electronic resources.
- g. Demonstrate proper citation for electronic resources.
- h. Create simple Web documents. Insert hyperlinks.
- i. Use Information and Communication Technology resources to identify common world problems, to develop solutions and/or make informed decisions, or to complete a project.

Keyboarding

NETSS.07 Standard #6 Technology Operations and Concepts	OH ACST '03: Standard # 3: Technology for Productivity Applications
NETSS.07 Standard #5 Digital Citizenship	

- a. Use correct finger positioning and correct posture.
- b. Achieve speed of at least 20-25 words per minute with reasonable (90%) accuracy.

Social Ethical Legal

NETSS.07 Standard #1 Creativity and Innovation	OH ACST '03: Standard # 1: Nature of Technology
NETSS.07 Standard #2 Communication and Collaboration	OH ACST '03: Standard # 2: Technology & Society Interaction
NETSS.07 Standard #5 Digital Citizenship	OH ACST '03: Standard # 4: Technology & Communication Applications
	OH ACST '03: Standard # 5: Technology & Information Literacy

- a. Honor Information and Communications Technology lab/classroom rules and policies.

- b. Demonstrate appropriate care and stewardship for technology resources.
- c. Understand and observe Responsible Use of Technology Policy.
- d. Work cooperatively and collaboratively with others on ICT projects and publications.
- e. Be respectful of others when using and sharing equipment and resources.
- f. Respect privacy and security of others' work; define “fair use” of digital resources.
- g. Understand and observe copyright laws.
- h. Understand the meaning and social/legal consequences of security threats such as hacking, viruses, and spam.
- i. Understand technology protection measures such as firewalls and filtering.
- j. Practice Internet Safety; discuss Internet Safety topics appearing in current events.
- k. Practice Christian values in working collaboratively with Information and Communication Technology.

NOTE: Concepts in Ohio Academic Content Standard #7, Designed World, are addressed in Archdiocesan Graded Courses of Study for Science, Mathematics, Social Studies, Health, and Religion. Refer to paragraph below for explanation of Standard #7.

Ohio Academic Content Standard # 7 referred to on pages 7, 8, 10 of this document states: Students understand how the physical, informational and bio-related technological systems of the designed world are brought about by the design process. Critical to this will be students’ understanding of their role in the designed world: its processes, products, standards, services, history, future, impact, issues and career connections.

Concepts in Ohio Academic Content Standard #7, Designed World, are addressed in Archdiocesan Graded Courses of Study for Science, Mathematics, Social Studies, Health, and Religion.

For Grades 9-12
Information and Communication Technology (ICT) Standards and Competencies
Consult the International Society for Technology in Education

http://cnets.iste.org/students/s_profile-912.html

and

The State of Ohio Academic Content Standards for Technology

<http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEPrimary.aspx?Page=2&TopicID=305&TopicRelationID=339>

In the event this link changes, go to <http://www.ode.state.oh.us/>
Type in search box: Ohio Academic Content Standards for Technology

Appendices to the Catholic School Office Guidelines for Implementation of Standards and Competencies:

<http://www.catholiccincinnati.org/schools/technology.htm>

Works Consulted

An Educator's Guide to Evaluating the Use of Technology in Schools and Classrooms (U.S. Dept. of Education)

<http://www.ed.gov/pubs/EdTechGuide/index.html>

Information Literacy Standards for Student Learning (American Association of School Librarians, 2001)

www.ala.org/ala/aasl/aaslpubsandjournals/informationpowerbook/ip_brochure.pdf

ISTE (International Society for Technology in Education) National Educational Technology Standards for Students, Teachers, Administrators

<http://www.iste.org/AM/Template.cfm?Section=NETS>

Scroll down to "View the Next Generation of NETS'S"

ISTE/NCATE Standards for Educational Technology Programs

<http://cnets.iste.org/ncate/>

National Education Technology Plan

<http://www.ed.gov/about/offices/list/os/technology/plan/2004/site/edlite-default.html>

National Educational Technology Standards for Administrators (International Society for Technology in Education), <http://cnets.iste.org/administrators/>

National Educational Technology Standards for Students, Second Edition, © 2007, ISTE® (International Society for Technology in Education) <http://www.iste.org>

National Educational Technology Standards for Students Overview

<http://www.iste.org/Content/NavigationMenu/NETS/NETSforStudentsStandards2007.doc>

National Educational Technology Standards for Teachers (International Society for Technology in Education), http://cnets.iste.org/teachers/t_book.html

Ohio Department of Education Academic Content Standards for Technology

<http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEPrimary.aspx?Page=2&TopicID=305&TopicRelationID=339>

or

<http://www.ode.state.oh.us/>

[Type in search box: Ohio Academic Content Standards for Technology]

Ohio Department of Education Instructional Management System Lesson Plans,
State Board Adopted Model Curricula (Indicate Technology & grade level(s))

<https://ims.ode.state.oh.us/ode/ims/Default.asp?bhcp=1>

Riverdeep Standards Locator

http://www.riverdeep.net/pro_development/standards/standards.jhtml

“Teaching Keyboarding -When? Why? How?” (and links at the end of the article)

http://www.education-world.com/a_tech/tech072.shtml

Standards for Technological Literacy: Content for the Study of Technology (International
Technology Education Association, April 2000 - 2003)

http://www.iteaconnect.org/TAA/Publications/TAA_Publications.html

American Association of School Librarians Standards for the 21st-Century Learner

"Standards for the 21st-Century Learner" offer vision for teaching and learning to both guide and beckon our profession as education leaders. They will both shape the library program and serve as a tool for library media specialists to use to shape the learning of students in the school.

Common Beliefs

The learning standards begin by defining nine foundational common beliefs:

- Reading is a window to the world.
- Inquiry provides a framework for learning.
- Ethical behavior in the use of information must be taught.
- Technology skills are crucial for future employment needs.
- Equitable access is a key component for education.
- The definition of information literacy has become more complex as resources and technologies have changed.
- The continuing expansion of information demands that all individuals acquire the thinking skills that will enable them to learn on their own.
- Learning has a social context.
- School libraries are essential to the development of learning skills.

The Standards

The Standards describe how learners use skills, resources, and tools to

1. Inquire, think critically, and gain knowledge;
2. Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge;
3. Share knowledge and participate ethically and productively as members of our democratic society;
4. Pursue personal and aesthetic growth.

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<http://www.ala.org/ala/aasl/aaslproftools/learningstandards/standards.cfm>

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