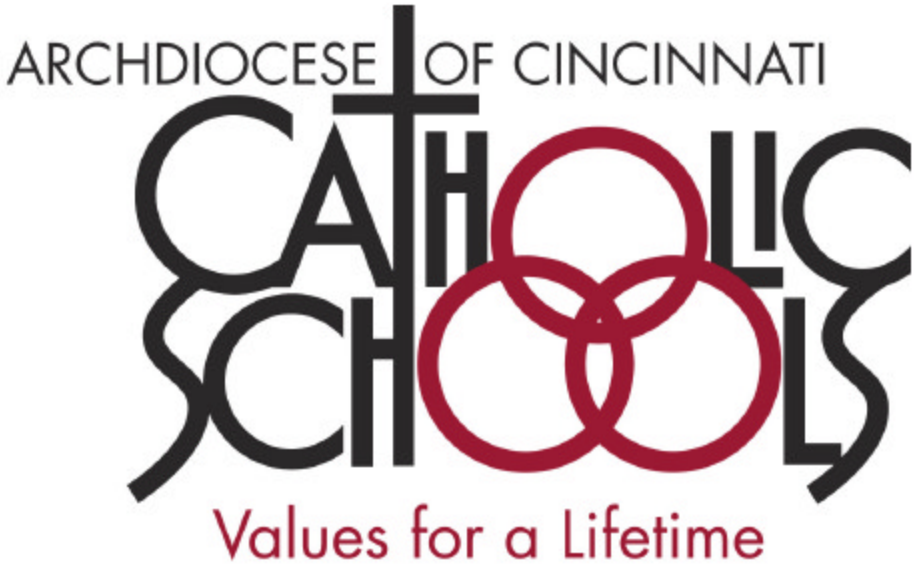
Archdiocese of Cincinnati
Catholic Schools Office

Guidelines for the Implementation of ISTE and Ohio Technology Standards and Competencies 2004-2007



Committee for Technology Standards and Competencies

2004-2007

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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.

CATHOLIC SCHOOLS OFFICE
ARCHDIOCESE OF CINCINNATI

Guidelines for Implementation of ISTE and Ohio Academic Content Standards for Technology 2004-2007

GENERAL STATEMENTS REGARDING THE USE OF TECHNOLOGY IN THE SCHOOLS

I. Integrating Technology into the Curriculum

a. Technology is a tool used to accomplish curricular and productivity goals.
b. The teaching of computer and other technology 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 technology 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 the technology 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 technology instruction that takes place in their classrooms.
e. Quality or lack of technology resources may impact student enrollment.

II. Technology Coordinators/Classroom Teachers

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

III. Technology Assessment

a. The Archdiocese of Cincinnati Catholic Schools Office Guidelines for Implementation of ISTE and Ohio Academic Content Standards for Technology is not a Graded Course of Study. Therefore, report card grades are not appropriate for technology and computer skills. Schools do, however, have the option to create an appropriate technology skills assessment tool as a report card insert. Marks such as S, I, U, or E, NE, M (Satisfactory, Incomplete, Unsatisfactory; or Not Evident, Developing, Mastery) may be used on such an insert.
b. Students' technology skills are developed to accomplish curricular tasks. Competency should be assessed in relation to those tasks.
c. Technology 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 the technology is being applied. As technology 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 do not need to totally change that approach, just continue to concentrate on involving the classroom teacher as much as possible in the instructional and assessment processes.

IV. 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 Internet Acceptable Use 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 Internet Acceptable Use Policy annually.
d. Schools must keep on file the signed Internet Acceptable Use Policy for that year.

V. Technology Planning

a. Each school should have a written Technology Plan and should evaluate it annually. The Archdiocese Graded Courses of Study curriculum should drive the technology planning. Technology planning should not drive the curriculum. The plan should guide evaluation and optimal use of current technologies within the school, and explain in what ways technology will assist achievement of curricular goals and objectives.
b. School Technology Plans need both short and long-term goals. Three-year plans seem to work best as it is difficult to project more than three years ahead due to rapidly changing technology.

c. The plan should establish minimum specifications for technology infrastructure, equipment, services, and Internet access.
d. If the school intends to apply for E-Rate discounts, the plan should reflect the E-Rate program's criteria for technology plans.
e. Each school should have a functioning Technology Advisory Committee composed of the principal, pastor, technology 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.
f. Computers need to be available in both the classroom and computer lab environments for optimal integration of technology into the curriculum.
g. 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.
h. Revised school technology plans should be submitted to the archdiocesan Office for Technology every three years.

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 for E-rate federal funding for technology. Schools should apply for E-Rate funds. In order for a school to receive Ohio Internet connectivity subsidy funding (OneNet "426 funds") the schools must first apply for E-Rate.
e. Make technology 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**.**
j. Provide adequate funding for the professional development of teachers.

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, PDA's, LCD projectors, copiers, printers, other), and esthetics.
e. Purchase technology equipment and services only from reliable vendors.
f. Schools may wish to consider leasing computers rather than purchasing.
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. Evaluate all software and hardware before purchasing it.
j. Maintain an inventory of all technology hardware and software.
k. Maintain a record of all software on each computer.
l. Abide by copyright laws. (This includes software programs, music, videos, Internet resources)
m. Keep accurate records of hardware warranties.
n. Keep accurate records of software licenses, technology contracts and grants, and E-rate program applications.
o. Develop a technology disaster recovery plan and process.
p. Implement a technology problem management process.
q. Implement a technology change management process.

VIII. Internet

a. The Children's Internet Protection Act (CIPA) requires monitoring students on the Internet. Adherence to the Internet Acceptable Use Policy assures fulfillment of this requirement.
b. Each student, parent, educator and school-affiliated individual who uses the school's technology must sign the Internet Acceptable Use 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. 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 regard to 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 and the community at large.
b. The school Web page should adhere to the Archdiocese of Cincinnati Catholic Schools Office Web page guidelines. *See Appendix*

STUDENT TECHNOLOGY MINIMUM COMPETENCIES
Grades K-2

These competencies are to be mastered by the completion of Grade 2 in conjunction with the national and state technology standards. They are to be taught within the context of curriculum-related activities.

Computer Operations

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 resources.
f. Be able to enter required passwords or user identification, if necessary.

Productivity

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. Close an application and return to the desktop.

Communication, Research and Thinking Skills

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 technology resources for simple tasks.

Keyboarding

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

Social Ethical Legal

a. Practice responsible use and care of computer equipment and software.
b. Work cooperatively and collaboratively with others on technology projects.
c. Be respectful of others when using and sharing equipment and resources.
d. Understand and observe the Internet Acceptable Use Policy. (Teacher assistance is necessary at this level.)
e. Practice Christian values in working collaboratively with technology in the classroom.

STUDENT TECHNOLOGY MINIMUM COMPETENCIES
Grades 3-4

These competencies are to be mastered by the completion of Grade 4 in conjunction with the national and state technology standards. They are to be taught within the context of curriculum-related activities.

Computer Operations

a. Use common input and output devices effectively.
b. Solve simple operating problems.
c. Have a basic understanding of a computer network.

Productivity

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. Compose, edit, revise, and print documents using a word processing program.
e. Load and save documents from floppy or hard disk, CD ROM, file server.
f. Insert / change CDs.
g. Use a simple spreadsheet.
h. Create a simple graphic using a paint or draw program.

i. Access and edit an existing digital image from a clipart source.
j. Integrate graphics into a word processing document.
k. Create a simple multimedia presentation.

Communication, Research and Thinking Skills

a. Read, write, and send E-mail for curricular purposes, if the school provides it. Adhere to the Internet Acceptable Use Policy in the use of E-mail.
b. Use electronic encyclopedias and other reference resources.
c. Access supplied Web addresses.
d. Navigate Web sites.
e. Use the Internet for curriculum-related research.
f. Use technology resources in problem-solving and decision-making activities.

Keyboarding

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

Social Ethical Legal

a. Observe lab/classroom technology rules and policies.
b. Work cooperatively and collaboratively with others on technology projects.
c. Be respectful of others when using and sharing equipment and resources.
d. Respect privacy and security of others' work.
e. Understand and observe copyright laws.
f. Understand and observe the Internet Acceptable Use Policy.
g. Practice Christian values in working collaboratively with technology in the classroom.

STUDENT TECHNOLOGY MINIMUM COMPETENCIES
Grades 5-6

These competencies are to be mastered by the completion of Grade 6 in conjunction with the national and state technology standards. They are to be taught within the context of curriculum-related activities.

Computer Operations

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

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. Learn basic file management and file sharing techniques.
g. Create a simple multimedia presentation using audio, video, and graphics.

Communication, Research and Thinking Skills

a. Continue use of e-mail to send and receive information for curricular projects, if the school provides it. Adhere to the Internet Acceptable Use 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 technology resources to accomplish a variety of tasks and solve problems.

Keyboarding

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

a. Observe lab/classroom technology rules and policies.
b. Work cooperatively and collaboratively with others on technology 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 Internet Acceptable Use Policy.
g. Practice Christian values in working collaboratively with technology in the classroom.

STUDENT TECHNOLOGY MINIMUM COMPETENCIES
Grades 7-8

These competencies are to be mastered by the completion of Grade 8 in conjunction with the national and state technology standards. They are to be taught within the context of curriculum-related activities.

Computer Operations

a. Know the difference between a stand-alone and a network computer.
b. Use computer and network effectively.
c. Be aware how peripherals are connected.

Productivity

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. Develop an appropriate management system for organizing and storing data.
e. Expand use of word processing and spreadsheet applications.
f. Download files from the Internet.
g. Use presentation hardware and software effectively (LCD projector, laptop, interactive board).
h. Produce an advanced multimedia presentation demonstrating successful integration of technology skills.
i. Develop an understanding of advanced productivity capabilities with use of computer programs such as Microsoft Outlook, WORD, Access, or AppleWorks templates.

Communication, Research and Thinking Skills

a. Engage in E-mail communication if the school provides it for curricular purposes. Adhere to the Internet Acceptable Use 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 information gathered from electronic resources.
g. Demonstrate proper citation for electronic resources.
h. Create simple Web documents. Insert hyperlinks.
i. Use technology resources to identify common world problems and find solutions.

Keyboarding

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

a. Honor lab/classroom technology rules and policies.
b. Demonstrate appropriate care and stewardship for technology resources.
c. Understand and observe Internet Acceptable Use Policy.
d. Work cooperatively and collaboratively with others on technology projects.
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 Christian values in working collaboratively with technology in the classroom.

For Grades 9-12 Technology Standards and Competencies Consult the International Society for Technology in Education (See Appendices for this link)

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

and

The State of Ohio Academic Content Standards for Technology (See Appendices for this link)

http://www.ode.state.oh.us/academic_content_standards/acstechnology.asp?pfv=True

To view the Appendices to the Standards and Competencies go to

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

Works Consulted

Web Sites

ISTE (International Society for Technology in Education) National Educational Technology Standards for Students, Teachers, Administrators
http://cnets.iste.org/index.shtml

Ohio Department of Education Academic Content Standards for Technology
http://www.ode.state.oh.us/academic_content_standards/acstechnology.asp?pfv=True

ISTE/NCATE Standards for Educational Technology Programs
http://cnets.iste.org/ncate/

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

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

National Education Technology Plan
http://www.nationaledtechplan.org/

Information Literacy Standards for Student Learning (American Association of School Librarians, 1998)
http://www.ala.org/aasl/ip_implementation.html

Standards for Technological Literacy: Content for the Study of Technology (International Technology Education Association, April 2000)
http://www.iteawww.org/TAA/Publications/STL/STLMainPage.htm