

St. Thomas More School

11800 Holmes Road
Kansas City, MO 64131
816 942-5581

Technology in the 21st Century: A Plan for Action

2009-2011

Team Members:

John O'Connor, Kathy O'Sullivan, Steve Pawlewicz

School Mission Statement

St. Thomas More School provides a safe learning environment, in which I, as a child of God, strives to become the person God intends for me to be; through academic achievement, acts of justice, love, and service, based in our Catholic religious beliefs.

Team Vision Statement

We envision a school in which teachers and students are empowered to be dynamic life-long learners who can and will live for Christ as members of a global technological society.

Team Mission Statement

The St. Thomas More School technology initiative exists to foster a climate and provide the resources which will enable ongoing and dynamic learner-driven educational experiences through technology integration for all members of the St. Thomas More community.

Environment

History

Phase 1 (1993-1996) – A computer lab was created adjacent to the library for school-wide use. Early projects in writing and multimedia utilized various technologies including scanners, digitalizing equipment, TV attachments and 2 printers. The library technology included 5 computers with CD-ROM and modems for Internet connection as well as a printer. Computer instruction in typing, word processing, spreadsheets, and multimedia software and application projects were conducted.

Phase 2 (1996 - 1997) – Five computers were placed in each of the two 6th grade classrooms. These machines included 4 used computers as well as one new unit containing CD-ROM. Support hardware including a TV connection and a printer. Multimedia training was provided for students and teachers. Writing and multimedia projects were introduced as part of the 6th grade curriculum.

Phase 3 (1998 – 2000) – The environment was further developed including the formulation of a technology implementation plan; securing of funds to support expansion of infrastructure, hardware and software; expansion of network connection to 100% of the school; internet connection (DSL); installation of file servers for user id and user file needs; removal of old, unusable equipment and establish a rotation plan to review equipment status and initiate proactive maintenance and replacement plan; installation of 30 new internet ready/CD-ROM equipped computers to allow each classroom up-to-date technology; support in-class computers with network service and hardware connections; establish e-mail accounts for staff; establish staff and student user accounts; secure site license for Microsoft Office.

Phase 4 (2000 – 2002) - Technology was further improved with the institution of a program of teacher training including all aspects of the systems. The purchase of the rights to SchoolMaster, an administrative software program designed for student records, grade keeping, attendance recording and report printing, added to teacher productivity and offered a centralized depository for all records. The introduction of a portable lab, including twelve laptop computers hooked to the network through a wireless system, added to student productivity. This wireless network system allowed students to access the Internet as well as utilizing the advanced technology of STM through desktop applications supported by the Microsoft software that was licensed annually. Additionally, the media center utilized Follett software to update the collections directly from the web. A plug and play projection system was added through auction funds. This projection system will allow the school and the parish to maximize the use of video displays in large areas. The addition of a Smart Board compliments the projection system and is available for use by the computer room as well as use by classroom teachers.

Phase 5 (2002 – 2004) – A new copier was added to allow the teachers to utilize the network as part of the printing procedure. Local Inkjet printers were replaced by networked laser printers in a variety of locations. The use of scanning to e-mail as well as document flow are capabilities that can assist in time utilized for document reproduction. The introduction of the STM School website improved visibility as well as facilitated the dissemination of information regarding the school to students, parents, parish, and community. Communication of activities in individual classrooms became a reality as teachers added webpages to the school site. The addition of additional technology resources, such as projection units, hand-held computers, and other devices to assist in instruction and individual learning, were made possible by the additional funds through special sources including auction and grant funds.

Phase 6 (2004 – 2008) – The current phase of STM's technological development hopes to capitalize on the existing infrastructure by maintaining, expanding, and utilizing the systems currently in place. The updating of the computer lab, including the replacement of CPUs and monitors, was done in the summer of 2005. Units from the existing lab were moved into the classroom, as planned in the original organizational plans dating to 2001. Updates in software include a web-based typing program, as well as materials to further integrate the existing Microsoft Licensed Software with curricular applications. UnitedStreaming allows the use of the computer, Internet capabilities, and projection systems to augment instruction with the over 40,000 video clips available.

Each student and teacher is afforded a computer account, allowing for storage of documents and Internet access. Additionally, teachers have access to a variety of drives including personal, community, and public staff drives in addition to dedicated drives for the administrative software program, SchoolMaster, and UnitedStreaming. Each teacher is also afforded web-based e-mail, voicemail, and a computerized gradebook.

Phase 7 (2009 – 2011) – The next phase of STM’s technological development will emphasize delivery of enhanced curriculum content to the classroom. Classroom teachers will have the ability to fully utilize internet based media thru updating the teacher computers, installing SmartBoards and projectors in 80% of the classrooms, and using existing highspeed internet access. Additionally, during upcoming textbook purchasing decisions, emphasis will be placed on selecting a publisher that has enriched web based/electronic media content. Further, to increase and further teacher/student feedback, the use of immediate response based units will be explored.

Infrastructure and Systems Specifications:

Network: A fiber backbone connects the three main parts of the building. Three Netgear 10/100/1000 hubs are interconnected via the fiber network. More hubs are chained off the 3 to provide additional network capacity. One Ethernet 10/100/1000 switch connects the servers to the main hubs in the server room. One Ethernet 10/100/1000 switch connects the servers to the Internet.

Servers: There are 3 Windows 2000 servers and 1 Windows NT on the school intranet: STMLIBRARY, STMEMAIL, STMPROXY, and STMSERVER (primary domain controller). The library server runs the Follet library software. The Email server runs Microsoft Exchange 5.5. The Proxy server runs Microsoft Proxy Server 2.0. Each server has 2 network connections, one to the STM internal/intranet network and one to the external/internet. Additionally, the Konica Bizhub and four other printers placed throughout the school are shared on STMLIBRARY.

Protocol: The STM internal network protocol is TCP/IP. The primary domain controller is running the NT DHCP service. All the PC’s in the building, except the servers, are assigned an IP from the STM PDC. The domain is 10.10.10.* with a subnet of 255.255.255.248.

Internet: The school is connected to the Internet via a partial T1 (shared with the parish) through Everest Communications. The servers have static Internet IP addresses and are held private for security reasons. The STM email server is running Microsoft IIS service and is hosting the school website. The domain “stmcyclones.org” has been registered with www.directnic.com and is renewed annually. All connections to the Internet (outside the server room) are managed via the proxy server. Only users with proper login credentials can gain access to the Internet. Internet activity is stored in log files and recycled every 7 days.

PC Lab: The PC lab has 28 personal computers and one HP 3500N color laser printer. Each computer in the lab is connected to the school intranet and to the Internet via the proxy server. The computers in the lab are using Windows XP.

Portable Lab: The portable lab unit contains 10 Dell Latitude laptop computers along with two radio transmission devices enclosed in a locked mobile unit. UnitedStreaming uses 3 additional laptop computers. Other laptops are used on an as needed basis for various applications including temporary replacement of inoperable desk top computers. The Home and School Organization has agreed to support technology through the addition or maintenance of the technology systems, including the laptop computers, within STM.

Media Center: The Media Center has 4 student computer workstations. The librarian uses a separate station for cataloging and checkout.

The **Teacher's Workroom/Lounge** has one networked PC for teacher use.

Administrative Offices: The offices have 3 computers, one each for the principal, assistant principal, and secretary. Administrative computers are networked to allow for access to various printers.

Classrooms: Each classroom in grades 1-8 has one Dell GX 110 PC with a CD ROM drive. The specials classrooms (music, art, PE, etc.) each have one teacher computer of various types. Based upon usage and teacher request, the additional available Pentium-equipped computers have been distributed for use. The Kindergarten rooms each have a Little Tykes IBM computer with expanded keyboard and two of the classrooms contain a networked computer for teacher use. Both the Preschool a Dell Optiplex computer for use by the level teachers as well as a Little Tykes for student use. Each classroom also has access to a dedicated printer, several a network printer, and the copier.

Software: St. Thomas More has a Microsoft Site License arrangement for Microsoft Office and operating systems, SchoolMaster, Follett Library software, as well as all server software. Most products are an annual arrangement that requires yearly renewal. Additionally, various curriculum or task specific software is used throughout the building.

Donations: St. Thomas More accepts pre-approved equipment donations. Only Pentium 2.4 MHZ PC's, laser printers less than 2 years old, and monitors 15" and above will be considered. Prior arrangements for delivery of the donated equipment must be made through the office.

Goals

(most of the Action Steps are dynamic and therefore ongoing)

Goal 1

Recognize and celebrate current, effective applications of technology already in use by the St. Thomas More community and encourage innovation.

Action Steps

1. Highlight innovative classroom application of technology through the display of computer generated work.(Spring 2001/Ongoing/Staff, Administrator, Student)
2. Form and facilitate co-curricular multimedia school clubs.(Fall 2001/Ongoing/Staff/Administration)
3. Write a technology column in the weekly newsletter.(Spring 2001/Ongoing/Tech. Committee, Staff, Student)
4. Use computer for student progress reports and grade cards. (Fall 2001/Ongoing/Administration and Staff).

Goal 2

Provide staff development to support technological innovation.

See Appendix A.

Action Steps

1. Provide ongoing training with the computer specialist for each faculty member.(Fall 2000/Ongoing/Staff, Computer Specialist)

2. Provide the opportunity for the St. Thomas More community learner to work with developing technological trends.(Fall 2000/Ongoing/Staff, Students, Administration, Support Staff)
3. Provide ongoing exposure and training in technology innovations.(Fall 2000/Ongoing/Administrator)
4. Invite parish staff to attend school staff development workshops and training.(Spring 2001/Ongoing/Parish Staff, Tech. Committee)
5. Provide and schedule opportunities for faculty members to observe cutting edge technology applications by visiting exemplary schools.(Spring 2001/Ongoing/Administrator, Staff)
6. Develop, Adopt, and Publish an Internet and E-mail access and use policy for faculty and staff. (Spring 2001/ Administration/Tech Committee/School Ministry Team)

Goal 3

Provide adequate resources for technology integration.

Action Steps

1. Provide necessary hardware/software to facilitate following:
 - Provide the ability for all students in a class to simultaneously work on and participate in a curricular objective. (Fall 2001/Tech. Committee)
 - Provide the teacher the ability to create and display slides to demonstrate, illustrate, and explain curricular objectives. (Ongoing/ Tech Committee/Administrator)
 - Improve attendance reporting. (Fall 2001/Tech. Committee/Administrator/Staff)
 - Improve student record keeping. (Fall 2001/Administration/Tech Committee/Staff)
 - Provide a repository for teachers to gain easy access to necessary forms. (Ongoing – Initiated Fall 2001/Administrator/Tech. Committee)
 - Maintain access to the media center catalog. (Ongoing – Initiated Fall 2001/Tech Committee/Librarian)
 - Maintain Internet access for student/teacher research use. (Ongoing/Tech. Committee)
 - Provide printer access for all computers and maintain laser printer(s) and color printer(s) to serve network groups to allow for time-effective student project printing.(Fall 2000/Spring 2001/Tech. Committee/Administrator)
 - Provide a portable lab to facilitate classroom-based technology projects. (Fall 2001/Tech Committee/Administration)
 - Provide support hardware to expand media and multimedia applications of technology. (Fall 2000 - Ongoing/Administrator/Tech Committee)

2. Provide solutions to include, but not be limited to, the following:
 - Site license for HyperStudio® (Fall 2001/Administrator, Computer Specialist)
 - Site license for Kidpix® (Fall 2001/Administrator, Computer Specialist)
 - Site license for keyboarding software (Fall 2001/Administrator, Computer Specialist)
 - Site license for Microsoft office (Yearly/Administrator)
 - Administrative software including school database (Fall 2001/Administrator)
 - Other software (Ongoing/as needed)
 - Create and maintain user id's for teacher and students (Ongoing/Tech Committee)
 - Train teachers on email (Fall 2000 – Ongoing/Administration)

- Communication of email addresses of parents/teachers to facilitate communication (Fall 2001/Tech Committee/Administrator/Staff/School Community)
 - Install an NT file server and proxy server (Fall 2001/Tech Committee)
 - Provide an overhead projection unit (Fall 2001/Tech Committee)
 - Create a form directory and maintain necessary forms (Fall 2005/Administration/Tech Committee)
3. Identify additional resources for funding including the following:
- Pursue grant opportunities (Ongoing/Tech. Committee, Staff)
 - Investigate corporate partnerships (Ongoing/Tech. Committee, Administrator, Parent Advisory Council)
 - Explore professional development school relationships with local colleges (Rockhurst, Avila, St. Mary, Baker, DeVry) to provide groundwork for collaborative grants. (Spring 2001/Ongoing, Administrator, Tech. Committee, Staff)
 - Investigate alternative financing for technology including initiation of Scrip program within parish. (Spring 2001/Ongoing/ Administration, Tech Committee)
 - Investigate the possibility of charging a technology fee. (Spring 2001/Ongoing, Administrator, Advisory Council, Tech. Committee)
 - Investigate the formation of a partnership with an urban Catholic school to promote true catholicity and social equity. (Spring 2001/ Ongoing, Tech. Committee)

Goal 4

Integrate technology across all grade levels and curricula.

Action Steps

1. Each member of the St. Thomas More teaching staff will identify a curricular area or topic, already in use, which would be enhanced by technology integration. (Spring 2001/Ongoing/Staff)
2. Encourage the use of technology in presentation of projects to demonstrate mastery in application. (Spring 2001/Ongoing/Staff, Students)
3. Use multimedia tools to complement school and parish goals. (Spring 2001/Ongoing/Staff, Parish Staff)

Goal 5

Provide opportunities for age appropriate student driven learning across the curriculum to develop communication, problem solving, and information retrieval skills.

See Appendix B

Action Steps:

1. Conduct an annual inventory to review and reintroduce currently available equipment and make available introduction and refresher training. (Spring 2001/Ongoing/Tech. Committee)
2. Establish a timeline to spiral the introduction and mastery of technology. (Fall 2001/Tech. Committee)

3. Provide the opportunity within the curriculum for projects integrating information retrieval from a variety of media-based resources to include CD-ROM, Internet, and text-based resources to augment other traditional and developing technologies. (Fall 2001/Staff)
4. Develop an evaluation tool to identify technology-related performance, including communication, information retrieval, understanding of appropriate and ethical use, and other expected outcomes. (Appendix, CASE, p. 32, New Frontiers Manual) (Spring 2001/Tech. Committee)
5. Provide an ongoing exposure and training in technology innovations.(Fall 2000/Ongoing/Tech. Committee)
6. Encourage the use of technology in presentation of projects to demonstrate mastery and application. (Fall 2000/Tech. Committee)

Goal 6

Promote interactive partnership within the St. Thomas More Family and with the local and global communities.

Action Steps:

1. Establish and maintain connectivity between parish web and STM school site. (Ongoing/Administration)
2. Establish connectivity between alumni and St. Thomas More extended family. (Spring 2001/Tech. Committee)
3. Communicate St. Thomas More technology accomplishments to our local and global community. (Spring 2001/Administration, Staff)
4. Provide the opportunity for the St. Thomas More community learner to use developing technological trends. (Fall 2000/Ongoing/Tech. Committee, Staff, Administrator)
5. Link teachers, parents, students, and parishioners with e-mail through the St. Thomas More Homepage.(Fall 2000/Tech. Committee, Students)
6. Maintain American School Directory Homepage and inform school and community about the website. (Fall 2000/Ongoing/Tech. Committee, Students)
7. Annually survey community for effectiveness of communication, access, training programs available for technological interface.(Spring 2001/Ongoing/Tech.Committee)
8. Provide opportunities for Greater STM community to access available resources. (Spring 2001/Ongoing/Tech Committee/Parish)
9. Explore potential and feasibility of maintaining a STM class/homework site on Webpage. (Spring 2001/Administration/Staff/Tech Committee)

Appendix A. Staff Competency

Phase I: Basic skills attainment

Goal 1: Demonstrate basic word processing skills

1. Create memo, include graphics
2. Create a worksheet, handout or test
3. Login to workstation and save a file on the file server
4. Edit a file as needed.

Goal 2: Selects and uses appropriate technology when teaching

1. Includes appropriate software as part of regular lesson plans
2. Computer is used for teacher demonstrations and student workstation
3. Work with technology coordinator to integrate lesson plans and labs
4. Uses multimedia equipment including VCR, LCD panel, large TV monitor

Goal 3: Uses available grading software on a regular basis

Phase II: Intermediate skills attainment

Goal 4: Access and use a network

1. Can successfully use email
2. Create and reply to messages
3. Can delete messages
4. Use help command
5. Know how to make a group mailing

Goal 5: Uses the Internet

1. Can access the World Wide Web
2. Use search tools
3. Understand appropriate use and risks of the internet

Goal 6: Uses some multimedia hardware

1. Laser disc/DVD
2. Video camera
3. Digital camera
4. Scanner
5. MIDI keyboard
6. Sound recording

Phase III: Advanced skills attainment

Goal 7: uses the Internet regularly

1. Save graphics from the internet
2. Transfer text from a web site to word processing
3. Print a web page
4. Identify the difference in types of site available (collaborative, search, publication)

Goal 8: Engage in multimedia production

1. Integrates motion, sound, and graphics
2. Performs video capturing and editing
3. Hooks up camera, VCR and computer
4. Understands HTTP presentation styles

Phase IV: Future Goals

Goal 9: To share developed projects and tools via

1. Web pages
2. Computer based presentations
3. Video conferences

Appendix B. Student Outcomes

Grades 1 – 3

- Computer Operations
 - i. Basic terminology (pull down, drag, point, click, save, desktop, diskette, etc)
 - ii. Turn on/off the computer correctly
 - iii. Mouse use (single vs double clicking)
 - iv. Keyboard commands (delete, insert, enter, shift, caps lock)
 - v. Familiarity with key layout
 - vi. Difference between a folder and a file
 - vii. Open an existing file
 - viii. Creating a new file
 - ix. Printing a file
 - x. Copy from hard disk to floppy
- Computer hardware
 - i. Knows how to insert and format a diskette
 - ii. Knows how to turn on a printer
 - iii. Knows how to handle, turn on, access and eject a CD
- Computer Software
 - i. Knows basic commands for several software programs
 - ii. Knows, in general, what type of commands are contained under the File, Edit, and Windows menus
 - iii. Knows how to Cut, Copy, and Paste
 - iv. Knows how to format a document
 - v. Knows how to spell check a document
 - vi. Knows how to Bold, Underline and Italicize text
 - vii. Knows how to change a font size and type
 - viii. Knows how to use a word processing program
- Simulations, Games, Drills
 - i. Is able to follow screen directions in a game
 - ii. Is able to work cooperatively with other students

Grades 4-6

- Computer Operations
 - i. Is able to follow the commands to complete a task as given by the teacher
 - ii. Knows how to import a CD picture into a document
 - iii. Knows how to use the built-in calculator
 - iv. Knows how to access the Control Panel when asked
 - v. Knows how to identify and solve print monitor errors
 - vi. Knows how to clean and care for a mouse
 - vii. Has correct keyboarding skills with minimum speed
- Computer Hardware
 - i. Is able to perform simple adjustments in the control panel
 - ii. Knows how to select a printer within the chooser

- iii. Can perform simple problem solving (check cables, printer cartridges, etc.)
- Computer Software
 - i. Knows some keyboard shortcuts
 - ii. Can find a file
 - iii. Can use search and replace
 - iv. Knows proper fingering on the keyboard
 - v. Is increasing keyboarding speed and accuracy
 - vi. Can create a simple budget spreadsheet

Grades 7-8

- See Appendix C

Appendix C

Grade 7

Network Objectives

1. Demonstrate proper login and logout procedures
2. Explain what the building LAN does in simple terms
3. Explain the function of the file server
4. Demonstrate boots
 - a. Warm boot
 - b. Cold boot

Printer Objectives

1. Print a document using a networked printer
2. Send a file to a print queue
3. Understand on-line and off-line
4. Load paper correctly
5. Troubleshoot simple printer problems

Multimedia Objectives

1. Create, save, edit, and retrieve a folder
2. Understand the function of a master layout
3. Use preset page layouts
4. Create custom layouts
5. Use text boxes
6. Insert graphics
 - a. Clip art
 - b. From a file
 - c. From the internet
7. Add a background
8. Add transitions
9. Add effects
10. Add sounds
11. Manipulate placement and size of objects
12. Link one page to another
13. Link one folder to another
14. Create a linear application
15. Create a nonlinear application
16. Set up timings for final presentation

Database Objectives

1. Define a database
2. Give examples of how databases are used
3. Differentiate between fields and records
4. Preplan a database format

5. Create a database in the form view
 - a. Create field names
 - b. Change field length
 - c. Change field width
 - d. Format a field
6. Create an original report
7. Use sort techniques
 - a. Ascending
 - b. Descending
 - c. Multilevel sorting
8. Use search/query techniques
9. Create, save retrieve, modify records

Internet Objectives

1. Understand what modem is and how it works
2. Describe how people use the internet/telecommunications for a variety of tasks
3. Use the internet to get information for a report
4. Use the internet to access the public library
5. Correctly use search to locate information on the internet
6. Use a Boolean “and” in a search
7. Use “” in a search

Social/Ethical Issues Objectives

1. Understand and discuss software piracy
2. Understand the issues of personal privacy vs. right to know
3. Understand the importance of technology literacy for all people
4. Understand and discuss computer “trespass”
5. Understand and discuss uses of robots and A.I.
6. Understand and discuss user “rights” on the internet
7. Understand and discuss the principles of intellectual property

Typing Objectives

1. Know where the home row is
2. Describe what carpal tunnel syndrome is
3. Properly sit at the computer
4. List proper typing positions
5. Consistently use both hands for typing
6. Type correctly without looking at fingers
7. Type correctly at 20 wpm
8. Use correct spacing when typing documents

Graphics Objectives

1. Use the mouse to draw lines, circles and squares
2. Combine shapes to design simple figures
3. Use fill to color picture
4. Change color palates
5. Use text to label pictures
6. Use a digital camera to import pictures
7. Use a scanner to import pictures
8. Convert a picture file into different formats
9. Import and use clip art

Grade 8

Network Objectives

1. Demonstrate proper login and logout procedures
2. Explain what the building LAN does in simple terms
3. Explain the function of the file server
4. Demonstrate boots
 - a. Warm boot
 - b. Cold boot

Printer Objectives

1. Print a document using a laser/inkjet printer
2. Send a file to a print queue
3. Understand on-line and off-line
4. Load paper correctly
5. Troubleshoot simple printer problems

Multimedia Objectives

1. Create, save, edit, and retrieve a folder
2. Understand the function of a master layout
3. Use preset page layouts
4. Create custom layouts
5. Use text boxes
6. Insert graphics
 - a. Clip art
 - b. From a file
 - c. From the internet
7. Add a background
8. Add transitions
9. Add effects
10. Add sounds
11. Manipulate placement and size of objects
12. Link one page to another
13. Link one folder to another
14. Create a linear application
15. Create a nonlinear application
16. Set up timings for final presentation

Spreadsheet Objectives

1. Define a spreadsheet
2. Give examples of how spreadsheets are used
3. Identify cells by row and column
4. Preplan a spreadsheet layout
5. Create, save and retrieve a spreadsheet
6. Use functions count, sum, avg

7. Write formulas
 - a. Incorporating a range of cells
 - b. Using order of operations
 - c. Using fill right or down
8. Use copy and move
9. Sort a column
10. Use forecasting to draw a conclusion
11. Create graphs
 - a. Pie graph
 - b. Line graph
 - c. Bar graph

Internet Objectives

1. Understand what modem is and how it works
2. Describe how people use the internet/telecommunications for a variety of tasks
3. Use the internet to get information for a report
4. Use the internet to access the public library
5. Correctly use search to locate information on the internet
6. Use a Boolean “and” in a search
7. Use “” in a search

Social/Ethical Issues Objectives

1. Understand and discuss software piracy
2. Understand the issues of personal privacy vs. right to know
3. Understand the importance of technology literacy for all people
4. Understand and discuss computer “trespass”
5. Understand and discuss uses of robots and A.I.
6. Understand and discuss user “rights” on the internet
7. Understand and discuss the principles of intellectual property

Typing Objectives

1. Know where the home row is
2. Describe what carpal tunnel syndrome is
3. Properly sit at the computer
4. List proper typing positions
5. Consistently use both hands for typing
6. Type correctly without looking at fingers
7. Type correctly at 30 wpm
8. Use correct spacing when typing documents

Graphics Objectives

1. Use the mouse to draw lines, circles and squares
2. Combine shapes to design simple figures
3. Use fill to color picture
4. Change color palates
5. Use text to label pictures
6. Use a digital camera to import pictures
7. Use a scanner to import pictures
8. Convert a picture file into different formats
9. Import and use clip art