ST. PAUL LUTHERAN SCHOOL

4941 W. Center Street
St. Paul, MI 48746
(989) 871-4581
School/School Code:
TECHNOLOGY PLAN

July 2010 – June 2013

Bruce Braun, Superintendent

Michigan District

Elaine Bickel, Principal

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TECHNOLOGY PLANNING TEAM

Elaine Bickel	Principal
Matthew Lambertson	Technology Director, Millington Community Schools
Amy Baldwin	Computer Teacher
David Kaiser	8th Grade Teacher

Introduction

School Description

St. Pauls Lutheran School is located in St. Paul, Michigan. There are 215 students in the School, which is comprised of one building:

- St. Paul ..... Kindergarten to 8th grade

School Mission Statement

- St. Paul Lutheran School strives to equip the saints with knowledge of their Creator/Savior and His world and their purpose in it.

Technology Mission Statement

- St. Paul Lutheran School's goal is to provide access to technology that will promote problem solving and critical thinking skills for students of all levels.

Vision and Goals

School Technology Vision Statement

- Our vision is to create a technological learning environment to enhance overall learning experiences for students and staff. We will strive to provide up-to –date technology and training to students and staff to facilitate leraning, resource sharing, and communication.

Technology Plan Overview

- Incorporate technology into dail lives of students and teachers.
- Use more virtual learning experiences to coincide with curriculum taught in the classroom.
- Training sessions for teachres on various computer skills-ex: UnitedStreaming training.
- Implement a faculty e-mail system
- Community outreach program
- Provide digital video capability
- Develop a budget plan to purchase new computers as needed.

Needs Assessment

A School-Wide Technology Team was formed in 2005 to develop a plan to guide our technological path. On a yearly basis, this plan is updated and changed to meet the challenges that technology has to offer.

Numerous studies, surveys, and interviews have been conducted during the past year. The main question remains the same: What tools do we need in order to successfully implement technology into the daily curriculum?

Based on staff input, the following are the most critical needs:

- Provide opportunities for all to access technology and its applications:
- Provide staff with the training to enable them to effectively use the technology as an administrative tool and integrate it into student instruction on a daily basis.

MAJOR TECHNOLOGY GOALS

Software

- **Software for all 26 computers in the lab**
- **Video/image blender for movie making**

Training

- **Train staff with login and running various programs**

Maintenance

- **Keep all computers in full working order**
- **Maintain cleanliness of lab for safe working conditions.**

Hardware

- Continue as needed to support curriculum and upkeep of the lab
- Provide a color printer
- Laptops for Teachers

Community

- Invite community to use lab for training courses.

Integration into Teaching and Learning

- Insure that technology is used to fullest capacity to meet state standards and benchmarks.

Technology Status

Current Infrastructure

The building is connected to the internet through a broadband connection. One classroom and two office areas are connected through a local area network (LAN) using category 5 Ethernet cable. The network is setup using Windows Advanced Server 2000.

Hardware

- One classroom has 35 computers in it
- All administrators have a computer and access to the network
- Secretaries have a computer and access to the network.
- All teachers have a computer in their classroom

Software

The School's current software is quite limited. There are very few software titles that would be considered to be courseware.

- Internet Explorer and Netscape Navigator
- Mavis Beacon Typing
- Accelerated Reader
- Microsoft Office Suite
- TuxPaint
- TuxMath

Curriculum Integration

St. Paul Technology Integration Levels

The St. Paul School understands that true integration of technology into our classrooms is not a small undertaking. We have identified five levels of this integration process. Our staff development is focused on assisting all instructional personnel to reach Level Five, where teachers incorporate existing teaching strategies that utilize technology as a flexible tool. The levels of technology integration are:

Entry/Awareness Teachers struggle to cope with technology and new learning environment, or have little or no experience.

Adoption Teacher moves from initial struggle to successful use of technology at a basic level (can turn on P.C., launch programs, and operate basic software packages).

Adaptation Teacher moves from basic use to discovery or potential in a variety of applications. Teacher has good operational knowledge of hardware and can perform basic trouble shooting. Teacher has begun to have students generate and create documents and newsletters using the computer.

Appropriation Teacher has mastery over various technologies and can use them to accomplish a variety of instructional and classroom management goals. Teacher has good knowledge of hardware and keeps abreast of best teaching practices in integrating technology.

Integration/Invention Teacher actively develops entirely new learning skills and incorporates existing teaching strategies that utilize technology as a flexible tool. Takes a leadership role in the integration of technology into the classroom.

The St. Pauls Lutheran School will follow the Michigan Curricula Standards for Technology Integration. Please See Appendix A for details.

Adapted from:

- CBAM – Concerns-Based Adoption Model - Adapted from Hord, S. M., Rutherford, William L., Huling-Austin, Leslie and Hall, G. E. (1987) p.10.
- The National Information Infrastructure Advisory Council Analysis of Teacher Skills Requirements

The technology acquired by the School will be used to

- support the active involvement of students as they learn
- give students experience in using technology to solve problems
- provide the benefits of computer assisted instruction
- build students' skill in the use of technology

Technology use is being integrated into each curricular area as it is revised using the TECHNOLOGY CONTENT STANDARDS from the MDE Curriculum Framework.

Technologies that are an integral part of the curriculum include network access, Internet connection, computers for students, digital cameras, video, and other educationally useful equipment as it becomes available.

A technology committee meets on a regular basis with the St. Pauls Lutheran Schools School to discuss technology curriculum and evaluate course selections. This committee decides which classes will be taught each year and helps to drive decisions about equipment for the computer labs, media centers and classrooms.

Professional Development

Strategy 1: Provide staff with experience in using the computer as a tool.

Action Steps	**Timeline**
Provide instruction in methods of information retrieval and use of on-line databases.	On-going
Utilize on-line and streaming video for training and refresher courses	On-going

Strategy 2: Encourage and support interdisciplinary projects and thematic instruction utilizing technology.

Action Steps	**Timeline**
Encourage and support staff interested in implementing interdisciplinary projects and thematic instruction.	On-going
Provide in service and technology to dept/grade levels desiring to begin implementing interdisciplinary and thematic instruction.	On-going

Strategy 3: Integrate use of the Internet as an information resource and a communication mode with the rest of the world.

Action Steps	**Timeline**
Provide guidance and instruction in use of the Internet for students and staff.	On-going

Strategy 1: Integrate technology into the curriculum at all levels K-12.

Action Steps	**Timeline**
Adopt the following technology integration plan	On-going

Language Arts

Elementary	Middle School	High School
Word processing, spell check, thesaurus and grammar checking software used in the writing process.	Word processing, spell check, thesaurus, and grammar checking software used in the writing process.	Word processing, spell check, thesaurus, and grammar checking software used in the writing process.
Data base and telecommunications for research.	Database and telecommunications for research.	Database and telecommunications for research.
Organize, track, investigate and communicate progress in reading with databases and spreadsheets.	Outline/brainstorm software and CD-ROMs for writing.	Outline/brainstorm software for writing.
Intervention, remediation, and reinforcement of language arts skills.	Multimedia projects with graphics, text and sound.	Multimedia projects with graphics, text and sound.
Multimedia reports and productions with graphics, text and sound.	Desktop publishing of newspaper.	Creation of time lines of events.
Creation of time lines of events	Desktop publishing of documents reports and other published materials.	Desktop publishing of newspaper and yearbook on computer.
Desktop publishing of documents, reports and other published materials.		Enhance photographs.
Video portfolios		Video productions in Multi-media Production class.

Mathematics

Elementary	Middle School	High School
Database and spreadsheet software used in research.	Spreadsheets to solve problems.	Spreadsheets to solve problems.
Intervention, remediation, and reinforcement of software for skill development.	Graphing calculators to discover concepts visually.	Graphing programs to discover concepts visually.
Simulation software used in problem solving.	Reinforce basic skills with computer software.	Reinforce basic skills with computer software.

LOGO programming for problem solving and simple geometry.	Simulation software used in problem solving.	Programming.
Computer generated graphs.	Computer generated graphs.	Probability simulations.
Database and telecommunications for research and communications.	Instructional resources on videotape, videodisc and instructional television.	Special "word processors" with math symbols.
Instructional resources of videotape, videodisc and instructional television.		Statistics software.

Social Studies:

Elementary	Middle School	High School
Software and online resources for map skills.	Telecommunication to use online resources.	Atlas/map making.
CD-ROM and online resources for research.	Multimedia projects with graphics, text and sound.	Telecommunications to use online resources.
Multimedia software and hardware used in student reports and productions.	Databases on compact disk.	Multimedia projects with graphics, text and sound.
Instructional resources on videotape, videodisc and instructional television.	Simulations.	Databases on compact disk.
Still video and digitizing peripherals used in student projects	Spreadsheet to graph statistics.	Simulations.
Desktop publishing of student projects and reports.	Still video and digitizing peripherals used in student projects.	Geographic information systems/ Global positioning systems in mapping.
Simulation software for problem solving…	Desktop publishing of travel brochures and reports.	
Individual and cooperative learning using computer-based resources.	Geographic information systems/ Global positioning systems in mapping.	

Science

Elementary	Middle School	High School
Database and telecommunications for research	Database and telecommunications for research.	Database and telecommunications for research.
Multimedia software and hardware use in student reports and productions.	Multimedia reports with graphics, text and sound.	Multimedia projects with graphics, text and sound.

Computer-based laboratories for measurement/analysis.	Download and analyze data from Internet sites.	Computer probes for measurement/analysis.
Optical technologies for research and analysis.	Nationwide collaboration via telecommunications.	Optical technologies for research and analysis.
Simulation software for problem solving.	Optical technologies for research and analysis.	Computer interface with lab instruments.
Instructional resources on videotape, videodisc and instructional television.	Simulation software for problem solving.	Gravity, projectile motion and simulation.
Download and analyze data from weather satellite via Internet resources.	Instructional resources on videotape, video disks, and instructional television.	Download and analyze data from weather satellite via Internet resources.
Review of basic skills and concepts using computer-based resources.		Nationwide collaboration via telecommunications

World Languages

Elementary	Middle School	High School
World language word processors for writing.	World language word processors for writing.	Foreign language word processors for writing.
Vocabulary review via computer.	Vocabulary review via computer.	Vocabulary review via computer.
Introduction to language via digitized voice.	Introduction to languages via digitized voice.	Introduction to languages via digitized voice.
Digitized audio for language development.	Compact disks with digitized speech.	Compact disks with digitized speech.
Telecommunications as database resources for research.	Telecommunications for research.	Telecommunications for research.
		Use of videos in language studied to build skill in understanding daily language.

Arts Education (including Music)

Elementary	Middle School	High School
Computer drawing programs for creative expression.	Computer drawing programs for creative expression.	Computer drawing with geometrical shapes or freehand.
Multimedia production and portfolios.	Design compositions.	Design compositions.
Use of still and live video in projects.	Multimedia production using still and live video.	Critique art work.

Animation software.	Critique art work.	Scanning images and enhancing on computer.
Art history and appreciation involving sources on video and CD-ROM.	Art history and appreciation involving sources on video and CD-ROM.	Animation.
Resources on audio compact disc.	Animation.	Enhance photography.
Creative music expression using multimedia resources.	Database and telecommunications for research.	Create multimedia portfolios.
	Compact disks on musical classics with analysis and history.	Database and telecommunications for research.
	Create music.	Compact disks on musical classics with analysis and history of writing.
	Develop music library.	Create music.
		Develop music library.
		Software to help plan marching band formations/transitions.
		Digitize/analyze voices.

Special Education

Elementary	Middle School	High School
CAI software for remediation.	Computer software for remediation.	Computer software for remediation.
Assistive peripherals and software for special needs.	Technology as tool to accomplish required objectives.	Use technology as tool to accomplish required objectives.
Word processing.	Skill development and reinforcement.	
Intervention, remediation, and reinforcement of skills development.	Use of laptop computers.	

Media Centers

Elementary	Middle School	High School
Computerized card catalog.	Computerized card catalog.	Computerized card catalog.
Databases on CD-ROM.	Multiple databases on compact/video disk.	Multiple databases on compact/video disk.
Encyclopedia, almanac, and atlases on CD-ROM or on	Telecommunications for research and Internet	Telecommunications for research

line.	instruction.	
Telecommunications, including cable television and local and world-wide online resources for research.	Multiple computer stations for teacher/student use.	Multiple computer stations for teacher/student use.
Multiple computer stations for teacher/student use.	Multimedia work stations.	Multimedia work stations.
Multimedia work stations.		Subscribe to Michigan Virtual High School for on-line courses

Physical Education/Health:

Elementary	Middle School	High School
	Caloric analysis for physical fitness.	Body fat analysis for physical fitness.
	Database for tracking of sports statistics.	Database for tracking of sports statistics.
		Automated timers.

Life Skills

Elementary	Middle School	High School
	Database and telecommunications for research.	Database and telecommunications for research.
	Spreadsheets to graph and analyze nutrients in difference food groups.	

Industrial and Applied Technology

Elementary	Middle School	High School
	Principles of technology.	Principles of technology.
	Multimedia reports with graphics, text and sound.	Computerized diagnostic devices.
	Spreadsheet to graph and analyze data.	Career exploration software.

		Monitoring and feedback devices.
	Use of LEGO/LOGO for problem solving experience.	Multimedia reports with graphics, text and sound.

Career Preparation

Elementary	Middle School	High School
	Use Electronic Educational Development Planning software starting at Grade 8	

Strategy 2: Combine technology coursework across the curriculum.

Action Steps	Timeline
Required Technical Communication Skills course for	On-going
All seniors will combine business communications skills and	
Technical writing using Microsoft or Open Office.	
Curriculum mapping by all staff K-8 including computer teachers, Physical education teachers, music and art teachers.	On-going

Strategy 3: Technology will be used to provide communications between parents, teachers, students, and staff

Action Steps	Timeline
Provide a secure E-mail system for staff to communicate with parent's	On-going
Student created daily announcements using audio production	On-going
Web Page to showcase student work in art, multimedia, Photoshop,	
Web design, or any curricular areas.	
Provide staff with instruction in using various types of projection equipment and their SmartBoards	On-going

Strategy 4: Enhance instruction with multimedia use.

Action Steps	Timeline
Provide instruction in creation of Power Point projects.	On-going

Strategy 5: Designate person(s) responsible for coordinating routine, frequent, and on-going in service opportunities within the School.

Action Steps	Timeline
Purchase training to utilize technology equipment	on-going

Strategy 6: Provide specific in service opportunities for departments, teams or grade levels with recently added technology.

Action Steps	Timeline
Provide in service on active and cooperative learning techniques.	On-going
Provide planning/hands-on time for staff (for depts./teams/grade levels)	On-going
Teachers will be asked to participate in at least one after school technology training session per year	On-going

Strategy 7: Support and encourage staff to do annual visitations to see new technologies.

Action Steps	Timeline
Obtain release time for staff (technology days)	On-going
Find worthwhile places to visit--schools, business, university	On-going
Make info on meetings, seminars, workshops, visits readily available	On-going
Obtain release time for staff to attend technology conferences	On-going

Strategy 8: Correlate departmental/team/grade level planning in K-12.

Action Steps	Timeline
Provide courses in curriculum that use multi-media and other technologies as part of the subject area	On-going
Curriculum mapping to be used and maintained throughout the School using computer programs	On-going

Collaboration

Community

St. Paul Lutheran School is a vital part of the community and works together with area businesses. Following are examples:

- Many community groups utilize the school facilities to conduct meetings.

Possibilities

Evening classes for the community are scheduled to be offered in the summer. The following subjects are possibilities: word processing, database management, spreadsheets, personal finance management, and Internet usage. The School staff would teach the classes, with students working as lab assistants. Our goal for the second and third years is to continue the above-mentioned educational classes and expanding these to other areas as the needs are identified.

Supporting Resources

Technical Support

To better support technological efforts of the School, Millington Community Schools have been providing support since 2004. Technical support is now provided via the following methods: Millington Community Schools Technology Director; Computer teacher; volunteer church members; and outside sources when needed.

Documentation – Training Manuals

Consumables

Timeline

Year 1 – 2010-2011

The following are priorities for Year 1:

Replace the aging teacher computers

Obtain more software for the computer lab

Year 2 – 2011-2012

The following are priorities for Year 2:

Replace the aging server

Replace the aging administrative computers

Year 3 - 2012-2013

The following are priorities for Year 3:

Obtain more software for the computer lab

Budget

Today, technology is a critical component for all learners. It is understood that to provide for the needed technology, our School needs to look beyond the traditional funding methods.

"Non-traditional Funds"

The following funding sources have been sought as a source for technology funding for the School:

1. Universal Service Fund (USF)
2. Donations from Church members, Business and Industry and other Grants

Universal Service Fund Dollars

Business, Industry and Other Grants

Year One Projections

Description	School	USF Funding	Other Funding	Totals
Computer Donations			5,000	5,000
Internet Service	480	720		16,440
Computer Hardware	5,000		5,000	10,000
Cable Drops	500			500
Projection Systems			5,100	5,100
Software Updates			1,200	1,200
Basic Phone	240	360		600
Long Distance	600	800		1,300
Consumables	10,000			10,000

Year Two Projections

Description	School	USF Funding	Other Funding	Totals
Computer Donations			5,000	5,000
Internet Service	480	720		1,200
Computer Hardware	5,000		5,000	10,000
Cable Drops	300			300
Projection Systems			5,100	5,100
Software Updates			1,200	1,200
Basic Phone	240	360		600
Long Distance	600	800		1,300
New Server	3,500			3,500
Consumables	10,000			10,000

Year Three Projections

Description	School	USF Funding	Other Funding	Totals
Computer Donations			**5,000**	**5,000**
Internet Service	**480**	**720**		**1,200**
Computer Hardware	**5,000**		**5,000**	**10,000**
Cable Drops	**0**			**0**
Projection Systems			**5,100**	**5,100**
Software Updates			**1,200**	**12,000**
Basic Phone	**240**	**360**		**20,678**
Long Distance	**600**	**800**		**9,542**

Evaluation Plan

The objectives of the St. Paul Technology Initiative and such delivery are of paramount importance. However, without formal evaluation, it is difficult to know if efforts and resources expended have produced the desired results. Using the ST. PAUL Technology Initiative Needs Assessment as a guideline, surveys will be conducted each semester to ensure that all goals are being met. These statistics will be collected by the Technology Director. If he determines that goals are not being met, then the Technology Committee will create an action plan to address unmet goals.

REQUIRED COMPONENTS	ACCOMPLISHMENTS	PROGRESS TOWARD GOALS	FOCUS AREAS FOR IMPROVEMENT	NOTES
INFRASTRUCTURE	The school has Broadband Internet access since 2005	All classrooms, offices and the library are cabled		
CURRICULM INTEGRATION	School guidelines have been established	Many teachers are not at the Adaptation level	Continue to assist teachers	
COLLABORATION		Receive assistance from St. Pauls Lutheran Schools	Get more volunteers from the church	
PROFESSIONAL DEVELOPMENT				
SUPPORTING RESOURCES	The computer teacher can handle most problems and calls on Millington Community Schools or volunteers when needed	Hardware and software problems are resolved		
TIMETABLE	Time tables have been established	So far the timetable has been followed		
COST/FUNDING	Budgets for Technology have been established USF funding has been applied sought for phones and internet services	Even though the school has committed funds to technology, it will not be sufficient to cover the funds needed Other funding sources have been Identified and used	Even more funding sources will need to be acquired to meet the needs	
COORDINATION OF				

REQUIRED COMPONENTS	ACCOMPLISHMENTS	PROGRESS TOWARD GOALS	FOCUS AREAS FOR IMPROVEMENT	NOTES
FUNDING RESOURCES				
NETWORK AND INTERNT AND SAFETY POLICY	Is in place and has been signed by each student and staff member that uses the computers in the School	Task complete but will need to be repeated each year		
COMMUNICATIONS	Newsletter, Press releases			
IMPACT ON STUDENT ACHIEVEMENT			A tool to assess impact on student achievement must be developed	

Communication

Community support has long been an important factor in gaining input for the School's technological advances. The community passed a bond issue in 1995 so that a major infusion of technology could take place.

The School shares information with the community in several ways:

Electronic Mail

Many School teachers and Administrators communicate with the parents through email

Newsletter

The newsletter should include a technology article, updating the community as to the technological news of the School.

Press Releases

Major new technology updates are announced in the St. Paul News, usually with corresponding articles.

TECHNOLOGY

MICHIGAN Department of Education

EDUCATIONAL TECHNOLOGY STANDARDS & EXPECTATIONS

Grades K-2

Welcome to Michigan's Educational Technology Standards & Expectations

It is a goal of No Child Left Behind that schools will "Assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student fi nishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability."

The Grade Level Educational Technology Standards & Expectations for K-2 are aligned with the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Students (NETS-S). They are meant to provide teachers with an outline of learning expectations and will be used to drive educational technology literacy assessments for the next several years.

The goal is that these Standards and Expectations will ultimately be integrated into the various other content areas and that a supplementary document will be produced offering examples and suggestions on how they could be incorporated within those areas.

Technology Literacy

Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21 st century. The Standards and Expectations for each grade range are established to designate clearly what students are expected to know by the end of grades two, fi ve, and eight.

Educational Technology Standards & Expectations — Grades K-2

BASIC OPERATIONS AND CONCEPTS

By the end of Grade 2 each student will:

1. understand that people use many types of technologies in their daily lives (e.g., computers, cameras, audio/video players, phones, televisions)
2. identify common uses of technology found in daily life
3. recognize, name, and will be able to label the major hardware components in a computer system (e.g., computer, monitor, keyboard, mouse, and printer)
4. identify the functions of the major hardware components in a computer system
5. discuss the basic care of computer hardware and various media types (e.g., diskettes, CDs, DVDs, videotapes)
6. use various age-appropriate technologies for gathering information (e.g., dictionaries, encyclopedias, audio/video players, phones, web resources)
7. use a variety of age-appropriate technologies for sharing information (e.g., drawing a picture, writing a story)
8. recognize the functions of basic fi le menu commands (e.g., new, open, close, save, print)

SOCIAL, ETHICAL, AND HUMAN ISSUES

By the end of Grade 2 each student will:

1 . identify common uses of information and communication technologies
2. discuss advantages and disadvantages of using technology
3. recognize that using a password helps protect the privacy of information
4. discuss scenarios describing acceptable and unacceptable uses of age-appropriate technology (e.g., computers, phones, 91 1, internet, email) at home or at school
5. discuss the consequences of irresponsible uses of technology resources at home or at school
6. understand that technology is a tool to help complete a task
7. understand that technology is a source of information, learning, and entertainment8 . identify places in the community where one can access technology

By the end of Grade 2 each student will:

1 . know how to use a variety of productivity software (e.g., word processors, drawing tools, presentation software) to convey ideas and illustrate concepts
2 . be able to recognize the best type of productivity software to use for certain age-appropriate tasks (e.g., word processing, drawing, web browsing)
3. be aware of how to work with others when using technology tools (e.g., word processors, drawing tools, presentation software) to convey ideas or illustrate simple concepts relating to a specifi ed project

By the end of Grade 2 each student will:

1 . identify procedures for safely using basic telecommunication tools (e.g., e-mail, phones) with assistance from teachers, parents, or student partners
2. know how to use age-appropriate media (e.g., presentation software, newsletters, word processors) to communicate ideas to classmates, families, and others
3. know how to select media formats (e.g., text, graphics, photos, video), with assistance from teachers, parents, or student partners, to communicate and share ideas with classmates, families, and others

By the end of Grade 2 each student will:

1 . know how to recognize the Web browser and associate it with accessing resources on the internet
2. use a variety of technology resources (e.g., CD-ROMs, DVDs, search engines, websites) to locate or collect information relating to a specifi c curricular topic with assistance from teachers, parents, or student partners
3. interpret simple information from existing age-appropriate electronic databases (e.g., dictionaries, encyclopedias, spreadsheets) with assistance from teachers, parents, or student partners
4. provide a rationale for choosing one type of technology over another for completing a specifi c task

TECHNOLOGY PROBLEM SOLVING AND DECISION MAKING TOOLS

By the end of Grade 2 each student will:

1. discuss how to use technology resources (e.g., dictionaries, encyclopedias, search engines, websites) to solve age-appropriate problems
2 . identify ways that technology has been used to address real-world problems (personal or community)

TECHNOLOGY

MICHIGAN Department of Education

EDUCATIONAL TECHNOLOGY STANDARDS & EXPECTATIONS

Grades 3-5

Welcome to Michigan's Educational Technology Standards & Expectations

It is a goal of No Child Left Behind that schools will "Assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student fi nishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability."

The Grade Level Educational Technology Standards & Expectations for 3-5 are aligned with the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Students (NETS-S). They are meant to provide teachers with an outline of learning expectations and will be used to drive educational technology literacy assessments for the next several years.

The goal is that these Standards and Expectations will ultimately be integrated into the various other content areas and that a supplementary document will be produced offering examples and suggestions on how they could be incorporated within those areas.

Technology Literacy

Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21 st century. The Standards and Expectations for each grade range are established to designate clearly what students are expected to know by the end of grades two, fi ve, and eight.

Educational Technology Standards & Expectations Grades 3-5

BASIC OPERATIONS AND CONCEPTS

By the end of Grade 5 each student will:

1 . discuss ways technology has changed life at school and at home
2. discuss ways technology has changed business and government over the years
3. recognize and discuss the need for security applications (e.g., virus detection, spam defense, popup blockers, fi rewalls) to help protect information and to keep the system functioning properly
4. know how to use basic input/output devices and other peripherals (e.g., scanners, digital cameras, video projectors)
5. know proper keyboarding positions and touch-typing techniques
6. manage and maintain fi les on a hard drive or the network
7. demonstrate proper care in the use of hardware, software, peripherals, and storage media
8. know how to exchange fi les with other students using technology (e.g., e-mail attachments, network fi le sharing, diskettes, fl ash drives)
9. identify which types of software can be used most effectively for different types of data, for different information needs, or for conveying results to different audiences
10. identify search strategies for locating needed information on the internet

SOCIAL, ETHICAL, AND HUMAN ISSUES

By the end of Grade 5 each student will:

1. identify cultural and societal issues relating to technology
2. discuss how information and communication technology supports collaboration, productivity, and lifelong learning
3. discuss how various assistive technologies can benefi t individuals with disabilities
4. discuss the accuracy, relevance, appropriateness, and bias of electronic information sources
5. discuss scenarios describing acceptable and unacceptable uses of technology (e.g., computers, digital cameras, cell-phones, PDAs, wireless connectivity) and describe consequences of inappropriate use
6. discuss basic issues regarding appropriate and inappropriate uses of technology (e.g., copyright, privacy, fi le sharing, spam, viruses, plagiarism) and related laws
7. use age-appropriate citing of sources for electronic reports
8. identify appropriate kinds of information that should be shared in public chat rooms
9. identify safety precautions that should be taken while on-line
10. explore various technology resources that could assist in pursuing personal goals
11. identify technology resources and describe how those resources improve the ability to communicate, increase productivity, or help achieve personal goals

By the end of Grade 5 each student will:

1. know how to use menu options in applications to print, format, add multimedia features; open, save, manage fi les; and use various grammar tools (e.g., dictionary, thesaurus, spell-checker)
2. know how to insert various objects (e.g., photos, graphics, sound, video) into word processing documents, presentations, or web documents
3. use a variety of technology tools and applications to promote creativity
4. understand that existing (and future) technologies are the result of human creativity
5. collaborate with classmates using a variety of technology tools to plan, organize, and create a group project

By the end of Grade 5 each student will:

1. use basic telecommunication tools (e.g., e-mail, WebQuests, IM, blogs, chat rooms, web conferencing) for collaborative projects with other students
2. use a variety of media and formats to create and edit products (e.g., presentations, newsletters, brochures, web pages) to communicate information and ideas to various audiences
3. identify how different forms of media and formats may be used to share similar information, depending on the intended audience (e.g., presentations for classmates, newsletters for parents)

By the end of Grade 5 each student will:

1. use Web search engines and built-in search functions of other various resources to locate information
2. describe basic guidelines for determining the validity of information accessed from various sources (e.g., web site, dictionary, on-line newspaper, CD-ROM)
3. know how to independently use existing databases (e.g., library catalogs, electronic dictionaries, encyclopedias) to locate, sort, and interpret information on an assigned topic
4. perform simple queries on existing databases and report results on an assigned topic
5. identify appropriate technology tools and resources by evaluating the accuracy, appropriateness, and bias of the resource6. compare and contrast the functions and capabilities of the word processor, database, and spreadsheet for gathering data, processing data, performing calculations, and reporting results

By the end of Grade 5 each student will:

1. use technology resources to access information that can assist in making informed decisions about everyday matters (e.g., which movie to see, which product to purchase)
2. use information and communication technology tools (e.g., calculators, probes, videos, DVDs, educational software) to collect, organize, and evaluate information to assist with solving real-life problems (personal or community)

TECHNOLOGY

MICHIGAN Department of Education

EDUCATIONAL TECHNOLOGY STANDARDS & EXPECTATIONS

Grades 6-

Welcome to Michigan's Educational Technology Standards & Expectations

It is a goal of No Child Left Behind that schools will "Assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student fi nishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability."

The Grade Level Educational Technology Standards & Expectations for 6-8 are aligned with the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Students (NETS-S). They are meant to provide teachers with an outline of learning expectations and will be used to drive educational technology literacy assessments for the next several years.

The goal is that these Standards and Expectations will ultimately be integrated into the various other content areas and that a supplementary document will be produced offering examples and suggestions on how they could be incorporated within those areas.

Technology Literacy

Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21 st century. The Standards and Expectations for each grade range are established to designate clearly what students are expected to know by the end of grades two, fi ve, and eight.

Educational Technology Standards & Expectations Grades 6-8

BASIC OPERATIONS AND CONCEPTS

By the end of Grade 8 each student will:

1. use proper keyboarding posture, fi nger positions, and touch-typing techniques to improve accuracy, speed, and general effi ciency in operating a computer
2. use appropriate technology terminology
3. use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced products
4. understand that new technology tools can be developed to do what could not be done without the use of technology
5. describe strategies for identifying and preventing routine hardware and software problems that may occur during everyday technology use
6. identify changes in hardware and software systems over time and discuss how these changes affected various groups (e.g., individual users, education, government, and businesses)
7. discuss common hardware and software diffi culties and identify strategies for trouble-shooting and problem solving
8. identify characteristics that suggest that the computer system hardware or software might need to be upgraded
9. identify a variety of information storage devices (e.g., fl oppies, CDs, DVDs, fl ash drives, tapes) and provide a rationale for using a certain device for a specifi c purpose
10. identify technology resources that assist with various consumer-related activities (e.g., budgets, purchases, banking transactions, product descriptions)
11. identify appropriate fi le formats for a variety of applications

SOCIAL, ETHICAL, AND HUMAN ISSUES

By the end of Grade 8 each student will:

1 . understand the potential risks and dangers associated with on-line communications

2 . identify security issues related to e-commerce

3. discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, spam, viruses, file-sharing)

4. describe possible consequences and costs related to unethical use of information and communication technologies

5. discuss the societal impact of technology in the future

6. provide accurate citations when referencing information from outside sources in electronic reports

7. use technology to identify and explore various occupations or careers

8. discuss possible uses of technology (present and future) to support personal pursuits and lifelong learning9 . identify uses of technology to support communication with peers, family, or school personnel

By the end of Grade 8 each student will:

1 . apply common software features (e.g., thesaurus, formulas, charts, graphics, sounds) to enhance communication and to support creativity

2. use a variety of technology resources, including the internet, to increase learning and productivity

3. explore basic applications that promote creativity (e.g., graphics, presentation, photo-editing, programming, video-editing)

4. use available utilities for editing pictures, images, or charts

5. use collaborative tools to design, develop, and enhance materials, publications, or presentations

By the end of Grade 8 each student will:

1. use a variety of telecommunication tools (e.g., e-mail, discussion groups, IM, chat rooms, blogs, video-conferences, web conferences) or other online resources to collaborate interactively with peers, experts, and other audiences

2. create a project (e.g., presentation, web page, newsletter, information brochure) using a variety of media and formats (e.g., graphs, charts, audio, graphics, video) to present content information to an audience

By the end of Grade 8 each student will:

1 . use a variety of Web search engines to locate information

2. evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness

3. identify types of internet sites based on their domain names (e.g., edu, com, org, gov, au)

4. know how to create and populate a database

5. perform queries on existing databases

6. know how to create and modify a simple database report

7. evaluate new technology tools and resources and determine the most appropriate tool to use for accomplishing a specifi c task

By the end of Grade 8 each student will:

1. use database or spreadsheet information to make predictions, develop strategies, and evaluate decisions to assist with solving a basic problem

2. describe the information and communication technology tools to use for collecting information from different sources, analyze fi ndings, and draw conclusions for addressing real world problems

TECHNOLOGY

MICHIGAN Department of Education

EDUCATIONAL TECHNOLOGY STANDARDS & EXPECTATIONS

Grades 6-

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Educational Technology Standards & Expectations — Grades 6-8

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11. use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced products

12. understand that new technology tools can be developed to do what could not be done without the use of technology

13. describe strategies for identifying and preventing routine hardware and software problems that may occur during everyday technology use

14. identify changes in hardware and software systems over time and discuss how these changes affected various groups (e.g., individual users, education, government, and businesses)

15. discuss common hardware and software diffi culties and identify strategies for trouble-shooting and problem solving

16. identify characteristics that suggest that the computer system hardware or software might need to be upgraded

17. identify a variety of information storage devices (e.g., fl oppies, CDs, DVDs, fl ash drives, tapes) and provide a rationale for using a certain device for a specifi c purpose

10. identify technology resources that assist with various consumer-related activities (e.g., budgets, purchases, banking transactions, product descriptions)

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10. describe possible consequences and costs related to unethical use of information and communication technologies

11. discuss the societal impact of technology in the future

12. provide accurate citations when referencing information from outside sources in electronic reports

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4. create a project (e.g., presentation, web page, newsletter, information brochure) using a variety of media and formats (e.g., graphs, charts, audio, graphics, video) to present content information to an audience

TECHNOLOGY RESEARCH TOOLS

By the end of Grade 8 each student will:

1 . use a variety of Web search engines to locate information

8. evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness

9. identify types of internet sites based on their domain names (e.g., edu, com, org, gov, au)

10. know how to create and populate a database

11. perform queries on existing databases

12. know how to create and modify a simple database report

13. evaluate new technology tools and resources and determine the most appropriate tool to use for accomplishing a specifi c task

By the end of Grade 8 each student will:

3. use database or spreadsheet information to make predictions, develop strategies, and evaluate decisions to assist with solving a basic problem

4. describe the information and communication technology tools to use for collecting information from different sources, analyze fi ndings, and draw conclusions for addressing real-world problems

Policies

ST. PAUL'S LUTHERAN SCHOOL SCHOOL NETWORK (SPLNET)
Network and Internet Safety and Use Policy

The use of St. Pauls Network (SPLNET) is to promote the exchange of information to further education and research and is consistent with the mission of St. Pauls Lutheran School. SPLNET is not for private or commercial business use, political purposes. Any use of SPLNET for illegal activity is prohibited.

NETWORK ETIQUETTE

1. Be polite. Avoid being abusive in your messages to others. Treat others fairly. Using programs that harass SPLNET users or infiltrate a computing system and/or damage the software components is prohibited.
2. Use of SPLNET to access obscene or pornographic material is prohibited. Sending material likely to be offensive or objectionable to recipients is prohibited.
3. Make the most efficient use of network resources to minimize interference with others.
4. Any use of SPLNET that accesses outside resources must conform to our "Network and Internet Safety and Use Policy".
5. Subscriptions to Listservs, bulletin boards and on-line services must be pre-approved by the School
6. You are expected to abide by the generally accepted rules of network etiquette.
7. Do not reveal your personal address or phone numbers of students or colleagues.
8. Note that electronic mail (e-mail) is not guaranteed to be private. People who operate the system do have access to all mail. Messages relating to or in support of illegal activities may be reported to the authorities.
9. Do not use the network in such a way that you would disrupt the use of the network by other users.
10. All communications and information accessible via the network should be assumed to be private property.

11. As the rules and guidelines for Network Etiquette change and evolve, users are responsible for understanding and abiding by those generally accepted rules of the Internet.

SECURITY

12. Respect the rights and property of others. Do not improperly access, misappropriate or misuse the files, data, or information of others.
13. Do not share your account with anyone or leave the account open or unattended.
14. Keep all accounts and passwords confidential and not accessible to others.
15. Change passwords regularly, using combinations of letters and numbers and avoiding Standard English words and names.
16. You are responsible for making back-up copies of the documents critical to you.

SOFTWARE

17. You are responsible to take precautions to prevent viruses on your own equipment and St. Pauls Lutheran Schools' equipment.
18. The illegal installation of copyrighted software or files for use on School computers is prohibited. Users may download copyrighted material for their own use only with the expressed permission of the owner or authorized person.
19. Please see your school's Technology Director to install any software on School computers.
20. E-Mail is provided for the purpose to exchange information consistent with the mission of St. Pauls Lutheran School.
    a. SPLNET's E-Mail cannot be used for private or commercial offerings of products or services for sale or to solicit products or services.
    b. E-Mail cannot be used for political purposes.
    c. E-Mail messages are subject to school review at any time.
21. Mail should be deleted regularly from our E-Mail directory to conserve the file space.

CHILDREN'S INTERNET PROTECTION ACT ("CIPA")

Certification for schools.---To be eligible to receive universal service assistance under subsection (h)(1)(B), an elementary or secondary school (or the school board or other authority with responsibility for administration of that school) shall certify to the Commission that it has---

> "(A) selected a technology for computers with Internet access to filter or block material deemed to be harmful to minors; and
>
> "(B) installed, or will install, and uses or will use, as soon as it obtains computers with Internet access, a technology to filter or block such material

1. The St. Pauls Lutheran School has Installed WebBlocker Internet filtering software that will block access of many resources that contain visual depictions of obscenity, child pornography, and any other materials deemed to be harmful to minors.

2. I understand that SPLNET will filter or block access to visual depictions of obscenity and child pornography when the system is in use by adults.

3. I understand that SPLNET will filter or block access to visual depictions of obscenity, child pornography, and material harmful to minors when SPLNET is in use by minors.

The use of SPLNET/Internet is a privilege, not a right, and inappropriate use of that connection may result in cancellation of those privileges. Interpretation, application and modification of this Network and Internet Safety and Use Policy is within the sole discretion of St. Pauls Lutheran School. Any questions or issues regarding this policy should be directed to St. Pauls Lutheran School Administration.

Violation of any conditions of use described here, and in the School's Technology Ethics Regulation may be cause for disciplinary action.

ST. PAULS LUTHERAN SCHOOL NETWORK (SPLNET)
Access Release and Authorization Form

As a condition of using St. Pauls Lutheran School's network (SPLNET), I understand the use of SPLNET and access to public networks (i.e. The Internet) is a privilege, and agree to the following:

1. The St. Pauls Lutheran School has the right to review any material stored on any system provided by the School and to edit or remove any material. I hereby waive any right, which I may otherwise have in and to such material.

2. All information and services available on The Internet and SPLNET are placed there for informational purposes. I use SPLNET at my own risk.

3. St. Pauls Lutheran School does not warrant the function of SPLNET or any information accessible through SPLNET to meet any specific requirements I may have, or the SPLNET will be error free or uninterrupted. St. Pauls Lutheran School staff are not liable for any damages incurred in connection with the use, operation, or inability to use SPLNET.

4. In consideration for using SPLNET and having access to public networks, I hereby release St. Pauls Lutheran School and its sponsors, individual board members, employees and agents from any claims and damages arising from my use, or inability to use SPLNET.

5. I have read and agree to comply with the Network and Internet Safety and Use Policy. I also understand that any violation of the regulations is unethical and may constitute a criminal offense. Should I commit any violation, my access privileges may be revoked and disciplinary action taken.

6. The St. Pauls Lutheran School had installed WebBlocker Internet filtering software that will block access of any resources that contain visual depictions of obscenity, child pornography, and any other materials deemed to be harmful to minors.

STAFF (Please Print)

Last First Middle Initial

Home Address Mother's Maiden Name

City State/Zip Code Building

Home Phone

User Signature Date

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Access Release and Authorization Form

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6. I have read and agree to comply with the Network and Internet Safety and Use Policy. I further understand that any violation of the regulations is unethical and may constitute a criminal offense. Should I commit any violation, my access privileges may be revoked and disciplinary action taken.

PARENT OR GUARDIAN (If you are under the age of 18, a parent or guardian must also read and sign this agreement.)

As the parent or guardian of this student, I have read the Network and Internet Safety and Use Policy and Access Release and Authorization Form. I understand that this access is designed for educational purposes. St. Pauls Lutheran School to restrict access to all controversial materials and I will not hold them responsible for materials acquired on the network. Further, I accept full responsibility for supervision if and when my child's use is not in a school setting. I hereby give permission to issue and account

for my child and certify that the information on this form is correct.

Parent or Guardian's Name (please print):
_____

Signature: _____ Date:
_____

Return completed forms to the Principals Office.

School Copy _____ Date _____