DIOCESE OF LANSING Catholic Schools

TECHNOLOGY GUIDELINES

Aligned with Michigan Content Standards and Benchmarks

Diocesan Curriculum Institute June, 2006

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Technology Vision Statement

With Jesus, the Great Communicator, and the spirit of our Christian tradition, we recognize that we live in a new media age.

The use of technology in our schools must provide learners and teachers with access to information, ideas, learning and teaching tools. Students must develop expertise in locating, evaluating and using these resources so that they will become strong Christian adults and productive citizens.

SKILLS NEEDED FOR THE 21ST CENTURY

- 1. Students need strong grounding in basic skills, including oral and written communication, practical math, estimation and computational skills.
- 2. Students must have the ability to use technology as a tool for learning.
- 3. Students must have the ability to work cooperatively in a high-performance team environment.
- 4. Students must have the ability to take responsibility for learning.
- 5. Students must have the ability to solve new and complicated problems.
- 6. Students must be able to evaluate the quality and validity of information and its resources.

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Using and Transferring

Content Standard 1: All students will use and transfer technological knowledge and skills for life roles (family member, citizen, worker, consumer, lifelong learner).

Code	Diocesan Objective: The student will	K	T	1	2		3	4	5	6	7	8	
1.1	Identify the computer as a machine that helps people work and is used as a form of entertainment.	I	M	[
1.2	Identify common uses of technology found in daily life including, but not limited to, cell phones, digital cameras, scanners and printers.	I	D		D	Ι)	D	D	D	D	D	
1.3	Identify places in the community where one can access technology.	I	D		D)	D	D	D	D	D	
1.4	Identify the parts of a computer system and operational terminology (e.g., cursor, icon, menu).	I	D		D	N	1						
1.5	Identify broader uses of technology found in daily life (e.g., bar code scanners, ATMs, medical equipment, security alarms, GPS).		I		D	Ι)	D	D	D	D	D	
1.6	Identify computer related careers.				I	Ι)	D	D	D	D	D	
1.7	Demonstrate the proper use of a computer system.	I	D		M								
1.8	Describe the effects of having technology in the home.		I		D	N	1						
1.9	Compare/contrast the impact of messages from different technological sources (e.g., television, cellular phones, electronic mail).					I		D	D	D	D	D	
Code	Diocesan Objective: The student will	K	T	1	2		3	4	5	6	7	8	
1.10	Understand and use multiple devices and systems for storage (file servers, flash drives, compact disks,					I		D	M				

	DVDs)													
1.11	Understands the uses, limitations and attributes of technology in choosing appropriate tools in a variety of situations.						I	D		D	Г)	D	
1.12	Access and use various types of educational software on an individual basis.						I	D		D	Г)	D	
1.13	Identify job opportunities and ways technology is related to these opportunities.						I	D		D	Г)	D	
1.14	Identify ways technology affects financial transactions inside and outside the home. (e.g., online purchasing, banking, stock trading, etc.)						I	D		D	Г)	D	
1.15	Recognize and use network terminology. (e.g., stand alone, network, file server, LANS, etc.)						I	D		M				
1.16	Discuss how various technologies can assist and benefit individuals with disabilities.						I	D		D	Г)	D	
1.17	Recognize and use terms related to the protection of computers (e.g., virus protection, password, network security, firewall)							I		D	N	I		
1.18	Use telecommunication terms and concepts. (e.g., browser, URL, hypertext, www)				I		D	M						
1.19	Use basic telecommunication tools. (e.g., e-mail and web quests).						I	D		D	N	1		
Code	Diocesan Objective: The student will	K	1	2		3	4	5	5	6		7	8	
1.20	Discuss possible uses of technology (present and future) to support personal pursuits and lifelong learning.									Ι)	D	
1.21	Use a variety of technological resources to explore career paths and identify areas of interest.										I		D	
1.22	Identify technology resources that assist with various consumer related activities (e.g., budgets, purchases, banking transactions and product descriptions.												I	

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Using Information and Technologies

Content Standard 2: All students will use technologies to input, retrieve, organize, manipulate, evaluate and communicate information.

Code	Diocesan Objective: The student will	K	1	1 2	2	3	4		5	6	7	7	8	
2.1	Understand proper procedure for turning the computer on, logging in and shutting down the computer	I	D	M										
2.2	Recognize the functions of basic file menu commands (e.g., new, open, close, save, print).	I	D	D		M								
2.3	Recognize letters, numbers, punctuation and specific function of keys.	I	M											
2.4	Use word processing as a tool to enter letters, numbers and words.	I												
2.5	Recognize proper hand positioning on the keyboard.		I	M										
2.6	Use word processing as a tool to enter numbers, words, short sentences.		I											
2.7	Understand the difference between informal and formal styles of communication (I.M., e-mail, research paper).			I		D	D	М						
2.8	Understand how to use the file management system.			I		D	D	M						
2.9	Use word processing with more advanced tools. (e.g., spell check, undo, tab, margins and thesaurus).					I	D	M						
Code	The Diocesan Objective: The student will	K	1	2	2	3	4		5	6	7	'	8	
2.10	Demonstrate proper keyboarding skills while improving speed and accuracy.					I	D	D		D	D		D	

2.11	Be able to access a specific website by typing in the URL under the direction of the teacher.				I	M							
2.12	Enter data into an already prepared database.					I	D		M				
2.13	Use word processing with more advanced tools. (e.g., tables, copy, paste, edit, page setup).					I	D		M				
2.14	Explore and apply menu functions across various applications.					Ι	D		D	D		D	
2.15	Be able to use search strategies with Boolean operators. (and, not, quotation marks, etc.).					Ι	D		M				
2.16	Use hyperlinks in program applications.						I		D	D		D	_
2.17	Evaluate search results for accuracy, appropriateness and bias.						I		D	D		D	
2.18	Modify a simple database and display data in different ways using the SORT function.						I		D	D		D	
2.19	Independently develop search strategies using two or more criteria.						I		D	D		D	
2.20	Produce, proofread and edit documents for a variety of content areas using appropriate resources (e.g., dictionary, thesaurus spell check, grammar check, grammar and writing references).						I		D	D		D	
2.21	Be able to work with two programs simultaneously.								I	D		M	
2.22	Use basic utility programs or built in application functions to convert file formats.								I	D		D	
2.23	Use keyboard without looking at keys while continuing to improve speed and accuracy.				I	D	M		I				
Code	The Diocesan Objective: The student will	K	1	2	3	4		5	6	7	'	8	
2.24	Demonstrate knowledge of word processing / desktop publishing features. (e.g., columns, tables, headers, footers, text box).									I		D	
2.25	Identify appropriate file formats for a variety of applications											I	
2.26	Use basic utility programs or built in application functions to convert file formats.											I	
	Create and use a simple database to organize and display data.											I	

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Content Standard 3: All students will apply appropriate technologies to critical thinking, creative expression and decision making.

Code	Diocesan Objective: The student will	K	1	. 2	2	3		4	5		6	7		8
3.1	Use appropriate software to combine text and graphics.		I	D		D	D		D	M				
3.2	Use a variety of technologies to express ideas (voice,			I		D	D		D	D		D	D	
	data, graphics, etc.).													
3.3	Imports graphics from a variety of sources using legal					I	D		D	D		M		
	and ethical standards. (e.g., files, digital cameras,													
	online sites, software).													
3.4	Create and/or import sound using legal and ethical					I	D		D	D		M		
	standards.													
3.5	Use multimedia to present information and ideas.					I	D		M					
3.6	Organize and arrange information for a multimedia						I		D	M				
	presentation.													
3.7	Create, modify and import graphics to use in						I		D	D		D	D	
	presentations and/or projects.													
3.8	Identify how different forms of media and formats may						I		D	D		D	D	
	be used to share similar information depending on the													
	intended audience. (e.g., presentations for classmates,													
	newsletters for parents, etc.).													
3.9	Compare / contrast the functions and capabilities of the								I	D		D	M	
	word processor, database and spreadsheet.													
3.10	Perform simple queries on databases and report results.								I	D		D	D	
Code	Diocesan Objective: The student will	K	1	. 2	2	3		4	5		6	7		8
3.11	Demonstrate knowledge of word processing tools to									I		D	M	
	develop documents that include data imported from a													
	spreadsheet or database.													

3.12	Use chart or graph functions to analyze or display findings.						I	D	I	D
3.13	Use spreadsheet functions to calculate and represent content specific information.						I	D	I	D
3.14	Incorporate video clips in a presentation or project while following ethical and legal standards.							I	I	D
3.15	Use advanced spreadsheet features (e.g., colors, legends, borders).							I	I	D
3.16	Individually create a spreadsheet for a specific purpose, such as computing grade averages.							I	I	D
3.17	Incorporate, edit, save and retrieve video clips for a presentation or project while following ethical and legal standards.]	[
3.18	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.]	[
3.19	Use database or spreadsheet information to make predictions, develop strategies and evaluate decisions to assist with solving a basic problem.]	[

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Employing Systematic Approach

Content Standard 4: All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems and environments.

Code	Diocesan Objective: The student will	K	<u> </u>]	1	2	3	4	5	6		7	8	
4.1	Enter data into simple graphs.			I		D	M							
4.2	Collect, enter and edit data in graphs and tables.					I	D	M						
4.3	Identify and discuss electronic databases (e.g., phone book, address book, calendars and library circulation) as a way to collect, organize and display data.					I	D	D	D	M				
4.4	Interpret simple information from existing age appropriate databases.					I	D	M						
4.5	Identify ways that technology has been used to address real world problems.					I	D	D	D	D	D		D	
4.6	Recognize spreadsheets as a tool to organize, calculate and graph information.						I	D	M					
4.7	Use spreadsheets to organize, calculate and display data.							I	D	M				
4.8	Understand and apply simple formulas. (e.g. SUM function).							I	D	M				
4.9	Select a graph or chart to best represent data from a spreadsheet.							I	D	D	M	[
													+	
													+	_
														=

Code	Diocesan Objective: The student will	K	1	2	3	}	4	5	5	6		7	8
4.10	Independently calculate, represent and explain data using a spreadsheet.							I		D	D		M
4.11	Enter and edit data into a spreadsheet to test simple "What if" statements to solve problems and make decisions.							I		D	D		M
4.12	Describe the development of technology.									I	D		D
4.13	Create a simple web page for a specific purpose. (e.g., market a product, promote your school, etc.).										I		D
4.14	Design a technological solution for a specific problem in your community or the world.												I

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Applying Standards

Content Standard 5: All students will apply ethical and legal standards in planning, using and evaluating technology.

Code	Diocesan Objective: The student will	ŀ	K	1		2	3	4		5	6		7	8
5.1	Demonstrate respect for the work of others.	I		D	I	D	D	D	D		D	D		D
5.2	Discuss ownership of creative works.	I		D	I	D	D	D	D		D	D		D
5.3	Give proper credit for the sources of information.			I	I	D	M							
5.4	Discuss the consequences of irresponsible uses of			I	I	D	D	D	D		D	D		D
	technology resources at home or at school.													
5.5	Describe security measures for preventing misuse.				I	[D	D	D		D	D		D
5.6	Understands the meaning of virus as it relates to				I	[D	D	N.	[
	computers.													
5.7	Demonstrate knowledge of individual right of						I	D	D		D	D		D
	ownership of creative works by citing sources.													
5.8	Know the consequences of irresponsible uses of						I	D	D		D	D		D
	technology resources at home or at school.													
5.9	Describe security measures for preventing misuse.						I	D	D		D	D		D
5.10	Identify appropriate kinds of information that							I	D		D	D		M
	should/should not be shared online. (e.g., chat rooms,													
	Weblogs (blogs), games, etc.)													
5.11	Recognize and model responsible and safe behavior							I	D		D	D		M
	with using technological resources.													
5.12	Demonstrate understanding of copyright							I	D		D	M		
	infringement, privacy rights and responsibilities,													
	plagiarism and cheating.													

Code	Diocesan Objective: The student will	K	1	2	3	4	5	6	7	8
5.13	Demonstrate through application their understanding						I	D	D	M
	of copyright infringement, privacy rights and									
	responsibilities, plagiarism and cheating.									
5.14	Discuss examples of situations where the use of							I	D	D
	technology might be affected by legal or ethical									
	considerations. (e.g., downloading music, camera									
	phones, copying DVDs/CDs)									
5.15	Discuss consequences of illegal use of technology.							I	D	D
5.16	Understand the school / district policies/ procedures								I	D
	for creating web pages.									
5.17	Respect privacy issues when creating web pages.								I	M
5.18	Apply prior knowledge of ethical and legal standards									I
	to existing policies in order to create an acceptable									
	use policy.									

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Content Standard 6:

Code	Diocesan Objective: The student will	K	1		2	3	4	5		6	7	8	8
6.1	List and describe safe and unsafe aspects of technology in relation to oneself and others.		I	I)	D	D	D	D)	D	D	
6.2	Identify responsible and safe online behavior and discuss why it is important.			I		D	D	D	Г		D	M	
6.3	Recognize internet advertising. (e.g., pop ups, you're a winner)			I		M							
6.4	Identify the impact of the disposal of technological devices.					I	D	D	D)	D	D	
6.5	Compare/contrast two communities, one with and one without technological advances.					I	D	D	Г)	D	D	
6.6	Research the positive and negative effects of existing technologies and provide examples.						I	D	D)	D	D	
6.7	Forecast the possible effects that technology could have on our society.						I	D	Г)	D	D	
6.8	Explore various technology resources that could assist in pursuing personal goals.							I	Г)	D	D	
6.9	Identify security issues related to E-commerce.								I		D	D	
6.10	Research examples of technological solutions that have led to social, civic, economic or environmental problems and propose methods for addressing these problems.								I		D	D	
													$oldsymbol{ol}}}}}}}}}}}}}}}}}}}$

Code	Diocesan Objective: The student will	K	1	2	2	3	4	5	6		7	8
6.11	Identify and describe the effects technological changes have contributed to a global society.									I	D)
6.12	Describe the information and communication technology tools to use for collecting information from different sources, analyze findings and draw conclusions for addressing real world problems.										I	

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2006 Diocesan Schools Technology Committee

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