



ARCHDIOCESE OF PORTLAND  
IN  
OREGON

TECHNOLOGY PLAN

September 2006

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## ARCHDIOCESE OF PORTLAND IN OREGON

The Department of Catholic Schools extends very special thanks to the members of the Archdiocesan Technology Plan Update Committee for their professional expertise and many hours of valuable time during the review and updating process. We also express deep gratitude to the principals for the sacrifices they made in order to release their teachers to do this very important work.

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## ARCHDIOCESE OF PORTLAND IN OREGON

### I. VISION FOR THE USE OF TECHNOLOGY

#### A. Mission

Our mission is to educate and empower students, staff, and administrators to become self-directed, continuous learners and ethical morally responsible citizens prepared to meet the increasing challenges of a global, technological society.

#### B. Beliefs

- We believe technology should be utilized to build positive community in light of Catholic values and moral decision-making.
- We acknowledge the need to prepare students, staff, and administrators for the challenges of the future in an increasingly complex world that requires technology to allow life-long learning.
- We believe that technology is a tool for curriculum integration and classroom support.
- We believe technology enables students to gather, organize, and communicate information through multiple learning styles.
- We recognize that with the exponential increase of electronic information, the ability to filter and evaluate information is critical for the learner.
- We believe technology encourages higher order thinking skills and fosters collaborative problem-solving and creativity.
- We acknowledge the importance of students sharing knowledge and technology skills in a collaborative environment.
- We affirm the need for consistent and continuous training in technology for faculty and staff.
- We believe technology can be used as a vehicle to assess subject knowledge.

### II. CURRICULUM

#### A. Guidelines

Teachers and students shall be instructed in the use of technology in the curriculum with an understanding of the implications of technology as a tool of communication, analysis and research. The faculty shall adopt a plan for the efficient and effective use of technology in the instructional program, including an Acceptable Use Policy for students (see Appendix for official Archdiocese AUP). The plan shall provide for the understanding and use of current technology by staff and students and shall include a procedure to review the school's

utilization of technology as a teaching and learning tool.

## **B. Archdiocesan Goals**

Staff and students will:

- Use existing and emerging technology responsibly and appropriately.
- Demonstrate proficiency in identifying, defining, and usage of computer components and structures.
- Use technology to create documents/presentations across the curriculum.
- Use technology to organize, gather, and analyze information and predict outcomes.

## **C. State of Oregon Goals**

The state of Oregon has not established specific content standards and benchmarks in technology. Nevertheless, the state believes that technology plays an essential role in a student's education. To that end the following revisions to the Technology Common Curriculum Goals were adopted by the State Board in March 2002:

- Demonstrate proficiency in the use of technological tools and devices.
- Select and use technology to enhance learning and problem solving.
- Access, organize and analyze information to make informed decisions, using one or more technologies.
- Use technology in an ethical and legal manner and understand how technology affects society.
- Design, prepare, and present unique works using technology to communicate information and ideas.
- Extend communication and collaboration with peers, experts and other audiences using telecommunications.

## **D. Archdiocesan Technology Benchmarks and Scope and Sequence**

The Archdiocesan technology benchmarks are grades 3, 6, and 8. The benchmarks simply give a developmental chart of where specific outcomes should take place. Due to the structure of some Catholic schools, benchmarks were written for grade 6 instead of the state of Oregon grade 5, to mark the move from elementary to middle school.

In the *Scope and Sequence*, introductory phases of skills are noted with (I) while mastery levels are (M). The time frame between introductory and mastery levels are quite broad due to the varying availability of software and hardware in each school.

Mastery at a benchmark does not signify that learning is complete, but will continue to expand as the student matures.

Based on the belief statement that technology is a tool for curriculum integration and classroom support, we recommend schedules that allow for classroom and technology teacher collaboration. (See Appendix for a sample Integration Tool.)

Archdiocese Benchmarks

Benchmarks	Grade 3	Grade 6	Grade 8
<b>I. USE EXISTING AND EMERGING TECHNOLOGY RESPONSIBLY AND APPROPRIATELY</b>			
<b>I.A. <u>Legal and Ethical Use</u></b>		Demonstrate awareness of plagiarism	Demonstrate awareness of plagiarism
	Respect rights of ownership (passwords, student's work, student/teacher/Administration files, etc)	Respect rights of ownership (passwords, student's work, student/teacher/Administration files, etc)	Respect rights of ownership (passwords, student's work, student/teacher/Administration files, etc)
		Demonstrates knowledge of software piracy	Demonstrates knowledge of software piracy
		Demonstrates knowledge of bibliography standards	Demonstrates knowledge of bibliography standards
		Citing sources within document	Citing sources within document
<b>I.B. <u>Identify Hardware</u></b>	Identify: CPU, monitor, keyboard, mouse, floppy disk, floppy disk drive, CD-ROM, CD-ROM drive, printer, hard drive	Identify: CPU, monitor, keyboard, mouse, floppy disk, floppy disk drive, CD-ROM, CD-ROM drive, printer, hard drive, scanner, modem, external drive, digital still camera	Identify: CPU, monitor, keyboard, mouse, floppy disk, floppy disk drive, CD-ROM, CD-ROM drive, printer, hard drive, scanner, modem, external drive, digital still camera, digital video camera, writable CD, projection system

Benchmarks	Grade 3	Grade 6	Grade 8
<b><u>I.C. Independent Use Of Hardware and Software</u></b>	On/off procedures mouse(select, drag) Disk use (insert, load, save, eject)	On/off procedures mouse(select, drag) Disk use (insert, load, save, eject, initialize)	On/off procedures mouse(select, drag) Disk use (insert, load, save, eject, initialize)
	Desktop Management Pull down menus	Desktop Management Pull down menus cut, copy, paste, use all menu functions	Desktop Management Pull down menus cut, copy, paste, short cuts, use all menu functions, help
	File management (save, save as, open, close, print)	File management (save, save as, open, close, print, page set up),	File management (save, save as, open, close, print page setup)
		Window management (scroll, resize, multiple windows)	Window management (scroll, resize, multiple windows), finder/program manager/explorer
<b>II. DEMONSTRATE PROFICIENCY IN IDENTIFYING, EDFINING, AND USAGE OF COMPUTER COMPONENTS AND STRUCTURES.</b>			
<b><u>II.A. Internal Structures/Components and Functions</u></b>			Define input/output, RAM, ROM, Server, LAN, WAN, ISP
			Identify motherboard, microchip, hard drive, SCSI, transistor, cards
<b>III. USE TECHNOLOGY TO CREATE DOCUMENTS/PRESENTATIONS ACROSS THE CURRICULUM</b>			
<b><u>III.A. Keyboard Familiarity</u></b>	Correct body posture, hand position (home row, space bar)	Correct body posture, hand position (home row, space bar)	Correct body posture, hand position (home row, space bar)

Benchmarks	Grade 3	Grade 6	Grade 8
		Understand/use function keys (return/enter, Esc, delete, command/control)	Understand/use function keys (return/enter, Esc, delete, command/control)
	Right/left division of keyboard	Right/left division of keyboard	Right/left division of keyboard
		Use correct fingers for letters, shift, numbers/symbols,	Use correct fingers for letters, shift, numbers/symbols, ten key numeric pad
		Keyboarding minimum: 15 WPM / 85% accuracy Recommended: 30 WPM / 95% accuracy	Keyboarding minimum: 15 WPM / 85% accuracy Recommended: 30 WPM / 95% accuracy
<b><u>III.B. Word Processing - Title Page, Poem, Report, Story, etc.</u></b>		Open, new, enter, spell check, save, fonts, size, select, proof, print, quit	Open, new, enter, spell check, save, fonts, size, select, proof, print, quit, close, save as, insert, undo, cut, copy, paste, select all, delete, text, find, replace, page layout, print preview, print options, header, footer, alignment, line spacing, margins, tabs, insert text or graphics, fonts, styles
			Desktop publishing document: columns, desktop tools, fonts, white space, page design, style, page numbering, tables

<b>Benchmarks</b>	<b>Grade 3</b>	<b>Grade 6</b>	<b>Grade 8</b>
<b>III.C. <u>Create Graphic Image</u></b>	Use simple paint tools (pencil, shapes, fill erase)	Use simple paint tools, use tools appropriate to task	Use simple paint tools, use tools appropriate to task
			Edit (resize, send to back, flip, compress, group, lock), graphic images, manipulate scanned image
			Save graphic in appropriate format (GIF, JPG, pic, tiff, etc)
			Differentiate between paint and draw
<b>III.D. <u>Produce Electronic Document</u></b>		Create simple presentation - using text, graphic, sound	Create simple presentation - using text, graphic, sound, create multimedia presentation - inserting: video clip, title page, links to other sources and appropriate source citations

**IV. USE TECHNOLOGY TO ORGANIZE, GATHER, AND ANALYZE INFORMATION AND PREDICT OUTCOMES**

<b>IV.A. <u>File Management</u></b>	Save and retrieve files	Save, retrieve, organize and back-up files	Save, retrieve, organize and back-up files
<b>IV.B. <u>Gathering Information</u></b>	Access and retrieve information by using keyword search	Access and retrieve information by using keyword search	Access and retrieve information by using keyword, subject, and

Benchmarks	Grade 3	Grade 6	Grade 8
			<p data-bbox="1850 280 2049 310">boolean search</p> <p data-bbox="1654 394 2049 500">Evaluate accessed information (current, pertinent, relevant, appropriate)</p> <p data-bbox="1686 545 2049 610">Evaluate sources (authority, reliability)</p>
<b>IV.C. <u>Use Spreadsheets</u></b>		<p data-bbox="1089 654 1549 727">Identify and define: row, column, cell, cell address, function, formula</p> <p data-bbox="1073 768 1549 914">Create spreadsheet: formatting (styles, alignment, decimal place, font, size, column dimensions)</p> <p data-bbox="1073 954 1549 1027">Organize and enter data (labels, numbers)</p>	<p data-bbox="1587 654 2049 727">Identify and define: row, column, cell, cell address, function, formula</p> <p data-bbox="1577 768 2049 914">Create spreadsheet: formatting (styles, alignment, decimal place, font, size, column dimensions)</p> <p data-bbox="1577 954 2049 1027">Organize and enter data (labels, numbers)</p>
<b>IV.C. <u>Use Spreadsheets</u></b>		<p data-bbox="1073 1068 1549 1141">Use direct calculations and formulas to manipulate data</p> <p data-bbox="1073 1182 1549 1255">Analyze data graphically and numerically</p>	<p data-bbox="1577 1068 2049 1141">Use direct calculations and formulas to manipulate data</p> <p data-bbox="1577 1182 2049 1255">Analyze data graphically and numerically</p> <p data-bbox="1812 1295 2049 1325">Predict Outcomes</p>
<b>IV.D. <u>Use Databases</u></b>		<p data-bbox="1073 1377 1549 1406">Identify and define: file, record,</p>	<p data-bbox="1577 1377 2049 1406">Identify and define: file, record,</p>

Benchmarks	Grade 3	Grade 6	Grade 8
		field/category, database, entry, label, and columnar format	field/category, database, entry, label, and columnar format
			Create database (eg. class names, address, book titles, author, type of book, etc)
			Organize data (sort, match, retrieve, select)
			Analyze data to create report (hard copy) in a format (eg, table, label, list)
<b>IV.E. <u>Use Internet</u></b>	Follow Acceptable Use Policy (AUP), stranger danger, appropriate sites	Follow Acceptable Use Policy (AUP), stranger danger, appropriate sites	Follow Acceptable Use Policy (AUP), stranger danger, appropriate sites
	Know netiquette and use appropriate language	Know netiquette and use appropriate language	Know netiquette and use appropriate language
			Identify and define: log on/off, load, download, upload,bookmark, Internet, HTML, email, WWW, FTP, fax, bulletin board,
			Identify and define: digital, analog, IRC software, list serve, CU/CME,

Benchmarks	Grade 3	Grade 6	Grade 8
	Compose/send/retrieve e-mail	Compose/send/retrieve e-mail	Compose/send/retrieve e-mail
			Information retrieval (search engines, directories)

Technology Scope and Sequence									
	K	1	2	3	4	5	6	7	8
<b>I. USE EXISTING AND EMERGING TECHNOLOGY RESPONSIBLY AND APPROPRIATELY</b>									
<b>I. A. Legal and Ethical Use</b>									
Demonstrate awareness of plagiarism			I			M			
Respect rights of ownership (passwords, student's work, student/teacher/Administration files, etc)			I			M			
Demonstrates knowledge of piracy and licensing				I			M		
Demonstrates knowledge of citing sources				I		M			
<b>I. B. Identify and Use Hardware</b>									
Identify and use: CPU, monitor, keyboard, mouse, floppy drive, CD/DVD, CD/DVD drive, printer, hard drive, USB ports, scanner, modem, removable media, digital camera, server, network, digital video camera, projection systems	I								M
<b>I. C. Independent Use Of Hardware and Software</b>									
On/off procedures	I	M							
Mouse (select, drag, drop)	I			M					
Data Storage (insert, read, save, remove)		I				M			
<b>Program/Desktop Management:</b>									
Pull down menus		I		M					
Cut, copy, paste			I			M			
Help Menu, keywords and terms					I				M
File management (save, save as, open, close, print, shortcuts, copying)		I					M		
Window management (scroll, resize, multiple windows)	I						M		
<b>I. D. Diagnose and Solve Simple Technology Problems</b>									
Power source			I				M		
Printer			I						M
Control (volume, brightness, etc.)					I				M
Cable connections							I		
Clock battery									I
<b>I. E. Select/Apply Appropriate Media and/or Technology to Task or Topic</b>									
Recognize the variety of resources (print, visual, electronic, Internet)		I							M
Access and select resources		I							M

<b>I. E. Select/Apply Appropriate Media and/or Technology to Task or Topic</b>									
Recognize the variety of resources (print, visual, electronic, Internet)			I					M	
Access and select resources					I				
<b>II. DEMONSTRATE PROFICIENCY IN IDENTIFYING, DEFINING, AND USAGE OF COMPUTER COMPONENTS AND STRUCTURES</b>									
<b>II. A. Computer Terminology</b>									
See individual topics for specific computer terms	I								M
<b>II B. Internal Structures/Components and Functions</b>									
Define input/output, RAM, ROM				I					M
Identify motherboard, microchip, hard drive, cards, USB, serial port, etc.				I					M
Knowledge of: cable, T-1, wireless, DSL, workstation, server, LAN, WAN, ISP, etc								I	M
Identify usage for security, firewall, filter, WEP enable				I					M
<b>III. USE TECHNOLOGY TO CREATE DOCUMENTS/PRESENTATIONS ACROSS THE CURRICULUM</b>									
<b>III. A. Keyboard Familiarity</b>									
Correct body posture	I			M					
Correct hand position (home row, space bar)		I			M				
Understand/use function keys (return/enter, Esc, delete, command/control)	I					M			
Right/left division of keyboard	I			M					
<b>Use correct fingers for:</b>									
Letters		I				M			
Shift			I			M			
Numbers/symbols				I					M
Ten key - numeric pad				I					M
<b>Keyboarding:</b>									
Minimum: 15 WPM / 85% accuracy Recommended: 40 WPM / 95% accuracy				I					M
<b>III. B. Word Processing - Title Page, Poem, Report, Story, etc.</b>									
Open, close, new, save, save as, quit		I		M					
Enter, spell check, fonts, size, select, proof, print,		I			M				
Insert, undo, cut, copy, paste, select all, delete, text, find, replace, page layout, print preview, print options, header, footer, alignment, line spacing, margins, tabs, insert text or graphics, fonts, styles				I					M

Desktop publishing document: columns, desktop tools, fonts, white space, page design, style, page numbering, tables				I					M
<b>III. C. Create Graphic Image</b>									
Use simple paint tools (pencil, shapes, fill erase) in a paint program, i.e. KidPix, Paint, etc.	I		M						
Use appropriate paint tools for task				I		M			
Edit (resize, send to back, flip, compress, group, lock)						I			M
Save graphic in appropriate format (GIF, JPG, pic, tiff, etc)						I			M
Edit graphic images						I			M
Manipulate scanned image							I		M
Differentiate between paint and draw							I		M
<b>III. D. Produce Electronic Document</b>									
Create simple presentation which includes title page, conclusion, and appropriate source citations			I			M			
Create simple presentation - using text, graphic, sound			I			M			
Create multimedia presentation – inserting video clips, sound clips, etc.							I		M
Create multimedia presentation - using all of the above and links to other pages							I		M
<b>IV. USE TECHNOLOGY TO ORGANIZE, GATHER, AND ANALYZE INFORMATION AND PREDICT OUTCOMES</b>									
<b>IV. A. File Management</b>									
Save and retrieve files	I			M					
Organize and back-up files				I			M		
Network Management of files		I			M				
Using removable storage devices			I			M			
Data/File Collaboration					I				
Learning File extensions: HTML, RTF, Office, PDF's, etc.									
<b>IV. B. Gathering Information</b>									
<b>Access and retrieve information by using:</b>									
Keyword search		I							
Subject search		I							
Boolean search					I				
Natural Language Search					I				
Evaluate accessed information (current, pertinent, relevant, appropriate)				I					
Evaluate sources (authority, reliability)				I					
Format of Works Cited					I				

<b>IV. C. Use Spreadsheet</b>									
Identify and define: row, column, cell, cell address, function, formula				I					
Create spreadsheet		I							
Format styles, alignment, decimal place, font, size, column dimensions				I					
Organize and enter data (labels, numbers)				I					
Use direct calculations and formulas to manipulate data						I			
Create bar, column and pie charts		I							
Label chart titles and axes				I					
Adjust columns and widths				I					
Use Sum function to add values						I			
Use fill series functions						I			
Copy chart into another application						I			
Prepare for printing		I					M		
<b>Analyze data:</b>									
Graphically (view data in graph form)					I				M
Numerically (comparing rows, cells, columns)					I				M
Predict Outcomes					I				
<b>IV. D. Use Databases</b>									
Identify and define: file, record, field/category, database, entry, label, and columnar format			I				M		
Organize data (sort, match, retrieve, select)					I				M
Analyze data to create report (hard copy) in a format (eg, table, label, list)						I			M
<b>IV. E. Use Internet</b>									
Follow Acceptable Use Policy (AUP), stranger danger, appropriate sites		I					M		
Know netiquette and use appropriate language				I				M	
Identify and define: log on/off, download, bookmark, Internet, HTML, E-mail, WWW, FTP				I					M
Safety discussions about Internet use of Blogs, Bulletin Boards, Instant Message, Chat Rooms, Email, etc. Resource: NetSmartz.org	I								M
<b>Internet Use:</b>									
How to use Browsers: Identify URL/address, home, back, forward, reload, bookmark/favorites, printing, etc.									
Use Search Engines see IV B.				I					M
Compose/send/retrieve email									
Attach/Detach files from email						I			M
Create web page (HTML, text, images, text, links, layout, etc)							I		

### III. STAFF DEVELOPMENT

Each school on the Archdiocese will develop and incorporate technology training for staff into its professional development plan. In this plan, the school will provide the time, resources, and personnel essential to effective technology training for staff, especially the unique needs of technology staff. Technology training will focus on enhancing educator skills that support standards-based curriculum and research-based instruction. Technology training will also focus on skills designed to support achievement by every student of the school's Schoolwide Learning Expectations.

#### A. Standards for Teachers

##### 1. Technology Operations and Concepts

*Teachers demonstrate a sound understanding of technology operations and concepts.*

Teachers:

- Demonstrate introductory knowledge, skills, and understanding of concepts related to technology.
- Demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

##### 2. Teaching, Learning, and the Curriculum

*Teachers work in collaboration with the computer teacher and/or library media specialist to implement curriculum plans that include methods and strategies for applying technology to maximize student learning.*

Teachers:

- Collaborate with technology instructor to facilitate technology-enhanced experiences that address content standards and student technology standards.
- Use technology to support learner-centered strategies that address the diverse needs of students.
- Apply technology to develop students' higher order thinking skills and creativity.

##### 3. Assessment and Evaluation

*Teachers work in collaboration with the computer teacher and/or library media specialist to apply technology to facilitate a variety of effective assessment and evaluation strategies.*

Teachers:

- Apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- Use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
- Apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

##### 4. Productivity and Professional Practice

*Teachers use technology to enhance their productivity and professional practice.*

Teachers:

- Use technology resources to engage in ongoing professional and lifelong learning.
- Continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- Apply technology to increase productivity.
- Use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

#### 5. Social, Ethical, Legal, and Human Issues

*Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-8 schools and apply those principles in practice.*

Teachers:

- Model and teach legal and ethical practice related to technology use.
- Apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- Identify and use technology resources that affirm diversity.
- Promote safe and healthy use of technology resource.
- Facilitate equitable access to technology resources for all students.

Taken from the ISTE Standards for Teachers

(See Appendix for Staff Competencies)

## IV. INFRASTRUCTURE

As a school plans to integrate technology into its program, emphasis needs to be given to modifying existing space and facilities to accommodate existing and future technology. This section addresses infrastructure, including technology support, hardware, and software acquisition needed to carry out the technology plan.

### A. Infrastructure

#### 1. Goals

The network environment should be robust enough to handle the standard applications common in today's technology world. Students and teachers should be able to depend on the technology to be running, responsive, and consistent so that all may be able to focus on accomplishing tasks.

- **Reliability** - Keep computers relatively new. Consider replacement cycles for computers every 3 – 5 years. Phase out older systems out of the computer lab and place them into the classrooms. Older computers in the classrooms should be removed after 7 – 10 years.
- **Usability** – Computers should be standardized with the same suite of software so that students can use any computer.
- **Accessibility** – The ratio of computers to students should be approximately 1 computer for every 5 students.
- **Facilitation of collaboration** – The use of a server with shared drive space should be encouraged to facilitate the collaboration between individuals.

- Business tools – Computer Operating system and software should ideally match what is available and used in the work force and at home. This will allow for greater support by parents and for future skills in other environments.
- Digital Equipment - A variety of technology devices should be available including digital cameras, digital video recorders, digital projectors, scanners, and other such items.
- Network Best Practices – Servers and workstations should be kept patched to the latest security releases to prevent attacks from outside. Virus software should be installed. Daily backups are important. A tape rotation schedule should be developed and a copy of a tape should be secured in an alternate location (in the church office for example).

## 2. Network

The file and print server must be sufficient to store all student and staff work. A backup using fast and reliable media should be run daily (DLT). 100Mb switched Ethernet should be used rather than 10Mbit Ethernet or the use of hubs rather than switches. All classrooms, computers, and printers should be connected to the LAN for everyone to use. Sufficient power should be available for the electrical wiring to support multiple computers in each room.

## 3. Security

A firewall should be installed to protect the network. Virus scan software should be installed on all machines and the server. Content filtering is desirable to prevent inappropriate sites from loading in the browser. Use a software or a hardware content filtering solution. All users should be assigned a user name and password.

## 4. Computer Lab Design Considerations

If possible, place as many computers in the computer lab as are needed to accommodate the largest class in the school. This will facilitate both instruction for a full class at a time and also allow for lab time in terms of research, word processing, and/or collaboration. Labs should be air-conditioned because computers, monitors, and people generate quite a bit of heat. Opened windows also let in dust which adversely affects computers. A digital projector should be permanently installed in the computer lab so that all of the class can see the teacher's computer. Sufficient electrical capability in the lab is most important.

## 5. Printing

All users should have access to a printer. All teachers and office staff should have access to a printer that is only accessible to teachers and staff. Printing should always be available and reliable. All users should have access to a color printer.

## **B. Technology Support**

### 1. Workstation Design Goal

Students should have workstations that are consistent in design, reliable, and sufficient to support the Operating System and applications of today's standards.

- Windows XP
- Office XP 2003
- Publisher 2003
- 512 Mb RAM
- 40 Gb hard drive

- Flat panel monitor (saves space, lower power consumption, lower heat output with comparable pricing to standard monitors)
- USB 2.0 port
- Built-in Ethernet port

## 2. Network/Computer Support

Part-time network support should be on-staff or on a consultant basis to provide timely support for common computer issues and should be a budget line-item.

### **C. Hardware Acquisition**

This section addresses the acquisition of technology hardware. This may include but is not limited to the following: computers, monitors, printers, scanners, modems, modem servers, routers, CD-ROMs, equipping a computer lab, interactive classrooms, VCRs, televisions, videodisk players, cameras, FAX machines, CAD/CAM classrooms, photography, projection devices, adaptive technologies, labs/classrooms, satellite hook-up, library/media management hardware, administrative technology hardware. Plans for preventive maintenance, security, and protection of all equipment need to be included.

#### 1. Evaluation Criteria Components

##### a. Compatibility and Industry Standards

- Is the hardware compatible and futuristic in regard to other pieces of hardware in your technology plan?
- Are there industry standards for similar hardware components?
- Is transfer of operating knowledge from other technologies applicable?

##### b. Ease of Operation

- Can hardware be installed and maintained by local staff persons?
- Are adult and student users able to access/use hardware with minimal additional technology competencies?
- Can hardware be serviced, maintained, and upgraded locally?

##### c. Support

- Is technical support provided by vendor at minimal cost and available in a variety of mediums?
- Are printed and electronic manuals written and understandable?
- Does the vendor have a strong Research and Development Department; does the vendor have a strong commitment to the Educational Community?

##### d. Cost

- Is the cost competitive within the market place for like specifications?
- Are the required/requested components included in the purchase price?
- Are detailed and renewal warranties available?

#### 2. Specific Considerations

- Is there the capability for and ease of using multimedia?
- Is the equipment able to be networked?

- Does the hardware include sound utilities, video input/output, etc?
- Is the built in memory sufficient and expandable?
- Is the hard drive storage adequate and expandable?
- Are computers and printers compatible?
- Are there adequate electronic devices available for backup and storage of data?
- Are printers adequate to handle current and future job loads?
- Are monitors and projection devices adequate for small and large groups?
- Do presentation systems have quality sound in and out capabilities?

### 3. Ordering Suggestions

- Occasionally group purchases/bundles are available; investigate current or pending offers;
- Hardware packages may not provide adequate memory for necessary program functions; consideration should be given to the savings of the package vs. the cost of additional memory upgrades.
- Consideration must be given to whether a line of equipment is being discontinued; what implications does the discontinuance have on issues such as maintenance;
- Review the type of warranty that is provided on the hardware;
- Maintain copies of all warranties;

When purchasing software, it is recommended that companies offering 30-day previews of software be used whenever possible.

### **D. Software Acquisition and Applications**

This section addresses the acquisition of software. All software acquisitions need to interface with the current and future hardware components of your technology plan. When evaluating software the following points should be kept in mind:

- Reliability and track record of the vendor
- Options for technological support
- Compatibility of software with current and future hardware
- History of product updates/revisions
- Preview/sample options
- Compatibility with other programs being used
- Ease of operation and installation

Widespread interest in the educational application of computerized technology indicates the on-going need to comment on its application in the schools of the Archdiocese of Portland. These comments assume that school/parental emphasis and use are placed within the context of ethics and use of technology. At present, there are six areas which we choose to address: 1) Teaching Productivity Software; 2) Teaching with Computerized Technology; 3) Computer Assisted Instruction; 4) Facilitating Information Access with Technology; 5) Teaching Computer Programming; 6) Staff and Administrative Use of Technology; and 7) Technology Assisted Instruction.

#### 1. Teaching Productivity Software

Teaching productivity software includes the use of keyboarding, word processing, data bases, spreadsheets, telecommunications, graphics, and desktop publishing. Application of the skill

and using the software are the goals, not merely mastering the use of the program itself. For example, teaching word processing to students should be related to the teaching of the writing/revising process, and application of those word processing skills should be an expectation for those students. Or, teaching use of a database management package should be related to a project involving organization and analysis of information.

*Application:*

*Productivity or application should be a major goal of the computerized technology curriculum in the schools.*

## 2. Teaching with Computerized Technology

Computerized technology has specific capabilities that make it an ideal teaching tool for many classroom situations, but it is not the ideal medium for all classroom instruction. If the focus of a lesson were hypothesis formation and testing, deductive reasoning, analysis, sequencing, classifying, or categorizing the instructive nature of technology makes it an ideal teaching tool. In this situation, the technology helps focus understanding by providing feedback to the students which they may use to modify their thinking strategies.

*Application:*

*Teacher use of computerized technology in the classroom for instruction in the various subject areas is a goal toward which schools should consistently move.*

## 3. Computer Assisted Instruction

Computer assisted instruction considers the computer as a means to help the student reinforce the basic subject matter in the curriculum. In this interactive application it could be used 1) to develop and reinforce skills and proficiency (as in spelling and mathematics); 2) to increase understanding in a variety of subjects through supplementary exercises and problem solving activities as well as; 3) to manage information efficiently.

The usefulness of any computer-assisted instruction for enrichment and deeper understanding of basic subject matter is primarily dependent upon the appropriateness of the software and the teacher's ability to incorporate the software into the lesson design/plan. Software should be able to generate student progress reports for teachers.

Computer-assisted instruction software needs to be evaluated or prepared in accord with the norms one would use in the critical evaluation of any supplementary instructional materials.

Issues to consider:

- Degree of relationship between the objective of the supplemental program and the concept/skill being taught in the basic curriculum;
- Interaction between student and subject matter (or teacher);
- Quality use of time;
- Motivational level;
- Level of thinking involved;
- Clarity of instruction;
- Sequentially progressive program versus repetitious presentation/practice;
- Single lesson versus part of a larger program;
- Method of feedback to student.

One of the differences between computer software and most other supplementary materials seems to lie in its complexity. Most computer software offers various skill levels. The student is only required to learn enough about the operation of the computer to manipulate the software. Thus, the decision to use a computer for computer-assisted instruction rests essentially on the evaluation of the quality and quantity of the software available and its compatibility with the program of basic instruction.

*Application:*

*Computer-assisted instruction is essential in today's society and needs to be further developed.*

#### 4. Facilitating Information Access with Technology

Providing access to a vast array of information resources is a primary skill students will need to be successful in life. Emphasis should be given to teaching these information retrieval skills through the existing media/library curriculum. Students should be exposed and have experience in a variety of programs and services; these should include but not be limited to: commercial online services, commercial program/curriculum services, web sites/pages, laser disks, CD-ROMs, on line libraries/resources, e-mail programs, video conferencing, chat forums, etc.

*Application:*

*Exposure and real life experiences in electronic information retrieval/sharing needs to be integrated in the existing curriculum.*

#### 5. Staff and Administrative Use of Technology

Computerized technology can greatly facilitate the many staff and administrative tasks which are part of a school. In looking to hardware and software for school use, it is good to keep the following in mind:

- Schools should decide what tasks and reports are needed and purchase hardware and software that will be sufficient;
- School personnel need to be trained in accord with the equipment to be used;
- When hiring personnel, preference should be given to applicants with knowledge and experience in computerized technology;
- Cost factor (initial expense, time saved performing tasks, long range benefits, tasks for which it is used).

*Application:*

*Staff and Administrative use of computerized technology is encouraged when it is efficient and cost effective.*

#### 6. Technology Assisted Instruction

Technology assisted instruction considers computerized technology as a means to enhance the students' understanding of the subject matter in the curriculum. In this interactive application it can be used for retrieving information, for building skills, for processing information, for producing media, and for communicating current messages. Technology assisted instruction also takes into consideration student motivation, learning styles, special needs, multi-cultural awareness and futuristic education.

*Application:*

*Technology assisted instruction should be used to enhance the thinking processes in organizing, analyzing, and interpreting information and developing evaluative skills in order to become an intelligent consumer of information for the purpose of solving problems and making decisions.*

(See Appendix for a sample Software Evaluation Form)

## **V. BUDGET**

The advent of technology into education prompts a rethinking of school financing, especially in the development of local budgets. While technology may permit a more efficient exercise of work, adequate planning must occur to provide the necessary financing for hardware and software acquisition, maintenance, security, utility charges, staff training, and future purchases. It prompts schools to think proactively, and often to reallocate financial resources to successfully accomplish school/Archdiocesan goals. The following assumptions and list of funding sources are offered as beginning points for acquiring the necessary resources.

### **A. Financial Planning**

Budgetary planning for technology is essential for the school in order to:

- Employ appropriate personnel to implement technology plan;
- Allocate financial resources for technology through annual line item designation in the budget, enabling staff to plan and prioritize building modifications, security, acquisition of hardware and software, equipment upgrade, repair, and maintenance, and training
- Fund innovative individual teacher projects that utilize technology;
- Allocate funding for telecommunications line charges and services fees;
- Take advantage of discounted prices on hardware and software provided by central purchasing or other cooperative purchases;
- Assure fair and equitable assignment of funds among grade levels and subject areas as well as a plan for redeployment of equipment throughout the system.

### **B. Funding Sources**

- Grants (local or national foundations)
- Title IIA, IID and V funds
- Computer fees
- Pilot projects
- Lease/purchase plans
- Parent Association donations
- Individual donors
- Alumni gifts
- Workshop/Evening class offerings
- Fundraisers
- Corporate matching programs

## VI. EVALUATION

Evaluation is essential throughout all parts of the technology plan. The Technology Needs Evaluation should be used at the beginning of the process with a follow-up at the end of the school year to verify that positive changes have actually taken place. The following areas need on-going and continuous evaluation:

- Management and assessment;
- Instruction and instructional design;
- Productivity and staff development;
- Moral and ethical issues;
- Administrative use and application.

In addition, it is important to identify specific criteria and indicators for other areas such as:

- Student learning;
- Review of policies and procedures;
- Review of hardware acquisition;
- Software guidelines;
- Building modifications;
- Budget expenditures.

(See Appendix for the Technology Needs Evaluation form.)

## VII. WEBSITES

A website/page is an electronic storage folder where information about the school is stored either locally or commercially for access by the constituents of the school and for others outside the school via the Internet. Webpages may be used to:

- Store documents from the school in an electronic format for others to access;
- Gather information from the constituents (e.g. forms, reports, surveys);
- Publish events and happenings about the school;
- Publish information about the school;
- Provide live audio/video downloads and interactive chatting/conferencing.

### A. Archdiocesan Policy on Building Websites

The Bishops Committee on Communications states as its principal concern “that what is presented on the Internet and elsewhere as ‘Catholic’ be authentically so and that truly Catholic sites not be linked to sites which contradict Church teachings and practice.” By the very nature of the Internet, specific guidelines are difficult to state and to enforce since there is no “central site” or single person responsible for its use. However, following the guidelines of the Bishops, the policy for building web sites throughout the Archdiocese of Portland in Oregon, including but not limited to parishes, schools, and the Pastoral Center are:

- That the Archbishop, as primary teacher in the Archdiocese, (or his delegate) has the ultimate and full discretionary authority to interpret websites within the Archdiocese as true to Catholic doctrine, as he would with other media;

- That sites do not compromise the integrity of Church doctrine;
- That sites which do not accurately reflect Church doctrine or devotion, not be presented in existing official or semi-official guides as “Catholic” sites;
- That the Catholic Church community use websites as a positive means of communication to their constituency and to the general public;
- That those who are usually responsible for supervision of employees are responsible for the supervision of information and links on a website;
- That the person designing a website (or the supervisor) be listed as the contact person for question and/or suggestions that arise from the website;
- That pornography, unethical or illegal solicitation, racism, sexism, and inappropriate language is not an acceptable application of a website;
- That transmission or use of any material in violation of any United States government or any state government is prohibited. This includes, but is not limited to copyrighted material, threatening or obscene material, or material obtained by trade secret;
- That the institutions within the Archdiocese adhere to copyright laws regarding use of software.

#### **B. Planning a Website**

- Become familiar with specific terminology related to websites;
- Electronically visit other websites to gather ideas;
- Access the current skill level of constituents to evaluate readiness for website usage;
- Inventory how the members of the school will get access to the site;
- Map out what type of information the school will post on the site;
- Decide if the school will use a provider or maintain its own site;
- Decide what level of access the site will provide;
- Decide who will have access to what types of information on the site;
- Decide who will be responsible for maintaining the content of the site;
- Decide the process for updating the content of the site.

#### **C. Implementation Steps**

- Once planning decisions have been made, seek competent technical advice;
- Establish a time line to implement the planning decisions;
- Secure the necessary human and technological resources to implement the site;
- Establish a marketing program to acquaint the constituents about your site;
- Conduct training sessions for the school’s constituents concerning how to access the site;
- Develop the site.
- Establish a time line for assessing the site's usage,
- Seek input from constituents as to ongoing purpose of the site; and plan accordingly.

#### **D. Archdiocesan Webpage Guidelines**

- There is to be no advertising, nor links to advertisers, including links to shopping sites for fundraising efforts.
- An acknowledgement page of donors contributing to the school/auction/campaign is allowed, provided there are no links to commercial sites.

- Identifiable photos of persons under the age of 18 years are not allowed on web pages. Care should be taken that there is no identifying information about students on a web page. It is a good idea to get written permission from adults whose pictures will appear on the web page.
- Web pages need to be reviewed by the Archdiocesan Office of Communications prior to “going live” on the Internet. The Communication Director will review the website. Any problems will be referred to the school to correct.
- If there are any questionable links to other religious or Catholic websites, the Communication Director will refer the issue to the Chancellor, who will make the final determination of appropriateness, per the instructions of the Archbishop.

# APPENDIX

## A. Electronic Information/Communications Policy/Agreement

### **Appropriate Use Policy and Guidelines**

\_\_\_\_\_ School is offers on-line electronic information services including but not limited to the Internet and email (“information services”) for students who participate in an orientation or training course. \_\_\_\_\_ School strongly believes in the educational value of such information services and recognizes the potential of such to support the curriculum and student learning in our school. The school’s goal in providing this service is to promote educational excellence by facilitating resource sharing, innovation, and communication. \_\_\_\_\_ School will make reasonable effort to prevent students from misusing the information services. However, a student is also responsible and must be continuously on guard to avoid inappropriate and/or illegal interaction while connected to the information services.

Listed below are the provisions of this agreement. If a student violates these provisions, access to information services may be denied and the student may be subject to disciplinary action.

### **PRIVILEGES**

The use of the information system is a privilege, not a right, and inappropriate use will result in a cancellation of those privileges. Before using the electronic services each student will participate in an orientation or training course with an appointed \_\_\_\_\_ staff member as to proper behavior and use of the network. The school will develop guidelines on what is appropriate use for subject areas and/or classroom usage. The principal may remove a user at any time deemed necessary or appropriate. The administration, staff, or faculty of \_\_\_\_\_ School may request that the principal deny, revoke, or suspend specific users.

### **PERSONAL RESPONSIBILITY**

The student will accept personal responsibility for reporting any misuse of the network to the appropriate authority (computer teacher, principal, teacher). Misuse may occur in many forms, but it includes using a program(s) or game(s), visiting web site(s), or sending or receiving messages that indicate or suggest pornography, unethical or illegal solicitation, racism, sexism, inappropriate language, as well as violating provisions of Sections **c**, **d** or **e** listed below.

### **ACCEPTABLE USE**

The use of any information services must, in the judgment of \_\_\_\_\_ School, be related to student education and research in accordance with the educational goals and objectives of \_\_\_\_\_ School. The student is personally responsible for compliance with this provision at all times when using information services.

The student may not:

1. Use, reproduce or transmit any material in violation of any federal, state or local laws. This includes, but is not limited to copyrighted material, threatening or obscene material, or material protected by trade secret;

2. Use the information services for any commercial or profit-making activity;
3. Use the information services to advertise a product or for lobbying or other political purposes.

Inappropriate use of electronic information resources may be a violation of local, state and federal laws.

### **NETWORK ETIQUETTE AND PRIVACY**

The student is expected to abide by the generally accepted rules of network etiquette. These rules include (but are not limited to) the following:

4. Be Polite: - Never send, or encourage others to send, abusive messages;
5. Use Appropriate Language: - The student is a representative of the school on a non-private system which may be viewed globally. Never swear, use vulgarities, or any other inappropriate language. Illegal activities of any kind are strictly forbidden.
6. Privacy: - The student should not reveal his/her home address or personal phone number or the addresses and phone numbers of other students.
7. Electronic Mail: - Electronic mail (email) at school is not guaranteed to be private. Messages relating to or in support of illegal activities must be reported to school authorities.
8. Disruptions: - Do not use the network in any way that would disrupt use of the network by others.

### **SECURITY**

Security on any computer system is a high priority because there are so many users. If the student identifies a security problem, notify the computer teacher or staff in charge at once. Never demonstrate the problem to other users. Never use another individual's account or password. Any user identified as a security risk will be denied access to the information services.

### **VANDALISM**

Computer vandalism is the intentional harming or destroying of the school's computer hardware and/or the school's software and/or data of other user(s) or any other agencies or networks that are connected to the system. This includes, but is not limited to, the uploading or creating of computer viruses. Vandalism may result in the loss of computer privileges, disciplinary action, and/or referral to law enforcement officials.

### **Services**

\_\_\_\_\_ School makes no warranties of any kind, whether expressed or implied, for the service it is providing. \_\_\_\_\_ School will not be responsible for any damages suffered while on this system. These damages may include but are not limited to loss of data as a result of delays, non-deliveries, mis-deliveries, or service interruptions caused by the system or student errors or omissions. Use of any information obtained via the information system is at the student's own risk.

\_\_\_\_\_ School specifically disclaims any responsibility for the accuracy of information obtained through its information services.

## B. INTEGRATION TOOL

### INTEGRATION OF TECHNOLOGY INTO THE CURRICULUM --Local School Use

The following list of concepts and skills can assist a school in identifying where technology related skills/concepts are integrated and taught in the curriculum. The instrument could be used as an “inventory” to access gaps in a program and identify the scope and sequence where skills could/should be covered/integrated. The listing could also serve as a documentation instrument for identifying where skills/concepts are covered/integrated. Concepts/skills should be added/deleted to adapt to the local situation.

OPTION A = Fill in the chart using disciplines, include grade and course

OPTION B = Fill in the chart by grade or department

<b>Option A</b>	Theology Religion	Language Arts	Math	Science	SS, Geography History	Health Physical Ed	The Arts	Modern Language	Other
<b>Option B</b>	Grade/ Dept	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:
<b>COMMUNICATION SKILLS; THE LEARNER:</b>									
Uses word processing to facilitate the writing process									
Creates presentation using computer programs (e.g. Hyperstudio, Persuasion, Powerpoint,									
Integrates software programs for creating projects									
Creates publications using desktop programs									

<b>Option A</b>	Theology Religion	Language Arts	Math	Science	SS, Geography History	Health Physical Ed	The Arts	Modern Language	Other
<b>Option B</b>	Grade/ Dept	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:
Creates web pages using a web authoring program									
Uses projection equipment for large group display/presentation									
Produces projects using: Sound sources / tape recorder / microphone									
Produces projects using: camcorder									
Produces projects using: VCR									
Produces projects using: video editing equipment									
Produces projects using: cameras									
Produces multimedia projects									
Converts images to digital format for use in publication or multimedia presentations by: using a camera									

<b>Option A</b>	Theology Religion	Language Arts	Math	Science	SS, Geography History	Health Physical Ed	The Arts	Modern Language	Other
<b>Option B</b>	Grade/ Dept	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:
Converts images to digital format for use in publication or multimedia presentations by: using a digital									
Converts images to digital format for use in publication or multimedia presentations by: using a video									
Exchanges information with outside sources using: e-mail									
Exchanges information with outside sources using: telephone, answering machine									
Exchanges information with outside sources using: fax machine									
Exchanges information with outside sources using: distance technologies, satellite, microwave, fiber optic									
Exchanges information with outside sources using: web sites/pages, electronic bulletin boards									
Creates compositions utilizing: MIDI devices or other computer software									
Creates compositions utilizing: computer drawing, paint, graphics, programs, animation									

<b>Option A</b>	Theology Religion	Language Arts	Math	Science	SS, Geography History	Health Physical Ed	The Arts	Modern Language	Other
<b>Option B</b>	Grade/ Dept	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:
Creates compositions utilizing: CAD/CAM									
<b>PROBLEM SOLVING; THE LEARNER:</b>									
Uses calculator to support mathematical principles: mathematical operations									
Uses calculator to support mathematical principles: graphical representation of data									
Uses technology to record, manipulate and analyze data: spreadsheet									
Uses technology to record, manipulate and analyze data: database									
Uses technology to record, manipulate and analyze data: task specific software (e.g. accounting,									
Can interpret technical manuals for operating or troubleshooting hardware and software									

<b>Option A</b>	Theology Religion	Language Arts	Math	Science	SS, Geography History	Health Physical Ed	The Arts	Modern Language	Other
<b>Option B</b>	Grade/ Dept	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:

**INFORMATION RETRIEVAL;  
THE LEARNER:**

Uses various strategies to search for information via: CD-ROM									
Uses various strategies to search for information via: automated card catalogs									
Uses various strategies to search for information via: video - television, videotape, film, etc.									
Uses various strategies to search for information via: videodisc									
Uses various strategies to search for information via: handheld devices - spelling assistants, personal digital									
Uses various strategies to search for information via telecommunications: commercial online services									
Uses various strategies to search for information via telecommunications: market data line									
Uses various strategies to search for information via telecommunications: weather data line									

<b>Option A</b>	Theology Religion	Language Arts	Math	Science	SS, Geography History	Health Physical Ed	The Arts	Modern Language	Other
<b>Option B</b>	Grade/ Dept	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:
Uses various strategies to search for information via telecommunications: <b>Internet</b>									
Gathers data using peripheral or sensory devices such as: scientific probes									
Gathers data using peripheral or sensory devices such as: microscopes									
Gathers data using peripheral or sensory devices such as: navigational devices									
Gathers data using peripheral or sensory devices such as: scientific calculator									
Gathers data using peripheral or sensory devices such as: timing devices									
<b>APPROPRIATE USE; THE LEARNER</b>									
Determines if use of technology is an effective strategy for a given situation									
Selects the most efficient technology to complete a task									

<b>Option A</b>	Theology Religion	Language Arts	Math	Science	SS, Geography History	Health Physical Ed	The Arts	Modern Language	Other
<b>Option B</b>	Grade/ Dept	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:
Is aware of/uses ethical and legal technology standards: copyright									
Is aware of/uses ethical and legal technology standards: right to privacy									
Is aware of/uses ethical and legal technology standards: school/diocese use acceptable policy									
Is aware of/uses ethical and legal technology standards: etiquette									
<b>TASK SPECIFIC PERFORMANCE; THE LEARNER</b>									
Demonstrates ability to operate: computer									
Demonstrates ability to operate: printers									
Uses technology to perform tasks: copy machine									
Uses technology to perform tasks: keyboarding/data entry									

<b>Option A</b>	Theology Religion	Language Arts	Math	Science	SS, Geography History	Health Physical Ed	The Arts	Modern Language	Other
<b>Option B</b>	Grade/ Dept	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:	Grade/ Dept.:
Uses technology to perform tasks: programming									
<b>OTHER; THE LEARNER</b>									
Understands technology related vocabulary									
Adapts to changes in technology									
Demonstrates awareness of: a variety of technologies available									
Demonstrates awareness of: technology-related career opportunities									
Demonstrates awareness of: sociological implication of technological advancements									
Other:									

## **C. STAFF COMPETENCIES**

### **Hardware/Software Skills**

- Connect, disconnect, and reconnect a computer and printer (basic skills);
- Locate, open, and relocate already-saved documents (basic skills);
- Be aware of system, memory, and storage as they apply to software and hardware and school computer infrastructure (basic skills);
- Use and understand the importance of virus protection software (basic skills);
- Troubleshoot computer systems to identify problems (basic technical support);
- Follow backup protocol for data as recommended by school technology personnel (basic technical support).

### **Program Application Skills**

- Compose, save, and print documents (all applications);
- Access student information files from server (all applications);
- Construct a spreadsheet and produce graphs (spreadsheet);
- Produce memos, certificates, and bulletins with graphics (graphics);
- Scan text and images for import into documents (multimedia productivity);
- Take pictures digitally for import into documents (multimedia productivity);
- Access electronic reference resources (information literacy);
- Create presentations (slide show, graphics, etc.);
- Send and receive information and files via electronic mail (telecommunications);
- Use the Internet (telecommunications);
- Generate and access attendance, grades, and progress reports electronically (grading).

## **ADDITIONAL INSTRUCTIONAL TEACHER COMPETENCIES**

### **Curriculum and Technology**

Collaborate with computer teacher and/or library media teacher to plan and implement curriculum that includes technology;

Develop student assessments to include technology components;

Provide special needs students with appropriate assistive technology;

Utilize computers for student use in the classroom;

Challenge students to use previously learned technology skills where appropriate to complete their classroom assignments.

Utilize the following technologies in their instructional programs:

- Large screen television/monitors;
- VCR/DV;
- Digital Cameras
- LCD Projectors
- Scanner
- Internet

**D. SOFTWARE EVALUATION FORM/INSTRUMENT**

Reviewer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

Program/Software Title: \_\_\_\_\_

Copyright Date: \_\_\_\_\_

Vendor: \_\_\_\_\_

Author(s)/Designer(s): \_\_\_\_\_

Cost: \_\_\_\_\_

Program Operating Requirements: \_\_\_\_\_

Necessary Additional Software: \_\_\_\_\_

Program Components: \_\_\_\_\_

Purchase Options: \_\_\_\_\_

**PROGRAM OVERVIEW AND DESCRIPTION**

1. Curriculum area(s) and specific topic: \_\_\_\_\_

2. Prerequisite skills necessary: \_\_\_\_\_

3. Appropriate users (check all that apply)

Pre K-K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	High S	Administrative	Instruction	other

4. Type of program:
- Teaching Productivity Software
  - Teaching with Computers
  - Computer Assisted Instruction
  - Teaching Computer Science
  - Office Use

5. Instructional group size: Individual      Small Group      Class

6. Is this program an appropriate instructional use of the computer?      Yes      No

7. Briefly list the program's objectives.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Yes      No      NA**

\_\_\_\_\_ Are they clearly stated in the program or in the documentation?

\_\_\_\_\_ Are they educationally valuable?

\_\_\_\_\_ Are they achieved?

8. Briefly describe the program.

Please check Yes, No, or Not Applicable (NA) for each question below. To add information or to clarify answers, use “Comments” at the end of each section:

Yes	No	NA	<b>Educational Content</b>
_____			1. Is the program content accurate?
_____			2. Is the content appropriate for intended users?
_____			3. Is the difficulty level consistent for interest and vocabulary?
_____			4. Is the content consistent with State/Archdiocesan Curriculum Standards for the particular program areas?
_____			5. Is the content able to be integrated into the current program as opposed to a separate add-on component?
_____			6. Is the content free of racial, gender, ethnic, political bias and other stereotypes?
_____			7. Is the content presented in an interactive medium incorporating higher level thinking skill processes?
_____			8. Is the content presented to multiple learning intelligences?

Comments:

Yes	No	NA	<b>Presentation</b>
_____			1. Is the program free of technical problems?
_____			2. Are the instructions clear?
_____			3. Is the material logically presented and well organized?
_____			4. Do graphics, sound, and color, if used, enhance the instructional presentation?
_____			5. Is the frame display clear and easy to read?

Comments:

**Yes    No    NA    Teacher Use**

- \_\_\_\_\_ 1. Is record-keeping possible (within the program or through documentation worksheets)?
- \_\_\_\_\_ 2. Does a teacher have to monitor student use?
- \_\_\_\_\_ 3. Can teachers modify the program?
- \_\_\_\_\_ 4. Is the documentation clear and comprehensive?
- \_\_\_\_\_ 5. Does the vendor provide technical support?

Comments:

**Overall Evaluation (Check one)**

- \_\_\_\_\_ Excellent program. Recommend without hesitation.
- \_\_\_\_\_ Pretty good program. Consider purchase.
- \_\_\_\_\_ Fair. But might want to wait for something better.
- \_\_\_\_\_ Not useful. Do not recommend purchase.

Comments:

## E. TECHNOLOGY NEEDS EVALUATION

This instrument can be used to assess an individual school's present status in integrating applications of information technology into the curriculum or educational management process. This instrument may also be used with school leaders to start serious discussion about future technology activity and planning.

### Management and Assessment

1. Our school uses technology applications to assess student performance of learner outcomes.  
(Not Very Well)      1      2      3      4      5      (Very Effectively)

2. Our school uses technology to manage and group students for instruction based upon assessment of student performance of learner outcomes.  
(Not Very Well)      1      2      3      4      5      (Very Effectively)

3. Our school uses technology to report student progress and performance in accomplishing learner outcomes to parents/guardians/community.  
(Not Very Well)      1      2      3      4      5      (Very Effectively)

4. Our school uses technology in daily operations for the management of student information and records.  
(Not Very Well)      1      2      3      4      5      (Very Effectively)

### Instruction and Instructional Design

5. Our school uses technology to design and develop personalized learning plans (PLPs) as needed or appropriate.  
(Not Very Well)      1      2      3      4      5      (Very Effectively)

6. Our school integrates, not relates, the applications of technology, outlined in the district curriculum guide document, into all course and/or grade level learner outcomes.  
(Not Very Well)      1      2      3      4      5      (Very Effectively)

7. Our school uses technology to manage print and non-print information resources used to provide instruction based upon learner outcomes. Our school has a plan to share media center resources among all schools in the Archdiocese.  
(Not Very Well)      1      2      3      4      5      (Very Effectively)

8. Our school has provided easy access to and appropriate amounts of information technology for students to use in accomplishing learner outcomes.  
(Not Very Well)      1      2      3      4      5      (Very Effectively)

9. Our school has developed an integrated information technology curriculum based upon identified Exit Outcomes. This means that students make effective, routine use of computer graphics, hypermedia, desktop presenting, spreadsheets, databases, video production, word processing, desktop publishing, and other applications of technology that increase a student's personal power and productivity.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

10. Our school has studied and applied the effective uses of distance learning technology for the delivery of instruction, and has implemented it when appropriate.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

11. Our school integrates and uses technology applications as more than “Electronic Workbooks” in the instructional process. Our use of CAI (computer aided instruction) is solidly based upon research and is used as a supplement to “conventional” instruction to help students master basic skills.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

12. Our school provides students and teachers access to data available through computerized information retrieval systems and online databases.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

13. Our school recognizes that information technology can be helpful to special needs children and to children at risk.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

14. Our school recognizes that computers can contribute to and/or alleviate some equity issues. We have made an effort to ensure equity in technology access and types of use.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

### **Productivity and Staff Development**

15. Our school has developed an information technology plan. The plan is based upon learner outcomes as well as our school’s vision of our educational future.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

16. Our school has developed a technology program for teachers. Teachers have good access to technology and software for their professional use.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

17. Our school has a media/technology coordinator(s) who provide on-site support to me when I have technical problems or questions. These technology specialists have a leadership role in shaping the use of information technology in our school.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

18. Our school encourages and supports staff development, workshops, and professional development activities in information technology.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

19. Our school provides technology purchases based upon requests and innovative funding proposals developed by teachers. We have access to any instructional technology needed to provide instruction based upon learner outcomes.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

**Moral and Ethical Issues**

20. Our school teaches computerized technology in an environment that models and teaches values and ethical principles.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

21. Our school has developed policies related to the ethical uses of computerized technology.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

**Administrative Use and Application**

22. Our school requires that all staff use and model the effective and appropriate use of technology.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

23. Our school has integrated the effective use of technology into all administrative and managerial functions.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

24. Our school has an authentic plan for integrating the appropriate use of technology into all aspects of our organization.

(Not Very Well)      1      2      3      4      5      (Very Effectively)

When completed with the survey, evaluate the results of the survey. These findings should serve as a foundation for establishing a technology plan for your program.

Points to consider:

Arrange responses according to individual scores;

Survey points scoring in the 1 or 2 range need to be looked at first; if applicable, long and short range plans should be established to work on these areas;

Survey points scoring in the 3, 4, and 5 range need to be evaluated for the next steps, and these steps need to be incorporated into your long and short range plan.