Technology Plan for
Catholic Schools

Archdiocese of Galveston-Houston
June 30, 2013 – June 30, 2018

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Preface

This educational technology plan is the collective work of the Archdiocesan Catholic Schools Office, school administrators, school technology representatives and teachers. The plan provides a broad overview for the implementation of a comprehensive technology plan for the schools in the Archdiocese of Galveston-Houston.

This document is directed to administrators and those who are responsible for developing the initial stages of technology planning. Users proceeding through the action plan steps will find accompanying samples and guidelines in the appendices. Those already involved in implementing a technology plan may find the action plan a helpful tool for assessing and verifying their efforts.

Users may choose to identify additional resources and input in addition to the steps found in this guide. It should be noted that this plan is subject to ongoing development as technologies continue to change. It should also be noted that this technology plan is in alignment with the policies and procedures of the Archdiocese of Galveston-Houston.
Prologue

Since the early days of the Church, Christians have used various means available to them to spread the Gospel. St. Paul, for instance, may have been the first innovator in Christian education when he employed the highly developed rhetorical conventions of letter writing to teach and preach the Good News. St. Basil the Great once exhorted the youth of his day to avail of the Greek achievements that were classics so that the young can acquire skills for a deeper understanding of the Christian faith. Throughout history, Christians have used the innovations of the human intellect to reach the hearts and minds of people hungry for knowledge and formation.”

Blessed John Paul II, in his *Decree on the Instruments of School Communication*, reflects on the Church’s position on the use of technology:

[As the Church always must communicate its message in a manner suited to each age and to the cultures of particular nations and peoples, so today it must communicate in and to the emerging media culture. This is a basic condition for responding to a crucial point made by the Second Vatican Council: the emergence of social, technical, and cultural bonds linking people ever more closely lends “special urgency” to the Church’s task of bringing all to “full union with Christ”. Considering how important a contribution the media of social communication can make to its efforts to foster this unity, the Church views them as means “devised under God’s Providence for the promotion of communication and communion among human beings during their earthly pilgrimage.”]

The Church, in its mission to spread the Gospel message, must continue to use the current technologies and most effective tools of communication available to reach and educate people, particularly the youth.

The Pontifical Council for Social Communication, in addressing the use of instruments of technology in Catholic schools, states the goal as this: “The student who is able to discover the harmony between faith and science will, in future professional life, be better able to put
science and technology to the service of men and women, and to the service of God. It is a way of giving back to God what He has first given to us.” Technology is not to be viewed as an end in itself. It is used as a vehicle of communication, analysis, and research in the light of Catholic values and moral decision making. The Catholic Schools of the Archdiocese of Galveston-Houston are committed to the integration of emerging technologies to further the Church’s mission of spreading the Gospel to all people.

St. John Chrysostom once exclaimed: “What is nobler to rule minds or to mold the character of the young? I consider that he who knows how to form the youthful mind is truly greater than all painters, sculptors, and all others of that sort.” If the technological advances we have today aid in shaping the character of the young and forming the youthful mind, then, by all means, our Christian education should use the resources available to facilitate such learning.

Daniel Cardinal DiNardo
Archdiocese of Galveston-Houston

References


CHAPTER I: INTRODUCTION

Technology Mission Statement

The Archdiocese of Galveston-Houston will prepare administrators, faculty, volunteers and students to utilize technology to support curriculum, enhance learning and enrich the academic environment. The integration of our Catholic belief system in the use of technology will better enable individuals to meet the challenges of a changing global society. Schools will promote moral and ethical use of technology consistent with our Catholic Faith.

Commitment for the use of Technology

COMM ITMENT:

- All schools will develop security plans to address user and system protection, including Internet filtering, virus protection, system penetration, etc.
- Quality staff development will be available as provided by the Archdiocese, school technologists, teachers, and outside sources.
- Schools will encourage frequent utilization of technology to enrich the curriculum and support multiple learning styles.
- All libraries will work toward full automation.
- Schools will have instructional technology fully integrated into every classroom.
- Every school will have access to technology support.
- All schools will work to insure that adequate types and amounts of hardware, including network (LAN) capabilities, will be at all schools.
- All schools will acquire current software that is reflective of the curriculum and enhances staff productivity, including email for all staff.
- In the event of disaster, technology (equipment) and procedures will be in place to support the reconstruction of school operations.
- All schools will have an adequate technology budget for their needs and will pursue grants and donations to acquire additional funding.
- All schools will yearly assess adequate technology budget needs and then pursue grants and donations to acquire additional funding.
Vision for the use of Technology

**EFFECTIVE USE OF TECHNOLOGY WILL OCCUR WHEN:**

- A vision of the future is shared by all involved.
- Long-term, sustained, quality staff development and training are ongoing.
- Technology is part of a systematic planning process with an appropriate budget.
- There is a commitment to the effective and efficient use of hardware and software.
- Technology serves as a support service to the school community.
- Technology is modeled in all school programs and offices to foster the efficient sharing of information.
- Technology use is secure and follows moral and ethical beliefs of the Catholic Church.
- All existing communication and information paradigms are continually evaluated.
- All schools have access to technical support, adequate hardware, and appropriate types and amounts of software.
- All appropriate types of technology are used collaboratively.
- Technology is monitored and revised, based on scheduled feedback from the users.
- Equal access to technology is available for all regardless of gender, socio-economic status, ethnic background, or learning exceptionality.
Beliefs and Practices about the use of Technology

**BELIEFS:**

- Technological tools foster the abilities of administrators, general staff, teachers, volunteers, and students to revolutionize the way they work and think and give them new access to the world.

- Technology enriches learning experiences by addressing multiple learning styles.

- Technology encourages powerful learning environments through simulation and interactive multimedia, helping students to discover important relationships and construct new knowledge.

- Technology is a supplement, not a replacement for human interactions.

- Technology increases personal and organizational productivity.

- Technology streamlines and improves administrative functions.

- Technology creates effective communications through desktop publishing and presentations.

- Technology enables cost savings through electronic publishing and communications.

- Technology connects multiple constituents (parents, teachers, students, and broader community) through electronic communications.

- Technology creates an understanding and appreciation of the development and applications of technology in the world around us.

- Technology should be used as a tool for improving overall quality of education through:
  - Presentation aids
  - Development of research papers
  - Calculations
  - Publications
  - Acquisition of knowledge
  - Creative design
  - Development of critical thinking skills
  - Problem solving
  - Communication
- Efficient practices
- Organizational purposes
- Experimentation
- Video conferencing / multimedia
- Multimedia collaboration

**PRACTICES:**

- Administrative leadership, support, and modeling are essential.
- Schools will implement a formal ongoing program to evaluate technological tools, hardware, and software.
- Schools will maintain an inventory network map, software, hardware, and passwords.
- There will be a sequence of implementation steps and skills training that starts with administrators, then moves to teachers, and ultimately impacts the students and curriculum.
- All principals and assistant principals are encouraged to attend the Technology Leadership Academy held at various Texas Education Service Centers.
- Teachers are encouraged to utilize all resources available, which include the school’s professional development allocation and Title II funding to enhance the knowledge of their faculty and staff. Use of third-party contractors, such as MindStreams/A+ Educators will help to ensure that the schools receive their full entitlement from their local school district. Instructional opportunities should include:
  - Hands-on use of the Internet
  - Web page design
  - Multimedia presentations
  - Student publications
  - Creative problem-solving lessons involving technology
  - Development of a showcase unit plan, using problem-based learning
• An Archdiocesan grant-writing committee and a grant-writing committee at each school will seek funding for technology professional development, writing, cabling, hardware and software at schools.

• Schools will utilize E-rate which provides up to 90% reimbursement to schools.

• Annual on-going support and up-to-date training for educator-trainers will be provided.

• Schools will research new resources and funding resources.
CHAPTER II: GOALS AND COMMITTEE MEMBERS

Goals of the Technology Plan

• Technology will permeate school facilities, administrations, operations and curriculum, and will reflect our Catholic faith.

• All teachers, staff, and administrators will be able to utilize word processing, spreadsheets, e-mail, internet, presentation software, and desktop publishing for their own use and to engage with students.

• Security safeguards will be in place to protect the user and overall hardware and software system.

• All classrooms within the Archdiocese will be connected to the Internet.

• All classrooms will have a means of two-way communication with the school’s office.

• Students and teachers will be competent in current technology and will be provided with opportunities for further professional development.

• Schools will ensure the safe and responsible use of technology on every campus by requiring:
  
  o The inclusion of instructional and curriculum concepts which address safety and ethics for staff and students.

  o Policy development by each campus which addresses technology safety and responsibility in accordance with the rest of the technology plan.
Five Year Technology Goals and Action Steps

2013-2014

- Continue to add and upgrade connections in schools throughout the schools.
- Continue to strive to meet all Texas Catholic Conference Education Department (TCCED) accreditation requirements for all schools.
- Continue to pursue resources for distance learning.
- Continue to seek funding for technology needs of schools.
- Continue encouraging technology training of teachers and staff.
- Investigate and integrate a web-based visitor identity management and monitoring system.
- Continue to investigate interactive projection systems and interactive pens solutions.

ACTION STEPS:

- Continue pursuing technology funding by the technology grant writing committee in the school.
- Continue to encourage eligible schools to apply for E-rate funding.
- Continue to provide and update technology training for faculty and staff.
- Continue to encourage schools to utilize their technology funds including their federal funds for technology professional development.
- Follow the Archdiocesan technology curriculum.
- Seek out resources for sharing and recycling.

2014-2015:

- Research implementing various distance learning programs with security web-based access.
- Continue to add and upgrade connections in schools throughout schools. (Investigate Cloud-based solutions.)
- Continue to strive to meet all Texas Catholic Conference Education Department (TCCED) accreditation requirements for all schools.
• Continue to pursue resources for distance learning.
• Continue to seek funding for schools’ technology needs.
• Continue encouraging technology training for teachers and staff.
• Review and update Technology Staff Development Plan to assess the competency of faculty, staff and teachers, determine their strengths and weaknesses, and utilize information to better address technology needs.
• Review and update plan for assessing students’ grade level competency in technology.
• Establish an archdiocesan consortium for sharing best technological practices in the classroom.

• Continue to investigate interactive projection systems and interactive pens solutions.
• Encourage STEM solution on all levels.
• Review and continue with subscription guidelines for online interactive programs.
• Institute guidelines for the use of web 2.0.
• Implement policies concerning B.Y.O.D. (bring your own device)
• Promote and encourage STEM field trips and virtual tours.
• Implement digital citizenship curriculum.

**ACTION STEPS:**

• Continue pursuing technology funding by the technology grant writing committee in the school.
• Continue to encourage eligible schools to apply for E-rate funding.
• Continue to provide and update technology training for faculty and staff.
• Continue to encourage schools to utilize their technology funds including their federal funds for technology.
• Implement a method of training in the Technology Staff Development Plan for assessment of faculty, staff and teachers.
• Continue to promote project-based learning that will engage students in learning knowledge and skills through carefully designed technology based products and tasks. (Develop digital portfolios.)
• The Archdiocese will continue to organize professional development support for teachers to share best practices for integrating technology in the classroom.

• Continue to add and upgrade connection in schools throughout schools. (Investigate Cloud-based solutions.)

• Continue with the awareness of issues regarding subscription guidelines for online interactive programs.

• Continue with awareness of interaction of faculty, students, parents and volunteers on web 2.0.

• Continue with awareness of interaction of B.Y.O.D. (bring your own device) for faculty, students, and volunteers.

• Continue to promote and encourage STEM field trips and virtual tours.

• Enforce digital citizenship curriculum.

2015-2016:

• Enhance Internet connections throughout the school.

• Investigate and implement mobile technology solutions (tablets, iPads, and laptops).

• Research implementing various distance learning programs with security web-based access.

• Continue to add and upgrade connections in schools throughout schools.

• Continue to strive to meet all Texas Catholic Conference Education Department (TCCED) accreditation requirements for all schools.

• Continue to pursue resources for distance learning.

• Continue to seek funding for schools’ technology needs.

• Continue encouraging technology training for teachers and staff.

• Review and update Technology Staff Development Plan to assess the competency of faculty, staff, and teachers, determine their strengths and weaknesses, and utilize information to better address technology needs.

• Review and update plan for assessing students’ grade level competency in technology.

• Establish an archdiocesan consortium for sharing best technological practices in the classroom.
• Continue to investigate interactive projection systems and interactive pens solutions.
• Encourage STEM solution on all levels.

**ACTION STEPS:**

• Continue pursuing technology funding by the technology grant writing committee in the school.
• Continue to encourage eligible schools to apply for E-rate funding.
• Continue to provide and update technology training for faculty and staff.
• Continue to encourage schools to utilize their technology funds including their federal funds for technology.
• Continue a method of training in the TSDP for assessment of faculty, staff, and teachers.
• Continue to promote project-based learning that will engage students in learning knowledge and skills through carefully designed technology based projects and tasks. (Develop digital portfolios)
• Diocese will continue to organize professional development support for teachers to share best practices for integrating technology in the classroom.

**2016-2017:**

• Assess current technology plans with regards to technological advances and required needs, with emphasis on what is working and what is not.
• Continue to enhance Internet connectivity and mobile technological solutions.
• Continue to strive to meet all Texas Catholic Conference Education Department (TCCED) accreditation requirements for all schools.
• Continue to pursue resources for distance learning.
• Continue to seek funding for technology needs of schools.
• Continue encouraging technology training for teachers and staff.
• Seek out resources for sharing and recycling.
• Continue to investigate interactive projection systems and interactive pens solutions.
• Encourage STEM solution on all levels.
**ACTION STEPS:**

- Check and update current schools’ technology plan.
- Purchase and obtain the necessary hardware and software.
- Research and update technology texts for high schools

**2017-2018:**

- Organize committee to reassess the Archdiocesan plan on what did and did not work.
## Technology Committee Members

<table>
<thead>
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CHAPTER III: PHASES OF THE TECHNOLOGY PLAN

The technology plan is divided into seven parts. The parts provide a framework for creating and maintaining facilities for students and teachers that best meet the technology mission for Catholic Schools in the Archdiocese of Galveston-Houston.

Part 1 - Technology Planning
Part 2 - Infrastructure Implementation, Upgrading, and Maintenance
Part 3 - Computer Hardware
Part 4 - Computer Software
Part 5 - Non-Computer Technology
Part 6 – Curriculum Guidelines
Part 7 - Training for Teachers and Administrators

One of the components required by Lumen Pro Via in all schools’ Strategic (long range) plans is a technology plan.

Part 1 - Technology Planning

There is a significant amount of pre-planning and assessment that occurs prior to actually determining the specific technology needs of a school (Appendix A). In order to determine what types of technologies must be mapped into the school’s future planning, a solid understanding of the school’s intended use of the technology for curriculum and education management purposes is essential. Towards this end, the following steps are recommended for both new and existing schools:

Review the Technology Integration Standards (Appendix B). Outcomes listed in the document can be charted to identify where technology related skills and concepts should be integrated and taught in the school’s curriculum. A review of the Computer Curriculum Guidelines
(Appendix C) and the online curriculum on the Catholic Schools web page should help a school in completing this plan. Please note the Archdiocese Technology Curriculum is posted online in the Teacher Documents link, along with the other curriculums.

The Technology Integration Standards and Computer Curriculum Guidelines can be helpful for categorizing thoughts and ideas for eventual inclusion in the Technology Plan. Both the Curriculum Guidelines and the Technology Integration Standards provide grade by grade suggestions for specific technology criteria. Individual schools may elect to modify these documents based on local school needs.

For all schools:
Review and finalize an Administrative Technology Assessment Survey and a Teacher Technology Competencies Assessment Survey (Appendix I and J). These documents help ensure an understanding of curriculum requirements prior to planning details of the software, hardware, etc. It is necessary that education management needs be also addressed. It is therefore suggested that schools follow the recommended guidelines cited above.

After these steps, new schools should have a clear idea of their technology goals. Based on the identified curriculum and educational management needs, new schools can begin planning for specific hardware, software, and training.

For existing schools, the following additional steps are suggested:
Complete a Technology Needs Self-Assessment (Appendix D).

Complete an Existing Inventory Survey (Appendix H) to help assess the school’s present status in integrating technology into the curriculum and the educational management process.
Perform a Gap Analysis based on the results of the Technology Needs Self-Assessment and a Needs Survey. This gap analysis will help the school determine their needs within the phases discussed in this technology plan. This will help existing school leaders to start serious discussions about future technology activity and planning.

Implementation of the Technology Plan
Evaluating the schools’ ability to meet these goals and prioritizing the path in achieving them is the objective. These considerations will help provide the classrooms and administrative offices with computers, hardware peripherals and software, as well as other technology related equipment.
Implementation of the technology plan should begin after a thorough review and completion of the steps listed in Appendix A.

Based on each school’s particular need, goals and areas of strength and weakness can be identified, and implementation priorities can be established. Areas that require prioritization are:

- Assignment and training of the technical administrator.
- Infrastructure path.
- Upgrading or replacement of hardware.
- Targeting of curriculum-specific hardware to insure usefulness.
- Provision of path for hardware to be able to adequately handle targeted software.
- Peripherals capability along plan’s path.

Implementation steps should be completed holistically, rather than in narrowly focused actions that may solve one problem, but create additional ones.

Objective measurement of the implementation plan’s success with feedback for improvement is important. This will allow enhancement and upgrades to the plan.

**Technical Administrator**

The assignment and training of individuals is key to keeping the technology plan on target. Personnel who have proper training and understanding of the goals can make decisions about the plan. Responsibilities of this person should include:

- Understanding the existing or proposed infrastructure capabilities.
- Contact person for vendors.
- Responsibility for security of hardware and software licensing.
- Assignment and on-going training of an assistant who has full access to electronic data.

**Part 2 - Infrastructure Implementation, Upgrading, and Maintenance**

The proper infrastructure will carry the school into the future. Installation of voice, data, and video infrastructure should follow the schedule determined in the school technology plan. The most important thing is to get it right the first time. Whether a new school is putting this infrastructure in for the first time, or an existing school is upgrading its infrastructure, the cost of doing it more than once is prohibitive. It is more cost effective to budget infrastructure at the expense of actual hardware or software.
Implementation plans and discussions with vendors providing the service (including voice, data, and video) must be integrated as a whole. As an example, the number of phone lines per classroom is entirely dependent on one’s choice of Internet connection (phone modem or not). Rooms with fax machines also need additional phone lines.

Network jacks are needed for computers and printers.

It is important that the installing vendor has appropriate warranty and service capabilities. With the ever-increasing importance data and voice infrastructure have in day to day instruction and administration, downtime is not an option. Select a vendor who has a clear warranty and proven track record in dealing with issues that may arise. Before signing contracts for significant technology expenses, submit contracts to the Archdiocesan Legal Services for their review.

Schools will seek grants and donations and have fund-raisers to help with expenses.

Upgrading the infrastructure can be planned in a time frame comfortable for the school, but as aggressively as possible. The incremental cost of adding four new lines versus three is much cheaper than adding three now, only to have to return and add another later.

**Outlets**

Existing schools with insufficient building infrastructure to support needs identified in the technology plan, should develop long range plans to address such issues as available network jacks or modems per classroom. The relative cost for incremental wiring is worth the small investment and any plans should take a long-term perspective. Schools will need at least as many communication outlets for capabilities in each office and classroom as they plan on having PC’s, modems, projectors, overheads, data projection displays, televisions, etc. Phone lines are needed for modems unless cable modems are used. It is recommended that a school add more of each type of line per classroom than what is actually planned to be used. Schools should attempt to have per classroom: One television outlet, five network modem lines for computers and projectors, and one line for a telephone.

**Network and Internet**

One performance problem that many face is not having adequate processing power of their computer, or speed of their connection. Install Internet connection service with adequate bandwidth to meet current and continued needs. Some possible options are T1, Cable and ADSL. The speed these services offer is by factors of 10-100 greater than phone lines, allowing mainstream use of this technology.

If phone modems are to be used, schools should use 56K modems or greater. Confirm connection capabilities with the Internet Service Provider - ISP.
Networks within a school should be completely standardized. In addition, standardizing across schools has tremendous benefit educationally in collaboration and in cost reduction.

A good Internet connection plan, along with an appropriate security/firewall strategy, is essential.

As more and more educational and administrative uses of the Internet continue to proliferate, having a good data infrastructure becomes critical.

All schools should put in place a plan to maintain networks as data traffic and technology needs increase and change. Networking is the backbone of the school’s computer technology. Ideally the network should be invisible and it should not be the limiting factor in how computers are used in school.

Part 3 - Computer Hardware

Review the Criteria for Hardware Acquisition, which outlines evaluation, special considerations, and suggestions (Appendix E). The importance of standards cannot be overemphasized. Maintenance, administrative, and training costs are all significantly reduced by operating standard or compatible sets of hardware. In addition, use of such hardware by students, teachers, and administrators is greatly simplified.

Review Computer Hardware Compatibility that lists specific models and capability levels they allow (Appendix E). Besides the significant advantages of having compatible hardware within a school, cross-school collaboration is also made possible.

First, assess or decide if the hardware platform for the school will be:

- IBM compatible only
- Macintosh
- Linux

Next, determine how each platform will be used, ideally not for the same purpose. Determine the number of each platform to be acquired. Remember to include needs for the labs and administrators in addition to the classrooms. For existing schools, determine what current hardware falls beneath the minimum standards discussed in the planning phase and is listed in the Computer Hardware Compatibility (Appendix E) document.

Computer Hardware Peripherals

Ideally each computer should have as a minimum goal direct access to:

*Minimum Requirements
• CD-ROM/DVD
• Network Card
• 17” RGB Monitor
• Sound Card
• Video Card
• Operating System
• Win2000/Windows XP/Windows Vista/Windows 7/Windows 8
• Mac OSX
• Pentium 3 Processor (or equivalent)
• Apple G4 Processor
• 512 MB RAM

*Note: These requirements are for desktop computers. Schools should set their own requirements for laptop computers and netbooks.

Recommended Requirements
• 2 GHz Processor (or equivalent)
• DVD/CD-RW (for instructor computer)
• 17”+ Monitor
• Network Card
• 1GB MB RAM
• Accessible USB Ports
• Sound Card
• Video Card

*Note: These requirements are for desktop computers. Schools should set their own requirements for laptop computers and netbooks.

Minimum standards for these peripherals will be based on the age of the computer. It is recommended that computers be no more than three years old if economically feasible. Doing so will ensure that the minimum peripherals’ standard is generally compatible.

Life of Computer Hardware
Hardware more than three years of age should be evaluated for major upgrade or replacement. This minimizes compatibility issues, lowers maintenance costs, and ensures that
students can take full advantage of the increasing technology capabilities afforded on a year to year basis.

Minimum peripheral requirements listed in the Selection Criteria for Hardware Acquisition (Appendix E) will be updated, based on the three-year guideline to assist local schools in determining acquisition needs and maintenance/enhancement planning.

Computers no longer compatible should be donated to other schools that need them or used for tasks that are not critical.

**Computers Per Classroom**

The number of computers needed per classroom may vary, depending on the average number of students per class, grade, and how computers are used in the curriculum. This number should be tied to the needs/outcomes identified in the *Integration of Technology into the Curriculum (Appendix C)*.

For example, schools having a lab with 20-25 computers available for general student use allow each student in a classroom access to a computer. Ideally each teacher would be equipped with a computer in addition to 2-5 per classroom.

**Computer Hardware Peripherals**

Most hardware peripherals should be included as part of the overall hardware purchase/lease. This includes a CD/DVD (on teacher’s computer, a CD/DVD R/W), monitor, speakers, sound, and video cards. With the purchase of a new machine, regardless of performance level, these peripherals should be appropriately new and compatible.

**Network Connections and Modems**

An appropriate network card and modem should be specified. While most new machines come with a 56K modem and a network card, if the school is fitted with a high-speed connection or a wireless connection, this should be reflected in the selection of network card and modem. High bandwidth connections typically have special modems that the providers lease.

The same advantages of standardizing on printers hold true as with the other equipment. This allows easy swapping of printers, minimizes maintenance, and supply cost and allows easier printer network set-up. Each classroom would ideally have one printer for teacher use and one for student use (one printer for every five computers).
A plan for printer breakdown should include back-up printers or designation of non-critical printers to be reassigned until warranty or loaner equipment arrives or equipment is repaired. Ordering printers along with computers insures compatibility and typically reduces cost. It is recommended that replacement costs of ink-jet cartridges be investigated. While the cost of a specific printer may be relatively inexpensive, the cost of replacing the printing cartridges may be prohibitive. If economically feasible, laser printers are recommended, following the same procedure of checking the costs of replacement cartridges. It is also recommended that DPI resolution be set to low to conserve expenses.

Peripheral upgrades should be closely tied to computer turnover. Upgrading peripherals in order to extend the useful life of the computer should be made. Besides memory upgrades, adding a DVD or CD R/W and/or faster connection speed can often extend the life for another 12 months. However, as the cost of new machines continues to drop, this strategy loses some of its return value.

**Computer Memory**

The number one source of slow response and “aging” of computers is typically computer memory or RAM (Random Access Memory). Specify the maximum amount of memory the budget allows. Additional RAM provides the greatest system performance boost at the lowest cost. It is better and cheaper to get a system with slower chip speed and with lots of memory than get the latest chip speed with minimum memory. Specify the largest denominator chip of RAM available, as these chips take fewer slots and allow for RAM to be added without disposing of many smaller denominations of RAM that occupy the limited memory slots. Specify the fastest speed of RAM available, expressed in nanoseconds.

**Upgrades**

A plan should be put in place to keep the hardware in working condition and to enhance the hardware, when needed, to extend its life span. For instance, each year a determination of what amount of memory will be considered minimum may be made. Machines below this minimum amount should methodically be brought up to standard. The machines themselves would then be made obsolete when the CPU minimum requirement is no longer met.

Often, by upgrading memory and other internal peripherals, another 12-18 months can be effectively “bought free” of any particular CPU. The school’s technology committee should constantly review the status of all equipment and continually be acting on enhancements, upgrades, and replacements in a planned fashion.
Donations

Donations should be gracedly accepted in the spirit they are given. Donated equipment that does not meet the minimum criteria chosen should be either re-purposed for other non-classroom, non-administrative needs, offered to another school whose need matches the donation, or sold to turn the donation into a cash benefit. There are many marketplaces on the Internet where such sales and auctions take place.

The hardware decision and ordering process needs to include decisions on what software is to become standard with the machines and peripherals.

Acceptance of Technology Donations

Each school should provide a letter to the donee following these guidelines:

*Name of School* has adopted the Archdiocesan Technology Plan’s guidelines for the acceptance of technology donations. All potential donations are evaluated by the technology committee. Donations are evaluated upon the ability to meet the following criteria:

- Supportive to the technology plan of the school.
- Supportive of the mission and philosophy of the school and the Archdiocese of Galveston-Houston
- Appropriate to the mission and purpose of the local program.
- Appropriate to the developmental level of the students affected.
- Are within one year of the current equipment level for compatibility and are compatible with the current and planned platforms at the school.
- Create no unanticipated or excessive financial burden for the school/program (construction, wiring, additional equipment, etc.)
- Comply with all tax rules and regulations governing donations.
- Require limited maintenance.
- Carry no unreasonable restrictions by the donor.
- Become the property of the school.
- Create no unanticipated additional staff requirements.

Accepted donations will be acknowledged in writing.

Training

When placing orders, be sure to plan for and include all training necessary for administrators and teachers to function on the new systems. This can be included in the lease or purchase price.
Warranty
When purchasing, be sure all warranty considerations are discussed prior to signing the agreement. Warranties should include “on-site” service. Vendors should assume as much responsibility for maintenance and replacement as possible. Most are willing to take almost total responsibility. Warranty service should be available for a one to two year period. The speed of warranty or replacement service should be considered when selecting the vendor. One or two system breakdowns can cause major problems. Choose a vendor who guarantees quick replacement of the hardware in question or provides loaner equipment in the interim. Note: Archdiocesan schools should send legal contracts to the Archdiocese Legal Department for review before the principal signs and the pastor approves.

Outside Contractual Agreements
All outside contracts should be sent to the Archdiocese’s Legal Department prior to principal’s signature and the pastor’s approval. No contracts may be signed by any other school personnel or volunteer groups.

Part 4 - Computer Software
Based on the Software Guidelines (Appendix F) and specific needs, work with the hardware vendor to get as much of the standard software as possible bundled with the standard computer installation. Generally, it is easy to do this with packages such as Microsoft Office™ or OpenOffice™, e-mail, calendar tools, etc., and an internet browser (such as Mozilla Firefox, Apple Safari or Microsoft Internet Explorer), Adobe Acrobat, Quick Time, Real Player, NetMeeting, and WinZip. Standards may differ for classroom use versus administrative use. It is much less expensive to have one set of standard “base” tools, even if some are not used. Maintenance, administration, and training costs are significantly reduced by operating standard or compatible hardware. In addition, use of such software by students, teachers, and administrators is greatly simplified. Besides the significant advantages of having compatible software within a school, cross-school collaboration allows maximum flexibility when reassigning or sharing any particular computer equipment.
A school with compatible hardware and software throughout is a school poised to leverage the benefits of technology to the greatest extent possible, while minimizing the cost. Teachers, administrators, and students can thus collaborate without hindrance, while support, maintenance, and licensing can be greatly reduced.

Certain classes of software may be standardized completely, while others should retain some degree of flexibility. Specifically, administrative software can be standardized, while educational software may have somewhat more variation.

Site Licensing
When leasing or purchasing in quantity, software that is not included in a bundled system should be evaluated for site licensing. Usually quantities of five to ten or more qualify. The cost for additional user licenses is almost always significantly less expensive at the time of initial purchase than later. Therefore, order for the planned need, whenever possible.

Collaboration in licensing targeted software on an Archdiocesan basis is very beneficial in terms of cost and maintenance reduction, compatibility across schools for greater collaboration and in increasing flexibility in meeting fluctuating needs. Therefore, contacting the Archdiocesan IS/Telecommunications Office to review your software purchase plans can be helpful in coordinating and ensuring these cross-school benefits.

Upgrades
Determinations as to life span of a particular piece of software are tied to functional capabilities, and so can vary to a greater degree. When planning for software upgrades/replacements, software may be broken into three categories: student based, teacher based, and administrative and operational based software. Operational software usually has the most frequent upgrade releases. Keep track of major functional changes and continually modify the software plan to reflect them. Actual upgrades should be kept to a minimum (no more than every 12-24 months). Student, administrative, and teacher specific software upgrades should be planned in advance.

The technology committee should stay in touch with software vendors to remain current on the vendor’s plans over a 12-month period. Schedule software upgrades for summer and winter breaks. Rollback plans should always be in place in case of an upgrade failure due to incompatibility or unforeseen bugs.

Verify that the existing hardware base can handle new versions of software prior to approving software upgrades. Since most of this planning is future focused, integrate the hardware and software plans.
Part 5 - Non-Computer Technology, Digital Equipment, and Communication Devices

- TVs
- VCRs
- DVDs
- Video Cameras/Camcorders/Webcams
- Digital Cameras, digital processing document cameras
- Microphones/intercoms/speaker systems/school cell phones
- Fax machines
- Video Conference (via PC and NetMeeting) and telecommunication conferences
- PDAs, hand held computers
- Technology Interactive response devices
- Digital scribes
- Wireless slates that connect

Because of the importance of compatibility in hardware and software, non-computer technology, computer accessories, and communication devices are great places to encourage and look for donations. It is much less important that schools have the same brands of TVs, VCRs, DVDs, fax machines, overheads, overhead projection displays, scanners, digital computer equipment, etc., than computer hardware. Obviously, technology moves rapidly, and it is difficult to predict non-computer technology and digital computer equipment that may be available during the years of the implementation of this technology plan.

Non-computer technology, digital computer equipment, and communication devices include, but are not necessarily limited to:

- Printers
- Scanners
- School cell phones, IPhones, walkie-talkies, weather radios
- Overheads
- Data/projection displays, LCD projectors, interactive digital table projectors
- Interactive white boards
- ct to data projector displays, interactive pen displays, etc.
- Robotics
- Graphing calculators
• Digital microscopes
• Flash drives, external hard drives

Maintain an up-to-date inventory of all items (such as those listed above). Consult the technology plan to determine areas of need. The life span of all such equipment should be significantly beyond that of typical computer hardware. Plan for the ideal number to have on site, and ensure ready access to an additional one in case of equipment breakage or other problems.

Decide life spans for purchasing forecasts to avoid emergency replacement.

**Part 6 – Curriculum Guidelines**

The Archdiocesan Technology Curriculum Guide is a separate document that serves as a foundation for teacher planning and student instruction. It includes standards from the National Educational Technology Standards (NETS) and the Texas Essential Knowledge and Skills (TEKS). The Curriculum Guide supports the integration of technology in all curriculum areas to enhance learning, instruction, communication, and information management in a manner that is both equitable and accessible by all. It is not intended to limit, but rather to provide a standard on which individual schools can build technology programs that will prepare its students for the future. Users of the Curriculum Guide must be aware that curriculum is an ever-evolving long-term collaborative effort involving teachers, librarians, administrators, and educational leaders. The Archdiocese Technology Curriculum Guide is posted online on the Catholic Schools web site in the Teacher Link, along with the other Archdiocese Curriculums.

Young people especially are rapidly adapting to the computer culture and to its "language." This is surely a cause for satisfaction. Let us "trust the young." ...They have had the advantage of growing up with the new developments, and it will be their duty to employ these new instruments for a wider and more intense dialogue among all the diverse races and classes who share this "shrinking globe."

Pope John Paul II

See Appendix C, Computer Curriculum Guidelines and the Archdiocese Technology Curriculum posted online.
Part 7 - Training for Teachers and Administrators

Implementation of hardware and software should be in conjunction with, or immediately followed by, appropriate teacher and administrator training. As students continue to become more technology savvy, it is imperative that teachers become very proficient with technology and its appropriate use. The Archdiocesan technology committee should review and enhance training requirements, based on changes in technology and in competency requirements for teachers and administrators.

Based on the school's Integration of Technology into the Curriculum document (Appendix C) and their specific hardware, software, and non-computer needs, a training plan should be created for teachers and administrators. The plan should provide for:

- Training to increase competency in the use of software, hardware and non-computer items. Minimal training in basic maintenance of such items can save a lot of expense and time for simple tasks (such as changing print cartridges, hook-ups for computers, etc.)
- Training in the use and integration of the Internet into the curriculum and collaboration among teachers, administrators, and students. Use of the Internet for video and audio conferencing should be included. Safe and effective use of the Internet, how to filter, monitor use, etc. are also important.
- Training materials for teachers and other staff to enable them to perform site based training.
- Evaluation of the training and implementation processes and recommendations for future improvement.

Federal funds through Title IIA are available for each school to provide professional development, which may include technology training. It is recommended that each school’s technology plan include the use of the school’s federal funds for technology professional development. Individual schools need to contact their own public school district (LEA). Schools located in HISD (and other public districts as applicable) may have technology training arranged through Mindstreams/A+Educators, a third party contractor that manages Title IIA funds. Other good sources for training are Region IV Education Service Center and Harris County Department of Education. All schools located in the Archdiocese of Galveston Houston may obtain services from both of these entities, regardless of the county in which the school may lie.
CHAPTER IV: TECHNOLOGY STANDARDS FOR STAFF DEVELOPMENT

Overview

A Technology Staff Development Plan should be incorporated into each school’s overall technology plan. The plan should be created, implemented and monitored by the school principal, technology committee, and/or technology coordinator. The plan should be based on the ISTE National Educational Technology Standards (NETS) for Administrators, Teachers, Technology Facilitators, Technology Leaders and Volunteers as outlined in the following pages, taking into consideration the school’s available technology resources.

Accompanying the technology standards are the “Essential Conditions,” or “necessary conditions to effectively leverage technology for learning.” The “Essential Conditions,” also developed by ISTE, can support or impede the school’s efforts at implementing the NETS, depending upon how each condition is being addressed. It is not possible to tackle all the essential conditions at once. It is recommended that the school examine and prioritize the conditions based on their level of concern and by the level of confidence in the school’s ability to meet the conditions. After examining the conditions, the school can then plan ways to meet the conditions most critical to the school and sustain those that are currently being addressed.

The Technology Staff Development Plan should include:

- A timeline for implementation.
- The methods of staff development to be used. Such methods may include:
  - Training sessions by on-site technology coordinator during the school day or after school.
  - Training sessions by a teacher/consultant from within the school or outside the school.
  - Off-site technology classes, seminars, conferences, and workshops such as those provided by the Archdiocese, the local public school district, Harris County Department of Education, Region IV Education Service Center, private corporations, or professional organizations.
  - A description of new staff member orientation and training.
  - A method or tool for assessment.
  - Descriptions of volunteer orientation and training.

*Title IIA allocations, along with the school’s allotment for technology and funds from fundraisers, technology fee, etc. could be used to cover training costs.*

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A list of resources and links that may be used by schools to assist in the creation of their staff development plan is available in Appendix L.
National Educational Technology Standards for Administrators (NETS-A)

The following is the latest version of Educational Technology Standards and Performance Indicators for Administrators (NETS-A) released by the International Society for Technology in Education (ISTE) in 2009.1

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The NETS for Administrators builds on the work of the Technology Standards for School Administrators (TSSA) Collaborative, where ISTE had a leading role in developing these standards. The NETS•A embraces the TSSA vision and extends it to additional administrative job roles. These standards are indicators of effective leadership for technology in schools. They represent a national consensus among educational stakeholders of what best indicates effective school leadership for comprehensive and appropriate use of technology in schools.

I. Visionary Leadership

Educational Administrators inspire and lead development and implementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization. The shared vision should:

A. Inspire and facilitate among all stakeholders a shared vision of purposeful change that maximizes use of digital-age resources to meet and exceed learning goals, support effective instructional practice, and maximize performance of district and school leaders.

B. Engage in an ongoing process to develop, implement, and communicate technology-infused strategic plans aligned with a shared vision.

C. Advocate on local, state and national levels for policies, programs, and funding to support implementation of a technology-infused vision and strategic plan.

II. Digital Age Learning Culture

Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students. The learning culture should:

A. Ensure instructional innovation focused on continuous improvement of digital-age learning.

B. Model and promote the frequent and effective use of technology for learning.
C. Provide learner-centered environments equipped with technology and learning resources to meet the individual, diverse needs of all learners.

D. Ensure effective practice in the study of technology and its infusion across the curriculum. Promote and participate in local, national, and global learning communities that stimulate innovation, creativity, and digital age collaboration.

III. Excellence in Professional Practice

Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources. The school should:

A. Allocate time, resources, and access to ensure ongoing professional growth in technology fluency and integration.

B. Provide for opportunities for educators to participate in learning communities that stimulate, nurture and support administrators, faculty, and staff in the study and use of technology.

C. Promote and model effective communication and collaboration among stakeholders using digital age tools.

D. Stay abreast of educational research and emerging trends regarding effective use of technology and encourage evaluation of new technologies for their potential to improve student learning.

IV. Systemic Improvement

Educational Administrators provide digital age leadership and management to continuously improve the organization through the effective use of information and technology resources so that educators may:

A. Lead purposeful change to maximize the achievement of learning goals through the appropriate use of technology and media-rich resources.

B. Collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve staff performance and student learning.

C. Recruit and retain highly competent personnel who use technology creatively and proficiently to advance academic and operational goals.

D. Establish and leverage strategic partnerships to support systemic improvement.

E. Establish and maintain a robust infrastructure for technology including integrated, interoperable technology systems to support management, operations, teaching, and learning.
V. Digital Citizenship

Educational Administrators model and facilitate understanding of social, ethical and legal issues and responsibilities related to an evolving digital culture. They must:

A. Ensure equitable access to appropriate digital tools and resources to meet the needs of all learners.
B. Promote, model and establish policies for safe, legal, and ethical use of digital information and technology.
C. Promote and model responsible social interactions related to the use of technology and information.
D. Model and facilitate the development of a shared cultural understanding and involvement in global issues through the use of contemporary communication and collaboration tools.

ESSENTIAL CONDITIONS

Shared Vision
The school administrators provide proactive leadership in developing a shared vision for educational technology among school personnel, parents, and the community.

Equitable Access
Students, teachers, staff, and administrators have equitable access to current technologies, software, and telecommunications resources.

Skilled Personnel
School administrators and support personnel are skilled in the use of technology appropriate for their job responsibilities.

Professional Development
School administrators and support personnel have consistent access to technology-related professional development for their job assignments.
**Technical Assistance**
Personnel have technical assistance for maintaining and using technology.

**Content Standards and Curriculum Resources**
Instructional personnel and school leaders are knowledgeable about content and technology standards, related curriculum resources, teaching methodologies, and the use of technology to support learning.

**Student-Centered Teaching**
Teaching in all settings includes the use of technology to facilitate student-centered approaches to learning.

**Assessment and Accountability**
School administrators have a system for the continual assessment of effective technology use for improving student learning.

**Community Support**
School administrators maintain partnerships and communications with parents, businesses, and the community to support technology use within the school.

**Support Policies**
The school has policies, financial plans, and incentive structures to support the use of technology in learning and in operations of the school.

**External Conditions**
Policies, requirements, and initiatives at the national, regional, and state levels support the school in the effective implementation of technology for achieving national, state, and local curriculum and technology standards.
National Educational Technology Standards for Teachers (NETS-T)

The following is the latest version of the Educational Technology Standards and Performance Indicators for Teachers (NETS-T) released by the International Society for Technology in Education (ISTE) in 2008.¹

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Effective teachers model and apply the National Educational Technology Standards for Students (NETS-S) as they design, implement, and assess learning experiences to engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community. All teachers should meet the following standards and performance indicators.

Teachers:

I. Facilitate and Inspire Student Learning and Creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.

Teachers should:

A. Promote, support, and model creative and innovative thinking and inventiveness.

B. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources.

C. Promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes.

D. Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments.

II. Design and Develop Digital-Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS-S.
Teacher should:

A. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity.
B. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress.
C. Customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources.
D. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching.

III. Model Digital-Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

Teachers should:

B. Demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations.
C. Collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation.
D. Communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats.
E. Model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning.

IV. Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.

Teachers should:

A. Advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources.
B. Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources.
C. Promote and model digital etiquette and responsible social interactions related to the use of technology and information.

D. Develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital-age communication and collaboration tools.

V. Engage in Professional Growth and Leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

Teachers should:

A. Participate in local and global learning communities to explore creative applications of technology to improve student learning.

B. Exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others.

C. Evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning.

D. Contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community.

ESSENTIAL CONDITIONS

Shared Vision

Proactive leadership at each school should facilitate the school to develop a shared vision for educational technology among all education stakeholders, including teachers and students, parents, and the community.

Empowered Leaders

Stakeholders at every level should be empowered to be leaders in effecting change.
Implementation Planning
Schools should have a systemic plan aligned with a shared vision for school effectiveness and student learning through the infusion of information and communication technology (ICT), and digital learning resources.

Consistent and Adequate Funding
Schools should have ongoing funding to support technology infrastructure, personnel, digital resources, and staff development.

Equitable Access
Schools should have robust and reliable access to current and emerging technologies and digital resources, with connectivity for all students, teachers, staff, and school leaders.

Skilled Personnel
Educators, support staff, and other leaders should be skilled in the selection and effective use of appropriate ICT resources.

Ongoing Professional Learning
Schools should have technology-related professional learning plans and opportunities with dedicated time to practice and share ideas.

Technical Support
Schools should have consistent and reliable assistance for maintaining, renewing, and using ICT and digital learning resources.

Curriculum Framework
Schools should have content standards and related digital curriculum resources that are aligned with and support digital age learning and work.
Student-Centered Learning
Planning, teaching, and assessment should be centered around the needs and abilities of students.

Assessment and Evaluation
There should be continuous assessment of teaching, learning, and leadership, and evaluation of the use of ICT and digital resources.

Engaged Communities
There should be partnerships and collaboration within communities to support and fund the use of ICT and digital learning resources.

Support Policies
Policies, financial plans, accountability measures, and incentive structures should support the use of ICT and other digital resources for learning.

Supportive External Context
Policies and initiatives at the national, regional, and local levels should support schools and teacher preparation programs in the effective implementation of technology for achieving curriculum and learning technology (ICT) standards.

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CHAPTER V: FINANCIAL ASPECTS OF TECHNOLOGY

Financial Aspects of Technology

- Budgeting and paying for technology.
- Determining the technology needs of the school.
- Prioritizing acquisition needs.
- Reviewing annually against long-term plan.

Budgeting and Paying for Technology

Schools must consider how much of their budget to allocate towards technology. Budgeting methods include, but are not limited to:

- Appointing a technology budgeting committee (ie. Principal, School Board representative, Tech Coordinator, and Accountant/Bookkeeper)
- Assessing current technology situation:
  - Inventory (Age, Condition and Quantity)
    - Student use
    - Staff use
  - Allocated budget
  - Device/Student ratio
  - Needs according to long-term plan
  - Operational costs
- Securing grant funds and donated technology
  - Foundation/individual donations, government title funds, parent/alumni gifts, and donated equipment in accordance to Archdiocesan guidelines.
- Using technology fees as a funding tool
  - Determine appropriate technology fee per school beyond tuition.
  - Earmark fees directly for technology budget. (ie. Internet Access, Licensing fees, etc.).

All of these factors together comprise the Total Cost of Ownership (TCO).

Determine Technology Needs of School

- Ideal device ratios
- Technology standards for staff and students
- Specialized technology needs (ie. Music, Yearbook, etc.)
- Replacing/Updating/Adding technology
  - All computer hardware and software depreciates in value within 3-5 years.
  - A typical business cycle for replacing computer technology is 3 years; in education, a more common (and economically realistic) cycle is 4-5 years.
  - New computers must be budgeted in addition to the agreed-upon replacement budget.
Using Standardization to Lower Costs or Improve Services

- Schools should set standards for the types of technology they will employ.
- Standardize hardware/software platform to limit costs where feasible.
  - Bulk purchasing of supplies
  - Group training

Prioritizing Acquisition Needs

- List all budget items in order of importance/need
- Create a purchasing calendar

Reviewing Annually Against Long-Term Plan

- Compare the actual expenditure against annual budget.
- Identify accommodations against long-term plan.
- Adjust current plan for future years.
CHAPTER VI: POLICIES

The Acceptable Use Policies and security guidelines for schools in the Archdiocese of Galveston-Houston outlined below are to be used as the generally accepted minimum policy for schools.

Network

Network Acceptable Use Policy

Use of the school’s Internet is to promote the exchange of information to further education and research. The school’s use should be consistent with the mission of the Archdiocese of Galveston-Houston, of the Catholic Schools Office, and with the mission of the school.

Each year, technology users, e.g., staff, volunteers, and students must accept an ethics agreement before gaining access to school information systems and networks.

The information technology staff or principal / principal designee will educate technology users regarding information security concerns at the beginning of each school year.

All new employees should be given an orientation covering information security, proper use of the network computers, and an introduction to software currently used by the school. A copy of the school’s technology plan and the Archdiocesan Technology Plan for Catholic Schools should be available to all current and new employees so they will better understand the goals of the school.

Important data should be backed up regularly and stored in an environmentally secure environment. Periodic backups (weekly, monthly, etc.) should be stored off site in a secure location.

No student will be allowed to maintain security files or access levels.

Respecting the rights and property of others is paramount. No improper access or misuse of files, data or information will be tolerated.

End-user passwords must be changed regularly, using generally accepted password standards (minimum of 8 characters, alphanumeric, maximum password age of 120 days).

Knowingly, or inadvertently, permitting the spread of computer viruses and malware in the school network is unacceptable.

Each school is responsible for taking precautions to prevent viruses and malware on its network.

Student access to the Internet shall be monitored or supervised by school staff members.

School networks will be protected by a firewall.

Application and modification of the Acceptable Use Policy are within the sole discretion of the Archdiocese of Galveston-Houston’s Catholic Schools Office. Violation of any conditions of use described here may be cause for disciplinary action or in the case of employees, discharge.
See appendix for sample agreements of letters of permission. (Appendix M)

**Network Responsibilities**

It is the responsibility of the school’s Technical Support/LAN designee to assign network security rights to employees to access the network in accordance with the employees’ business needs. Passwords should be required in all key systems and should meet password strength requirements detailed above. It is the employee’s responsibility to use the password and protect it from unauthorized use of others. Please see chapter IX for more information on information security concerns.

**Security**

Please see Chapter IX, Security.

**Disaster Recovery**

Loss of digital information, network infrastructure and/or computer systems can bring all areas of your campus to a standstill. It is vital that time is taken *before* a crisis occurs to:

- Analyze and inventory the resources on your campus.
- Identify key personnel and their disaster responsibilities.
- Identify the location of necessary programs, backups and documentation.

Whether the loss is the result of weather-related incident, fire, flood, virus, or hardware damage, each campus should have a plan in place to resume normal operations as soon as possible. The following are minimal steps and guidelines to re-establish the information system for a campus:

- Backup data regularly as detailed in the above policies, with offsite backups.
- Backups should be tested regularly to ensure they are working correctly.
- Identify and prioritize critical data and systems.
- Ensure that the school’s offsite backups are secure, and data privacy is protected.

Plans for school should include protection on:

**A. School Software**

- Software inventory database
- License keys
- Network notebook (documentation)
- Network diagram
- Admin passwords
• DNS record information
• Media
• Software Manuals: (pdf files)
• Database software: SQL, etc.
• Server and OS software, etc.
• E-mail system database & software
• User home directories
• Vendor/consultant list/contact info
• Website data/database

B. Financial Data
• Database with employee records
• Payroll: history, tax information
• AP/GL: bank records
• Insurance records

C. Development
• Database
• Critical email contact information

D. Academic
• Student Record database
• Schedule
• Grade book
• Transcript
• Health records
• Library database
• Discipline records

Hurricane Preparation
Ensure the Crisis Management Plan (facility evacuation plan) for each campus addresses:
• The physical integrity of the school’s computer network system including hardware and software.
• Who decides when to schedule a system shutdown and the time it will take.
• The procedure for shutdown and equipment protection, (unplug, off the floor, cover with plastic, move away from the window; blinds down and closed)

Recent disasters on the Gulf Coast show that schools must consider both what is needed to get the school back in operation and what is needed to do to assist students if they are temporarily displaced.

The following sites may be of assistance in developing a strategy for each campus.

• The Disaster Recovery Journal [http://www.drj.com/new2dr/samples.htm]
• National Institute for Standards in Technology

Responsibility

Software

• Both operating systems and program applications must be approved by the school administration and Technology Coordinator and installed by the Technology Coordinator or designee.

• Each user is responsible for taking precautions to prevent viruses and malware on his or her own equipment as well as school and/or Archdiocesan equipment.

• The illegal installation of copyrighted software or files for use on school computers is prohibited. The school’s Technology Coordinator is to install any software on school computers following the license agreement.

The Technology Coordinator will secure all license agreements on file.

Copyright

It is the policy of the Archdiocese of Galveston-Houston that all employees, volunteers, and students are to abide by federal copyright laws.

Employees, volunteers, and students may copy print or non-print materials allowed by:

• Copyright laws
• Fair use guidelines
• Specific licenses or contractual agreements
• Other types if permission is given in writing.

Employees, volunteers, and students who willfully disregard copyright laws are in violation of this policy, doing so at their own risk and assuming all liability.
Acceptance of Technology Donations

Each school will adopt the following guideline for the acceptance of technology donations. All potential donations are to be evaluated by the technology committee. Donations will be evaluated upon the ability to meet the following criteria:

- Supportive to the technology plan of the school.
- Supportive of the mission and philosophy of the school and the Archdiocese of Galveston-Houston
- Appropriate to the mission and purpose of the local program.
- Appropriate to the developmental level of the students affected.
- Compatible with the current and planned platforms at the school.
- Create no unanticipated or excessive financial burden for the school/program (construction, wiring, additional equipment, etc.)
- Comply with all tax rules and regulations governing donations.
- Maintainable by existing school personnel or contractors
- Carry no unreasonable restrictions by the donor.
- Become the property of the recipient.
- Create no unanticipated additional staff requirements.

Accepted donations will be acknowledged in writing.

Internet Terms, Conditions, and Regulations

It is the policy of the Archdiocese of Galveston-Houston, the Archdiocesan Catholic Schools Office, and the specific school to require the ethical use of the Internet and related technologies by all employees, volunteers, and students. These policies are set forth below in the Term, Conditions, and Regulations for the use of the Internet and related technologies. Access privileges may be revoked, school disciplinary action may be taken, and/or appropriate legal action taken for any violations that are unethical and may constitute a criminal offense.

Use of Electronic Communication

Whether occurring within or outside of school, when staff or student electronic communications jeopardize the safe environment of the school or may be construed as contrary to Gospel values, the staff member or the student can be subject to the full range of disciplinary consequences including the termination of a staff member or the expulsion of a student.

This policy applies to communications or depictions through email, text messages, cell phone pictures, or any online postings, whether they occur through the school’s equipment or connectivity resources or through private communication at the school or elsewhere.
Electronic communications or depictions are considered unacceptable if they are:

- Of a sexual and/or violent nature;
- Threaten, libel, slander, malign, disparage, harass, bully, or embarrass members of the school community; or
- Cause harm to others and/or to the school community.

**Acceptable Use**

The use of the Internet and related technologies must be in support of education and research consistent with the educational objectives of the Archdiocese and the school. Use of other organizations’ networks or computing resources must comply with the rules appropriate for these networks.

**Unacceptable Use**

Transmission of any material in violation of any U.S., State, Board, Archdiocesan, or school policy is prohibited. This includes, but is not limited to:

- Copyrighted materials.
- Threatening, bullying, violent, or obscene material
- Transmission of unacceptable cell phone/IPhone messages, pod casts, aps, tweets, social media posts and images, or material protected by trade secret.

Use for commercial activities is not acceptable. Use for product advertisement, political lobbying, game playing, gambling, unauthorized chat, or chain letter communication is also prohibited.

Electronic devices may be used to record a class lecture, presentation, program, interview, meeting or similar activity **only** with prior permission of the individual(s) being recorded. Absence of permission is unacceptable and may constitute copyright infringement. Verbal permission may be sufficient for recording within a class or meeting for personal use. However, written permission must be obtained prior to recording or transmitting someone’s image or speech over the airwave, in public, on the web, as part of a class assignment or any school sponsored activity or program. It is the responsibility of the user, host, event sponsor, department, or school to provide notification and obtain the necessary permissions in advance or at the time of the recording/transmission.

Other examples of unacceptable information are

- Pornography.
- Violence.
- information on bombs.
- inappropriate language and communications.
Acts of vandalism are prohibited. Vandalism is defined as any malicious attempt to harm or destroy data of another user or to damage hardware or software. This includes, but is not limited to, the uploading or creation of computer viruses, attacking school network and system services, or actively attempting to deny the use of school network and information resources. Unauthorized use of another person’s computer, access accounts, and/or files is prohibited.

Privileges

The use of the Internet and related technologies is a privilege, not a right; and inappropriate use may result in cancellation of those privileges. Each user who is provided access to the Internet and related technologies will participate in a discussion with assigned staff person(s) concerning the proper use of the network.

The faculty, staff, or parent/guardian may request the administrator or designee to deny, revoke, or suspend a specific user’s access to the Internet and related technologies due to unacceptable use. Students are also required to follow rules for cell phone use as contained in the Parent/Student Handbook. Inappropriate use may result in confiscation of cell phones/IPhones and/or revocation or suspension of student’s use on school property.

When communicating with the school (Principal/Teachers), parents are to follow email guidelines established by the school.

Instruction – Technology in Curriculum

Teachers and students shall be instructed in the use of technology in the curriculum with an understanding of the implications of its use as a tool of communication, analysis and research. The school administration shall adopt a plan as developed by the school for the efficient and effective use of technology in the instructional program. 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, in conjunction with Archdiocesan and state curriculum guidelines. Staff meetings should include regular technology updates in all areas, especially acquisitions, grants, and workshops.

Instruction – Library/Media Center

The school administration is responsible for materials used by the school. The administration collaborates with qualified media specialists/aides, in cooperation with the staff, for the selection of instructional materials for the library media center. The selection of materials is ongoing and involves other members of the school community. In selecting materials to purchase for the library/media center, the media specialist/aide will evaluate the existing collection and the curriculum needs and will consult with reputable professionals for prepared aids and other appropriate sources.

The materials selected must comply with these criteria:

- Related to the program and curriculum.
• Age appropriate.
• Viewed as acceptable by professionals.
• Reflective of the philosophy of the school.
• In compliance with Archdiocesan standards and policies.

The media specialist shall assess the instructional materials. All non-functional, worn, or lost materials will be replaced appropriately, considering the needs of students and faculty and pending the availability of funds.

E-Mail

Each school should publish their email policies in the school’s Faculty/Staff Handbook and Parent/Student Handbook. These policies should include guidelines for staff and parents. School-provided email is intended primarily for business/academic purposes. Personal use of electronic mail is permitted as per each school’s guidelines, but such messages and access will still be governed by this policy.

Improperly used, E-Mail can result in a loss of privacy and potential legal liability for individuals and employers. School administration or IT staff may access, log, and review faculty, staff, and student email as necessary for information security or school investigations. Such access should be approved and logged by an appropriate school administrator. The school may both retain and examine email for an acceptable period of time after an employee has been terminated.

Users need to use public mailing lists appropriately, ensuring that the right mailing lists are used. Users are to not send messages unnecessarily to every list within the directory. (SPAM)

Transmissions of copyrighted material are to be done only with permission. All copyright laws must be followed.

Electronic snooping for any purposes or transmission of discriminatory, bullying, violent, or harassing language or images by any student, volunteer or school employee is a violation of policy and grounds for disciplinary action, up to and including termination or expulsion, in accordance with standard Personnel policies and procedures.

Use of E-mail for inappropriate messages is prohibited. Inappropriate messages, images, and attachments include, but are not limited to, those containing discriminatory or derogatory language and images that may be construed as contrary to Gospel values and/or inappropriate and unsolicited (SPAM) e-mail.

Guidelines for emails to teachers from parents should be published in the Student/Parent handbook and should include a general timeline for responses and follow the policy established by the school administrator.

Misaddressed mail should be routed immediately, without reading, to intended recipient OR deleted without reading.
Social Media

Social Media refers to the means of interactions among people in which they create, share and exchange information and ideas in virtual communities and networks.

The school or parish owns the school or school’s name and administrators have the right to restrict its use. Student/parent handbook rules and faculty/staff handbook rules prohibit unauthorized use of images, names and logos.

A Catholic school administrator can impose consequences for conduct occurring outside school. What students/faculty/staff do off-campus can detrimentally affect a school’s reputation. The parent/student handbook and faculty/staff handbook, which is a legal contract, must state that the administration reserves the right to discipline students/faculty/staff for off-campus conduct. Consequences for violating acceptable use of technology including social media include termination of employees and suspension and expulsion of students. (Note: The parent/student handbook and faculty/staff handbook can be updated during the year as circumstances may require)

Social media provides another venue for students/faculty/staff/parents to make threats, bully others, and offers opportunities to post potentially defamatory statements about the school, school personnel and students. Deliberate defamation of others is not consistent with Christian values and all should be held accountable for intentional harm they cause others.
CHAPTER VII: DEVELOPMENT GUIDELINES

Network

Networking at each school should facilitate the use of common software tools, have the ability to communicate with others efficiently, and allow access to the internet for students and faculty members. The infrastructure is crucial to many factors – cost, security, maintenance, and the ease of use.

The following areas should be addressed in development of a network system:

- Identify persons who will be responsible for managing the network. This should include responsibility for the development of policies and procedures, including the ethical use of information. (Note: Operating systems and programs applications must be approved by the school administrator and Technology Coordinator and installed by the Technology Coordinator or designee).
- Determine what type of information will be shared via the network.
- Establish a uniform system for user identities and how they will be published.
- Determine who will have access to the network.
- Determine access levels for various user groups.
- Clearly define and document all group policies.
- Develop a level of security that defined appropriate access based on user identities.
- Determine if there are others outside the organization that need to be connected to the system.
- Establish a process to alter user information as needed.
- Document network map and properly label all switches during set-up for future reference.
- Provide adequate training sessions for network users.
- Establish a procedure and timeline for backing up all network data.

E-Mail

E-Mail provides an avenue of enhanced, efficient, and economical communication with the school’s constituents. It should be viewed as an effective companion to personal contact, but should not replace direct contact with constituents. Electronic modes of communication facilitate the timely transfer of information.

The following areas should be addressed in development of an e-mail system:

- Determine best type of email to fit needs of campus (web host or local exchange).
- Identify person(s) who will be responsible for managing the e-mail software. This should include the responsibility for policies and procedures including the ethical use of
information. Note: software must be approved by the school administrator and Technology Coordinator and installed by the Technology Coordinator.

- Select software that has the ability to make each person an independent user. The software selection should be determined by the use. (Do you want to check e-mail off site? Will your e-mail address be easily accessible to outside parties? Can others access your e-mail at your computer?)
- Determine who will have access to the communication system and at what level.
- Establish a process to alter user information as needed.
- Establish a uniform protocol for email assigning email addresses.

**Use Guidelines**

Encourage administration, faculty, and staff to communicate electronically. Policies regarding email should be contained in the Faculty/Staff Handbook.

Encourage faculty and parents to communicate electronically. Policies regarding email (frequency, quantity, etc.) should be contained in the Parent/Student Handbook.

**Web Page Communication**

A Web Page is an electronic storage folder where school information is stored either locally or commercially for access by constituents. Following are the guidelines for web page communication. Web pages should be updated on a regular basis.

**Web /Site Usage**

- Store documents from the organization in an electronic format.
- Gather information from constituents.
- Publish events and happenings about the school.
- Publish information about the school according to the guidelines in the AUP permission form and user agreement.
- Communicate classroom activities via teacher websites.
- Provide secure portal for communicating grade information to parents.

**Planning Decisions**

- Seek competent technical advice in the early stages of planning.
- Identify the school website design team or individual.
- Become familiar with specific terminology related to the Web Site.
- Electronically visit other Web Sites to gather ideas.
• Map out what type of information the school will post on its site.
• Decide if the school will use a provider or maintain its own site.
• Decide what level of access the school site will provide.
• Decide who will have access to what type of information on the school’s site.
• Decide who will be responsible for maintaining the content of the site.
• Decide the process for updating the content of the site.
• Decide on a disclaimer statement regarding the website as an ongoing process.

**Implementation Steps**

• Establish a timeline to implement the planning decisions.
• Secure the necessary people and technological resources to implement the site.
• Create a set of guidelines and protocols for publishing pages on the web site.
• Establish a marketing program to acquaint the school’s constituents about the site.
• Conduct training sessions for the site.
• Determine how to access the site.
• Convey protocols for constituents who want to publish on the site.
• Include the Catholic School’s logo on the school site.
• Develop the school’s Web site.
• Establish a timeline for assessing the site’s usage and, seek input from constituents as to the ongoing purpose of the site.
• Determine minimum updating requirements for teachers.
• Designate individual(s) responsible for maintaining website.
• Designate individual responsible for serving as webmaster.
CHAPTER VIII - REPAIR, MAINTENANCE, AND UPGRADING

All schools need to create a multi-level plan for on-site maintenance. Maintenance should include a designated on-site employee, contracted services and/or volunteered expert advisor. It is recommended that low performance equipment be moved to locations where the need for powerful machines is not required. A standard level of technology will be maintained throughout the school.

The school will:

- Designate on-site employee(s) to oversee maintenance on technology assets.
- Secure maintenance contracts when determined to be cost-effective.
- Follow the Acceptable Use and copyright policy
  - Distribute to each staff member.
  - Strictly enforce and monitor.
- Use only school approved software and school owned/leased/approved hardware.
- Include in the budget a commitment for purchase of equipment to replace older, low performance equipment that is equitable among all grade levels.
  - Included as a separate budget item (ie. Technology fee to all students, portion of tuition set aside for technology budget)
- Establish procedures for the procurement of new equipment and software that takes into account school/Archdiocesan guidelines
- Designate on-site employee(s) to:
  - Maintain an inventory of all hardware and software.
  - Evaluate maintenance procedures, repair forms, and equipment standards annually.
  - Maintain a relationship with several vendors and/or repair services that can be easily contacted.
- Recommend the purchase of lab packs, multiple use, site/individual licenses as needed.
- Encourage the use of open-source/freeware software and services.
- Inform staff of procedures for requesting equipment purchase, repair, or maintenance.
  - Establish forms, deadlines and criteria for request.
- Consult the Archdiocesan Legal Services to review contracts before signing.
CHAPTER IX - SECURITY

Network security is a vital part of the technology plan. It must be integrated in the early stages of the planning process. Local security procedures in partnership with the Archdiocese should be established and communicated to all.

Purpose

The purpose of the Computer Security Policy is to ensure the three principles of information security – confidentiality, integrity, and availability.

- Confidentiality – Information should only be available to authorized users who have a need for that information.
- Integrity – Information should not be modified in a malicious way, by unauthorized individuals or for unauthorized reasons.
- Availability – Computer assets and information should be available for authorized use. Malicious attempts to compromise the availability of computing assets or information are a violation of the computer security policy.

All employees are obligated to know and follow the Computer Security Policy.

Responsibility

Information Systems should be organized with multiple levels of access. It is the responsibility of the school’s technology designee to issue and maintain local information security, and review appropriate security controls with the principal and pastor/president. Information should be available to authorized users only. Ability to manipulate important data should be closely guarded, and only granted to authorized individuals. Questions regarding access levels to application data should be addressed to the principal. Schools are to implement these procedures:

- A policy on computer use by terminated employees and their access rights must be developed at the school level. Ideally, terminated employees should have all access revoked upon termination.
- All schools will keep a copy of inventory off campus, as well as in the school office.
- Security procedures, including user identities, will be reviewed annually and updated as needed.
- The principal and technology resource person are responsible for the development and maintenance of technology security issues including record keeping of signed acceptable use agreements.
- Each school should have security policies relevant to the school which are updated as needed. For example; if computers may be used by others then caution should be given to users to log off at the end of the day/period.
• Each school is responsible for taking precautions to prevent viruses and malware on its network.
• No student will be allowed to maintain security files or access levels.

Reporting Security Violations

Information security violations should be reported immediately to the technical designee and principal. Failure to report violations or to adhere to the Security Policy could result in negative consequences on performance reviews, up to and including loss of employment.

Acceptable Use Policy and Guidelines

• Each year, technology users, e.g., staff, volunteers and students must accept an ethics agreement before gaining access to school information systems and networks. (Appendix M)
• All new employees should attend an orientation covering security, proper use of the network computers, and an introduction to software currently used by the school. Orientation for digital equipment should be held as needed.
• A copy of the school technology plan and the Archdiocesan technology plan should be available for current and new employees to read in order to better understand the goals of the school. (A current copy of the school technology plan should be filed at the Archdiocese Catholic School Office.)
• Security procedures, including active user identities, will be reviewed annually.
CHAPTER X: EVALUATION

The Texas Catholic Conference Education Department (TCCED) requires all teachers to demonstrate proficiency in the areas of word processing, spreadsheets, databases, email, and Internet use for educational purposes and multimedia presentations.

It is strongly suggested that teachers demonstrate technology proficiency by a passing (80%) score on an Archdiocesan approved technology test and by integrating technology into classroom lessons as evidenced by lesson plans. It is also recommended that technology proficiency become a component of the annual evaluation.

Evaluation is essential throughout all aspects of the technology plan. The Technology Needs Assessment (Appendix D) should be used at the beginning of the year with a follow-up at the end of the school year to verify that positive change has actually taken place. The following areas need 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.
Appendix A - Step by Step Action Plan

The following are necessary to achieve the successful implementation of the beliefs and practices set forth previously. Stages should be followed in sequence, although some line items may not apply to all situations.

Stage 1. Prerequisites

- Establish a technology vision.
  - Review successful organizational/Archdiocesan training models in order to establish attainable goals and timeline (Appendix I).
- Assess obstacles and barriers to successful implementation.
  - Identify key individuals and educate them about the school’s vision and goals to gain their support and commitment (e.g. pastor, administrators, teachers, parents, board members).
  - Educate and enlist the support of organizational/Archdiocesan professional staff and school administrators.
- Develop a plan for communicating progress to constituents (staff, donors, etc.).
- Preliminary technology needs assessment (Appendix D).

Stage II. Preparation

- Review the selection criteria and establish the local standards for software, hardware, and building specifications (Appendix E, F, G).
- Survey constituent software, hardware, and building specifications needs (Appendix E, F, G).
- Determine funding needed for software, hardware, and building specifications.
- Address financial implications and secure funding sources.
- Establish ordering procedures for hardware, software, and supplemental items.
- Secure the necessary resources to support the training goals and timeline.
  - Establish expectations and procedures for the use of technology by all local and Archdiocesan administrators.
- Develop a standardized approach to address electronic communication.
  - Establish policies related to the ethical use of technologies (copyright, acceptance of gifts, use of software) (Chapter VI).
  - Establish and include technological competencies in administrative job descriptions at all levels.
Stage III. Implementation

• Conduct the training sessions for administrators and staff.
• Facilitate a “buddy system” for ongoing personal support.
• Coordinate marketing of program (Appendix A, E).
• Develop electronic versions of all school/Archdiocesan materials.

Stage IV. Maintenance

• Incorporate technology into administrative communications, gatherings, and activities.
• Establish a plan for providing ongoing training for current and new administrative users.
• Maintain a helpful/responsive Archdiocesan/school office demeanor to respond to questions/concerns
• Review and revise standards for administrative hardware/software.
• Establish a plan for redistribution of existing hardware/software.
• Include transfer to other schools, recycling and the return to government entities.
• Incorporate technology into school budgets.
• Include technology into everyday school procedures.
• Conduct ongoing self-assessment of the use of technology (Appendix J, K).

Stage V. Next Steps

• Offer elective advanced skills training for staff and students.
• Sponsor technology gatherings to showcase emerging technologies and their practical application.
• Invite/encourage affiliated constituencies to engage in a similar usage of technology.
• Develop a network of support personnel from within the school.
• Establish teacher competencies in technology (Appendix J,K).
• Provide teacher training.
• Establish student and program learning objectives related to technology (Appendix B).
• Facilitate the process for integrating technology into curriculum (Appendix B).
Appendix B: Technology Integration Standards

The following are necessary technology integration standards for all schools:

Moral, Ethical, Social, and Human Issues

- Students understand the moral and ethical issues related to technology and demonstrate ethical use of technology.
- Students develop positive attitudes toward technology that support lifelong learning, collaboration, personal pursuits, and productivity.
- Students evaluate the impact of technology on individuals, society, and the environment.

Basic Operations and Concepts

- Students demonstrate an understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology according to their grade level curriculum.

Technology Productivity Tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works.

Technology Communication Tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

Technology Research Tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.
Technology Problem-Solving and Decision-Making Tools

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

*Wording of the Technology Integration Standards and Performance Indicators is used with permission from the National Educational Technology Standards Projects.*
Appendix C: Computer Curriculum Guidelines

Introduction

This Technology Curriculum for Catholic schools in the Archdiocese of Galveston-Houston was developed using standards based on the ISTE (International Society for Technology in Education) NETS (National Educational Technology Standards), and the TEKS (Texas Essential Knowledge and Skills). The NETS and TEKS denote what is valued along with what students should know in the area of instructional technology. Continuous staff development for teachers and administrators is crucial to ensure the successful implementation of this technology curriculum guide. Based on individual campus technology plans, schools are encouraged to utilize a variety of instructional resources, strategies, and assessments to put this curriculum guide into action. The Archdiocese Technology Curriculum is posted with the teacher documents at the Archdiocese of Galveston-Houston Catholic Schools web site on the Teacher Link, along with the other curriculums. http://www.archgh.org/cso/
Appendix C1: Profile for Technology (ICT) Literate Students Grades PK-2

ISTE NETS for Students are the standards used for evaluating the skills and knowledge that students need to learn effectively and live productively in an increasing global and digital world.

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades PK-2. The numbers in parenthesis after each item identify the Standard(s) above most closely linked to the activity described.

1. Illustrate and communicate original ideas and stories using digital tools and media-rich resources. (1,2)
2. Identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution. (1,3,4)
3. Engage in learning activities with learners from multiple cultures through e-mail and other electronic means. (2,6)
4. In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area. (1,2,6)
5. Find and evaluate information related to a current or historical person or event using digital resources. (3)
6. Use simulations and graphical organizers to explore and depict patterns of growth such as the life cycles of plants and animals. (1,3,4)
7. Demonstrate the safe and cooperative use of technology. (5)
8. Independently apply digital tools and resources to address a variety of tasks and problems. (4,6,)
9. Communicate about technology using developmentally appropriate and accurate terminology. (6)

10. Demonstrate the ability to navigate in virtual environments such as electronic books, simulation software, and Web sites. (6)

National Educational Technology Standards for Students, ISTE 2007
Appendix C2: Profile for Technology (ICT) Literate Students Grades 3-5

ISTE NETS for Students are the standards used for evaluating the skills and knowledge that students need to learn effectively and live productively in an increasing global and digital world.

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 3-5. The numbers in parenthesis after each item identify the Standard(s) above most closely linked to the activity described.

1. Produce a media-rich digital story about a significant local event based on first-person interviews. (1,2,3,4)
2. Use digital-imaging technology to modify or create works of art for use in a digital presentation. (1,2,6)
3. Recognize bias in digital resources while researching an environmental issue with guidance from the teacher. (3,4)
4. Select and apply digital tools to collect, organize, and analyze data to evaluate theories or test hypotheses. (3, 4, 6)
5. Identify and investigate a global issue and generate possible solutions using digital tools and resources. (3, 4)
6. Conduct science experiments using digital instruments and measurement devices. (4,6)
7. Conceptualize, guide, and manage individual or group learning projects using digital planning tools with teacher support. (4,6)
8. Practice injury prevention by applying a variety of ergonomic strategies when using technology. (5)
9. Debate the effect of existing and emerging technologies on individuals, society, and the global community. (5,6)

10. Apply previous knowledge of digital technology operations to analyze and solve current hardware and software problems. (4,6)

National Educational Technology Standards for Students, ISTE 2007
Appendix C3: Profile for Technology (ICT) Literate Students Grades 6-8

ISTE NETS for Students are the standards used for evaluating the skills and knowledge that students need to learn effectively and live productively in an increasing global and digital world.

1. Creativity and Innovation  
2. Communication and Collaboration  
3. Research and Information Fluency  
4. Critical Thinking, Problem Solving and Decision Making  
5. Digital Citizenship  
6. Technology Operations and Concepts

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 6-8. The numbers in parenthesis after each item identify the Standard(s) above most closely linked to the activity described.

1. Describe and illustrate a content-related concept or process using a model, simulation, or concept-mapping software. (1,2)
2. Create original animations or videos documenting school, community, or local events. (1,2,6)
3. Gather data, examine patterns, and apply information for decision making using digital tools and resources. (1,4)
4. Participate in a cooperative learning project in an online learning community. (2)
5. Evaluate digital resources to determine the credibility of the author and publisher and the timeliness and accuracy of the content. (3)
6. Employ data-collection technology such as probes, handheld devices, and geographic mapping systems to gather, view, analyze, and report results for content-related problems. (3,4,6)
7. Select and use the appropriate tools and digital resources to accomplish a variety of tasks and to solve problems. (3,4,6)
8. Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other learners. (2,3,4,5)
9. Integrate a variety of file types to create and illustrate a document or presentation. (1,6)
10. Independently develop and apply strategies for identifying and solving routine hardware and software problems. (4,6)

National Educational Technology Standards for Students, ISTE 2007
Appendix C4: Profile for Technology (ICT) Literate Students Grades 9-12

ISTE NETS for Students are the standards used for evaluating the skills and knowledge that students need to learn effectively and live productively in an increasing global and digital world.

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts

The following experiences with technology and digital resources are examples of learning activities in which students might engage during Grades 9-12. The numbers in parenthesis after each item identify the Standard(s) above most closely linked to the activity described.

1. Design, develop and test a digital learning game to demonstrate knowledge and skills related to curriculum content (1,4)
2. Create and publish an online art gallery with examples and commentary that demonstrate an understanding of different historical periods, culture and countries. (1,2)
3. Select digital tools or resources to use for real-world tasks and justify the selection based on their efficiency and effectiveness. (3,6)
4. Employ curriculum-specific simulations to practice critical-thinking processes. (1,6)
5. Identify a complex, global issue, develop a systematic plan of investigation and present innovative sustainable solutions. (1, 2, 3, 4)
6. Analyze the capabilities and limitations of current and emerging technology resources and their potential to address personal, social, lifelong learning and career needs. (4, 5, 6)
7. Design a Web site that meets accessibility requirements. (1,5)
8. Model legal and ethical behaviors when using information and technology by properly selecting, acquiring and citing resources. (3, 5)
9. Create media-rich presentations for other students on the appropriate and ethical use of digital tools and resources. (1,5)

10. Configure and troubleshoot hardware, software, and network systems to optimize their use for learning and productivity. (4, 6)

National Educational Technology Standards for Students, ISTE 2007
Appendix D: Technology Needs Assessment

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 lessons to meet the needs of our students and that align our curriculum with our standardized testing program. (Not Very Well) 1 2 3 4 5 (Very Effectively)

6. Our school integrates 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. (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 implemented an integrated information technology curriculum based upon identified exit Outcomes.
(Not Very Well) 1 2 3 4 5 (Very Effectively)

10. 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)

Productivity and Staff Development

11. Our school has developed an information technology plan. The plan is based upon learner outcomes as well as our system’s vision of our educational future.
(Yes) (No)

12. Teachers have good access to technology and software for their professional use.
(Yes) (No)

13. Our school has a well-qualified media/technology coordinator(s) who provide(s) on-site support to me when I have technical problems or questions.
(Yes) (No)

14. Our school encourages and supports staff development, workshops, and professional development activities in information technology.
(Yes) (No)

15. Our school provides technology purchases based upon requests and innovative funding proposals developed by teachers. We have access to any instructional technology needed to design to provide instruction based upon learner outcomes.
(Yes) (No)

Moral and Ethical Issues

16. Our school uses technology in an environment that models and teaches values and ethical principles.
(Yes) (No)

17. Our school makes substantial effort to ensure gender equity in the use of technology.
(Yes) (No)

18. Our school makes substantial effort to ensure cultural/racial equity in the use of technology.
(Yes) (No)
Administrative Use and Application

19. Our school requires that staff use and model the effective and appropriate use of technology.
   (Yes) (No)

20. Our school has integrated the use of technology into administrative and managerial functions.
   (Not Very Well) 1 2 3 4 5 (Very Effectively)

21. Our school has a plan for integrating the appropriate use of technology into aspects of our organization.
   (Not Very Well) 1 2 3 4 5 (Very Effectively)

Results and evaluation of survey findings should serve as a foundation for establishing a technology plan for the school/Archdiocesan 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.
Appendix E: Selection Criteria for Hardware Acquisition

This appendix deals with the acquisition of technology hardware. This may include, but is not limited to the following: computers, computer related peripherals, interactive classrooms, multimedia devices, library/media management hardware, administrative technology hardware. Plans for preventive maintenance, security, and protection of all equipment should be included.

Evaluation Criteria Components

Compatibility and Industry Standards
- Is the hardware compatible and futuristic in regard to other pieces of hardware in the school technology plan?
- Will the hardware meet the school’s needs for the budget period?
- Are there industry standards for similar hardware components?

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?

Support
- Is technical support provided by vendors at minimal cost and available in a variety of mediums?
- Are printed and electronic manuals written and understandable?
- Does the vendor have a strong commitment to the Educational Community?
- What forms of support are available?

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?
• Does vendor provide a detailed list of possible add-ons?

Specific Considerations
• Is there a capability for and ease of using multimedia?
• Is the equipment net-workable?
• Are computers and printers compatible with current network?
• Are printers adequate to handle current and future job loads at a reasonable cost?
• Are monitors and projection devices adequate for small and large groups?
• Do presentation systems have quality sound in and out capabilities?
• Is hardware in good working condition, current and upgradeable?

Ordering Suggestions
• Occasionally group purchases/bundles are available; investigate current or pending offers
• Consideration must be given to whether a line of equipment is being discontinued and what implications the discontinuance may 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 a 30 day preview of software be used whenever possible.
• Consult the Archdiocesan IT/Telecommunications for advice on large scale purchasing
• Consult the Archdiocesan Legal Services Office for review of contracts before signing.
Appendix F: Software Guidelines

This appendix deals with the acquisition of software. All software acquisitions should interface with the current and future hardware components of the 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

Sample Software Guidelines

Widespread interest in the educational application of computerized technology indicates the ongoing need to comment on its application in the schools of the Galveston-Houston Archdiocese. These comments assume that school/parental emphasis and use are placed within the context of ethics and use of technology. At present, these are addressed:

- Teaching Productivity Software.
- Teaching with Computerized Technology.
- Computer Assisted Instruction.
- Facilitating Information Access with Technology.
- Teaching Computer Programming.
- Staff and Administrative Use of Technology.
- Technology Assisted Instruction.

Teaching Productivity Software

Teaching productivity software includes the use of keyboarding, word processing, databases, spreadsheets, telecommunications, graphics, presentations, and desktop publishing. Application of skills and using software is the goal, 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 the 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.

**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, then it does make an ideal teaching tool. In this situation, the technology helps focus understanding by providing feedback to the students in 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.

**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 to:

- Develop and reinforce skills and proficiency (as in spelling and mathematics).
- Increase understanding in a variety of subjects through supplementary exercises and problem solving activities as well as 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. 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, e.g.:

- 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
• ease of teacher monitoring/record keeping

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.

**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, CD-ROMs, online libraries/resources, e-mail programs, podcasts, video conferencing, educational chat forums, etc.

**Application**

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

**Teaching Computer Programming**

Teaching computer programming is appropriate for those students who have the interest and the aptitude. The formal structure and abstract conceptualization in programming make learning to program inappropriate for some students. However, for the students who have the aptitude for it, learning to program can help them develop skills in logic and analysis, which can be of value in various problem-solving situations.

**Application**

Teaching computer programming is for those students who have the interest and aptitude for it. All students may be introduced to programming, but not all students need to study it in-
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 accomplish these.
- 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.

Technology Assisted Instruction

Technology assisted instruction considers computerized technology as a means to enhance the student’s understanding of the subject matter in the curriculum. In this interactive application it can be used for retrieving information, building skills, processing information, producing media, and 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 for the student to become an intelligent consumer of information for the purpose of solving problems and making decisions.
Sample Software Evaluation Form/Instrument

Reviewer’s Name: ___________________________________________
Date: ___________________________________________
Program/Software Title: ___________________________________________
Copyright Date: ___________________________________________
Vendor: ___________________________________________
Author(s)/Designer(s): ___________________________________________
Cost: ___________________________________________
Operating Program Requirements: ___________________________________________
Necessary Additional Software: ___________________________________________
Program Components: ___________________________________________
Purchase Options: ___________________________________________

Program Overview and Description

Curriculum area(s) and specific topic ___________________________________________
Prerequisite skills necessary ___________________________________________
Appropriate users ___________________________________________

Type of Program

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>Teaching Productivity Software</td>
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<tr>
<td>Teaching With Computers</td>
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<tr>
<td>Computer Assisted Instruction</td>
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<tr>
<td>Teaching Computer Science</td>
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<tr>
<td>Office Use</td>
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</table>

Circle the Instructional group size: Individual   Small   Group   Class

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

Briefly list the program’s objectives: ___________________________________________
________________________________________
Are the objectives clearly stated in the program/documentation?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>NA</th>
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Are they educationally valuable?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>NA</th>
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Are they achieved?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>NA</th>
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</table>

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:

<table>
<thead>
<tr>
<th>Educational Content</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
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<tbody>
<tr>
<td>Is the program content accurate?</td>
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<td>Is the content appropriate for intended users?</td>
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<td>Is the difficulty level consistent for interest and vocabulary</td>
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<td>Is the content consistent with National Curriculum Standards for the</td>
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<td>particular program areas and with Catholic values?</td>
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<td>Is the content able to be integrated into current program as opposed to a</td>
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<td>separate add on component?</td>
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<td>Is the content free of racial, gender, ethnic, political bias and other stereotypes?</td>
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<td>Is the content presented in an interactive medium incorporating higher</td>
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<td>level thinking skill processes?</td>
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<td><strong>Presentation</strong></td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Is the program free of technical problems?</td>
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<td>Are the instructions clear?</td>
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<td>Is the material logically presented and well organized?</td>
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<td>Do graphics, sound, and color, if used, enhance the instructional presentation?</td>
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<td>Is the frame display clear and easy to read?</td>
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<td>Comments:</td>
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<thead>
<tr>
<th><strong>Teacher Use</strong></th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
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<tr>
<td>Is record-keeping possible (within the program or through documentation worksheets)?</td>
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<tr>
<td>Questions</td>
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<td>Does a teacher have to monitor student use?</td>
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<td>Can teachers modify the program?</td>
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<td>Is the documentation clear and comprehensive?</td>
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<td>Comments:</td>
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**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:**
Appendix G: Building Modification Guidelines

As the school plans to integrate technology into its program, emphasis needs to be given to modifying existing space and facilities to accommodate technology. If the school is planning on new construction; the following points should be considered:

Connectability

Internal – Network Design
- Provisions for transmitting data between stations: twisted pair, coax, fiber, wireless; best recommendations: 10/100Base (Fast Ethernet)
- In new construction, conduit needs to be laid so adding wire will be least expensive
- Have sufficient phone lines
- Have sufficient face plates in each room to accommodate a variety of networking/wiring options
- Label and identify network and telephone jacks.
- Have provisions for decided network topology (star, bus ring).
- Plan location and selection of hubs bridges, switches, routers, and modems.
- Plan location of equipment/wiring closets.

External–Internets: Wide Area Network (WAN) and Intranets: Local Area Networks (LAN)

How a site/archdiocese will connect between buildings and other remote sites need to be considered when planning a WAN.
- Provisions for Internet connections: direct or dial up.
- Provisions for modems, modem servers, and Dial Servers.
- Provisions for router options: Router: 56K, T1, T3 Lines; CSU/DSU; LAN to LAN access; Dial on Demand (DOD).
- Provisions for Building to Building Links: DOD; spread spectrum over a network bridge; MiMicrowave; ATM (Asynchronous Transfer Mode); FDDI (Fiber Distribution Data Interface).
Electrical
- Provide dedicated wiring to all computer and printer equipment.
- Have a certified electrician review electrical wiring needs.
- Ensure there are adequate circuits to support equipment needs.

Environment
- Ensure there is adequate ventilation and cooling for computer equipment
- Consider location of equipment, such as close proximity to windows which may increase possibility of water, sun, or heat damage.

Presentation
- Provisions for large screen colored monitors with computer and VCR connections for instruction and presentations.
- Provisions for LCD projection devices.
- Provisions for room darkening for better display resolution.
- Provisions for auditorium type screen/projection for large group presentation.
- Provisions for flexible computer lab set up.
- Provisions for adequate grounded electrical outlets, with options for expansion.
- Provisions for audio and video conferencing.
- Provisions for adequate sound systems.

Atmosphere Control
- Provisions for climate control for air conditioning, heat, and dust control in all areas where advanced technology will be used.
- Provisions for adequate and appropriate lighting.
- Provisions for marker boards to decrease dust.

Space Design
- Provisions for furniture that will accommodate all technologies correctly.
- Flexible spacing which will allow for a variety of arrangements using a variety of technologies.
- Equipment positioning/location for the age appropriateness of the user/learner.
- Provisions for adding future networks and hubs with minimal redesign.
• Adequate and expandable storage options.

**Security**

• Provisions for the safe use of all equipment/services.
• Provisions for the security of all equipment and software.
• Provisions for the security of all user’s data and information.
• Provisions for the security of all connect sites/webs.

*Knowledge of network fundamentals and rules is essential*
Appendix H: Existing Inventory Survey

Component A

**Hardware**
This component deals with identifying all existing technology hardware. This may include but is not limited to the following: computers, monitors, printers, scanners, modems, modem servers, routers, CD R/W, computer lab equipment, interactive classrooms, VCR’s, televisions, videodisc players, cameras, FAX machines, CAD/CAM classrooms, photography labs/classrooms, satellite hook–up, library/media management hardware, administrative technology hardware, graphing calculators.

<table>
<thead>
<tr>
<th>Item</th>
<th>Make</th>
<th>Model</th>
<th>Purchase Date</th>
<th>Specifications</th>
<th>Location</th>
<th>Time Use</th>
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Component B

**Software**
This component deals with existing computer software, CD discs, and/or information retrieval programs.

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<thead>
<tr>
<th>Program</th>
<th>Platform</th>
<th>Version</th>
<th>Vendors</th>
<th>Copyright</th>
<th>Location</th>
<th>Requirements License</th>
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Component C

Digital Computer Equipment

This component deals with digital computer equipment, such as data/projection displays, interactive white boards, digital cameras, digital process document cameras, PDAs, hand held computers, wireless slates, etc.

<table>
<thead>
<tr>
<th>Program</th>
<th>Platform</th>
<th>Version</th>
<th>Vendors</th>
<th>Copyright</th>
<th>Location</th>
<th>Requirements License</th>
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Component D

Building Modification

This component deals with outlining any building modifications that will be required to facilitate all the phases of components A, B, and C. Areas to be included in this component are wiring for network systems, two-way distant learning, modem hook ups, satellite reception, other buildings/institutions; climate control to accommodate optimum learning and technology usage; location of computer centers, video labs, CAD classroom, media centers; location of central server systems, technologies in the individual classrooms/departments; and furniture to support the technology plan.

If a new building or addition is undertaken, it is recommended that many of these technology specifications be incorporated into the original building plan since it is more cost effective to incorporate when building as opposed to adding later. It is recommended that those responsible for decisions concerning building modifications have a basic knowledge of types of networking, cabling specifications; federal, state, and local building codes; fire codes,
communications mediums, etc. It is also recommended that the principal and school technologist have input.

<table>
<thead>
<tr>
<th>Location</th>
<th>Modifications</th>
<th>Cost</th>
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Appendix I: Core Competencies

System Operation Skills
1.1 Start up and shut down computer system and peripherals.
1.2 Identify and use icons, windows, menus, and shortcuts on the desktop.
1.3 Select and start multiple applications.
1.4 Save/Copy/Delete/Rename/Backup files on Local (A:,C:) and Network Drives (H:,R:,S:)
1.5 Use various printing options including network printing if applicable.
1.6 Insert and eject floppy disk and CD-ROM.
1.7 Use the mouse right and left click buttons.
1.8 Create/Delete/Rename/Move/Copy Folders and Subfolders

Basic Hardware
2.1 Setup computer system and connect peripheral devices including mouse, keyboard, printer to their proper ports.
2.2 Protect and care for floppy disks.
2.3 Care and Cleaning of computers and printers.
2.4 Using the application Help resources to diagnose and correct common problems.
2.5 Installing and upgrading an application.

Word Processing
3.1 Enter, edit, cut, copy, paste and move a block of text.
3.2 Save (and Save As), open, and print documents.
3.3 Change text format and style, set margin, line spacing, tabs.
3.4 Check spelling, grammar, word usage.
3.5 Create numbered or bulleted lists.
3.6 Insert clip art into document.

Internet
4.1 Start and navigate the Internet using Netscape or Microsoft Internet Explorer.
4.2 Type a specific URL on the address line and go to a specific web site.
4.3 Add a URL to a "favorites" or "bookmarks" list.
4.4 Access a "search engine" (i.e. Yahoo, Lycos, etc) and find sites related to a specific topic.
4.5 Understand and follow the district's "Acceptable Use Policy" located on the district web site.
4.6 Use District's Electronic Mail and be able to compose, send, retrieve, read, reply, and forward e-mails.
4.7 Send and Receive attachments using e-mail.
4.8 Subscribing to specialized e-mail lists relevant to professional information needs.
4.9 Connect to the district's web site (www.colleton.k12.sc.us).

Instructional Applications
5.1 Coordinate use of hardware, software and peripheral devices within the classroom.
5.2 Teach, support, and supervise student use of technology.
5.3 Integrate technology resources into lessons and learning activities.
5.4 Integrate local information resources into lessons and learning activities.
5.5 Integrate Internet resources into lessons and learning activities.
5.6 Actively encourage and provide for appropriate student use of all technology resources.
Appendix J: PCC Assessment Tool by the Milken Family Foundation

The following pages contain the PCC Assessment created by The Milken Family Foundation. The tool is originally a companion to the Professional Competency Continuum document “designed to provide educators with an opportunity to assess their status within the skill and knowledge areas described in that continuum.” The PCC Assessment Tool features two different assessments.

- The **General Assessment** provides a quick, 20 question (25 for administrators) overview of the educator’s status within each of the areas of the continuum.

- A **Detailed Assessment** can be taken in any of the 5 major areas of the continuum. This assessment will provide a score for each of 4 to 6 more specific indicator areas within that major area.¹

The **Professional Competency Continuum** is based on the following “stages of instructional evolution”:²

- **Stage 1 – Entry**: At this stage, the educators, students and the community are aware of the possibilities that technology holds for improving learning, but learning, teaching and the system remain relatively unchanged. Educators at this level lack access to technology and the requisite skills to implement and sustain significant changes in practice.

- **Stage 2 – Adaptation**: Technology is thoroughly integrated into the classroom in support of existing practice. Educators at this stage have developed skills related to the use of technology, but have primarily applied these skills to automate, accelerate and enhance the teaching and learning strategies already in place.

- **Stage 3 – Transformation**: At this stage, technology is a catalyst for significant changes in learning practice. Students and teachers adopt new roles and relationships. New learning opportunities are possible through the creative application of technology to the entire school community.

---


Appendix K: School Technology Self-Assessment

The following items reflect the components of a successful integrated technology plan, and may be used in a variety of formats. (E.g. checklist, yes-no responses, ranking (1-5), etc.)

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### Role of the School Technology Committee/Planning Group

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**Staff Technology Development and In-Service**

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Technology Coordination

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Site System Communication

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## Equipment Repair, Maintenance and Upgrading

**The school:**

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| ___ | ___ | Has an annual commitment for purchase of equipment.
| ___ | ___ | Has a schedule for equipment upgrade and replacement that ensures equity between buildings and grade levels.
| ___ | ___ | Has a procedure established for new equipment and software that includes investigation, vendor presentation, site visits, and building license considerations.
| ___ | ___ | Has established a software and copyright policy that is distributed to each staff member.
| ___ | ___ | Has the necessary equipment to back up essential computer data and has a disaster recovery plan in place.
| ___ | ___ | Secures maintenance contracts when determined to be cost-effective.
| ___ | ___ | Informs staff of procedures for requesting equipment purchase, repair, or maintenance.
| ___ | ___ | Designates an individual to do regular maintenance and basic diagnostic procedures before sending equipment out for repair.
| ___ | ___ | Has a repair technician or maintains a relationship with one or several vendors and/or repair services.
Budget and Funding

The school:

Yes  No

___  ___ Allocates financial resources for technology through annual line item designation in
the budget, enabling staff to plan and prioritize acquisition hardware, software, and training.

___  ___ Has an annual budget allocation for equipment upgrade, repair, and maintenance.

___  ___ Actively evaluates and pursues alternative funding sources such as grants, business
partnerships, chapter funds, computer fees, pilot projects, and fund raisers.

___  ___ Attempts to fund innovative individual teacher projects that utilize technology.

___  ___ Allocates funding for telecommunications line charges and services fees. It is
strongly recommended that schools apply for E-Rate.

___  ___ Takes advantage of discounted prices on hardware and software provided by
cooperative purchases through the TEA Educational Service Center at Region IV, Harris County
Department of Education, Catholic Purchasing Services, and the Archdiocesan
IT/Telecommunications Office.

___  ___ Assures fair and equitable assignment of funds among building, grade
levels, and subject areas.

The Media/Resource Center budget has separate line items and sufficient amounts budgeted for:

___  ___ Hardware

___  ___ Equipment repair

___  ___ Equipment and software upgrades

___  ___ Telecommunications costs

___  ___ Network installation and maintenance.
Administrative Uses of Technology

Technology is used for administrative tasks such as:

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| ___ | ___ | Word processing, database files, spreadsheet computation
| ___ | ___ | Grade/progress reporting
| ___ | ___ | Attendance
| ___ | ___ | School lunch programs
| ___ | ___ | Inventory
| ___ | ___ | Accounting/payroll
| ___ | ___ | Immunization records

Various forms of technology are used to communicate with parents/guardians, students, and community members such as:

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| ___ | ___ | Computerized calendar programs
| ___ | ___ | Email
| ___ | ___ | News and RSS feeds
| ___ | ___ | Electronic bulletin boards/message boards
| ___ | ___ | Emergency communication system
**Technology in Instruction**

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Curriculum frameworks and course guidelines reflect effective use of technology throughout a student’s K - 12 education.

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The school buildings have a combination of computer labs and classroom clusters of computers in classrooms, departments, and the media center.

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Student assessment includes technology components.

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The library media center has a telephone and each classroom either has a telephone or has close access to one. A public address system is in place for central office and all classrooms, whether it is a telephone system or a public address system.

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Online services are annually evaluated and available for students and faculty use to support curricular projects.

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The school seeks to provide at least one computer with appropriate software in every classroom.

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

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Teachers are aware of the hierarchy of technology skills being taught at various levels.

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Teachers use technology to increase higher order thinking, creativity, and analysis.

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**Teachers in the school utilize the following technologies in their instructional programs:**

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Large screen television/monitors

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DVD/video player

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Document cameras/digital camera

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Video projection systems

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Digital media equipment device

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Scanner/document reader

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Learning Management System

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Interactive boards

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Digital equipment such as graphing calculators, robotics, wireless slates, digital response systems.

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Classrooms are connected together via: computer network/in-house television, network/intercom system.
Media/Resource Center

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Appendix L: Online Resources

NOTE: Due to the changing nature of technology, the resources cited below may become outdated at any time.

Periodicals

Consortium for School Networking (CoSN)
www.cosn.org

Educational Technology and Society
http://Ifets.info

Educational Technology Review
www.aace.org/pubs/etr/issue1/rogers.cfm

eSchool News
www.eschoolnews.com

Independent Teacher
http://www.independentteachers.org

PC Magazine
www.pcmag.com

PC Teach It-Magazine
www.pcteachit.com

Technology & Learning
www.techlearning.com

Education & Information Technology Digital Library
www.editlib.org
Online Resources

Graphic

Accteach.com Teaching Extras: Certificates
www.abcteach.com/directory/teaching_extras/certificates
Offering 5000+ free printable certificates, theme units, word puzzles, writing forms, book report forms, math, ideas, lessons and much more

Adobe Studio Exchange
http://adobe.com/cfusion/exchange/index.cfm
Adobe Studio Exchange is your place for actions, plug-ins, extensions, tutorials, and other helper files that allow you to easily add new features to Adobe products

Award Certificate Maker
www.teach-nology.com/web_tools/certificates
Making award certificate is easy with Teach-nology.com’s Award Certificate Maker.

Awesome Clipart for Educators & Kids
www.awesomeclipartforeducators.com
Teacher, Student & Family-Friendly FREE clipart, backgrounds, fonts, worksheets & more!

Billy Bear 4 Kids
www.billybear4kids.com
Certificates, books, puzzles, games and more!

Certificate Creator
www.certificatecreator.com
This service allows you to create certificates online. There are dozens to choose from and more added regularly. Please note that upon entry into the site, you’ll need to click on the “free certificate” button.

Certificate of the Month Club @ Microsoft
Look to this archive for links to downloadable student projects centered on time specific holidays and celebrations, as well as free customizable certificates of accomplishment, invitations, calendars and more.

Classroom Clipart
www.classroomclipart.com
Over 30,000 free clip art images, illustrations, and photographs for every occasion. Over 700 clip art and related categories.
Clipart Gallery @ Discovery Education  
http://school.discoveryeducation.com/clipart  
Choose from hundreds of original clipart, including animations.

School Clip Art  
www.school-clip-art.com  
Educational Clipart

The Kidzpage: Free Clipart for Kids  
www.thekidzpage.com/freeclipart.htm  
From Alphabet to Toys, over 1200 colorful images and animations are organized into sixteen categories.

KID FRIENDLY DIRECTORIES

AOL @ School: Primary School Search (K-2)  
www.aolatschool.com/primary/search/index.adp

AOL @ School: Elementary School Search (3-5)  
www.aolatschool.com/elementary/search/index.adp

AOL @ School: Middle School Search (6-8)  
www.aolatschool.com/middleschool/search/index.adp

Ask Jeeves for Kids  
www.askkids.com  
Ask Jeeves for Kids prides itself on answering natural language questions. No Boolean or complicated search engine syntax necessary, simply ask Jeeves a question.

Cybersleuths Kids  
http://cybersleuth-kids.com  
In Internet search guide for the K-12 student.

DMOZ for Kids and Teens  
http://dmoz.org/Kids_and_Teens  
The Open Directory Project is the largest, most comprehensive human-edited directory of the Web. It is constructed and maintained by a vast, global community of volunteer editors.
Ithaki for Kids
www.ithaki.net/kids
Ithaki 4 Kids is a metasearch engine that finds results in the best search engines for kids simultaneously, removes the duplicates, ranks the results and shows them in one clean & simple page.

Kids Click!
www.kidsclick.org
A “web search for kids by librarians” created by the Ramapo Catskill Library System.

Yahooligans!
www.yahooligans.com
The first Internet directory for kids published by Yahoo!

INTERNET GLOSSARIES

Acronym Finder
www.acronymfinder.com
Find out what those acronyms and abbreviations stand for.

Get Net Wise
www.getnetwise.org/glossary
Guide to Internet Terms: A Glossary

Merriam-Webster Online
www.m-w.com
The online version of the Merriam-Webster Dictionary

NetLingo
www.netlingo.com
An online dictionary about the Internet

Webopedia
www.webopedia.com
Online dictionary and search engine for computer and Internet technology definitions.

WhatIs
http://whatis.techtarget.com
Definitions for thousands of the most current IT related words.
ONLINE ENCYCLOPEDIAS

Britannica
www.britannica.com

Encyclopedia Smithsonian
www.si.edu
Helps answer frequently asked questions about the Smithsonian with links to resources on subjects from Art to Zoology.

Encyclopedia.com
www.encyclopedia.com
Composed of 50,000 articles from the Columbia Encyclopedia.

Information Please
www.infoplease.com
It’s an almanac, a dictionary, and an encyclopedia. This site integrates the various Information Please Almanacs (sports, entertainment and general knowledge) with Random House Webster’s College Dictionary and the Columbia Encyclopedia.

INTERNET RADIO

iHEART RADIO
www.iheart.com
Listen to live stations or create your own custom stations

LAUNCHcast
http://music.yahoo.com/launchcast
Yahoo!’s LAUNCHcast not only hosts three dozen pre-programmed radio stations, but also lets you create a custom radio station with songs and genres you select and rate.

Live 365
www.live365.com
A directory of thousands of Internet only radio stations. It also includes tools for and tutorials on producing your own streaming radio station.

Pandora
www.pandora.com
Free personalized radio sort by artist, genres or composer

Radio@Netscape
http://netscape.ca/channels/radio/index_bak.jsp
America Onlin’s Spinner has merged with Netscape Music to form Radio@Netscape. They produce 175 free internet only music channels that stream 90 million songs per month.

Radio Tuna
http://radiotuna.com
Listen without downloads

Shoutcast
www.shoutcast.com
Nullsofts’ free Winamp based distributed streaming audio system.

INTERNET SAFETY

CyberNetiquette Comix
http://disney.go.com/guestservices/safety
An entertaining, interactive way for families to learn valuable lessons about online safety. Join classic Disney characters for adventure, fun, and online awareness tips.

CyberSmart!
www.cybersmart.org/home
First of its kind K-8 curriculum co-published with Macmillan/McGraw-Hill and available free to educators. Original standards based lesson plans. Student activity sheets, non-sequential for flexible implementation by tech teachers, librarians, media specialists and classroom teachers.

Iggy and Rasper’s Tips for Internet Safety and Good Manners
www.kidscomjr.com/games/safety
KidsCom presents ten rules for Internet safety, online manners, and copyright law. There are two great games that reinforce the rules.
Get your Web License
http://pbskids.org/webonauts
An interactive test from PBS Kids online about Internet safety

SafeKids.com
www.safekids.com
Tips, advice and suggestions to make your online experience safe, fun and productive.

SafeTeens
www.safeteens.com
A place for parents and teen to learn how to use the Internet safely. No preaching, just good advice

ONLINE NEWS

CNN Student News
http://cnn.com/studentnews
Educators use CNN Student News in their classrooms for the news of the day, as well as segments that encourage student participation. CNN Student News is easy to integrate into any lesson and is closed captioned for use by the hearing impaired or ESOL classes.

New York Times Learning Network
http://learning.blogs.nytimes.com
News, activities and lesson plans for grades three through high school.

Online News Hour: Extra for Students
www.pbs.org/newshour/extra
From the PBS News Hour with Jim Lehrer, Extra for Students is the site to visit for outstanding news features that takes a deeper look at current events.

Pencil News
www.studentnewsnet.com
Pencil News from MSNBC brings daily news snippets, sports coverage and short features that are perfect for elementary students.
Junior Scholastic Online combines original reporting with an interactive news quiz, a NewsZone Real Audio Radio broadcast and opinion poll.

Time for Kids Online
http://scholastic.com/teachers
Covers the tough issues such as the war on terrorism, along with sports, fun feature sand challenging games. Time for Kids can be navigated from the front page, the pop-up scrolling news headlines, or through the grade sorted archive of the three English and two Spanish editions.

ONLINE RESEARCH/WEB SITE EVALUATION

Cheat1
www.kalama.com/~zimba/plag&cheat.htm#track_down
A lengthy list of web sites which “help track down plagiarism” by Patti Tjomsland.

Citation Style Guides
http://libguides.seattlecentral.edu/mla
This site is a convenient reference tool for middle school and high school students who need to write bibliographies using specific citation styles. Modern Language Association (MLA), Chicago (Turabian), American Psychological Association (APA), and American Anthropological Association (AAA) styles are featured.

ClassZone Web Research Guide
www.classzone.com/books/research_guide
This tutorial to teach middle school students to research, evaluate and cite Web sites stars with a quiz to evaluate how much you already know about using the internet. Next, you’ll find five lessons, starting with an exploration of the internet versus the library.

Evaluating Web Resources
www.widener.edu/about/campus_resources/wolfgram_library/evaluate

Glatt Plagiarism Services, Inc.
www.plagiarism.com/self.detect.htm
This site offers a free self-detect test for students to check their own material for plagiarism.
Kathy Schrock’s Guide for Educators: Critical Evaluation Surveys
http://www.schrockguide.net/critical-evaluation.html
To help students to think critically about Web sites, Kathy Schrock has designed three grade appropriate site evaluation forms.

Kid’s Tools for Searching the Internet
www.rcls.org/ksearch.htm
This page puts the best children’s search engines and directories onto a single page. You can find forms for KidsClick!, Yahooligans!, Education World, Awesome Library, StudyWEB, Ask Jeeves for Kids, Berit’s Best Sites, ThinkQuest Library, and GEM Gateway to Educational Materials.

NoodleQuest
www.noodletools.com/noodlequest
Search Strategy Wizard. Develop the optimum Web-based search strategy, based on your research topic.

Internet Plagiarism: A Teacher’s Combat Guide
http://editlib.org/p/10742/

How to Create a Bibliography
www.joe.org/joe/2003june/tt1.php
In a world of information overload, understanding how to compile a bibliography

How to Compile a Bibliography
www.library.barrie.on.ca/children/homework/bibliography.htm

Museum of Hoaxes
www.museumofhoaxes.com

COPYRIGHT/PIRACY

Copyright Kids!
www.copyrightkids.org
Kids site from the Copyright Society of America. Highlights are the multimedia Yearbook Club (shows the kids at Lincoln Middle School dealing with copyright issues while creating a school yearbook) and the Copyright Challenge quiz.
CopyrightQuiz
www.copyrightkids.org/quizframes.htm

Stanford Copyright & Fair Use Center
http://fairuse.stanford.edu

E-PALS/COLLABORATIVE LEARNING/WEB-BASED PROJECTS

Blue Web’n Learning Sites Library
www.kn.pacbell.com/wired/bluewebn
Searchable database of outstanding Internet learning sites categorizes entries by content, audience and type.

ePALS
www.epals.com
An online classroom community that connects 1.9 million student and teachers from 28,747 classrooms around the world.

Global SchoolNet’s: Internet Projects
www.gsn.org/pr
Find the finest projects from across the globe to bring into your classroom.

Kids’ Space Connection
www.ks-connection.org
An international meeting place for children and schoolteachers. Find pen pals from around the world!

NickNacks Telecollaborate!
http://nschubert.home.mchsi.com
This comprehensive site includes project how-to’s, samples, a project template, a project planner, some technical support and much more.

WEBQuest Page
http://webquest.org
This site is designed to serve as a resource to those who are using the WebQuest model to teach with the web.

www.gsn.org
GSN has a good index to Online Collaborative projects, articles, etc.
http://library.thinkquest.org/c002727/main.html
This site was designed to bring a virtual zoo to anyone with access to the Internet, regardless of their location in the world.

www.surfnetkids.com/musicpiracy.htm

FORUMS.MAILING LISTS

EDTECH
www.h-net.org/~edweb
This list was conceived to bring together students, faculty, and “interested others” in the field of educational technology to share ideas and information. There are more than 3500 subscribers from about 50 countries on the EDTECH list. As well, EDTECH is carried on USENET NEWS as bit.listerv.edtech, on the AskERIC gopher server and, on private electronic bulletin boards at several universities.

Tech Support Guy
www.helponthe.net
Tech Support Guy is actually a forum for more than 100,000 guys and gals ready to jump all over your tech problems, whether they concern e-mail, programming, networking, Oss or specific software applications.

COMPUTING/TUTORIALS

W3Schools
www.w3schools.com/html/default.asp
Provides simple step by step tutorials to the basic HTML tags that you will need to create your homepage.

Computer Security resource Center
http://csrc.nist.gov
This site is for those seeking the latest on information systems, security classes, white papers, news, and explanations of related government research. There are also links to NIST security bulletins covering intrusion detection systems, secure Web servers, secure email, cryptographic standards, and guidelines.

How Stuff Works
http://computer.howstuffworks.com
How computer and electronic stuff works.

Internet Storm Center
http://isc.sans.edu
This site looks like a stock ticker combined with a weather map, but what you’re viewing is attack trends from over 3 million intrusion detection log entries from across the Internet every day. You can read about emerging threats (and their TCP port number, so you know how to block them) and top source IP addresses for originating attacks.

MacFixIt
http://reviews.cnet.com/macfixit
MacFixIt offers help, troubleshooting, news, and tips for Mac-heads (some content is available only to premium subscribers). The forums- cover topics from waking up your machine to retrofitting a backlight on a PowerBook. The excellent utilities make this a site worth visiting.

TechSoup
www.techsoup.org
TechSoup serves up resources for doing good. The Products section provides nonprofits with access to discounted and donated tech products, and it has a Donate Hardware link, which lets you search for recyclers of old equipment in your area. The extensive How-To section offers tons of tech advice that’s useful to a wide audience too.

Tutorialfind
www.tutorialfind.com
Features over 300 categories of computer related tutorials

Wi-Fi Planet
http://www.wi-fiplanet.com/
Everything you ever wanted to know about 802.11 wireless protocols: news, reviews, and tutorials for your wireless life.

ZDNet Downloads
http://www1.zdnet.com
Best freebies, shareware, freeware and more as chosen by the editors of PC Computing.

TEACHING TOOLS & RESOURCES/LESSON PLANS

Polaris Grants Central
http://polarisgrantscentral.net
GrantSeekers Association Web site has special categories for educators, schools, administrators and organizations.

QuizStar
http://quizstar.4teachers.org
Setup classes and assign quizzes you have created to those classes. Tell your students to sign up for QuizStar and to search for, then register for your class. If you prefer, you can register the students to your class yourself. Once the students take your quiz go to the Report Manager to view the report for that quiz assigned.

Technology & Learning
www.techlearning.com
Resources for Teachers, Tech Coordinators & Administrators

T.H.E. Conference Calendar
www.theconferencecalendar.com
T.H.E. Conference Calendar provides up-to-date conference information that allows you to choose conferences that best meet your needs. We will continue to include conferences with both a strong technology track and participation by those who influence the use of technology.

The Gateway to Educational Resources
www.thegateway.org
The key to one-stop any–stop access to lesson plans, instructional units, and other education resources on the Internet.

Intel
www.intel.com/education/sections/section1/index.htm
New ways to improve student learning through the effective use of technology. From Quick ideas to detailed unit plans for extended projects, you’ll find resources and strategies for every grade and subject area.

Technology Applications Center for Educator Development
www.tcet.unt.edu/START
Sharing Technology Applications Resources with Teachers

The Internet Public Library
www.ipl.org

The Library of Congress
www.loc.gov
www.apple.com/education
Apple computer’s starting spot for educators.

www.eduhound.com

http://eduref.org
This education site offers more than 2,000 lesson plans contributed by teachers from all over the W.S., from “computer Olympics” and “Measuring Calories” to a “History of Flight” timeline. There’s also a resource collection with over 3,000 links to online education information, including sites, organizations, and discussion groups, and a search interface to the ERIC database.

www.internetsociety.org
Who are Leonard Kleinrock and J.C.R. Licklider: What are DARPA and ARPAnet? You can find answers to all your questions about where the internet came from on the Internet Society (ISOC) site, which includes a history section with essays, facts, and other information about the growth of the Net.

www.microsoft.com/Education
Microsoft is working with educational experts to deliver high-quality learning and development experiences for educators, resources to support success in the classroom, and opportunities to network with colleagues.

http://www.discoveryeducation.com/teachers/index.cfm
Tools for teachers K-12

www.educationworld.com/a_tech/
Major categories include lesson planning, professional development, administrator’s desk, technology integration, school issues, and other resources for educators.

Professional Organizations

Association for the Advancement of Computing in Education (AACE)
www.aace.org

Association for Educational Communications & Technology (AECT)
www.aect.org
Association of Computer Educators in Texas (ACET)
http://acetweb.org/

International Society of Technology in Education (ISTE)
www.iste.org

International Technology Education Association (ITEA)
www.iteea.org

Texas Computer Education Association (TCEA)
www.tcea.org
Appendix M: Internet and Electronic Communications

Internet Terms, Conditions, and Regulations
It is the policy of the Archdiocese of Galveston-Houston, the Archdiocesan Catholic Schools Office, and the specific school to require the ethical use of the Internet and related technologies by all employees, volunteers, and students. These policies are set forth below in the Term, Conditions, and Regulations for the use of the Internet and related technologies. Access privileges may be revoked, school disciplinary action may be taken, and/or appropriate legal action taken for any violations that are unethical and may constitute a criminal offense.

Use of Electronic Communication
Whether occurring within or outside of school, when staff or student electronic communications jeopardize the safe environment of the school or may be construed as contrary to Gospel values, the staff member or the student can be subject to the full range of disciplinary consequences including the termination of a staff member or the expulsion of a student.

Electronic communication between students/staff/parents/volunteers should be professional in nature and limited to activities that coincide with extra curricular or school sponsored activities or school work that both parties are involved in. General guidelines for emails from parents to teachers should be delineated in the Faculty and Student/Parent handbooks. This policy applies to communications or depictions through email, text messages, cell phone pictures, or any online postings, whether they occur through the school’s technology connectivity resources or through private communication at the school or elsewhere.

Electronic communication is considered unacceptable if it contains one or more of these characteristics:

- Being of a sexual and/or violent nature;
- Threatens, libels, slanders, maligns, disparages, bullies, harasses, or embarrasses members of the school community; or
- Causes harm to others and/or to the school community.

E-Mail
E-Mail provides an avenue of enhanced, efficient, and economical communication with the school’s constituents. It should be viewed as an effective companion to personal contact, but should not replace direct contact with constituents. Electronic modes of communication facilitate the timely transfer of information.

The following areas should be addressed in development of an e-mail system:
• Identify person(s) who will be responsible for managing the e-mail software. This should include the responsibility for policies and procedures including the ethical use of information. Note: software must be approved by the school administrator and Technology Coordinator and installed by the Technology Coordinator.
• Select software that has the ability to make each person an independent user. The software selection should be determined by the use. (Do you want to check e-mail off site? Will your e-mail address be easily accessible to outside parties? Can others access your e-mail at your computer?)
• Determine who will have access to the communication system.
• Establish a process to alter user information as needed.
• Provide closed email system to avoid junk mail, and generate group mail and address book capability.

Each school should publish its email policies in the school’s Faculty/Staff Handbook and Parent/Student Handbook. School-provided email is intended primarily for business/academic purposes. Personal use of electronic mail is permitted as per each school’s guidelines, but such messages and access will still be governed by this policy. Policies governing emails between parents should be established and implemented.

Improperly used, E-Mail can result in a loss of privacy and potential legal liability for individuals and employers. School administration or IT staff may access, log, and review faculty, staff, and student email as necessary for information security or school investigations. Such access should be approved and logged by an appropriate school administrator. The school may both retain and examine email for an acceptable period of time after an employee has been terminated.

Users need to use public mailing lists appropriately. Ensuring the right mailing lists are used for mailings. Do not send messages unnecessarily to every list within the directory. (SPAM) Transmissions of copyrighted material are to be done only with permission. All copyright laws must be followed.

Electronic snooping for any purposes or transmission of discriminatory, bullying, or harassing language or images by any student, volunteer or school employee is a violation of policy and grounds for disciplinary action, up to and including termination or expulsion, in accordance with standard Personnel policies and procedures.

Use of E-mail for inappropriate messages is prohibited. Inappropriate messages, images, and attachments include, but are not limited to, those containing discriminatory, bullying, violence or derogatory language or remarks and images that may be construed as contrary to Gospel values and/or inappropriate and unsolicited (SPAM) e-mail.
Misaddressed mail should be routed immediately, without reading, to intended recipient OR deleted without reading.

Social Media

Social Media refers to the means of interactions among people in which they create, share and exchange information and ideas in virtual communities and networks.

The school or parish owns the school or school’s name and administrators have the right to restrict its use; in the same way, student/parent handbook rules and faculty/staff handbook rules can prohibit unauthorized use of images, names and logos.

A Catholic school administrator can impose consequences for conduct occurring outside school. What students/faculty/staff do off-campus can detrimentally affect a school’s reputation. The parent/student handbook and faculty/staff handbook, which is a legal contract, must state that the administration reserves the right to discipline students/faculty/staff for off-campus conduct. (Note: The parent/student handbook can be updated during the year as circumstances may require)

Social media provides another venue for students/faculty/staff/parents to make threats and offers opportunities to post potentially defamatory statements about the school, school personnel and students. Deliberate defamation of others and bullying are not consistent with Christian values and all should be held accountable for intentional harm they cause others.

Electronic devices may be used to record a class lecture, presentation, program, interview, meeting or similar activity with prior permission of the individual(s) being recorded. Absence of permission is unacceptable and may constitute copyright infringement. Verbal permission may be sufficient for recording within a class or meeting for personal use. However, written permission must be obtained prior to recording or transmitting someone’s image or speech over the airwave, in public, on the web, as part of a class assignment or any school sponsored activity or program. It is the responsibility of the user, host, event sponsor, department, or school to provide notification and obtain the necessary permissions in advance or at the time of the recording/transmission.

Bring Your Own Device

BYOD stands for “Bring Your Own Device.” The school administration may allow students to BYOD to school to carry out the academic mission under the direction of a teacher or administrator. BYOD devices will supplement (not replace) school devices.

Optional Guidelines
• Administration should govern which devices are allowed and how and which students are allowed to use them.
• BYOD follows the TAUP (The Acceptable Use Policies) of the school.
• The teacher is the instructional leader and determines when and how personal devices are to be used.
• Personal devices should arrive to school functional and fully charged.
• Students bring personal devices to school at their own risk, just like any other personal items.
• Personal devices should never be used in locker rooms, restrooms, or nurse’s offices.
• Students are not permitted to use any electronic device to record audio or video media or take pictures of any student or staff member without permission. Distribution of unauthorized media may result in disciplinary action.
• BYOD devices used in school are not permitted to connect to the internet 3g or 4g or other content service provider. Personal devices must access the internet through the school content filtered wireless network to meet CIPA (Children’s Internet Protection Act) requirements.

Privileges
The use of the Internet and related technologies is a privilege, not a right; and inappropriate use may result in cancellation of those privileges. Each user who is provided access to the Internet and related technologies will participate in a discussion with assigned staff person(s) concerning the proper use of the network.

The faculty, staff, or parent/guardian may request the administrator or designee to deny, revoke, or suspend a specific user’s access to the Internet and related technologies due to unacceptable use. Students are also required to follow rules for personal electronic devices as contained in the Parent/Student Handbook. Inappropriate use may result in confiscation of personal electronic device and/or revocation or suspension of student’s use on school property.
Appendix M1: Parents and Students

TECHNOLOGY ACCEPTABLE USE POLICY (TAUP)
AGREEMENT AND PERMISSION FORM Current School Year
For Parents and Students

*Name of Principal or school* is pleased to offer students access to technology resources for educational purposes, which may include computer hardware and software licensed to the school. To gain access to the technology resources, all students must obtain parental permission as verified by the signatures on this agreement.

What is expected?

Whether occurring within or outside of school, when a student’s use of technology jeopardizes the safe environment of the school, staff or students or is contrary to Gospel values the student can be subject to the full range of disciplinary consequences including the expulsion of the student. Students are responsible for appropriate behavior on the school’s computer network just as they are in a classroom or on a school playground. Communications on the network are often public in nature. General school rules for behavior and communications apply. It is expected that users will comply with Archdiocesan standards and the specific rules set forth below. The use of technology resources is a privilege, not a right, and may be revoked if abused. The user is personally responsible for his/her actions in accessing and utilizing the school’s technology resources. The students are expected never to access, keep, or send anything that they would not want their parents or teachers to see.

Internet and E-mail

Access to Internet and e-mail will enable students to explore thousands of libraries, databases, museums, and other repositories of information and to exchange personal communication with other Internet users around the world. FAMILIES SHOULD BE AWARE THAT SOME MATERIAL ACCESSIBLE VIA THE INTERNET MAY CONTAIN ITEMS THAT ARE ILLEGAL, DEFAMATORY, INACCURATE, OR POTENTIALLY OFFENSIVE. While the purpose of the school is to use Internet resources for constructive educational goals, students may find ways to access other materials. We believe that the benefits to students from access to the Internet outweigh the disadvantages. Ultimately, however, parents and guardians of minors are responsible for setting and conveying the standards that their children should follow when using media and information sources. Therefore, we support and respect each family’s right to decide whether or not to allow access to the Internet.

*Optional - Bring Your Own Device (BYOD)*
BYOD shall follow the guidelines stated in this policy.

- The teacher is the instructional leader and determines when and how personal devices are to be used.
- Personal devices should arrive to school functional and fully charged.
- Students bring personal devices to school at their own risk, just like any other personal items.
- Personal devices should never be used in locker rooms, restrooms, or nurse’s offices.
- Students are not permitted to use any electronic device to record audio or video media or take pictures of any student or staff member without permission. Distribution of unauthorized media may result in disciplinary action.
- BYOD devices used in school are not permitted to connect to the internet 3g or 4g or other content service provider. Personal devices must access the internet through the school content filtered wireless network.
- Administration should govern which devices are allowed and how and which students are allowed to use them.

What are the Rules of Appropriate Use?

**Electronic Communication** – Students may not use electronic communication in a way that jeopardizes the safe environment of the school, staff, or students or is contrary to Gospel values.

This policy applies to all forms of electronic communications or depictions whether they occur through the school’s equipment or connectivity resources or through private communication.

**Personal Safety and Personal Privacy** – Students will not post personal contact information about themselves or others unless otherwise indicated in the user agreement and parent permission form. Personal contact information includes their address, telephone, school address, etc. This information may not be provided to an individual, organization, or company, including websites that solicit personal information.

**Social Networking** - Accessing social networking websites, except those used for educational purposes, are off-limits on school property. The use of circumventors to get around school network security is prohibited.

**Illegal copying** - Students should never download or install any commercial software, shareware, or freeware onto network drives, external devices or cloud based storage. Nor should students copy other people’s work or intrude into other people’s files. The download/upload of any material in violation of any U.S., State, Board, Archdiocesan, or school policy is prohibited. This includes, but is not limited to, copyrighted materials, threatening, violent, or obscene material, or material protected by trade secret.

**Inappropriate materials or language** – No profane, abusive, slanderous, bullying, or impolite language or images should be used to communicate nor should materials be accessed which are not in line with the rules of school behavior. Use of technology resources for anything other than educational purposes is also prohibited. Should students encounter inappropriate material by accident, they should report it to their teacher immediately. A good rule to follow is never view, send, distribute, or access materials or images, which you would not want your
teachers and parents to see. Use of any electronic device to transmit unacceptable language, images and/or photos that are harmful to self or others is prohibited.

**Succinct Advice**
These are guidelines to follow to prevent the loss of technology privileges and/or disciplinary measures at school.

1. Do not use technology to harm self, other people or their work.
2. Do not damage the network or any technology resource in any way.
3. Do not interfere with the network or computer operation by installing any form of software or permitting the spread of computer viruses.
4. Do not violate copyright laws.
5. Do not view, send, distribute or display offensive or bullying messages or images.
6. Do not share your passwords/personal information or in any way obtain another person’s password/personal information.
7. Do not waste technology resources such as storage space or printing supplies.
8. Do not trespass in another’s folders, work or files.
9. Do notify an adult immediately, if by accident, you encounter materials, which violate the Rules of Appropriate Use.
10. Do not attempt to circumvent network filters or security in any way.
11. BE PREPARED to be held accountable for your actions and for the loss of privileges if the Rules of Appropriate Use are violated.
Dear Parents:
Your child has the opportunity to access technology resources at Name of school. With this educational opportunity also comes responsibility. It is important that you and your child read the enclosed Technology Acceptable Use Policy (TAUP) and Permission Form and discuss it together.

When your child is given an account and password to use on the computer, it is extremely important that the rules be followed. Failure to follow the rules will result in the loss of the privilege to use this educational tool.

Remember that you are legally responsible for your child’s actions. Please stress to your child the importance of using only his or her own account and password, and the importance of keeping it a secret from other students. Under NO circumstances should your child let anyone else use his or her account and password! Please refer to your school’s parent/student handbook for policies regarding cell phones/I phones and handheld devices.

Although we have established acceptable use policies, please be aware that there may be unacceptable material, images, or communication on the Internet that your child can access. After you have read and discussed this with your child, please check the appropriate boxes, have both you and your child/children sign the agreement, and return it to the school office.

Sincerely,

Principal
USER AGREEMENT and PARENT PERMISSION FORM

As a parent/guardian and student/s of Name of School, we have read the above information on the appropriate use of technology at school and the appropriate use of electronic communication, and we understand this agreement will be kept on file. (Questions should be directed to the principal for clarification.) Whether occurring within or outside of school, when a student's use of technology jeopardizes the safe environment of the school, students, or staff or is contrary to Gospel values, the student can be subject to the full range of disciplinary consequences including expulsion.
This policy applies to all electronic communications or depictions whether they occur through the school’s equipment or connectivity resources or through personal electronic devices.

Parent/Guardian Name (print) _________________________________

Parent/Guardian Signature ___________________________ Date: _______________

Student Name/Grade (print) _______________________/ _____________________________

Signature _____________________________

Student Name/Grade (print) _______________________/ _____________________________

Signature _____________________________

Student Name/Grade (print) _______________________/ _____________________________

Signature _____________________________

Student Name/Grade (print) _______________________/ _____________________________

Signature _____________________________

School Copy Received By ___________________________ Date _______________
Appendix M2: Employees and Volunteers

TECHNOLOGY ACCEPTABLE USE POLICY (TAUP)
AGREEMENT Current School Year
For Employees and Volunteers

Access to the technology resources of Name of School by its faculty, staff and volunteers is for purposes of instruction, research, and school administration.

Use of Resources
Respecting the rights and property of others is paramount. No improper access or misuse of files, data, or information, or improper use and waste of technology resources such as storage space or printing supplies will be tolerated.

Below are the guidelines to follow:

Electronic Communication
Whether occurring within or outside of school, when a staff member or volunteer’s use of electronic communication jeopardizes the safe environment of the school or is contrary to Gospel values, the staff member/volunteer can be subject to the full range of disciplinary consequences including the termination of the staff member or the revocation of the volunteer’s services. This policy applies to all forms of electronic communications, whether they occur through the school’s equipment or connectivity resources or through private communication.

E-mail
E-mail, like the telephone, is intended primarily for business purposes. Incidental and occasional personal use of electronic mail is permitted, but such messages and access will be governed by this policy.

E-mail should not substitute for all personal meetings.

Use of e-mail to transmit inappropriate messages and/or images is prohibited. Inappropriate messages include, but are not limited to, those containing discriminatory or derogatory language or remarks that may be construed as bullying, sexual harassment, and unsolicited e-mail (spam). Misaddressed e-mail should be routed immediately, without reading, to intended recipient OR deleted without reading.

Cell Phones/Smartphones
Use of cell phones/smartphones during instructional time is prohibited. Text messages and images that are inappropriate are prohibited on school property. Refer to the school’s teacher handbook for policies regarding e-mail and cell phones/smartphones.
Optional Bring Your Own Device (BYOD)
BYOD shall follow the guidelines stated in this policy.

Internet
It is the policy of the Archdiocesan Catholic schools (as stated in the Archdiocesan Catholic Schools’ Technology Plan) and Name of School to require the ethical use of the Internet and related technologies by all employees and volunteers, as stated in the Archdiocesan Catholic Schools Technology Plan. These policies are set forth below. Access privileges may be revoked, school disciplinary action may be taken, and/or appropriate legal action taken for any violations that are unethical and may constitute a criminal offense.

Acceptable Use
The use of the Internet and related technologies must be in support of education and research consistent with the educational objectives of the Archdiocese and the school. Use of other organizations’ networks or computing resources must comply with the rules appropriate for these networks.

Student access to the Internet shall be monitored or supervised by a school staff member.

Unacceptable Use
Transmission of any material in violation of any U.S., State, Board, Archdiocesan, or school policy is prohibited.

Social networking, websites, blogs, podcasts, video sites, except those used for educational purposes, are off-limits on school property. Use for commercial activities, product advertisement, political lobbying, game playing, gambling, chain letter communication, or use contrary to Gospel values is also prohibited.

A Catholic school administrator can impose consequences for conduct occurring outside school that detrimentally affects the school. Whether occurring within or outside of school, when a staff member or volunteer’s use of electronic communication jeopardizes the safe environment of the school, detrimentally affects the school’s reputation, or is contrary to Gospel values, the staff member may be discharged or the volunteer may lose his/her privileges of volunteering at the school.

Electronic devices may be used to record a class lecture, presentation, program, interview, meeting or similar activity with prior permission of the individual(s) being recorded. Absence of permission is unacceptable and may constitute copyright infringement. Verbal permission may be sufficient for recording within a class or meeting for personal use. However, written permission must be obtained prior to recording or transmitting someone’s image or speech...
over the airwave, in public, on the web, as part of a class assignment or any school sponsored activity or program. It is the responsibility of the user, host, event sponsor, department, or school to provide notification and obtain the necessary permissions in advance or at the time of the recording/transmission.

**Software**
Both operating systems and program applications must be approved by the school administration and Technology Coordinator and installed by the Technology Coordinator designee.

Each user is responsible for taking precautions to prevent viruses on his or her own equipment as well as the school and/or Archdiocesan equipment.

The illegal installation of copyrighted software or files for use on school computers is prohibited. The school’s Technology Coordinator is to install any software on school computers following the license agreement. The Technology Coordinator will secure all license agreements on file.

**Copyright**
It is the policy of the Archdiocese of Galveston-Houston that all employees, volunteers, and students are to abide by the federal copyright laws.

Employees, volunteers, and students may copy print or non-print materials allowed by:
- Copyright laws
- Fair use guidelines
- Specific licenses or contractual agreements
- Other types if permission is given in writing.

Employees, volunteers, and students who willfully disregard copyright laws are in violation of this policy, doing so at their own risk and assuming all liability.
Security
The purpose of the security policy is to ensure that technology assets are used only by authorized persons for authorized purposes, that computer related hardware, software, data, and digital equipment are protected from mischief, and that accountability is established for achievement of these objectives.

Passwords for accessing technology resources must be kept private, changed regularly, and must meet password strength requirement. It is the employee/volunteer’s responsibility to use the password and protect it from unauthorized use of others. Employees and volunteers should not allow students to access resources through their employee/volunteer accounts.

Reporting Security Violations
Security violations should be reported immediately to the technical designee and principal. Failure to report such violations or to adhere to the Security Policy could result in negative consequences on performance reviews, up to and including loss of employment.

Publishing Student’s Work
Check parental permissions before publishing student work, images, or information onto the school website/Internet.
USER AGREEMENT

I HAVE RECEIVED AND READ Name of school’s Technology Acceptable Use Policy (TAUP) for all employees and volunteers.

I understand that the policy represents the Policy and Procedures for use of technology resources by employees and volunteers of Name of School. I understand its significance, and I agree to abide with all terms and conditions of the policy.

I understand and agree that whether occurring within or outside of school, my use of electronic communication and/or the Internet must not jeopardize the safe environment of the school or be contrary to Gospel values. I understand that if I violate this, I can be subject to the full range of disciplinary consequences including my termination if I am a staff member or revocation of my services if I am a volunteer.

This policy applies to communications or depictions through e-mail, text message, podcasts, blogs, twitters, or website postings, whether they occur through the school’s equipment or connectivity resources or through private communication.

I understand and agree that any violation of this policy, including a breach of confidentiality or security, or any applicable law, would be unethical and may also constitute a criminal offense. I also understand that my failure to comply with the terms and conditions of this policy may result in disciplinary action, including but not limited to revocation of computer privileges and termination of employment.

Please Print:

______________________________________ ________________________
Name       Position

______________________________________ ________________________
Signature      Date
Appendix M3: Sponsoring Teacher Agreement

I have read the Technology Acceptable Use Policy Agreement and Permission Form for Parents and Students and agree to promote the said agreement with the students. Because student use may vary for individual work or in the context of another class, I cannot be held responsible for student use of our equipment, network, or other technology resources. As the sponsoring teacher, I do agree to instruct students on acceptable use of technology resources and proper etiquette.

Please Print:

______________________________________ ________________________
Name       Position

______________________________________ ________________________
Signature      Date