Technology Plan
July 1, 2015 – June 30, 2018
Pine Valley Central School

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This plan is broken into five sections with supporting appendixes. Each section addresses a major area of responsibility of the technology department.

Introduction

The District

The Pine Valley Central School District has maintained a very positive image as a high quality school system. It is a rural district dedicated to the belief that the personal and academic growth of each student flourishes in a caring and nurturing environment. The school district serves 633 students in two buildings, an elementary building for grades UPK-6 (338 students) and a 7-12 (295 students) Jr.-Sr. high school. The district's population is 94% white, 3% Hispanic/Latino, 2% multi-racial, <1% American Indian/Alaskan Native and <1% Asian/Pacific Islander. The schools are centrally located in the district on adjacent sites totaling 70 acres. Students are transported to school on the district's bus fleet.

The Pine Valley Central School has a professional staff consisting of a superintendent, Jr.-Sr. high school principal, elementary principal, business administrator and director of special education. Full-time faculty members number 73, with a support staff totaling 75.

The Pine Valley Central Elementary School opened in January, 197l. The Jr.-Sr. high school was built in 1954, an addition of classrooms and pool was completed in 1958, a technology wing in 1987, and band room in 1993. In 1994-95 two projects totaling 5.2 million dollars were completed that included: a new gymnasium, locker room, library, computer room, art room, home economics suite and three science labs. In 2004, an 8.9 million dollar project was completed with major renovations made to the elementary school with additional renovations to the 7-12 building and extensive upgrading of athletic fields and grounds. In 2008, a 10.5 million dollar project was undertaken providing for additional improvements including extensive, state-of-the art technology updates. An 11.4 million dollar facilities improvement project began in 2012, that includes reconstruction of all parking lots and driveways; upgrading to energy efficient lighting in all classrooms, offices, gymnasiums and hallways; a new water well building; replacement of outdated electrical systems and panels in both schools; re-pointing of all brick/masonry cleaned at both schools; replacement of classroom ventilators, Pool-Pak, windows and window panels, roof replacement at the junior/senior high school.

The instructional program is well articulated and utilizes up-to-date, 21st Century teaching techniques. Every effort is made to provide a varied and appropriate educational program to all students. Pine Valley Central is a component district of the Erie2-Chautauqua-Cattaraugus Board of Cooperative Educational Services (BOCES). The BOCES organization provides the district with a variety of educational services, as well as business and staff development assistance.

The Community

The Pine Valley Central School District is a rural district, which covers an area of approximately 120 square miles in the northeast section of Chautauqua County and the northwest section of Cattaraugus County. The Pine Valley Central School is approximately fourteen miles from the Village of Fredonia and twenty–five miles from the city of Jamestown. The area connects easily to metropolitan Buffalo and Erie by using the nearby Southern Tier Expressway (I-86) and the New York State Thruway (I-90), thus numerous two and four-year educational institutions are easily accessible.

The two largest villages in the district are Cherry Creek (approximate population of 450) and South Dayton (approximate population of 600). The area is largely residential and heavily agricultural, although a few small businesses add to the economic base. The beautiful and vast countryside with nearby Allegany State Park, the largest in New York State, offers numerous year-round outdoor activities: hunting, fishing,

hiking and camping. The surrounding area is especially noted for its fine recreational facilities with many excellent golf courses, ski resorts, state parks, and boating opportunities.

There are many cultural and enrichment activities opportunities nearby. Chautauqua Institute, Roger Tory Peterson Institute, Reg Lenna Civic Center, the Buffalo Philharmonic, Shea's Performing Arts Center offer programs, speakers, add entertainment of wide appeal. The Community also has a large population of Amish within the district's boundaries. The Amish offer not only a cultural aspect to the community, but they provide services from woodworking and cabinetry making to baked goods and quilts at reasonable prices. All of this combines to provide the Pine Valley Central School District residents with an excellent quality of life at a moderate cost of living.

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District Technology Team

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Pine Valley Central School has, and will continue to embrace technology resources with the determined intent of providing the tools necessary that will prepare students to participate and succeed in a technologically advancing world. We also recognize this cannot be accomplished without teachers' ability to exploit technology to deliver rich curriculum, proper staffing to provide integration and support services, and a solid infrastructure to provide capable technology resources. Professional Development is viewed as a key component in reaching and surpassing our technology goals.

We are in the process of developing two building level technology committees that will meet frequently to discuss the individual technology needs of their specific building. Both building committees will meet together twice a year and act as a steering mechanism for the technology program. The Technology Committee's Mission is to consolidate, standardize and simplify technology currently available in our district.

The Planning Process

Technology planning is the process of combining together two building level groups and individual ideas, to create goals, objectives and policies into one cohesive product that will give Pine Valley Central School the tools to direct technology into the future. Our process to bring this plan to publication is as follows:

1. The present plan will be brought to the Technology Team for review.
2. The District needs will be discussed using assessment sources from:
   - student/parent technology surveys
   - technology benchmark checklists
   - formal technology literacy assessment
   - observations from the technology staff
3. Goals and objectives will be evaluated from the previous plan.

4. To be highly attuned to the most state-of-the-art technology, team members may tour local districts and other institutes that use advanced technology.
5. The focus of this plan will be on what is important for each contingency group to know and be able to do and the intermediate steps necessary to ensure the plan's goals are met to the set standard.
6. The vision, goals and objectives will be updated annually.
7. The annual budget will be reassessed and updated to meet the revised goals and objectives.
8. The steps to implement the goals and objectives will be created for the new plan along with a timeline and an action plan.
9. Strategies for professional development will be formed and stated in the plan along with a timeline and action plan.
10. A plan for evaluation and assessment will be established to address the effectiveness of technology in meeting the stated goals, objectives and strategies.

Mission, Vision, and Goals

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Pine Valley Central School Mission Statement
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The entire Pine Valley Central School recognizes its mission is to provide a comprehensive and academically challenging education for <u>all</u> students in an atmosphere that will stimulate and nurture the students' intellectual, moral, social, and physical development in order to prepare each student for responsible participation in the American democratic society. The entire school community will have a sense of responsibility, self-motivation, and cooperation. This will result in a more effective school.

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Technology Vision
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The entire Pine Valley Central School community recognizes its mission is to provide students with technology integrated curriculum and instruction rich in academic content in order to compete, communicate, and operate in our information driven society. The components of our technology program will prepare our students to be creative, adaptive, lifelong learners and productive citizens in the global society.

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Technology Goals
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The following goals support our overall mission and vision by articulating our intentions on the "how" aspect of preparing our students to become global productive citizens. Each goal plays an important role for effective and efficient integration practices influencing student achievement.

Technology Integration: *Increase quality and use of technology tools to improve student technology skills at each grade level as recommended by national and state standards.*
Data Team Support: *Provide access to information needed to make decisions to heighten the effectiveness of technology integration as it relates to student achievement.*
Professional Development: *Provide ongoing professional development to teachers, staff, and administrators to elevate competency in technology management, instruction and integration.*
Communication: *Use technology to promote parental and community involvement through the use of the District website and Parent Portal.*
Technology Equipment and Infrastructure: *Use a variety of financial resources to maintain, support and enhance computer access to students, district personnel and members of the community.*
Security: *Continue to advance a functional, secure networking infrastructure and instruct students in information literacy to ensure competency and safety in an online environment.*

Curriculum

A. Curriculum Integration

Technology Goals and Strategies

The success of curriculum integration depends on meeting the goals set forth in this technology plan. Below, the goals are restated with specific objectives and strategies, which are based on the International Society of Technology in Education (ISTE) National Standards and the New York Math, Science and Technology (MST) standards.

In our District, with the help of our 1:1 iPad initiative, we use school issued tablets. The iPads are pre-loaded with digital content and access through a certified LMS to access instructional materials. This is in an effort to use digital connectivity and technology to improve teaching and learning.

Technology Goals

- Implement technology for instructional use that supports the teaching and learning process which will allow all students to achieve technology mastery and prepare them to succeed in a global economy.
- Provide ongoing professional development to teachers, staff and administrators to elevate competency in technology management, instruction and integration.
- Focus technology integration toward **ISTE NETS for students.**
- Maintain a secure network infrastructure, and instruct students to ensure competency of safe, legal and responsible practices in an online environment.
- Incorporate alternative formats to address Special Education needs in compliance with **NIMAS**.

Integration Strategies

- Identify and expand best practices for technology integration in curricular areas.
- Provide opportunities for teachers to showcase and discuss technology and technology related instructional strategies.
- Post Best Practice technology integrated units on the District's website and My Big Campus for other teachers to access and adapt for their classroom.
- Enable and empower teachers to present a specialized area of technology and how they have integrated it into their curriculum.
- Create mentoring opportunities for staff to assist others with integration into the content areas.
- Publish articles in the District's newsletter related to outstanding technology integrated projects or lessons.

I.   Curriculum

B.   Student Achievement

Student achievement is supported by differentiation and engagement, constructivism and inquiry, collaboration and communication using data driven instruction, and digital learning resources. Although our Paperless Initiative and 1:1 iPad initiative have become an integral part of classroom curriculum in our district, it is important to continue designing, implementing, and assessing technology and curriculum activities to meet students' learning and instructional needs. To accomplish this, we need to consistently incorporate new instructional strategies using research-based approaches that effectively and appropriately incorporate technology with standard-based curriculum. Instructional activities must support information literacy, inquiry, problem solving, creativity, communication, and collaboration in an environment that maximizes student learning and prepares students for the 21st century.

Examples of activities:
1. A district-wide research model that moves students from being just gatherers of information to those who manage, evaluate, analyze, and synthesize information.
2. Opportunities for communication and/or collaboration with experts on real world issues or fields of study through the use of distance learning.
3. Online resources such as lessons, tutorials, online/blended courses, and distance learning.
4. Collaborative projects that use Internet tools such as email, blogs, wikis, and discussion threads.
5. The use of multimedia to incorporate images, sound and video into podcasts, video casts, and web pages.
6. Incorporating multimedia to drive problem or project-based learning.
7. Information Technology instruction to prepare students with the technological skills they will need for success in their future.
8. Activities of inquiry that utilize probes, simulations, and data analysis applications.
9. Assistive technology that addresses unique and specific needs of students with disabilities in order to meet individualized student goals and benefit from the general education curriculum.

In our district we formally teach basic and advanced computer applications, media and technology, as well as design and drawing courses. Formal keyboarding is addressed with a program called Type to Learn 4. The purchase of iPad keyboards further encourages proper keyboard skills. We implement ethical and safe technology practices expecting students to respect copyright, intellectual property and cite sources. The primary focus is the seamless integration of technology in meeting curriculum objectives which also address many of the remaining ISTE and MST standards. These examples can be adapted to other subject areas and adjusted to other grade levels.

Technology Integration Action Plan
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Actions needed to achieve goals	Staff Development	Person(s) Responsible	Date Each Action Will Be Completed	Indication of Success
Focus on ISTE NETS for student and teacher technology integration Provide opportunities for creativity and constructive thinking within curriculum context.	Utilize in-service time for teachers to demonstrate and share lessons that exhibit creativity and innovation

Offer in-house or outside workshops on technology software, new devices or strategies that promote innovation and creativity | Superintendent Building Principals Technology Integrators | 2015-2018 | Faculty connection with 21st century best practices to create effective classroom practices tied to ISTE NETS for students |
| Incorporate research base models such as problem/ project-based and inquiry- based learning that will support critical thinking and problem solving. | Incorporate research based models by implementing integration strategies by providing in-house and CSLO training | Superintendent Building Principals Technology Integrators | 2015-2018 | Teacher-shared unit plans demonstrate these models in teacher observations. |
| Involve students with communication and collaboration projects using programs such as My Big Campus and Distance Learning opportunities | Offer teacher in-service through CSLO and/or in-house training on in-service days, summer professional development days, etc.

Meet with individual teachers to outline goals that would incorporate a collaborative/communication plan | Superintendent Building Principals Technology Integrators | 2015-2018 | Online learning assessment that includes discussion threads, blogs, wikis checklists, observations, etc., using My Big Campus. |
| Incorporate and assess basic technology skills of applications, systems and concepts. | Make teachers aware of the NET, NY MST and District Technology Benchmarks. | Administrators Teachers Special Area Technology Teachers Technology Integrators | 2015-2018 | Methods are in place to assure technology and curriculum objectives are implemented

local technology literacy assessment |
| Incorporate alternate Formats of ISTE NETS to address Special Education needs | In-service training and work sessions for Special Education staff | Administrators Special Education Staff Technology Integrators | 2015-2018 | Students with disabilities are provided alternative technology integration materials in compliance with NIMAS. |
| Use data driven instruction to meet student needs and technology integrated curriculum objectives. Data analyzed should include formative as well as summative assessment in the form of standardized tests, formal classroom tests, rubrics, checklists and observations. | Formal in-service to discuss ways teachers can use different assessments to make informed decisions about instruction and student learning | Superintendent Building Principals Building Data Teams | On-going | Increased data provided for teams |

I. Curriculum
   C. Technology Delivery
   Our district has participated in Distance Learning for many years. This affords our students the opportunity to participate in courses from other districts that are not available in our district. Presently, students participate through distance learning in Animal Science, Business Law, Physics and sign language. Our district also participates in the Virtual Advanced Placement Grant. This program allows our students to take additional AP courses that are completely online. Pine Valley students have taken AP Psychology, AP Government, AP Music Theory, and AP Computer Programming. It is the goal of the district to increase the number of classes each year, offering new classes as interest remains.

Courses designed in-house will follow the NEA Guide to Online High School Courses.

1. Online Curriculum: Offerings should be challenging, relevant, and aligned with appropriate national, state, and district standards for student learning.
2. Instructional Design: Online courses should be designed to take advantage of the online learning environment and support the development of 21st-century learning skills.
3. Teacher Quality: Teachers should be skilled in the subject matter, learning theory, technologies, and teaching pedagogies appropriate for the content area and the online environment.
4. Student Roles: Students should be actively engaged in the learning process and interact on a regular basis with the teacher and online classmates.
5. Assessment: Assessment should provide opportunities for students to reflect on their own learning and work quality during the course, and give students the opportunity to demonstrate mastery of the course content.
6. Management and Support Systems: Support systems should provide resources to teachers, students, and parents comparable to those provided by face-to-face courses, as well as special support necessitated by the unique circumstances of the online environment.
7. Technological Infrastructure: The technology behind the course should work reliably, simply, and economically. Technical assistance should be available whenever needed by students or teachers.

The District also supports distance learning staff development by facilitating their participation in webinars and online meetings.

I. Curriculum
D. *Parental Communications and Community Relations*
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Dissemination of Educational Technology Plan to the Community

The district realizes the importance of communicating its needs and plans to the community. It provides the opportunity for partnership and cooperation and makes the plan a dynamic, functional document. Our district has a relationship with several community groups such as the Mother's Club, CIA (Community in Action, village libraries, compact teams, area churches and SUNY Fredonia. These groups are supported by, and help support, the educational goals of the district. It is important that the goals and functions established in our educational technology plan be communicated to these organizations to strengthen the foundation of the community/school relationship and to extend the environment for student achievement in the acquisition of 21st century skills. They are a vital part in the evaluation and assessment of the plan's success.

There are several ways the district technology plan will be disseminated to the community:
1. The plan will be published and updated on the district web site: Departments/Technology/Technology Plan.
2. Technology Committee will share the goals and objectives of the district's technology plan with student teachers, college coordinators, etc.

Using Technology to Communicate With and Involve Parents

Our district uses technology in various ways to communicate with parents and the community. To announce school closings and noteworthy events, the district uses a mass notification/announcement system which dials into homes and/or cell phones of those registered as well as a new Alerts system in place on the homepage of Pine Valley School District webpage. It is also suggested that teachers post an updated syllabus, classroom policy, and schedule on their teacher page of the district webpage. Other additional information that can be found on the website includes announcement of important events, the district calendar, sports schedule, lunch menu, and a link to payment system for school meals. Contact information and informational documents, such as the technology plan, web resources, and tutorials may also be found on the district website. Technology is also involved with the creation of our District Newsletter which is published and distributed five times a year to parents within all the communities of the district. Our district maintains a state-of-the art Fitness Center, which is open to the public, and uses technology devices that monitor heart rate, distances, speed, etc. PowerSchool, the district student information system, has a parent portal that creates a collaborative environment where parents can view student performance via an Internet browser.

As technology equipment is replaced with updated versions, our district donates older equipment to community organizations, such as the village libraries.

Community and Parent Stakeholders of the District Technology Plan

   We realize the importance of having community and parent stakeholders on the District technology team who contribute in the planning, implementation and ongoing assessment of the technology plan.

I.   Curriculum
E.   Collaboration

        Our district sponsors Adult Education classes during winter and spring semesters. This provides a vital opportunity for our technology program.

   There are several areas that we can address with parents that would be important for them to enhance their learning opportunities while assisting the promotion of their children's learning. One of these is Information Literacy. Information Literacy involves the research, evaluation, and communication skills needed throughout life, which is important for both adults and students. The class may involve research seeking strategies, selecting and evaluating resources, organizing and restructuring information, communicating or presenting, and evaluating the results. Another issue is Internet Safety. As a mandatory part of the curriculum, it is important for parents to be aware. The district publishes articles to assist parents in awareness, prevention, and "what to do if" on various Internet Safety issues such as credit card theft, cyber bullying, online predators, and violations of copyright in the district newsletter.

II. Professional Development

A. Professional Development

Professional development is one of the cornerstones in this district's technology plan. We provide on-the-spot training as well as formal training that is offered during in-service days. Many district teachers are proficient in technology and are willing to share their talent, assist or mentor others with technology integration in the classroom. These teachers demonstrate awareness, use of, and basic troubleshooting strategies of district hardware, software, and peripherals, as well as best practices models, web 2.0 tools, multimedia, and Internet safety. It is our goal to encourage more teachers to lead, mentor or offer specialized assistance.

Our district also offers professional development through BOCES CSLO Model Schools. Each year we send two representatives from each building to participate in the required 3-day regional model school workshop. By doing so, we are awarded 4 days of technology integration instruction for professional development that can be used in either building. Along with these outside sources, we have a technology integration consultant who assists and collaborates with teachers on technology skills and integration practices.

Current Status:

Our faculty has been trained on all district software including the *Microsoft Office* 2010 suite, My Big Campus (online content management), and Safari Montage (digital media management and distribution system), and quickly becomes familiar with new applications. They are also fluent working with other management systems, such as PowerSchool (grade book application and attendance program). We have state-of-the art classrooms that are equipped with a projector, screen, document camera, and sound amplification system.

Our district's 1:1 iPad initiative has grown to over 700 iPads in grades PreK-12th grade.   The faculty has had professional development to integrate the iPad into the curriculum. Apps are easily accessed through the Apple Configuration and MDM Server Management of app distribution.

Communication is an important factor.   A Google form is commonly used for faculty surveys and questionnaires. Survey results demonstrate the district's continual dedication to technology across a wide spectrum of educational environments and shows where focus is needed. Following through with implementation and evaluation of ISTE Educational Standards for Teachers and Students aligned professional development ensures that training leads to integrated practices in the classroom. In-service training should fit the needs of the students, faculty and district as technology continues to advance.

Professional Development Action Plan

Professional Development Goal
- Provide ongoing professional development to teachers, staff, and administrators to elevate competency in technology management, instruction and integration.

Professional Development Strategies
- Facilitate and inspire student learning and creativity
- Design and develop digital-age learning experiences and assessments
- Model digital – age work and learning
- Promote and model digital citizenship and responsibility

Actions needed to achieve the goals	Staff Development	Person(s) Responsible	Date each action will be Completed	Indication of Success
Remain current on new and effective technology integration tools and resources.	Attend CSLO Model School Regional Workshops.	Building Principals Technology Integrator	On-going	Teacher observations & staff surveys
Assess student technology skills and teacher effective use of technology	Professional development/in-service	Building Principals Technology Integrator	6-2016	Reinforce the pattern of administration and data collection for teacher technology skills and use survey across the District.
Devote In-service to 21st century technology integration directly related to Common Core curriculum.	Staff development/in-service	Superintendent Building Principals Technology Integrator	9-1-2015 9-8-2015 10-9-2015 (In-Service Dates)	Staff feedback and increased Attendance/interest in technology integration courses

II. Professional Development
B. Supporting Resources:

Our district relies on a variety of resources that undergird the support of the technology program. Such resources include the following:

District Technology Benchmarks and Checklists (Technology Benchmarks)
These benchmarks are modeled from ISTE NET standards for Students 2007 and NYS MST standards. They are set up in four scaffold grade level ranges of UPK-2, 3–5, 6-8, and 9–12. Each is divided into three areas of concentration: Basic skills and concepts, ethical, social and safe use, and application involving research, problem solving, communication, collaboration, creativity, and innovation.

District Website
Our district website provides resources and information for the community, parents and school. The technology section provides resource links for both elementary and high school curriculum areas and management tools. It also lists links to our technology benchmarks, tutorials, and the District's Technology Plan.
The website is designed with an Intranet access for school personnel. The Intranet includes technology calendars, technology training resources, and business office information. Links for WinCap Web, SafeSchools Training, and Employee Assistance Program are available. Employee email can be accessed from an Internet browser by logging into our district's website.

VPN
An SSL VPN (Virtual Private Network) has been implemented to provide faculty, staff, and students' access to their school network folder anywhere an Internet connection is available.

Technology Help Web Desk
A Technology Web Help Desk shortcut is available on all district computer desktops and iPad home screens and can quickly be filled out for any technology request. This is important for documentation, efficiency, and organization.

BOCES Services
The services we receive through BOCES are an integral part of our technology program. Following are some of the services that support our technology program.
- Broadband Internet access
- CSLO professional development support
- Hardware and software purchases.

- Content Filtering
- Email spam filtering, and email server support
- Hardware warranty support & server maintenance
- Consumable supplies
- Online financial system
- Lunch management system
- Library Services
- Distance Learning
- Online classroom / course management through My Big Campus and Google Classroom
- Other misc. services purchased through Erie1/Erie2 BOCES

Director of Technology

Our district employs a full-time Director of Technology who also acts as the Network Administrator. The duties include, but are not limited to: maintaining updates, securing servers and the network infrastructure of the district, budgeting and ordering network and hardware equipment.

Microcomputer Technical Support Specialist

Our full-time technician troubleshoots and repairs hardware and software issues, as well as audio-video setup and repair.

III. Technical Infrastructure
A. Infrastructure Needs/Technical Specification and Design
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Computers

For desktop computing, Pine Valley takes a primarily Windows based approach for delivery to students, staff, and administration. Apple computers are in use in the specialty areas of multi-media for morning announcements, art, and music, as well as within the Technology Department for technical support.

The Junior/Senior High School employs a predominately lab-based computing environment for students. Computer labs include CAD lab, art lab, music lab, library lab, and a lab located in the large study hall that is also used as a Training and Professional Development center. Classrooms are generally equipped with one or two computers to meet classroom needs.

The Elementary School employs a predominately dispersed environment for students with four computers in each classroom. One general use computer lab and one Linux OS resource lab.

Apple iPads are deployed to Pre K to 12th grade students, as part of a 1:1 iPad initiative program. The iPads are equipped with age/grade appropriate apps. Each student receives an iPad case and charger (additional charging carts are available in classrooms). In our district, 1:1 initiative has proven to improve student engagement and increase student achievement. With the use of the iPads, our students will have the skills and confidence to integrate technology into their future and will be better prepared for tomorrow's success. The school district plans to continue developing the initiative.

Telecommunications

Pine Valley currently employs PSTN telephone lines. A PBX is installed to handle internal telephone needs. PSTN lines are used on a rotary to service general telephone use in the Junior/Senior High School. PSTN lines are used on a rotary to service general telephone use in the Elementary School. One line serves as a backup line in the case of a failure of the PBX switching system. One line is used to service telephone needs in the bus garage. The remaining lines are used for fax service in the Superintendent's office, the Business office, the High School office and the Distance Learning Lab.

Pine Valley also employs cellular phones to meet the unique requirements of certain individuals.

Nine pagers are in use by the building maintenance team for notification of building alarm alerts and other needs pertaining to facility maintenance.

Internet Access and Services

Pine Valley's network is an Ethernet, switched network. The network backbone consists of a core switch in both buildings. These switches are connected to each other via gigabyte fiber optics. Sixty-seven classrooms/offices are equipped with a 24-port switch connected to a core switch via 100 megabit fiber optics. Wireless connectivity is hosted through Avaya wireless access points located throughout both buildings.

The external (WAN) connection is hosted through the WNYRIC using a gigabit broadband connection.

Network services are delivered using eight servers. These servers provide central logon/user profiles, print, file storage and sharing, application hosting, and data repositories. Special appliances provide email "spam" filtering and Internet content filtering.

Current hosted applications are listed in the Inventory table.

E-mail is considered a vital communication link between faculty, staff, administration, parents, and the community at large. Pine Valley will continue to provide support for e-mail to all employees who require such services. Student e-mail supported though Microsoft Office 365.

Internet filtering is a continuing, mandated service that is critical to the safety of students and employees, mandated by law and employed through Lightspeed content filtering service. Pine Valley is continuing support of the installed filter and currently provides briefings for employees and requires student and parent/guardian acknowledgement of policy to allow student access to web-based resources.

Other Technologies

The iPad has become a substitute for many smaller technologies. Although, several specialty items are still in use such as interactive slate boards, digital cameras, digital camcorders, and portable multimedia carts. These items are generally used to enhance curriculum and add diversity and flexibility to delivery.

One Call Now is a program our district uses to deliver and mass-call messages to the community and staff to relay messages such as emergency closings or delayed openings.

Pine Valley also considers its Internet presence to be a vital link in our community involvement process. We post a variety of items on the web site to keep our taxpayers and community involved in what's going on in their school. Visit us at http://www.pval.org.

Distance learning is supported with a dedicated room equipped with the latest technology, updated in spring 2014. Our participation in the Gigabit Ethernet Project through the WNYRIC has allowed us to eliminate the dedicated T3 connection for distance learning and integrate the distance learning lab into the data network. This alone saves thousands of dollars each year. A mobile Polycom unit, housed in the high school, is used for various distance learning classes. The other mobile unit, using Movi is housed in the elementary building, is used to enrich distance learning experiences by increasing the amount of projects that can be accomplished through Distance Learning.

Security and Privacy

Pine Valley has a Board of Education Policy prohibiting release of any confidential data to any unauthorized person or agency. Disclosure under the Freedom of Information Law can be retrieved.

Network security is provided through several layers. A firewall is installed as part of a WNYRIC service. Anti-Virus programs are deployed and centrally updated. File sharing security is applied and student computers are secured using group polices. Users must also "click-through" an acceptable use splash screen before given an opportunity to log onto the network.

Physical security is enforced through inventory controls for installed assets. Main wiring closets and servers are kept in locked rooms.

Privacy is consistent with Board of Education Policies. No student, staff, or faculty should consider any data stored on or passing through the network to be absolutely private. Individual accounts are kept and controls are in place to secure data and ensure access to only authorized individuals.

Staffing and Training

The district employs a full-time Director of Technology, providing all hardware configuration control, maintenance and budgeting, server configuration, software configuration, and user access policies and a full-time Microcomputer Technical Support Specialist, providing hardware and software support and other assistance as needed.

Training is provided to each member of the technology support team. The Director of Technology receives appropriate training relevant to job requirements, attends Technology Consortium meetings, and attends program specific users' group meetings. The Technology Integration Specialist receives training through professional development initiatives and specialized training and WNYRIC- Technology Integrators Forum-South Region. The Microcomputer Technical Support Specialist receives training through Erie-2 BOCES as required to support the customer.

III. Technical Infrastructure
B. Current Inventory and Projected Needs

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Inventory	Computer Labs	Classrooms	Library Media Center	Admin Offices	Other Locations	Planned Future Acquisitions		
						Year 1	Year 2	Year 3
Computers								
A. Laptops (PC)					1	Maintain and replace as needed		
B. Desktops (PC)		49	12			Maintain and replace as needed		
C. iPads								
D. Apple (Mac)	20	7			15	Maintain and replace as needed		
E. Apple (Laptop)					5			
Devices Internet Ready & Equipped for Mutlimedia	All					Continue		
Peripheral Devices								
A. Printers	1	0	0			Centralized printing in offices		
B. Modems						Maintain and replace as needed		
C. Assistive/Adaptive Devices						Address as needed		
D. Digital Cameras		10			5	Replace as needed		
E. Video Cameras		6			2	Maintain and replace as needed		
F. TV Monitors					6			
G. VCR/DVD Players	2	49	2	0	9	Maintain and replace as needed		
H. Projections Device	2	49	2	0	9	Maintain and replace as needed		
I. Satellite Dish/Cable						Maintain		
J. Smart Document Camera	2	49	2	0	9	Maintain		
Network Equipment								
A. Hubs	None							
B. Routers	2							
C. Servers	10 District Wide							
D. Wireless	102 Access Points					Dependent on WNYRIC		
E. Switches	69 District Wide					Maintain		

Number of rooms wired for internal connections	All	Maintain

Telecommunications Links

Fiber Optics	Buildings connected via fiber and BOCES connected via fiber	Dependent on WNYRIC
PSTN	VOIP	Maintain
Cellular	Cell phones for key administrators and staff	Maintain
Public Access System	For general announcements	Maintain
Radio Network	20 -Providing staff communications (hand-held two way radio transceivers)	Maintain
Pagers	9- (For building maintenance)	Maintain

Software --Academic (Annual Subscription)	**Library Databases**
BrainPop/Jr & BrainPop Castle Learning EnchantedLearning Movie Licensing (legal use of movies) Reading Counts SchoolWires (School Website Host) Sounzabounds (legal downloading of music) TTL4	Ancestry Career Cruising Country Watch EBSCO Info Track Student Resources in Content Fold3 Teaching Books
Software- Microsoft EES Enterprise	**Software--Operating Systems-Other**
Microsoft Exchange, Office 2010, Windows7, Windows Server 2008	Linux - Lubuntu (10 PC) Macintosh OSX Apple OS X Server (unlimited)

Software—Networked Service (Specialized)	
ClearTrack AIMS Web Easy Bus (Bus Driver Management) iReady PowerSchool - Attendance & Grades & Student Information System Destiny-Library Management Symantech Endpoint, Backup Exec 12.5, Ghost 2.0	Synchroneyes - Computer Lab Management Schoolvue - Classroom Lab Management SNAP Health Center - Health Records Management Ultra VNC Violent & Disruptive Incident Reporting WinCap - Financial Management System Lunch Managemen - WebSmart AirServer

The seamless use and access of technology in management, instruction, and learning is a dependent, solid, and efficient infrastructure. It is important that the interoperability of equipment and software is updated and maintained. Therefore, our plan includes a replacement and maintenance cycle which is indicated in our inventory and in the action plan below.

We also have a strong backbone of technical support through services the district has purchased through BOCES. This includes support and services with PowerSchool, WinSnap, WinCap, Websmart, Clear Track, Spam and Internet filtering, the network switches, Distance Learning, hardware coupons and CSLO.

Maintain and Replacement Action Plan:

Actions Needed to Achieve Goals	Staff Development	Person(s) Responsible	Date of Completion	Indication of Success
Replace the DLT backup with a new Powervault Tape backup	Network and Technician training in new systems	Network Specialist		Trend Backlog of Job Orders
WinSnap will be upgraded to WebSmart	Network and Technician training in new systems	Network Specialist		Trend Backlog of Job Orders
Destiny Library Automation will replace Follett	Network and Technician training in new systems	Network Specialist		Trend Backlog of Job Orders
Maintain network backbone	Training in switch configuration Training in firewall configuration	Network Specialist	Ongoing	Network service availability
Recycle desktops as they age out of a 5 year cycle	Network and Technician training in new systems	Network Specialist Computer Technical Assistant	Ongoing	Trend Backlog of Job Orders
Update Wireless Infrastructure	Network and Technician training in new systems	Superintendent Network Specialist		Trend Backlog of Job Orders

Technical Equipment and Infrastructure
C. Increase Access

The major focus of the district's previous capital projects has been to increased technology access. Every classroom is equipped with audio/visual equipment which includes a ceiling mounted LCD projector with VGA, S-Video, and an RCA outlet, a projector screen, an integrated sound system with microphones, and a document camera. The district supplies bus transportation 4 days a week after school for any student to gain access to school computer labs and libraries.

Action Plan:
Use a variety of financial resources to continue to increase Internet access to all students, district personnel, and members of the community.

Actions Needed to Achieve Goals	Staff Development	Person(s) Responsible	Date of Completion	Indication of Success
Increase Access of computers, servers, and peripherals Purchase new tech and student server with increase storage and performance	Technician training in new systems Teacher training in use of equipment and software	Network Specialist Computer Technical Assistant Technology integration Specialist	2018	Trend Backlog of Job Orders

Section IV: Budget
A. Budget and Timetable

BUDGET	2009 - 2010	2010 - 2011	2011 - 2012
General Fund:			
Harware	$26,460.00	$29,106.00	$30,561.00
Software	$21,012.00	$23,113.00	$24,269.00
Prof. Development	$14,000.00	$14,750.00	$15,250.00
Materials & Supplies	$4,050.00	$4,335.00	$4,763.00
Staff Support Services	$123,424.00	$128,361.00	$133,495.00
BOCES:			
Harware	$70,000.00	$70,000.00	$70,000.00
Software	$65,000.00	$65,000.00	$65,000.00
Materials & Supplies	$14,000.00	$16,800.00	$18,480.00
Staff Support Services	$138,395.00	$143,931.00	$149,688.00
Services (non-staff)	$141,775.00	$148,863.00	$157,212.00
TOTAL	**$618,116.00**	**$644,259.00**	**$668,718.00**

IV. Funding Budget

B. Coordination of Resources

As always, budgeting for technology is challenging. There are yearly changes in state funding, aid rates and needs ratios. Pine Valley is committed to maintain and expand our program appropriately to meet the ever increasing demands on the technology program. Most services and equipment are purchased using aided or grant sources. We feel the process of purchasing equipment and services is just as important as the equipment and services are.

Below is an overview of the current situation for technology funding:

Funding Source	Category	Amount
BOCES Aided	Services	$70,000.00
BOCES Aided	Equipment	$65,000.00
BOCES Aided	Pro. Dev.	$5,720.00
Improving Literacy Through School Libraries (LSL)--Fedral Grant (submitted March/2009)	Pro. Dev.	$0.00
LSL	Equipment	$0.00
Title II D	Pro. Dev.	$5,050.00
Title II D	Software	$3,316.00
NY State Aid	Equipment	$4,023.00
NY State Aid	Software	$11,984.00
		$165,093.00

V. Monitoring and Evaluation
A. Evaluation

The District Technology Team will monitor and evaluate the technology plan on a regular basis to ensure the effectiveness of technology as it relates to student achievement. It will use a process of data gathering, summarization and analysis to determine the current state of technology integration, professional development, technology deployment, and community/parental involvement as outlined in this plan. Two building teams (High School team and Elementary team) will meet frequently during the school year. The District Technology Team, comprised of the two building teams and administration will meet twice each year as a large group to make certain the goals, objectives and strategies are effective and meeting the needs of the district, the community, and particularly our students.

Achievement of technology goals will continually be under review and the District Technology Team and will be adjusted to meet our 21st century technology needs. Any unmet goals will be discussed with appropriate school staff based on the areas that needs to be addressed. The following evaluation strategies below will allow Pine Valley Central School District to measure and analyze the effectiveness of our technology plan on student achievement.

- Monthly meetings of the District Committee to review the Technology Plan's progress and to make reports, recommendations and/or adjustments with appropriate staff and constituents.
- Report the Technology Plan's progress to the District Administration when appropriate.
- Observation in classrooms and review of data to assess student learning.
- Formal and informal surveys to staff and students.
- Requests for anecdotal information on the use of computers as an instructional informational tool.
- Ongoing review by technology sub-committees and periodic reviews with building Administrators
- Coordination of technology professional development opportunities with Administrators
- Follow-ups at the building levels as to the progress of technology integration and support in curricular areas.

Evidence used to determine progress and success: Student portfolios and/or projects, Rubrics, Assessments/Surveys and Results, NYS Assessments, in-service training, teachers as trainers, Faculty exemplars, Teacher appraisal, community participation and feedback.

V. Monitoring and Evaluation
   B. Acceptable Use Policy

8272
SUBJECT: ACCESS AND USE OF COMPUTERIZED INFORMATION RESOURCES
             (INTERNET)

Staff Use of Computerized Information Resources

The Board of Education of the Pine Valley Central School District will provide staff access to various computerized information resources through the District's Computer System (DCS hereafter) consisting of software, hardware, computer networks and electronic communication systems. This includes access to electronic mail, on-line services and the Internet. It may include the opportunity for some staff to have independent access to the DCS from other remote locations. All use of the DCS, including independent use off school premises, shall be subject to this policy.

One purpose of this policy is to provide notice to students, parents and guardians and staff that, unlike most traditional instructional or library media materials, the DCS will allow access to external computer networks not controlled by the School District where it is impossible for the District to screen or review all of the available materials. Some materials may be deemed unsuitable for use or access by anyone utilizing the DCS. This policy is intended to establish guidelines and regulations for staff to follow in instruction and in working with students on acceptable student use when there will be access to external computer networks.

Generally, the same standards of acceptable staff conduct that apply to any aspect of job performance shall apply to the use of the DCS. Staff members who engage in unacceptable use may lose access to the DCS and may be subject to further discipline under the applicable procedures and/or applicable contractual guidelines. Legal action may be initiated against a staff member who willfully, maliciously or unlawfully damages or destroys property of the District or of others.

In addition to the general requirements of acceptable staff behavior expected under the District's school conduct and discipline policy, staff shall be prohibited from engaging in any of the following:

a)   Using the DCS to obtain, view, download, send, print, display, or otherwise gain access to or to transmit materials that are unlawful, obscene, pornographic, abusive;

b)   Damaging, disabling, or otherwise interfering with the operation of computers, computer systems, software or related equipment through physical action or by electronic means;

c)   Using unauthorized software on the DCS;

d) Changing, copying, renaming, deleting, reading, or otherwise accessing files or software not created by the staff members without expressed permission from the system administrator;

e) Violating copyright law or employing the DCS for any commercial purpose; guardians of students must be willing to set and convey standards for appropriate and acceptable use to their children when using the DCS or any other electronic media or communications. The District respects the right of each family to decide whether to allow their child independent computer access.

f) Disclosing an individual password to others or using others' passwords;

g) Use of the DCS for other than school related work or activities;

h) Assisting a student to violate District policy or failing to report knowledge of any student violations of the District's policy regarding student use of computerized information resources;

i) Use of obscene or vulgar language;

j) Harassing, insulting, or attacking others;

k) Use of the DCS in any unlawful manner.

Staff date files and other electronic storage areas are School District property subject to control and inspection by the District. School officials may access all such files and communications to ensure system integrity, to ensure that users are complying with the requirements of this policy and for other reasons. Staff should NOT expect that information stored on the DCS will be private.

The Superintendent is authorized to establish regulations and procedures as necessary to implement the terms of this policy.

Student Use of Computerized Information Resources

The Board of Education of the Pine Valley Central School District will provide student access to various computerized information resources through the district's computer system (DCS hereafter) consisting of software, hardware, computer networks and electronic communication systems. This includes access to electronic mail, on-line services and the Internet. It may include the opportunity for some students to have independent use off school premises, which shall be subject to this policy.

One purpose of this policy is to provide notice to students, parents/guardians, that unlike most traditional instructional or library media materials, the DCS will allow student access to external computer networks not controlled by the School District where it is impossible for the District to screen or review all of the available materials. Some material may be deemed unsuitable by parents or guardians for student use or access. This policy is intended to establish guidelines and regulations for acceptable student use where there will be access to external computer

networks. Despite the existence of such guidelines and regulations, it will not be possible to completely prevent access to computerized information that is inappropriate for students. Furthermore, students may be able to access such information from their homes or other locations off school premises.

Student access to the DCS will automatically be provided unless the parent has submitted written notification to the District that such access should be denied. Procedures will be established to define the process by which parents may submit a written request to deny or rescind student use of the DCS in accordance with law, Commissioner's Regulations and/or District policies and procedures. Generally, the same standards of acceptable student conduct that apply to any school activity shall apply to the use of the DCS.

District students shall also adhere to the laws, policies and rules governing computers including, but not limited to, copyright laws, rights of software publishers, license agreements, and student rights of privacy created by federal and state law. Students who engage in unacceptable use may lose access to the DCS in accordance with applicable due process procedures, and may be subject to further discipline under the District's school conduct and discipline policy and the Student Discipline Code of Conduct. The District reserves the right to pursue legal action against a student who willfully, maliciously or unlawfully damages or destroys property of the District or another person. The District may bring suit in civil court against the parents/guardians of any student who willfully, maliciously or unlawfully damages or destroys District property pursuant to Education law 1709(36).

Student data files and other electronic storage areas will be treated like student school lockers and are subject to control and inspection. School officials may access all such files and communications to ensure system integrity, to ensure users are complying with the requirements of this policy and for other reasons. Students should NOT expect that information stored on the DCS will be private.

In addition to the general requirements of acceptable student behavior expected under the District's school conduct and discipline policy, students shall be prohibited from engaging in any of the following:

a) Using the DCS to obtain, view, download, send, print, display, or otherwise gain access to or to transmit materials that are unlawful, obscene, pornographic, abusive;

b) Damaging, disabling, or otherwise interfering with the operation of computers, computer systems, software or related equipment through physical action or by electronic means;

c) Using unauthorized software on the DCS;

d) Changing, copying, renaming, deleting, reading, or otherwise accessing files or software not created by the student without expressed permission from the system administrator;

e) Violating copyright law or employing the DCS for any commercial purpose;

f) Disclosing an individual password to others or using others' passwords;

g) Use of the DCS in any unlawful manner;

h)   Use of the DCS for other than school or educational activities.

The Superintendent is authorized to establish regulations and procedures as necessary to implement the terms of this policy.

NOTE: Refer also to Policy #8271 -- <u>The Children's Internet Protection Act: Internet Content Filtering/Safety Policy</u>

Adoption Date: 12/16/02
Revised: 09/20/10
Readopt/Revised: 05/03/11

2010   8271
2011   1 of 3

Policy

SUBJECT: THE CHILDREN'S INTERNET PROTECTION ACT: INTERNET CONTENT FILTERING/SAFETY POLICY

In compliance with the Children's Internet Protection Act (CIPA) and Regulations of the Federal Communications Commission (FCC), the District has adopted and will enforce this Internet safety policy that ensures the use of technology protection measures (i.e., filtering or blocking of access to certain material on the Internet) on all District computers with Internet access. Such technology protection measures apply to Internet access by both adults and minors with regard to visual depictions that are obscene, child pornography, or, with respect to the use of computers by minors, considered harmful to such students. Further, appropriate monitoring of online activities of minors, as determined by the building/program supervisor, will also be enforced to ensure the safety of students when accessing the Internet.

Further, the Board of Education's decision to utilize technology protection measures and other safety procedures for staff and students when accessing the Internet fosters the educational mission of the schools including the selection of appropriate teaching/instructional materials and activities to enhance the schools' programs; and to help ensure the safety of personnel and students while online.

However, no filtering technology can guarantee that staff and students will be prevented from accessing all inappropriate locations. Proper safety procedures, as deemed appropriate by the applicable administrator/program supervisor, will be provided to ensure compliance with the CIPA.

In addition to the use of technology protection measures, the monitoring of online activities and access by minors to inappropriate matter on the Internet and World Wide Web may include, but shall not be limited to, the following guidelines:

a) Ensuring the presence of a teacher and/or other appropriate District personnel when students are accessing the Internet including, but not limited to, the supervision of minors when using electronic mail, chat rooms, **instant messaging** and other forms of direct electronic communications. As determined by the appropriate building administrator, the use of e-mail and chat rooms, **instant messaging and other forms of direct electronic communications** may be blocked as deemed necessary to ensure the safety of such students;

b) Monitoring logs of access in order to keep track of the web sites visited by students as a measure to restrict access to materials harmful to minors;

c) In compliance with this Internet Safety Policy as well as the District's Acceptable Use Policy, unauthorized access (including so-called "hacking") and other unlawful activities by minors are prohibited by the District; and student violations of such policies may result in disciplinary action; and

d) Appropriate supervision and notification to minors regarding the prohibition as to unauthorized disclosure, use and dissemination of personal identification information regarding students.

The determination of what is "inappropriate" for minors shall be determined by the District and/or designated school official(s). It is acknowledged that the determination of such "inappropriate" material may vary depending upon the circumstances of the situation and the age of the students involved in online research.

The terms "minor," "child pornography," "harmful to minors," "obscene," "technology protection measure," "sexual act," and "sexual contact" will be as defined in accordance with CIPA and other applicable laws/regulations as may be appropriate and implemented pursuant to the District's educational mission.

Under certain specified circumstances, the blocking or filtering technology measure(s) may be disabled for adults engaged in bona fide research or other lawful purposes. The power to disable can only be exercised by an administrator, supervisor, or other person authorized by the School District.

The School District shall provide certification, pursuant to the requirements of CIPA, to document the District's adoption and enforcement of its Internet Safety Policy, including the operation and enforcement of technology protection measures (i.e., blocking/filtering of access to certain material on the Internet) for all School District computers with Internet access.

Internet Safety Instruction

In accordance with New York State Education Law, the School District may provide, to students in grades K through 12, instruction designed to promote the proper and safe use of the Internet of the curricula for such course of study shall be age appropriate and developed according to the needs and abilities of students at successive grade levels in order to provide awareness, skills, information and support to aid in the safe usage of the Internet.

Notification/Authorization

The District's Acceptable Use Policy and accompanying Regulations will be disseminated to parents and students in order to provide notice of the school's requirements, expectations, and student's obligations when accessing the Internet.

"Passive Consent" (Opt-out) Student access to the District's Computer System (DCS) will automatically be provided unless the parent has submitted written notification to the District that such access not be permitted. Procedures will be established to define the process by which parents may submit a written request to deny or rescind student use of District computers.

The District has provided reasonable public notice and has held at least one (1) public hearing or meeting to address the proposed Internet Content Filtering/Safety Policy prior to Board adoption. Furthermore, appropriate actions will be taken to ensure the ready availability to the public of the District's Internet Content Filtering/Safety Policy, as well as any other District policies relating to the use of technology.

47 United States Code (USC) Sections 254(h) and 254(l)
47 Code of Federal Regulations (CFR) Part 54
Education Law Section 814

Note: Refer also to
Policy #7324 - Student Use of Computerized Information Resources, Policy #6470 - Staff Use of Computerized Information Resources, Policy #6471 - Acceptable Use Policy

Student Technology Skill Benchmarks
PreK-2nd Grade Technology Checklist (I = Introduction; D = Developing; M = Mastery)

Standard 1: Students will demonstrate competence in the use of computers and applications and will understand the concept of technology, its operations and systems	PreK-K	1st	2nd
1.1 Identify basic computer components including computer, keyboard, mouse, printer, CD-ROM, monitor, hard drive, word processor, network and file server.	I	D	D
1.2 Can perform the basic procedures in operating a computer and its applications (e.g. open, drag, save, exit, log off)	I	D	M
1.2a Use and understand proper network terminology such as username, password, network and file server.		I	D
1.3 Can explain that icons are symbols represent commands for action processes such as opening a program or folder	I	D	M
1.4 Can identify numbers, letters and special keys (e.g. space bar, Shift , Delete) on the keyboard	I	D	M
1.5 Can perform the basic menu commands (e.g. Open, Close, Save, Print)	I	D	M
1.5a Begin performing basic keyboarding skills and techniques.	I	D	D
Basic Word Processing and Desktop Publishing			
1.6 Begin to create lists, captions, notes, messages, simple stories, invitations, instructions, and/or friendly letters using any work processing program.	I	I	D
1.7 Demonstrate ability to insert graphic and resize	I	D	D
1.8 Enter and edit text (position cursor, insert and delete, change font color and size)	I	D	D
Internet and Multimedia			
1.9 Illustrate a thought, idea, or story with computer generated drawings or graphics in painting and/or drawing programs	I	D	D
1.10 Explain that the Internet provides access to find information or to communicate around the world.		I	D
1.11 Create one slide on an assigned topic. Type or record information. Add appropriate graphics or drawings. Contribute to class slide show		I	D
Database and Spreadsheet			
1.12 Create and print a simple graph to represent data	I	I	D
1.13 Explain that some programs store and organize data on a computer to make searches efficient and easier		I	D
Standard 2: Students will demonstrate responsible use of technology practicing ethical, legal and safe practices.	PreK-K	1st	2nd

Ethics			
2.1 Follows classroom rules on responsible use of computers, printers and other peripherals	I	D	M
2.2 Begin to credit creators of intellectual property when using their work in a student project		I	I
Classroom/Society			
2.3 Identifies technology that is used in daily functions of home, school, and in the community	I	I	I
2.4 Knows that new tools and ways of doing things affect all aspects of life and may have positive or negative effects on people.		I	I
2.5 Demonstrates responsible use of technology and software	I	D	D
Safety			
2.6 Follow the teacher's instructions for safe and ethical use of Internet	I	D	M
2.7 Explain the difference between appropriate and inappropriate sites		I	D
Standard 3: Students will demonstrate the ability to apply technology to support research, communication, collaboration, problem solving, decision making, creativity and innovation.	**PreK-K**	**1st**	**2nd**
Research			
3.1 Use age appropriate teacher directed resources to plan, locate, gather and organize information		I	D
3.2 Evaluate with teacher assistance how planned Internet resources may have been useful or not useful.		I	D
Problem Solving			
3.3 Use age appropriate technologies to gather and analyzed data (e.g. graphic organizer or simple graphing programs)	I	I	D
Communication and Collaboration			
3.4 Use a variety of age-appropriate technologies (e.g. presentation, desktop publishing) to communicate and/or collaborate information and ideas	I	I	D

3rd – 5th Grade Technology Checklist (I = Introduction; D = Developing; M = Mastery)

Standard 1: Students will demonstrate competence in the use of computers and applications and will understand the concept of technology, its operations and systems	**3rd**	**4th**	**5th**
Basic Operations			
1.1 Can perform basic steps in use of computer hardware, peripherals and software	I	D	M
1.2 Can prepare for printing by using page set-up for appropriate orientation, uses print preview, chooses appropriate printer	I	D	M
1.3 Can manipulate operating system procedures such as opening more than one application at a time, using the task bar to view and work with more than one application, minimizing, maximizing and closing windows, and finding and docking toolbars.	I	D	M

1.4 Use and understand proper network terminology such as username, password, network and file server	I	D	D
1.5 Open, retrieve, save or delete files on the network storage drive	I	D	M
1.6 Begin performing basic keyboarding skills and techniques	D	D	D
Basic Word Processing and Desktop Publishing			
1.7 Use toolbars and menu bar functions to format and edit graphics and text	I	D	D
1.8 Perform cut, copy and paste techniques with a document and from other documents or resources	I	D	D
1.9 Edit text using tools such as spell-check, grammar-check, Thesaurus, and dictionary	I	D	D
Internet			
1.10 Use and understand basic terms of the Internet (web page, links, URL)	I	D	D
1.11 Use age appropriate library subscription databases and Internet search engines using keywords to extract needed information	I	D	D
Multimedia and Presentation Tools			
1.12 Create, edit and format text on a slide	I	D	M
1.13 Create a series of slides organized to present information or an idea	I	D	M
1.14 Insert graphics and/or sound appropriate to the topic	I	D	M
Databases			
1.15 Explain the definition of a database and provide examples used in everyday life (e.g. online library catalog, school records, Internet directories)	I	D	D
1.16 Experience the use of databases such as online library catalogs and electronic encyclopedias	I	D	D
Spreadsheets			
1.17 Define the use of a spreadsheet as a tool to record, organize and graph data	I	D	D
1.18 Identify the terms and vocabulary associated with the functions of a spreadsheet such as cell, column, row, values, tables, chart, graph	I	D	D
1.19 Enter data and use simple formulas (+, -, *, /) to compare data or observe changes	I	D	D
Standard 2: Students will demonstrate responsible use of technology practicing ethical, legal and safe practices.	**3rd**	**4th**	**5th**
Ethics			
2.1 Discuss the district's rules and policies concerning the responsible use of computers and technology resources and possible consequences for inappropriate use.	I	D	M
2.2 Define Fair Use guidelines in the use of copyrighted materials (text, music, pictures, and videos) as they are used in student projects.	I	D	M
Society			
2.3 Identify technology that is used in daily functions of home, school, and in the community.	D	D	M

	3rd	4th	5th
2.4 Work collaboratively with others online under teacher supervision.	D	D	M
2.5 Observe how some software and hardware help people with disabilities to learn.	I	D	M
2.6 Analyze electronic media to decide if the purpose is to inform, entertain or persuade.	I	I	D
Safety			
2.7 Recognize and describe the potential risks and dangers associated with various forms of online communication	I	D	D
2.8 Discuss safe and efficient practices for computer use including passwords, virus protection software, spam filters, and pop-up blockers	I	D	D
2.9 Practice Netiquette procedures with on-line communication	I	D	D
2.10 Identify cyber bullying and know prevention and strategy measures	I	I	D
2.11 Recognize and practice correct, ergonomically use of equipment	I	I	D
Standard 3: Students will demonstrate the ability to apply technology to support research, communication, collaboration, problem solving, decision making, creativity and innovation.	**3rd**	**4th**	**5th**
Research			
3.1 Locate, collect and organize information from digital media resources, citing sources	I	D	D
3.2 Practice evaluating online resources for usefulness, credibility, and currency	I	D	D
3.3 Use note-taking techniques to gather information organized by topics and details	I	D	D
3.4 Use content-specific tools such as probes, sensors, measuring devices and simulations to gather and analyze data	I	D	D
3.5 Use digital tools such as blogs, emails, and/or wikis with the approval of the district to communicate or collaborate to gather or share information with others	I	D	D
Problem Solving			
3.6 Use digital tools such as graphic organizers to compare, contrast, solve problems or make decisions	I	D	D
3.7 Use digital tools such as spreadsheets to make predictions, solve problems or draw conclusions	I	D	D
Communication and Collaboration			
3.8 Use text, graphics, audio and/or video to communicate ideas	I	I	D
3.9 Communicate with other students, schools or communities using online tools such as email, blogs and/or wikis as permitted by the district	I	D	D

6th – 8th Grade Technology Checklist (I = Introduction; D = Developing; M = Mastery)

	6th	7th	8th
Standard 1: Students will demonstrate competence in the use of computers and applications and will understand the concept of technology, its operations and systems	**6th**	**7th**	**8th**
Basic Operations			

1.1 Understand and use features of the computer operating system such as the format and size of applications and files, location of local and remote storage, and application versions	I	D	D
1.2 Able to troubleshoot minor software and hardware problems such as frozen screen, and log-in failure	I	D	M
1.3 Can independently operate available peripheral devices.	I	D	M
1.4 Identify and use other storage devices such as CDs, DVDs and flash drives as available by the district	I	I	D
1.5 Demonstrate proficient keyboarding skills, typing from 25-30 wpm with fewer than 5 errors. Students with disabilities will demonstrate with alternate input techniques as appropriate	D	D	M
Basic Word Processing and Desktop Publishing			
1.6 Use more advanced features such as tabs, indents, margin sets, bullets, numbers, tables, columns, etc.	I	D	M
1.7 Access and use templates	I	D	M
1.8 Recognize the ability to open, save and import in different formats	I	D	D
Databases			
1.9 Describe the function and structure of a database using correct terminology	I	D	D
1.10 Create a simple database		I	D
1.11 Use basic operations such as sorting, filtering or searching for particular criteria		I	D
1.12 Plan and create a database report to present organized information		I	D
Spreadsheets			
1.13 Explain the use of spreadsheets as a medium to calculate, graph, organize and present data in a variety of world settings	I	D	M
1.14 Create an original spreadsheet using formulas	I	D	M
1.15 Create simple charts and graphs using a spreadsheet	D	D	M
1.16 Use various number formats such as currency, percentages, etc.	I	D	M
1.17 Distinguish the different types of graphs and charts and demonstrate the ability to choose appropriately for a particular purpose	I	D	M
1.18 Apply more advanced formatting features to tables, charts and graphs	I	D	M
Internet			
1.19 Use Web browsing features to access information such as URL, Favorites/Bookmarks, Links, Advanced Search, etc.	D	D	M
1.20 Distinguish domain names in identifying organizations (edu., com., gov., org., etc.) and understand that sometimes they are created to deceive	I	D	M

	6th	7th	8th
1.21Explain that web sites require the use of plug-ins and that some types of access are dependent on a version of the web browser		I	D
1.22 Begin to demonstrate understanding terms of online learning such as discussion threads, forums, post, account, password, etc.	I	D	D
1.23Explain different network terminology such as WANS, LANS, servers, routers, switches and Internet connectivity		I	D
Multimedia and Presentation Tools			
1.24 Create a multimedia project using various media that is appropriate to the purpose.	I	D	D
1.25 Use precise vocabulary, and presentational strategies to influence the audience.	I	D	M
1.26 Use presentation software to communicate ideas to specific audiences.	I	D	M
Standard 2: Students will demonstrate responsible use of technology practicing ethical, legal and safe practices.	**6th**	**7th**	**8th**
Ethics			
2.1 Discuss ethical issues that relate to privacy, plagiarism, spam, viruses, hacking and file sharing	I	D	M
2.2 Explain how copyright protects intellectual property and discuss the consequences of violating copyright laws	I	D	M
2.3 Explain Fair Use guidelines for using copyright material	I	D	M
2.4 Discuss appropriate and responsible use of communication tools (blogs, email, chats, etc.)	I	D	M
Society			
2.5 Identify the positive and negative effects technology has had on society.	D	D	M
2.6 Discuss how technology can support communication, personal or professional productivity, and lifelong learning	D	D	M
2.7 Analyze how media and technology can used to distort, exaggerate or misrepresent information	I	D	M
2.8 Provide examples of hardware and software that assist those with disabilities to learn.		I	D
Safety			
2.9Distinguish between safe and unsafe practices in regards to sharing personal information over the Internet, cell phones, wireless devices, LAN systems, etc.	I	D	M
2.10 Discuss reasons for computers, networks, and information to be protected from viruses, intrusions and vandalism	I	D	D
2.11 Practice Netiquette procedures with on-line communication	I	D	M
2.12 Identify cyber bullying and know prevention and strategy measures	I	D	M
2.13 Recognize and practice ergonomically use of equipment	I	D	M
Standard 3: Students will demonstrate the ability to apply technology to support research, communication, collaboration, problem solving, decision making, creativity and innovation.	**6th**	**7th**	**8th**

Research			
3.1 Locate, collect and organize information from digital media resources, citing sources	I	D	D
3.2 Practice evaluating online resources for usefulness, credibility, and currency	I	D	D
3.3 Use note-taking techniques to gather information organized by topics and details	I	D	D
3.4 Use content-specific tools such as probes, sensors, measuring devices and simulations to gather and analyze data	I	D	D
3.5 Use digital tools such as blogs, emails, and/or wikis with the approval of the district to communicate or collaborate to gather or share information with others	I	D	D
3.6 Demonstrate effective searching strategies when searching and browsing on the Internet	I	D	D
Problem Solving			
3.7 Independently use digital tools such as graphic organizers to define problems and propose hypotheses	I	D	D
3.8 Use digital tools such as spreadsheets and/or databases to analyze data and propose solutions	I	D	D
Communication and Collaboration			
3.9 Plan, design, and develop a multimedia product to present research findings suggesting ideas, solutions, or point of view	I	I	D
3.10 Use a variety of telecommunication tools to communicate and collaborate with peers, experts, and other audiences	I	D	D

9th – 12th Grade Technology Checklist (I = Introduction; D = Developing; M = Mastery)

Standard 1: Students will demonstrate competence in the use of computers and applications and will understand the concept of technology, its operations and systems	9th 10th	11th 12th
Basic Operations		
1.1 Differentiate between platforms, their features, versions and interoperability	I	D
1.2 Discuss effective backup and recovery strategies	I	D
1.3 Evaluate the effectiveness of specific hardware or software for a particular task (features, versions, etc.)	D	M
1.4 Use proficient keyboarding techniques, including the use of shortcut keys to complete tasks efficiently and accurately	D	M
1.5 Identify the potential and limitations of emerging technologies in society	I	D
Basic Word Processing and Desktop Publishing		
1.6 Use advanced features such as columns, page layout, and templates to enhance the appearance of a document	D	M
1.7 Use advanced editing features such as tracking changes and making comments where appropriate	I	D
1.8 Demonstrate awareness of careers where word processing and desktop publishing play a role	D	M

Databases		
1.9 Explain the importance of structuring a database to address a specific purpose.	D	M
1.10 Design a database structure to address the needs of an organization	I	D
1.11 Use basic operations such as sorting, filtering or searching for particular criteria	I	D
1.12 Use database features to create mailing lists, labels, form letters and perform mail merge	I	D
1.13 Explain the concept of "metadata" as it is used by organizations to structure the use of information	I	D
1.14 Determine skills needed for careers that involve designing and maintaining databases	I	D
Spreadsheets		
1.15 Define and use advanced features such as filter, sort, find, and auto-fill	D	M
1.16 Define and use advanced formatting tools such as repositioning columns and rows, naming worksheets, use of shading and lines	D	M
1.17 Use formulas and functions for calculations and the analysis of data	D	M
1.18 Differentiate between absolute and relative cell referencing when writing formulas	D	M
1.19 Demonstrate the ability to link worksheets to solve problems	D	M
1.20 Import and export spreadsheets to other applications	I	D
Internet , Networking and Online Communication		
1.21 Distinguish and explain the differences in various search engines and directories	D	M
1.22 Use effective research strategies such as Boolean logic operators and syntax to retrieve specific information	D	M
1.23 Describe and exhibit good security practices using passwords and authentication.	D	M
1.24 Define career options for network technologies	D	M
Multimedia		
1.25 Identify and use appropriate technology tools to create a multimedia product	D	M
1.26 Use a variety of applications such as slide presentations, podcasts, videos, animations, and simulations to plan, create, edit and publish a multimedia product	D	M
1.27 Determine career options for multimedia development	D	M
Standard 2: Students will demonstrate responsible use of technology practicing ethical, legal, and safe practices.	**9th 10th**	**11th 12th**
Ethics		
2.1 Demonstrate compliance with the District's Acceptable Use Policy	D	M
2.2 Depict issues related to the responsible use of technology such as privacy, Netiquette, and security	D	M
2.3 Portray copyright laws and Fair Use guidelines as it relates to technology projects	D	M
2.4 Acknowledge the issue of plagiarism and implement acceptable practices of paraphrasing, quoting and	D	M

source citations		
2.5 Recognize and discuss possible consequences for the misuse of technology.	D	M
2.6 Discuss the value and responsible use of communication tools such as blogs, wikis, chats, instant messaging, forums, etc.	D	M
Society		
2.7 Evaluate electronic resources for authenticity, accuracy, appropriateness, and bias.	D	M
2.8 Work with a virtual community to conduct a project or solve a problem using the network	D	M
2.9 Distinguish features of devices, applications, and operating system that offer accessibility for people with disabilities	I	D
2.10 Discuss how applications of information technology can address some major global problems and issues	D	M
Safety		
2.11Describe ergonomic practices in the school and work environment	D	M
2.12 Distinguish and practice safety and responsibility when participating in online communities	D	M
2.13 Identify and use practices to protect one's personal safety online	D	M
2.14 Discuss the environmental, ethical, moral, and social issues raised by the use and abuse of information technology	D	M
Standard 3: Students will demonstrate the ability to apply technology to support research, communication, collaboration, problem solving, decision making, creativity and innovation.	**9th 10th**	**11th 12th**
Research		
3.1 Devise and demonstrate strategies for independently and efficiently planning, locating, collecting and organizing information form electronic sources	D	M
3.2 Select the most appropriate online databases, search engines and directories for specific research tasks	D	M
Problem Solving		
3.3 Explain and demonstrate how specialized technology tools such as probes, GPS systems, simulators, computer-aided design, graphing calculators and art and music software can be used for problem solving, decision making, and creativity in all subject areas	D	M
Communication and Collaboration		
3.4 Use a variety of technology mediums to present information for specific purposes, citing sources.	D	M
3.5 Demonstrate how the use of various techniques and effects can be used to convey meaning in media	D	D
3.6 Use online communication tools to collaborate with peers, community members, and field experts as appropriate	D	M
3.7 Plan and implement a collaborative project with students in other classrooms and/or schools using telecommunications tools	D	M
3.8 Complete at least one online credit or non-credit course or tutorial, discuss the benefits and disadvantages of this method of learning (depends on availability in the district)	I	D

Teacher Learning Standards

ISTE's Educational Technology Standards for Teachers

Facilitation 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:

Promote, support, and model creative and innovative thinking and inventiveness				
Engage students in exploring real-world issues and solving authentic problems using digital tools and resources				
Promote student refection using collaborative tools to reveal and clarify students' conceptual understanding and think, planning, and creative processes				
Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments				

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. Teachers:

Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity				
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 resources				
Customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources				
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				

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:

Demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations				
Collaborate with students, peers, parents, and community members using digital tools and resources to				

support student success and innovation				
Communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats				
Model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning				

Promote and Model Digital Citizenship and Responsibility:
Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal ethical behavior in their professional practices. Teachers:

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				
Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources				
Promote and model digital etiquette and responsible social interactions related to the use of technology and information				
Develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital-age communication and collaboration tools				

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:

Participate in local and global learning communities to explore creative applications of technology to improve student learning				
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				
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				
Contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community				