

PHOENIX CENTRAL SCHOOL DISTRICT
Phoenix, New York



DISTRICT TECHNOLOGY PLAN
2011 - 2014

Phoenix Central School District

The Phoenix Central School District is located in the Towns of Schroepfel, Palermo, Granby, Volney and Hastings in Oswego County, and the Towns of Clay and Lysander in Onondaga County. There are three schools in operation within the District, with approximately 2,200 students and 500 employees.

District Technology Committee 2010 - 2011

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EXECUTIVE SUMMARY

A. Mission Statement

The PCSD is committed to a strong educational program that promotes academic and personal growth for all students. Each student will become a productive, responsible, confident individual with a strong academic foundation and the ability to make intelligent choices. Our goal is to cultivate a sense of pride in our students, our schools, and our community. The Board of Education, school staff, parents, students, and other members of the community share responsibility for this mission.

B. Vision of Technology Use

Learning technologies will be widely and equitably used in every school building to support the engagement of students, teachers, administrators, parents, and the community in helping all students to achieve high standards.

Educational technology applications will deepen student engagement and improve student achievement by enabling them to access and analyze information, solve problems, collaborate with others, and communicate their thoughts and ideas. Effective use of learning technologies will allow students to become self-directed, self-motivated and lifelong learners.

Teachers will increasingly be facilitators of student learning through proficient use of learning technologies. All teachers will receive intensive, job-embedded, ongoing professional development in integrating technology into curricula and instruction. Teachers will incorporate high quality information resources in their teaching strategies to address multiple learning styles, to motivate and engage students, and to support student exploration and growth.

C. District Technology Summary

Since the authoring of the last technology plan (2008-2011) there have been many changes to the Phoenix Central School District technology program, including staff reorganization, a new network topology, wiring and switching infrastructure, and network operating system. Major security upgrades to antivirus, local computer configuration and image deployment and operating system patch and update management have occurred. In addition, a new firewall was put in place that does deep packet inspection of all data entering and leaving the district, does role-based web filtering and logging, as well as intrusion prevention and notification. We began addressing fiscal challenges in 2009 through staffing levels, print management, server virtualization and consolidation, and migration to thin client endpoint devices that significantly reduce power consumption in the classroom coupled with a server-based computing model that significantly saves on technician management time. We have virtualized our data storage through a Storage Area Network (SAN) that allows storage to be thin-provisioned (space is allocated when it is needed) as well as shared between virtualization hypervisor hosts (enables highly-available virtual machines). We have established a second data center at the High School, installed Air Conditioning, and have critical volumes from the SAN replicated between the Middle School and the High School on a nightly bases. At the same time, we have leveraged technology to enhance district communications. In addition to a new district-wide phone system (there were previously separate phone systems in each building), we have put in place a new email system, an automated school alert calling system for parental and employee emergency and information notifications, as well as a web site based on an open source content management system. We have developed a District-wide intranet site for the collaboration of teams, committees, and groups, that allows for the creation of document libraries, announcements, calendars, lists, wikis, and much more. Instructionally, we have replaced our aging CCC (Computer Curriculum Corp) system with the new version of Pearson SuccessMaker, and have seen the use of NovaNet skyrocket at the High School through its use as both a credit recovery and AIS instruction tool.

I. INFORMATION TECHNOLOGY ASSESSMENT

A. Current Inventory of Equipment and Services

1. Computers and Other Hardware

MICHAEL A. MAROUN ELEMENTARY SCHOOL (MAM) - 808 students, 43 teachers, and 115 staff members

Classroom Computers:

There is a cluster of four computers in each kindergarten through fourth grade classroom. All computers have Internet access.

Computer Labs:

MAM has four computer labs. One lab is used for teaching computer skills to K-2 students (24 PCs), while a second, and third labs are used to teach computer skills to students in grades 3-4 (24 PCs). The fourth lab (25 PCs), which is attached to the library, is available for teachers to use with a full class of students, and is used by the library with the Successmaker software. The elementary school library has a cluster of five computers available for student and staff use. All computers have Internet access.

Interactive White Boards:

Twenty four interactive whiteboards have already been installed and eight more were installed in spring 2011 (for a total of 32). At that time, three of the four computer labs had interactive white boards. Two freestanding interactive whiteboards are available to be "signed out" by classroom teachers. They are housed in the main computer lab.

Presentation Media

There are two computers with projectors (on carts) that are available for staff use. They are housed in the main computer lab. A presentation cart is also available in the Intermediate cafeteria for large group presentations.

Digital Cameras

There are 12 Digital cameras available for sign-out. A digital video camera was purchased in August of 2005. Several VHS video cameras are housed in the library, and are available to be signed out by staff.

Scanners

There are 3 scanners available for use at the elementary school. One is located in the library, one in Room 124 computer lab, and one in the Art room..

EMERSON J. DILLON MIDDLE SCHOOL (EJD) - 672 students, 58 teaching staff

Classroom Computers:

Each classroom including the teacher has a minimum of three computers. We have two classrooms that have six computers for reading and speaking lessons. All computers have Internet access.

Computer Labs:

There are four computer labs (25-30 computers each), which are available throughout the day for whole class instruction. The recent capital project added two additional computer labs as a part of the 7th and 8th grade technology classrooms. All computers have Internet access.

Interactive White Boards:

Every classroom is equipped with an interactive white board and ceiling-mounted projector (approx. 60 rooms). All of the computer labs contain interactive white boards. Two freestanding interactive white boards are available for teachers to “sign out” and use in areas such as the cafeteria or gym.

Presentation Media

There are two computers with projectors (on carts) that are available for staff use. They are housed in the main computer lab. These are also used with the portable interactive white boards.

Digital Cameras

There are 5 digital cameras available for teachers to sign out for classroom use. They are available to be signed out from the computer lab TA. There are two digital video cameras available to be signed out by staff in the library.

Scanners

There are 2 scanners available for use at the middle school. They are located in two of the computer labs

JOHN C. BIRDLEBOUGH HIGH SCHOOL (JCB) - 752 students, 59 teaching staff

Classroom Computers:

Each classroom has a minimum of one computer. Science classrooms have seven computers in the classroom. There are 4 rooms in the Science Wing which each have an additional cluster of six computers. Special Education classrooms have clusters of 2-3 computers. A few other disciplines have clusters of 3-4 computers. All computers have Internet access.

Computer Labs:

The Math department has a lab (11 computers) for student use. The school library has 26 computers. Attached to the library is a Library Lab containing 19 computers. Adjacent to that is a Smart Lab consisting of 30 computers. The Smart Lab is used for both student and staff development training. JCB also has a technology lab (19 computers), and two business classrooms (25 computers each). All computers have Internet access.

Interactive White Boards:

There are thirty five interactive white boards in classrooms. There are two portable interactive white boards for teachers to sign out and use in their classrooms. These are housed in the Technology Store Room. In addition, there is one interactive white board in the library computer lab and one in the Smart Lab (adjacent to the HS library).

Texas Instrument Navigators System:

Each Math classroom has a set of TI graphing calculators, and a TI-Navigator classroom learning system. This system provides real-time feedback and instantly assesses student understanding.

Presentation Media

There are three computers with projectors (on carts) that are available for staff use. Two are housed in the library and one is in the Technology Storage Area. These are also used with the portable interactive white boards.

Scanners

There are 6 scanners available for use at the high school. One is located in the Smart Lab, one in the athletic office, one in the Art department, one in each of the business classes and one in the Special Education Classroom.

Video Production Studio

The high school has a video production studio which has computer equipment for the television production club.

PENNELVILLE LEARNING CENTER (PLC) - 28 students, 4 ½ time teaching staff, 1 Teaching Assistant and 1 Administrator

Classroom Computers

There are five classrooms in the PLC. There are clusters of 3/4 computers in four of the classrooms, and a cluster of seven computers in the Math classroom. All computers have Internet access.

Computer Lab

There is one computer lab of 11 computers for students and staff to use. All computers have Internet access.

Interactive White Board & TI Navigator System

There is one interactive white board and a TI Navigator System in the Math classroom.

Digital Cameras

There are 2 digital cameras available for teachers to sign out for classroom use. They are available to be signed out from the main office.

2. Telecommunications and Internet Access

The Phoenix School District is connected to other schools in the county by means of a fiber line (100 mbps) connected to the Oswego BOCES Network Operations Center, which in turn is connected to the CNYRIC at 1 Gigabit per second. Internet bandwidth is provided to the District by the Central New York Regional Information Center (CNYRIC). With the recent capital project, the District was fortunate to be able to have the opportunity to:

- Replace the aging Nortel 450 series 10/100 switches with CXtec Equal2New (lifetime warranty) Nortel 5500 Gigabit Ethernet series switches
- Install Nortel 5520 Power-Over-Ethernet switches at the edge and 5530 switches for the core switching at each building – routing between buildings and limiting subnet traffic to each closet
- Work hand-in-hand with CXtec to train Phoenix IT staff how to maintain and configure the network infrastructure
- Replace all inter-closet fiber connections at MAM Elementary and EJD Middle School
- Install a total of nine CAT6 network drops in each classroom at EJD Middle School
- Install an additional two CAT6 network drops (1 existing) to every classroom in MAM Elementary
- Install Fiber and CAT6 cabling to the athletic storage building and football field press box

The High School, Middle School, Elementary School Transportation Center, and District Office are connected via a 10 Gbps fiber optic trunk. The Pennellville Alternative School is connected via a T1 (1.536 mbps) line. The Maintenance and Operations Center and Food Service Offices on Oneida St are connected via a Roadrunner Business Class Cable Modem, which has a secured VPN tunnel back to the District LAN. All schools in the district are wired for cable television with each classroom having a connection. Each school in the district is connected to the CNYRIC hosted Nortel hybrid Voice over IP system. The entire district can

now four-digit dial and bypass local phone charges by leveraging the 10Gbps fiber trunk between buildings.

Internet bandwidth has been significantly upgraded to 20 Mbps. With the network reconfiguration and new Fortinet Firewall, the District's IT team now has the ability to more closely monitor how that bandwidth is used. Every staff member has an email account and every district computer has access to the Internet. Use of the Internet provides instant access to unlimited resources and interactive web sites.

3. Other Technologies

The PCSD currently uses contracts with the RIC (Regional Information Center) and OCM BOCES for the following web applications and administrative software:

- *IEP Direct* (Special education student information management program)
- *AIMSweb* (RTI and student assessment data tool)
- *mClass DIBELS* (handheld-based ELA progress monitoring software)
- *Blackboard* (Online course content delivery system)
- *NovaNet* (Middle and High School Computer Aided Instruction System)
- *Cognos* (Web-based analysis tools for district data)
- *Data Mentor* (Web-based student assessment tool which analyzes test results)
- *SchoolTool* will be replacing *SIS Classic* and *SIS Web* starting in the 2011-2012 school year (Student information systems software for tracking student information and grade reporting)
- *WinCap* (Financial program for payroll and bookkeeping)
- *WinSnap* (School food management program)
- *School Messenger* (Automated attendance-calling program to notify parents of student absence and important notices)
- *OPAC and MANDARIN* (Library automation services)

With the capital project work done in 2009, Syracuse Time & Alarm was sub-contracted to provide a security camera system for EJD Middle School and the new Transportation Center. These facilities now have analog cameras connected to IP-based DVR systems. With the EXCEL project done in 2010, Day Automation was sub-contracted to provide a new security camera system for MAM Elementary and JCB High School. These facilities now have Hi-definition IP cameras connected to a physically separated Gigabit Power-over-Ethernet switch, connected to each building's core with dedicated Gigabit fiber connection. These systems record video to Network Video Recorder (NVR) servers (1 at MAM, 2 at JCB) with over a Terabyte of dedicated storage each.

All buildings in the district have security locks on the doors with proximity keys for employees. Televisions are provided in all high school and middle school classrooms. At the high school, the video production studio broadcasts daily announcements in the morning to all high school classrooms and is later available to be streamed from the Districts public and intranet web sites. At both the high school and middle school, video display units are used to broadcast static announcements throughout the day to all classrooms.

The Phoenix Central School District has partnered with the Phoenix Public Library. The District supports them by providing computers, technical assistance and maintenance.

B. Current Program Status

1. Curriculum Integration

The Phoenix School District has made a concerted effort to make technology an integral part of the teaching and learning process. We have been fortunate to have a history of investment in technology and infrastructure. The District is very proud of the strides we have made in achieving that goal while recognizing that the job is never finished. Below is a snapshot of how technology is impacting teaching and learning in the three schools in Phoenix:

Michael A. Maroun Elementary School (MAM)

All students at the elementary level have access to both computers and the Internet from their classrooms. Computers are used in each classroom to give students and teachers continual access to resources provided through technology. There are 32 classrooms with interactive whiteboards. In addition, there are computer clusters in each classroom that provide teachers with the opportunity to have small groups of students work within the regular classroom setting.

MAM has four computer labs with approximately 24 computers in each for large group instruction. One lab is dedicated to students in grades K-2 and the second and third labs are dedicated to students in grades 3-4. The fourth lab is attached to the library and is used to by the Library Media team and the SuccessMaker computer-based ELA & Math instruction/assessment program. The library has a ceiling-mounted projector and is used as a video conferencing facility.

The 3-4 labs are staffed by a teaching assistant who assists the teacher with large group instruction. This lab is also available for staff training. Teachers use computers to remediate students, to test students, to train students on developing projects, to train students to conduct research, and to prepare their own teaching materials. Three of the four labs have an interactive white board and ceiling-mounted projector.

Emerson J. Dillon Middle School (EJD)

At the middle school, all fifth graders receive ten weeks of keyboarding skills instruction and all sixth graders receive ten weeks of computer library skills in accordance with EJD's technology curriculum. Through the capital project completed in 2010 we were able to outfit every classroom with an interactive whiteboard and ceiling-mounted projector, a high-speed data network, and a research "mini" lab with two to four computer workstations (with capacity for six in every room). The middle school also has four computer labs for full classroom accessibility, one of which is connected to the Library Media Center. Students at the middle school can begin to use computers independent of teacher-instructed lessons. Teachers are encouraged to provide a 1 to 2-week unit that integrates technology into their classroom teaching. Three of the computer labs are available for the teachers to bring in their classes and use for the technology units they teach. A teaching assistant is available to assist the teacher in the lab as well as to provide access to the lab for students when a class is not using the lab. Teachers create many of their own materials as well as plan for special computer-centered lessons of productivity and research. Teachers have developed online curriculum maps in conjunction with the Learning Focused Solutions initiative. Students' progress at the middle school is also assessed through the use of the SuccessMaker program.

Our middle school library has been an Electronic Doorway since 1998. It supplies several electronic databases for student and professional research. The school card catalog is available online and accessible to all students at home and at school at all times.

John C. Birdlebough High School (JCB)

At the high school, students and teachers have computer and Internet access throughout the building. Computers in the classrooms, mini labs, library lab, and instructional labs supply everyone with continuous access to technology. There are 35 classrooms equipped with an interactive white board. Students are expected to do independent research, prepare presentational materials, and remediate themselves. Teachers create online tests using the technology support systems provided to them. Technology is used every day throughout the building in presenting information to students and in providing students with an interactive and global resource with which to enhance their education. Streaming video is available to provide another source of dynamic presentation of information. Projectors and computers on mobile carts make it possible for information to be brought directly to the classroom. Entire classes can also be brought to the Smart Lab so that students can directly interact with the material being presented or created through technology

NovaNet instructional software is used for credit recovery and interventions for students who are at risk for failing a course. This program has seen tremendous growth. Students at the high school are allowed independent technology access for research and productivity in the library, labs, and mini labs throughout the building. In addition to being used in traditional courses in history and science, computers and technology are heavily integrated into music, art, and technology curriculums at the high school level. Students write and record their own music, digitally edit their artwork and photographs, and create original pieces of computer animation and graphics. Our television studio is dependent on student input to create digital openings and special effects for our student-created television news.

Our high school library has also been an Electronic Doorway since 1995. It supplies several electronic databases for student and professional research. The school card catalog is available online and accessible to all students at home and at school at all times.

2. Staffing and Training

Professional development is an integral part of the Phoenix Central School District's technology plan. The district provides appropriate training opportunities to improve individual proficiency levels and to keep pace as technologies and methods emerge. We have transitioned our professional development program from a "menu" of options provided by an in-house trainer to targeted, high-quality professional development, partnering with local Microsoft and SMART board training companies to develop customized on-site training. Professional development participation is tracked in MyLearningPlan.com.

The district Professional Development Plan (PDP) outlines opportunities staff will be afforded for school-wide and district-wide training. In addition, individual staff members are encouraged to participate in offerings off-site, in the summer, and throughout the school year.

Appropriate workshops are scheduled to coincide with all phases of the technology plan. Introduction of new hardware and software will be accompanied with related training. New staff is automatically trained on technology as they join the staff. Sessions that involve large segments of staff or specific departments are offered with release time from regular duties. Some personal and professional development opportunities are provided both before school, after school, and during vacation periods.

Professional development is the primary goal of this District Technology Plan. We will be exploring ways to create learning communities in which teachers and students support each other's learning supported by technology. Some examples may include developing a school-based on-line social learning environment, conducting before and after school webinars, creating screencast how-to video libraries, and developing a knowledge base.

3. Accomplishments of the last District Technology Plan

The most significant accomplishment from the last District Technology Plan has been the infrastructure and institutional changes due to both major physical and social reorganization. District voters approved a capital project in May of 2006 and a subsequent EXCEL project. The work was completed in 2010. Building additions and upgrades include:

- All new network infrastructure at EJD and expanded and refreshed structured cabling at MAM and JCB
- Refurbished network switching infrastructure
- The 1:1 Interactive white board to classroom milestone at EJD
- New district-wide phone system
- New IP camera security system

While the capital project construction and renovation was taking place, the IT team took advantage of the opportunity to:

- Implement private IP scheme and routed network segments,
- Migrate from Novell to Microsoft network OS
- Install Barracuda E-Mail Spam and Virus Firewall and Archiver
- Intrusion Protection System (IPS) and web filtering provided at the new District firewall.
- New Antivirus and management system
- Many common Windows applications were virtualized
- Significantly reduced high-cost printers and installed a new print management system, including secure-release print kiosks and follow-me printing that allows system users to print to a common queue and pick up their print job at any kiosk
- Move to thin clients for student computing needs, leveraging the network resources to provide server-based computing
- Begin implementation of a virtual desktop infrastructure (VDI)

In addition, major IT staff reorganization has taken place. The department now has a Director, three LAN techs, and three Computer Lab Teaching Assistants each of whom is assigned to a particular school. Professional development have been provided for the IT staff in addition to team-building and cross-training so there are two technicians able to operate within certain areas of responsibility. Recent network reconfiguration was accomplished by Phoenix IT staff and CXtec working together to plan and implement the major system architecture changes. Following this infusion of knowledge, all district LAN technicians and the Director trained in and obtained CompTIA Network+ certification.

The Director of Technology participates in the Professional Development Committee to ensure that staff development for technology is incorporated into the district's professional development plan. Technology specific staff development has been conducted recently on:

- Learning Focused Solutions (curriculum mapping toolbox)
- DotNetNuke Web Portal (new District and school web pages)
- Sharepoint
- Microsoft Office 2007
- Outlook 2007 and Exchange E-mail
- SMART Notebook and SMART Boards
- SMART Response System (clickers)

The District is working with Information and Communication Technologies Group, LLC (ICTG), a local company dedicated to supporting the needs of local businesses, non-profits, and schools. This past year, ICTG developed a new web site for the Phoenix School District and provides ongoing support and training for the various website content contributors. ICTG participates in conversations with the district's other system vendors to establish a framework for integrating these systems. The District will be working with ICTG in the future to develop a single-sign-on

student/teacher/parent portal. ICTG has already completed the development of a custom coded Dot Net Nuke module to allow “extranet” access – a secured system of allowing authenticated users on the District’s PhoenixNET portal to view intranet SharePoint document libraries, lists, and calendars.

The Acceptable Use Policy (AUP) was adopted by the Phoenix Board of Education on May 10, 2010. Board policy regarding compliance with the Children’s Internet Protection Act (CIPA) was passed on May 24, 2010.

C. Current Budget

The Phoenix Central School District is very proud of its technology program – which it has achieved without a voter-approved technology initiative. It has provided the resources on an annual basis to maintain and improve the hardware, software and staffing necessary for our instructional program.

That being said, we are facing the reality of the economic climate in 2011 with Governor Cuomo significantly reducing state-aid to New York State. Since 2008, Phoenix has been planning for the impact of this fiscal restructuring of our public school systems. Assuming the role as the catalyst for change, the District’s Information Technology team has implemented innovative solutions that optimize efficiency, enable the end-user to be more productive, and save structural budget dollars of ongoing maintenance, subscriptions, and contracts.

The most significant cost saving measure has been the introduction of thin clients to the JCB and EJD computing environment. Thin clients have no moving parts, produce less heat, and use significantly less energy (5-10 Watts – compared to several hundred Watts for a typical desktop computer). In addition, by consolidating computing resources in the data center, the IT team now only has to provide computing resources for the peak demand, as opposed to providing resources per end-user device. This savings has allowed the IT technicians to be able to do development work that is moving the software and operating system infrastructure forward, as opposed to struggling to keep up with the demand for keeping the infrastructure operational.

The Phoenix School District has significantly reduced the number of printers on campus beginning in the summer of 2009. JCB High School was converted from a system of networked HP Jet Direct devices connected to Ink Jet printers in every classroom, to a network of interconnected high-capacity laser printers enabled with “follow me” (single queue) printing with each printer connected to a print release kiosk. EJD Middle School moved to a hybrid model of print-release station printers and shared workgroup team printers (2 per team of 4). MAM Elementary School currently has a laser printer in every classroom. All employees are informed of their current cumulative printing “balance” when they log in.

Detail of the BOCES subscriptions and item-level breakdown of the current-year budget (2010-2011) is included in the Budget section III – B.

D. Needs Assessment

1. Recent Developments and Current Status

Various data has been used to direct IT resources and influence this plan:

- The Director of Technology conducted a survey in the Spring of 2009, with 150 teachers responding
- The eight-grade technology literacy assessment

- The District IT team has begun an extensive effort to collect analytic and task completion user feedback in regards to the District web site.

Based on the feedback from technology users and the District Technology Committee, the following are areas identified in need of being addressed in this plan:

- The impact and professional development needs with the inclusion of technology literacy, skills, and assessments within the new Common Core Standards.
- A need to address basic computer skills for all users, and specifically keyboarding for students at all levels (particularly with the move to computer-based assessments)
- The planned Phoenix/CNYRIC migration to the SchoolTool SIS system
- The development of a “one stop shop” web portal for parents, students, and teachers to get access to all appropriate and relevant district resources.
- Begin pilot testing the implementation of a school-based social learning environment
- A continued commitment and investment in the professional development and budgeting for interactive white boards in every classroom.
- Continue to maximize the instructional usefulness of the technology equipment already in place.

2. Planning Process

a) Key Roles of Personnel

In the Phoenix Central School District several individuals and groups will share the responsibilities of carrying out this technology plan.

The following are the key roles in establishing and/or supporting our technology plan:

- Superintendent and Board of Education: At this level, our support of funding sources and approval of our administrative policies is critical to the continued success of the technology program. With the continued backing of the financial resources by the Superintendent and Board of Education, we can continue to plan, maintain and offer growth in the area of technology.
- School Business Official: This individual is a member of the District Technology Committee. He works closely with the Director of Technology to ensure that there is adequate and ongoing funding for personnel, staff development, hardware, software, and maintenance.
- Director of K-12 Instruction: This individual is a member of the District Technology Committee. He works closely with the Director of Technology in planning professional development, evaluating instructional software, and ensuring that technology initiatives are clearly communicated throughout the schools. In addition, this individual serves as the District's Data Coordinator.
- Building Administrators: These individuals are responsible for day-to-day supervision of staff and technology in their respective buildings. Their ideas regarding hardware and software needs assist in the development of technology integration into the classrooms of their buildings.
- Director of Technology: This person supervises the technology department, and is a member of the District Curriculum Council and Professional Development Committee. He provides the coordination necessary to maintain the technology program and manage

necessary resources. The Director of Technology will allocate funds and professional development resources to enable the schools to develop and follow the Technology Plan. In addition, the Director:

- Participates as the chair of the District Technology Committee
 - Participates as the chair of the District Technology Instructional Program Steering Committee
 - Participates as a member of the Curriculum Council and the Professional Development Committee
 - Provides opportunities for staff development to instructional and clerical staff
 - Models the use of instructional technology to instructional staff
 - Recommends out-of-district staff development workshops
 - Makes recommendations for software and hardware purchases
- LAN Technicians: This position has the responsibility of maintaining a healthy and secure local area network including protecting our security from inside and outside threats. In addition, each LAN Technician is responsible for providing desktop support for the users in his or her school. There are currently three full-time LAN techs.
- District Technology Committee: This committee is composed of the Director of Technology, the Business Official, a representative from the BOE, teacher representatives from the schools, and a parent. The committee meets annually to discuss the current and future needs of the Phoenix CSD technology program. Ideas are shared regarding hardware needs, software needs, training and support requirements, policies, new technologies and directions, communication and telecommunication systems. Using the information gathered from this process, the Phoenix School District developed this technology plan.

b) Research and Initiatives

The District Technology Plan includes initiatives and research from governmental agencies and various educational organizations. These initiatives and research contain important indicators for the direction an effective plan should take. *(Each underlined program is an active hyperlink.)*

Federal Initiatives

➤ [National Education Technology Plan 2010](#)

The National Education Technology Plan, *Transforming American Education: Learning Powered by Technology*, calls for applying the advanced technologies used in our daily personal and professional lives to our entire education system to improve student learning, accelerate and scale up the adoption of effective practices, and use data and information for continuous improvement.

It presents five goals with recommendations for states, districts, the federal government, and other stakeholders. Each goal addresses one of the five essential components of learning powered by technology: Learning, Assessment, Teaching, Infrastructure, and Productivity.

➤ **Common Core Standards**

The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy.

State Initiatives

➤ **USNY Statewide Learning Technology Plan**

The Statewide Learning Technology Plan was approved by the Board of Regents at the February 2010 meeting. This plan is designed to harness the collective initiatives of the University of the State of New York (USNY), the most complete, interconnected system of educational services in the United States.

Students

➤ **Partnership for 21st Century Skills**

This is a public-private organization of leaders and educators in business and education who have come together to help schools fully address the educational needs of the 21st century. They recognize that there is a profound gap between the knowledge and skills students in typical 21st century communities and work places. They are committed to the development of curriculum and assessments that reflect 21st century realities.

Staff

➤ **Commissioner's Regulations 52.21(b), and Part 80-3.6**

Standards adopted for teacher certification and ongoing professional development will ensure that every teacher and prospective teacher is:

- a. Well qualified to integrate technology effectively into curricula and instruction aligned with New York State Learning Standards; and
- b. Well qualified and capable of assisting students in achieving student technology standards.

➤ **NYS Virtual Learning System (VLS)**

Access to high quality professional development will be available over time to every teacher and prospective teacher through the VLS, including but not limited to: a) examples of best practices; b) high quality content; c) curricula, assessments, and student work aligned with New York State Learning Standards; d) the opportunity to interact with colleagues in a variety of virtual relationships; and e) other aspects of ongoing professional development.

Educational Organizations

➤ The International Society for Technology in Education

Educational technology standards are the roadmap to teaching effectively and growing professionally in an increasingly digital world. Technology literacy is a crucial component of modern society. In fact, the globalizing economy and technological advances continue to place a premium on a highly skilled labor force.

Education Must Change:

As technology dramatically changes our society, educators need to demonstrate the skills and behaviors of digital-age professionals. Competence with technology is the foundation.

- Societies are changing
- Expectations are changing
- Teaching is changing
- Educators must lead

Transforming Learning Environments with Technology:

Today's educators must provide a learning environment that takes students beyond the walls of their classrooms and into a world of endless opportunities. Technology standards promote this classroom transformation by ensuring that digital-age students are empowered to learn, live, and work successfully today and tomorrow.

II. TECHNOLOGY OBJECTIVES AND PLANS

A. Overview

The 2011-2014 Phoenix Central School District Technology Plan addresses federal and state government expectation requirements. The plan calls for the development of a district framework for teaching with and about technology, with the expectation that technology purchases will be based on a plan tied to that framework.

The plan provides for the emphasis on doing more with less – a timely topic given the economic hardships that are facing our state, our school district, and our community. The Phoenix Central School District has had a history of continued support and funding for computing in schools. With the recent capital project completed in 2010, we are now fortunate to have facility and infrastructure improvements such as: one-to-one interactive whiteboards to classrooms in the Middle School and new networking infrastructure.

The Phoenix Central School District's Information Technology team has implemented major structural changes to the computing environment. The conversion to an energy efficient, durable, non-persistent thin client end point in student computing environments has enabled the District's LAN technicians to move from the "sneaker tech" approach of customizing and "deep freezing" every endpoint to a service-based model – with one of the services provided being the centrally managed server-based desktop computing environment. For the first time, the LAN technicians were involved in the creation of the Technology Plan.

B. Overall Objectives

The Phoenix Central School District is dedicated to making reliable and current technology available to its staff and students. Technology must be an integral part of each child's education to level the playing field for students of diverse economic backgrounds and to produce citizens who are competent technology users. Teachers and administrators must be competent technology users as well, not only to improve the diversity of their students' educational experiences but also to serve as exemplars of technology integration. Technology provides the opportunity for teachers to broaden every child's learning experience in a variety of ways and to individualize and customize a child's education in the hopes that every child's learning experience will be strengthened.

1. Professional Development

Use technology comprehensively to develop proficiency in 21st century skills and support innovative teaching and learning

In concert with the District's Professional Development Plan, this goal leverages technology's ability to strengthen teaching and learning. There are two main parts to this goal: leadership and connectedness.

- LEADERSHIP

High-Quality professional development initiatives will be lead and supported by all district administrators, teachers, and support staff. Each occasion is an opportunity to demonstrate (as teachers and administrators) the characteristics of life-long and life-wide learning. In addition, we will begin to investigate student leadership opportunities.

- CONNECTEDNESS

A defining characteristic of the 21st Century is how technology is connecting us – spanning geographical boundaries, reconnecting us to colleagues and friends on social networking web sites, and allowing for rich, immersive, video conference experiences. As the public lives of teachers and students take on more of these characteristics, it is only fit that their experience in school begins to reflect the greater society around them. To that end, our professional development goals relating to connectedness revolve around two main sub-goals: 1. Create a digitally connected K-12 community; and 2. Support innovative teaching and learning.

- Create a Digitally Connected K-12 Community

It is our goal to create a digital community that is reflective of our classroom environments and digitally connected world, one which:

1. Is always on
2. Is accessible and usable by all, inside and outside the classroom
3. Places FERPA compliance, privacy rights, and online protection for students first
4. Supports a safe space for learning

- Support innovative Teaching and Learning

This goal strikes at the heart of what we do. Specifically, we aim to:

1. Provide a physical classroom environment in which students and teachers have high access to computing individually and in small and large groups.
2. Provide differentiated professional development opportunities in technology for staff that is targeted to meet specific district goals
3. Experiment with diverse learning environments such as “make and take” sessions before or after school, webinars, screencasts, and train-the-trainer opportunities
4. Follow-up and sustain training initiatives
5. Identify Subject Matter Experts (SMEs) by technology area by building
6. Encourage teachers to teach paperless
7. Encourage teachers to indicate in their handbook, course syllabus, or welcome letter how technology will be implemented in their classrooms, and follow up with those who do.

2. Communication

Establish and maintain communication and learning methods with students, parents, and community.

Some of this goal overlaps with the previous goal of professional development and connectedness. However, while the previous goal focused on teachers and students, this goal expands to parents and community as well. Our communication goals are:

1. Establish a teacher to student learning network.
As a part of the digitally connected K-12 community (see above), the teacher and student learning network will be a web-based password-protected area for teachers to support student learning outside of the seat time in their classroom. This learning network would replace the current teacher web pages.
2. Launch a parent portal / student portal
There is high demand from connected parents to be able to access student records and academic activities through a web application. In addition, this portal can be used by the students themselves to self-monitor their progress. Our conversion to School Tool will enable us to approach this goal in 2012. Once opened, students and parents will be able to review assignments, grades, and other pertinent student record information.
3. Collect, review, and share assessment and post-graduation data
Part and parcel of the parent / student portal is the ability to monitor student assessment data. To take that one step further, we would like to begin to integrate this perspective of student assessment data with post-graduation data (i.e. college clearinghouse national database) to gain a better sense of how well our local and state assessments are indicators of student success in college and career preparation.

3. Disaster Recovery

To be able to recover from any type of disaster, and continue student education, and business continuity. by implementing a thorough disaster recovery plan for essential services.

Through this technology plan, it is our goal to create a disaster recovery and business continuity plan. There are many facets to this process, including:

- A plan outline defining essential services and staff needed to get them running after a disaster
- A standard communication method in the event of disaster

- Off -site storage location
- Disaster recovery will not just be an IT issue. Other departments may need to be involved to get things such as power, HVAC and other essential services running. Coordination between involved parties is essential.
- A process to verify and validate backup and restore processes need to be developed
- A list of priority of restoration of services (order of importance)
- Devices need to be inventoried and serial numbers on file for insurance purposes
- Training for the IT staff in the method of recovery, and training for staff regarding the expectations of essential services and timelines of restoration
- List of vendors and contact info for replacement of damaged equipment
- A “sandbox” environment needs to be set up for the testing and verification of backup processes, methods, and equipment

III. PLAN ADMINISTRATION AND BUDGETING

A. Current Plan Approval Status

1. Internal Planning

- *The District Technology Committee* met several times over the course of the 2010-2011 school year to analyze the available data and prioritize the ideas that clearly support the vision of the Phoenix Central School District. These ideas were incorporated into this three-year technology plan. The following steps were taken to ensure that the plan meets the needs of district constituents:
- *The Director of Technology:*
 - Worked with the Curriculum Council, the Professional Development Committee, and the building principals to assess the district technology plan in terms of instructional, functional, and educational goals.
 - Reviewed the plan with the District Technology Committee to determine whether or not we are progressing toward meeting district goals. If not, corrections will be made.
 - Worked closely with the CNYRIC, OSWEGO and OCM BOCES, businesses the District has partnered with, and other appropriate groups in order to plan an extensive and comprehensive computer technology program for the Phoenix Central School District.

2. Independent Review and Approval

The Technology Plan will be presented to the Phoenix Central School District Board of Education and approved on a three-year basis.

B. Budgeting

1. Equipment and Service Purchases

Description	Funding Source	2010-2011 Budget	2011-2012 Budget	2012-2013 Budget	2013-2014 Budget
Salaries	Local	\$209,092	\$213,274	\$217,539	\$221,890
Hardware	State-Aid	\$46,125	\$46,125	\$46,125	\$46,125
Software	State-Aid	\$35,501	\$35,501	\$35,501	\$35,501
Conference/Milage	Local	\$1,500	\$1,500	\$1,500	\$1,500

Materials/Supplies	Local	\$8,500	\$8,500	\$8,500	\$8,500
Instructor-led Training - Base Fee	Oswego 511	\$3,005	\$3,065	\$3,157	\$3,252
Instructor-led Training	Oswego 511	\$35,000	\$35,000	\$35,000	\$35,000
Equipment Repair - Base Fee	Oswego 514	\$10,047	\$0	\$0	\$0
Equipment Repair - Base Fee RWADA	Oswego 514	\$21,543	\$0	\$0	\$0
Equipment Repair - Parts	Oswego 514	\$5,000	\$0	\$0	\$0
Equipment Purchase - Base Fee	Oswego 515	\$7,129	\$7,300	\$7,519	\$7,745
Equipment Purchase	Oswego 515	\$287,805	\$240,000	\$240,000	\$240,000
MyLearningPlan Licensing	Oswego 515	\$7,717	\$7,717	\$7,949	\$8,187
Distance Learning	Oswego 477	\$35,150	\$36,165	\$37,250	\$38,367
Model Schools	Oswego 517	\$11,069	\$11,479	\$11,823	\$12,178
Library - Automation	Oswego 534	\$1,182	\$1,217	\$1,254	\$1,292
Library - Cooperative Collection Development	Oswego 537	\$45,740	\$0	\$0	\$0
Library - Media	Oswego 512	\$20,374	\$20,985	\$21,615	\$22,263
Discovery Edu Streaming	CNYRIC 540	\$913	\$1,255	\$1,293	\$1,331
Digital Printing Managed Services	CNYRIC 562	\$12,720	\$12,720	\$13,102	\$13,495
Multifunction Device (Copier) Lease	CNYRIC 562	\$95,736	\$95,736	\$98,608	\$101,566
MFD Overage Charges	CNYRIC 562	\$20,000	\$12,000	\$12,360	\$12,731
ITD - Blackboard Base Fee	CNYRIC 562	\$1,900	\$2,050	\$2,112	\$2,175
ITD - BlackBoard Annual Licensing Fee	CNYRIC 562	\$425	\$425	\$438	\$451
ITD - ExploreLearning Gizmos Base Fee	CNYRIC 562	\$1,600	\$1,600	\$1,648	\$1,697
ITD - ExploreLearning Gizmos User Fee	CNYRIC 562	\$4,200	\$4,200	\$4,326	\$4,456
ITD - NovaNet Base Fee	CNYRIC 562	\$2,000	\$2,300	\$2,369	\$2,440
ITD - NovaNet User License Fee	CNYRIC 562	\$26,250	\$27,500	\$28,325	\$29,175
ITD - Bridges - Career Futures	CNYRIC 562	\$750	\$750	\$773	\$796
ITD - Career Cruising	CNYRIC 562	\$850	\$850	\$876	\$902
ITD - Ensemble Video	CNYRIC 562	\$1,808	\$3,100	\$3,193	\$3,289
Library - Mandarin Base Fee	CNYRIC 573	\$10,710	\$10,710	\$11,031	\$11,362
Telecommunications - Base Fee	CNYRIC 601	\$2,700	\$2,700	\$2,781	\$2,864
CNY Regional Network - Oswego	CNYRIC 601	\$57,492	\$57,492	\$59,217	\$60,993
Telephone Interconnect Service Fee	CNYRIC 602	\$2,990	\$3,110	\$3,203	\$3,299
Local Telephone	CNYRIC 602	\$44,000	\$44,000	\$45,320	\$46,680
Long Distance	CNYRIC 602	\$2,200	\$2,200	\$2,266	\$2,334
E Rate Base Application Fee	CNYRIC 602	\$2,940	\$3,125	\$3,219	\$3,315
E Rate RWADA Application Fee	CNYRIC 602	\$1,075	\$1,291	\$1,330	\$1,370
Voice Services	CNYRIC 602	\$10,971	\$11,000	\$11,330	\$11,670
Voice Service-Service/Support Base	CNYRIC 602	\$5,400	\$5,400	\$5,562	\$5,729
Voice Service-Service/Support RWADA	CNYRIC 602	\$1,793	\$1,793	\$1,847	\$1,902
RIC Hosted Voicemail	CNYRIC 602	\$2,400	\$2,400	\$2,472	\$2,546
Employee Calling Service (sub service)	CNYRIC 615	\$8,559	\$7,857	\$8,093	\$8,335

Non Component RIC Charges	CNYRIC 620	\$7,098	\$6,947	\$7,155	\$7,370
WinCap - Accounting Maintenance Fee	CNYRIC 620	\$3,735	\$3,845	\$3,960	\$4,079
WinCap - Payroll Maintenance Fees	CNYRIC 620	\$3,735	\$3,845	\$3,960	\$4,079
WinCap - Employee Attend Maint	CNYRIC 620	\$1,255	\$1,290	\$1,329	\$1,369
WinCap - Benefits Maintenance Fees	CNYRIC 620	\$1,255	\$1,290	\$1,329	\$1,369
WinCap - Appointments H/R Maint	CNYRIC 620	\$1,255	\$1,290	\$1,329	\$1,369
WinCap - Base Fee	CNYRIC 620	\$14,660	\$15,175	\$15,630	\$16,099
WinCap - Limited Application Support	CNYRIC 620	\$0	\$7,200	\$7,416	\$7,638
WinCap - Server Access Fees	CNYRIC 620	\$2,700	\$2,700	\$2,781	\$2,864
Additional Internet bandwidth	CNYRIC 620	\$16,200	\$16,200	\$16,686	\$17,187
Telecommunications Ntwk Line Cost	CNYRIC 620	\$1,940	\$0	\$0	\$0
Telecommunications Ntwk Line Cost	CNYRIC 620	\$5,063	\$0	\$0	\$0
Tech - Delivery Service to BOCES	CNYRIC 620	\$3,400	\$3,400	\$3,502	\$3,607
Mass Communication Base Fee	CNYRIC 620	\$1,200	\$1,200	\$1,236	\$1,273
School Messenger License Fee	CNYRIC 620	\$6,575	\$6,330	\$6,520	\$6,715
SIS - Centralize User Account Support	CNYRIC 620	\$1,350	\$0	\$0	\$0
SIS - Central Support Connection Time	CNYRIC 620	\$2,250	\$0	\$0	\$0
Insurance for Technology Projects	CNYRIC 620	\$3,959	\$3,959	\$4,078	\$4,200
Facilities Management Application	CNYRIC 620	\$7,000	\$7,000	\$7,210	\$7,426
Helpdesk Software	CNYRIC 620	\$3,695	\$3,895	\$4,012	\$4,132
Computer Supplies	CNYRIC 620	\$22,000	\$18,000	\$18,000	\$18,000
SMS Annual Base Fee	CNYRIC 620	\$2,750	\$2,832	\$2,917	\$3,004
SIS - SISWeb Census	CNYRIC 620	\$2,079	\$0	\$0	\$0
SIS - SISWeb Comprehensive	CNYRIC 620	\$42,679	\$0	\$0	\$0
SIS - MyGradebook - Base Fee	CNYRIC 620	\$2,400	\$0	\$0	\$0
SIS - MyGradebook Training & Support	CNYRIC 620	\$1,120	\$0	\$0	\$0
SIS - PDA Schedules	CNYRIC 620	\$2,181	\$0	\$0	\$0
Schooltool - License Purchase	CNYRIC 620	\$13,932	\$0	\$0	\$0
Schooltool - Crystal Reports Viewer License	CNYRIC 620	\$1,500	\$0	\$0	\$0
Schooltool - Annual Software Maintenance	CNYRIC 620	\$3,668	\$7,337	\$7,557	\$7,784
Schooltool - Annual Technical Support	CNYRIC 620	\$2,089	\$4,179	\$4,304	\$4,434
Schooltool - Annual Application Support	CNYRIC 620	\$14,686	\$29,373	\$30,254	\$31,162
Schooltool - Implementation and Conversion	CNYRIC 620	\$10,000	\$0	\$0	\$0
Schooltool - Elementary Report Card Dev	CNYRIC 620	\$5,000	\$0	\$0	\$0
Schooltool - CNYRIC Hosting Fee	CNYRIC 620	\$2,850	\$2,850	\$2,936	\$3,024
Schooltool - Implementation Project Mgmt	CNYRIC 620	\$5,000	\$0	\$0	\$0
Test Scoring	CNYRIC 620	\$9,521	\$11,162	\$11,497	\$11,842
Food Service - WinSnap Support - Office	CNYRIC 620	\$7,975	\$8,215	\$8,461	\$8,715
Food Service - WinSnap Support - Site	CNYRIC 620	\$3,260	\$3,360	\$3,461	\$3,565

Food Service - WinSnap Tech Support	CNYRIC 620	\$3,000	\$2,625	\$2,704	\$2,785
Food Service - WebSMARTT Support	CNYRIC 620	\$920	\$960	\$989	\$1,018
Food Service - WinSnap Equipment Priority	CNYRIC 620	\$550	\$550	\$567	\$583
Data Warehouse - Level 1 Services	CNYRIC 620	\$14,298	\$14,298	\$14,727	\$15,169
Data Warehouse - District Data Coordinator	CNYRIC 620	\$14,000	\$14,000	\$14,420	\$14,853
Data Warehouse - College Clearinghouse	CNYRIC 620	\$1,000	\$1,000	\$1,000	\$1,000
Pupil Personnel - AimsWeb Base Fee	CNYRIC 620	\$0	\$2,000	\$2,060	\$2,122
Pupil Personnel - AimsWeb RWADA	CNYRIC 620	\$0	\$597	\$615	\$633
Pupil Personnel - AimsWeb Pro Complete	CNYRIC 620	\$10,676	\$12,913	\$13,300	\$13,699
Pupil Personnel - AimsWeb Support	CNYRIC 620	\$2,500	\$2,500	\$2,575	\$2,652
Pupil Personnel - AimsWeb Support Part B	CNYRIC 620	\$0	\$436	\$449	\$463
Pupil Personnel - AimsWeb Data Sync	CNYRIC 620	\$0	\$500	\$515	\$530
Pupil Personnel - RTIm Direct Support	CNYRIC 620	\$5,903	\$0	\$0	\$0
Pupil Personnel - IEP Direct Base Fee	CNYRIC 620	\$8,732	\$8,994	\$9,264	\$9,542
Pupil Personnel - IEP Direct Annual Support	CNYRIC 620	\$4,116	\$4,241	\$4,368	\$4,499
Pupil Personnel - Medicaid Direct Annual Support	CNYRIC 620	\$0	\$1,200	\$1,236	\$1,273
Pupil Personnel - Medicaid Direct - Base Fee	CNYRIC 620	\$1,100	\$1,100	\$1,133	\$1,167
Pupil Personnel - Centris Sync Integration	CNYRIC 620	\$378	\$378	\$389	\$401
Pupil Personnel - Application Hosting	CNYRIC 620	\$0	\$695	\$716	\$737
Learning Focused Toolbox	Madison Oneida	\$1,500	\$1,500	\$1,545	\$1,591

	Budget (2010- 2011)	Budget (2011- 2012)	Budget (2012- 2013)	Budget (2013- 2014)
e-rate	\$136,600	\$130,118	\$134,022	\$138,042
	\$1,425,549	\$1,228,754	\$1,251,915	\$1,275,728

2. Annual Budgeting and Approvals

The annual budgeting procedure for the Phoenix Central School District begins around November when the Superintendent of Schools presents budget allocations and guidelines to the various Directors of the District. The Principals also receive their pupil allocations at that time. During this time the Director of Technology Administrator with the Business Official and Superintendent to discuss the technology program. The Director of Technology then prepares a request for staffing, equipment and supplies for the Superintendent and the Business Official. Budget requests are due by the beginning of January. During the month of January,

the Superintendent and Business Official compose a draft of the budget that is presented to the Board of Education during the first board meeting in February. During the month of March, the Board of Education and the Superintendent have work sessions on the budget. The final draft of the budget is presented to the Board of Education in March. By the end of March the first notice of the budget vote is provided to the public. The second, third and fourth notice of the vote are provided to the public in April. The budget is made available to the public at the end of April. The budget hearing is presented in early May with the annual meeting and budget vote taking place the second week of May.

3. Special Bond Issuance and Approvals

At the present time, there are no special bond proposals or building referendums before the district. If during the time of this Technology Plan a bond issue or referendum is considered, a modification to this plan will be completed to include any technology initiatives included in the bond or referendum.

4. Other Funding Sources (see budget above)

C. Ongoing Planning and Review

The Phoenix School District will continually monitor and review the technology plan and will adjust its implementation as part of an ongoing process. The District Technology Committee will annually revise the technology plan. With assistance from the Building Principals, Curriculum Committee, and Professional Development Committee, feedback and suggestions will be gathered on a regular basis so that the district can review and evaluate its current direction. Then several times during the year, the District Technology Plan will be modified, if necessary, to change its direction.

D. Technology Program Monitoring and Evaluation Process

1. Monitoring

The Phoenix School District will monitor its technology program and make sure it is in step with what other school districts are doing in the area. By staying current with emerging technologies and by talking to and working closely with vendors and our regional BOCES, we will be able to maintain a high level of technology standards. New and innovative uses for technology will be sought after and incorporated into the technology program as the need arises. The following questions will be asked periodically so that we maintain our high standards for our technology program.

- What has been accomplished as part of the technology program in the past?
- What needs to be accomplished in the following years?
- What training will the staff need to integrate technology into the curriculum?
- What level of technology skills will the students need?
- How can the technology improve?
- What are the next steps necessary to move ahead?

The district will collect information on an ongoing basis in order to continually improve the student and staff learning opportunities. Staff and students will be asked to complete self-assessment tools regarding their skills with technology so that we will be able to evaluate the direction of our technology program. The information will be used to examine the technology program and see what needs to be improved. Surveys will be completed by the staff to assess what technology training will be needed. Evaluation forms will be used after each staff

development course and analyzed by the technology department to ensure the course content meets the needs of the staff.

2. Evaluation

To ensure that its investment in technology is maximized, the District Technology Committee will establish an evaluation process to monitor the impact of technology on teaching and learning in the context of New York State Learning Standards.

This evaluation process will address such issues as:

- The degree to which technology has been incorporated into the curriculum in various subject areas
- The applications of technology that have had the most or least affect on student outcomes
- The correlation between the use of technology and improved assessment results
- The impact of staff development on the use of technology in the classroom

Evaluation tools will include:

- Surveys that assess technology literacy skills of staff and extent of integration of those skills into curriculum and classroom management tasks
- Computer training session exit surveys
- Assessments of students' skills in using technology
- Annual assessment of 8th grade students' computer skills
- Portfolio assessments of computer related student projects
- Degree of student use of technology
- State tests
- Standardized tests

The information gathered will be used to identify areas that need further attention as well as those that produce intended results and may be continued and/or expanded.