
Pennsylvania Department of Education



Commonwealth of Pennsylvania
Department of Education
333 Market Street
Harrisburg, PA 17126-0333

Educational Technology Report
Tuesday, October 20, 2009
(Last Last Approved: Tuesday, October 20, 2009)

Entity: Bradford Area SD
Address: 150 Lorana Ave
Bradford, PA 16701-0375

Mission

Our mission is to work together to provide a learning environment in which all students will be successful.

Vision

By 2012, the BASD will be a standard of excellence in education.

Shared Values

We believe all children can learn.

We believe in high expectations for all.

We believe working together provides a safe, quality education.

We believe children learn differently.

We believe it is our role to prepare children for the future.

We believe in creating a positive learning environment.

We believe in life-long learning.

We believe in accountability.

We believe in the value of diversity.

Needs Assessment

Reflections

There are currently no reflections selected for this section.

Review of District Technology (telecommunication services, infrastructure, hardware, software, etc.)

Our network topology consists of a Local Area Network (LAN) in each of the four school buildings that provides communications to local file and application servers and printers; a Wide Area Network (WAN) that provides connections between each building for communications to District file and application servers. Our WAN is directly connected to an Internet Service Provider (ISP). The District technology department deploys email and filtered access to the Internet in addition to other technological services. The connection to our ISP and the services provided by the ISP are eligible for e-Rate funding.

The topology of each LAN within its respective building consists of several wiring closets with 10/100/1000Mbps switches connected via fiber optics. Category 5 cabling and ground fault protected power are distributed throughout each building. Every classroom has been wired with a minimum of five network ports. The WAN incorporates routers, firewall, email and web filtering appliances via six Point-to-Point 100Mbps fiber connections. The Point-to-Point fiber connection is leased from a local service provider, these services are eligible for e-Rate funding.

In addition to the technology infrastructure, several technology initiatives have been implemented. They are as follows:

- Distance Learning (videoconferencing) Center and two portable videoconferencing units.
- Two - Television Studios.

- Microsoft Office Certification Training and Testing Center.
- PC Repair/A Plus Certification Training Lab.
- AutoDesk (CAD) Lab.
- MasterCam (CAD) Lab.
- Four - Business Labs.
- Five - Open Labs.
- Three - Waterford Early Reading, Math and Science Labs.
- Four - Internet/Resource Media Centers.
- Music Composing & Theory Lab.
- Teleconference Center.
- Multi-Media Center.
- Leap Frog Centers in all Pre-K and K classrooms.
- 34 - Classrooms for the Future classroom kits that consists of interactive white boards, projectors, speakers, and laptops).

Technology is provided for integration into the classroom. In addition to computers and initiatives listed above, teachers and staff currently use the following technology devices enhance instruction and learning:

- Digital cameras.
- Classroom Performance Systems (CPS).
- Interactive whiteboards.
- PDA's.
- Projectors.
- Scanners.
- Video cameras.

Several educational software applications have been integrated and implemented into the curriculum and classroom as appropriate levels from Pre-K through 12. They are as follows:

- Accelerated Reader.
- Adobe Premier Pro Suite.
- AES Business Suite.
- AIMS Web Software.
- Alfred Essentials to Music Theory and Interactive Music.
- AutoDesk Suite.
- Blackboard.
- Business Accounting Software.
- Compass Odyssey.
- Cyber School for credit recovery and student at risk programs.
- Earobics Literacy Launch Course 1 & 2.
- ExamView Assessment.
- MasterCam Suite.
- Mavis Beacon Teaches Typing Deluxe.
- Microsoft Office 2007 Professional.
- RiverDeep Destination Success Reading Course 1 & 2.
- RiverDeep Destination Success Math Course 1 & 2.
- RiverDeep Oregon Trail.
- RiverDeep Math Blasters.
- RiverDeep Word Munchers.
- Scholastic Type to Learn Jr.
- Scholastic Type to Learn.

- Scholastic Reading.
- Scholastic Fast Math.
- Smart Music Software.
- Study Island.
- Waterford Early Reading Program.
- Waterford Math and Science Program.

The District workstations are comprised of both desktop and laptop models connected via direct cabling or wireless technology. Our workstations and servers use both Windows and Macintosh operating systems. All workstations have the basic software collection of Microsoft Office Professional and Internet Explorer for web access. We also incorporate subject-specific software applications such as AutoDesk, Accelerated Reader and various other third party software, dependent upon the needs of the teacher and curriculum. In addition to the Office suite, the administration and support staff use a central database software package for student, faculty, and staff administration (i.e. grading, scheduling, various reporting requirements, payroll, fund accounting, etc.). Our student to computer ratio is acceptable, 3:1 (three students to one computer). Our schools have cable television access in every classroom. Our administrative building and school buildings are equipped with door entry security systems that include surveillance cameras with key fob access units.

Technology Distribution and Practices

Technology assets are equally distributed throughout all buildings and all grade levels and based on the needs of the students and teachers' curricula in support of Pennsylvania Academic Standards. Technology is used to empower students and improve learning. Using technology to access the latest informational resources from around the world can expand the amount of information available. Virtual field trips to museums, other countries/cultures and historical events can enhance student knowledge and appreciation for these topics. Teachers utilize various technology to prepare and deliver lesson plans, evaluate student achievement and share information with students, parents, administration and colleagues. Technology is also used for staff development to provide new models of teaching and instructional strategies. Staff development is now focused on 21st Century teaching practices and methodologies using measurable performance benchmarks.

Needs Assessment

The Technology Committee assessed the current status of the District's technology resources and assets. Since the development of the previous three Technology Plans, the District has successfully accomplished and achieved the goals and strategies it had laid out. Attainment of these goals has had a positive impact on how we teach, learn, communicate and do business. Most of our classrooms are fully equipped with interactive white boards and projectors. All students Pre-K through 12 have the opportunity to use computers with integrated curriculum software for reading, writing, mathematics, and science in the labs as well as in the classrooms. Students and Staff have the opportunities to learn through videoconferencing, teleconferencing, video streaming and webcasts.

In Summary, our previous plans and actions brought technology to the forefront of our schools. It is now infused into the basic fiber of our learning process throughout the District. We must continue to recognize the importance of technology in our instruction and education. Even though we have made great progress, the "vision" for technology is an on-going process. In this process there are challenges, the technology committee has identified the following areas for

improvement:

1. Keeping technology current. One of our largest challenges today is providing up-to-date technology. Computer hardware, software and other technologies advance with new technologies emerging every day. The advances are not limited to the tools used in the classroom such as computers, projectors, interactive whiteboards, etc. but to the access or connectivity to the different resources. The infrastructure or network backbone that connects the computers to servers and computers to the Internet also require attention. Without a robust network infrastructure and high speed communications backbone, the state-of-the-art computers will function slow, frustrating teachers and students during the learning process. The District will continue to provide timely updating of technology resources to include broadband telecommunications and adequate technical support to keep technology current and operational.

2. Continue technology integration. As stated above, technology is used to empower students and improve learning. Simply increasing technology in the schools is not a goal of our school district. When technology is used as a tool for learning, students can expand their base of knowledge and concepts, and develop an improved order of learning and achievement. Teachers and support staff using technology provide quality curriculum with exemplary instructional strategies. Over the past several years, we purchased and implemented numerous hardware and software technological initiatives and have made great strides with the integration of technology into the classroom; however, until educational technology becomes commonplace in the classroom, the students in this district will be deprived of a valuable learning tool and may not reach or exceed their learning potential. The District must continue to monitor, evaluate and plan to fully integrate our existing technology resources and continue to purchase new where needed.

3. Professional Development. All of the technology in the world can be at the finger tips of the teachers, but without proper training these tools may not be used or not used to their fullest potential. Currently, technology staff development is coordinated between the Continuing Professional Education Committee (Act 48 Committee), the Assistant Superintendent, Technology Integrator/Coach, and Technology Director. The technology training activities are overseen by the Technology Director. Technology staff development courses are offered in-house using our own staff as well as outside resources, through our local intermediate unit, and through our partnership with the University of Pittsburgh at Bradford. We use teleconference, videoconference and Internet webcast initiatives to offer a variety of other technology development opportunities during the school year and over the summer break. The District will continue to provide technology training across all levels of technology competencies to enhance the knowledge of both teachers and staff.

4. Safe Schools. As stated above, our school buildings are equipped with door entry security systems that include surveillance cameras with key fob access units. We need to continue to evaluate our security measures and add additional cameras in areas of concern. The increased security posture will enhance the safety of our students and staff providing a safer learning environment.

Goals and Strategies

Goal: MATHEMATICS

Description: By the year 2012, each grade level tested and all sub-groups, will meet or exceed the goal of 78% proficiency in Mathematics as measured by the annual state-wide PSSA assessment.

Strategy: Development of a Unified Curriculum

Description: A unified curriculum is a prioritized, baseline curriculum framework in literacy and math developed to provide consistency regarding instructional priorities across grade levels and schools.

Activity: Integrate Learning Systems

Description: Educators will utilize integrated learning systems to help students meet or exceed Pennsylvania State Standards and to remediate student skill deficits.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009 Finish: Ongoing	\$80,000.00
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Status: In Progress — Upcoming

Date Comment

7/21/2009	The district has implemented the ExamView software program using CPS "clicker" units and manual testing to assess student achievement. This provides immediate feedback that identifies deficiencies for teacher intervention much quicker than before. The district has subscribed to the "Blackboard" online learning tool to drive learner achievement by creating personalized and engaging learning experiences at all levels.
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Goal: Technology

Description: Enhance current technologies, fully integrate and combine new technologies into curriculum, continue to provide technology staff development, and improve communications and increase access to information within the District and community.

Strategy: Broadband Telecommunication Services - Inside

Description: Improve broadband telecommunications between district buildings and local area networks within each building.

Activity: Telephone System Replacement

Description: Identify telephone system solution for the replacement of our out-dated telephone system.

Person Responsible Timeline for Implementation Resources

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009 Finish: Ongoing	\$80,000.00
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Status: In Progress — Upcoming

Date Comment

7/27/2009 Over the past three years, the video surveillance systems at both the high school and middle school were replaced. In addition to the system replacement, 88 new cameras and 6 digital have been added to increase the surveillance coverage throughout both buildings. Our two elementary schools will undergo the same system replacement over the next two years.

Strategy: Technology Integration

Description: Continue to monitor, evaluate and plan to fully integrate our existing technology resources and continue to purchase a variety of new technology resources to enrich curriculum and enhance teaching.

Activity: Curriculum Integration

Description: Technology investigation and integration will be incorporated into all curriculum cycles and mapping.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009 Finish: Ongoing	\$4,000.00
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Status: In Progress — Upcoming

Date Comment

7/27/2009 In 2007, the district implemented a technology integrator or coach program. The coach works in all four school buildings assisting teachers with classroom integration of different types of technology based on the student grade level.

Activity: Integrate Learning Systems

Description: Educators will utilize integrated learning systems to help students meet or exceed Pennsylvania Sate Standards and to remediate student skill deficits.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009	\$80,000.00
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Finish: Ongoing

Status: In Progress — Upcoming

Date	Comment
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7/21/2009	The district has implemented the ExamView software program using CPS "clicker" units and manual testing to assess student achievement. This provides immediate feedback that identifies deficiencies for teacher intervention much quicker than before. The district has subscribed to the "Blackboard" online learning tool to drive learner achievement by creating personalized and engaging learning experiences at all levels.
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Activity: Local Technology Resources

Description: Educators will incorporate a variety of local technology resources such as interactive white boards, projectors, speakers, wireless writing pads, etc. to teach lessons. Educators will record references to technology use in their curriculum.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009 Finish: Ongoing	\$80,000.00
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Status: In Progress — Upcoming

Date	Comment
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7/21/2009	Over the past two years, every core-subject area classroom as well as other subject area classrooms received an interactive white board, ceiling mounted projector, and ceiling mounted speaker, and associated software and hardware equipment in grades 3 through 12. Several classroom kits were also installed in some of our K - 2 classrooms.
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7/27/2009	We are developing an Expected Use Policy to define the role of technology in the classroom and to ensure the technology is being used to enhance student learning. We will include a quantitative measurement system of how the tool is impacting student achievement. This will assist us in determining additional technology resources and implementation.
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Activity: Online and Network Resources

Description: Educators will incorporate the use of Internet, Internet2, videoconferencing, and statewide educational network as well as other online resources to develop and teach lessons. Educators will record references to technology use in their curriculum.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009 Finish: Ongoing	\$40,000.00
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Status: In Progress — Upcoming

Date	Comment
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7/21/2009	Videoconferencing equipment has been purchased and installed at three of our four school buildings. Two of the units are portable and can be moved between buildings. Our participation in the IU9's Act183 Broadband Grant has afforded us with the opportunity to access statewide educational network and Internet2 connection.
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Activity: Technology Use

Description: Educators and Staff will model the use of technology and encourage the students to also use technology in their daily activities.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009	-
	Finish: Ongoing	

Status: In Progress — Upcoming

Date	Comment
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7/21/2009	Technology integrator or coach program has been implemented to provide technology training to staff and teachers. Teachers continue to use state of the art technology to engage students enhancing the learning process.
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Strategy: Timely Updating of Technology Resources

Description: Continue to provide timely updating of technology resources and adequate technical support to keep technology current and operational.

Activity: Curriculum and Educational Support Software - Update

Description: Upgrade and/or replace all curriculum and educational support software on an as-needed basis.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009	\$300,000.00
	Finish: Ongoing	

Status: In Progress — Upcoming

Date	Comment
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7/27/2009	Several curriculum software programs were replaced over the past three years. We
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moved from Compass Classic and Compass Odyessey to Study Island and Waterford programs. All of our support software has been updated to the latest versions as they become available.

Activity: Servers and Network Equipment - Update

Description: Replace servers and network equipment (i.e. switches, routers, firewalls, security appliances, etc.) in all district buildings on an as-needed basis.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009 Finish: Ongoing	\$60,000.00
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Status: In Progress — Upcoming

Date Comment

7/21/2009	Eight servers have been replaced/upgraded throughout the district. All of the network hubs have been replaced with switches. We have increased our overall network speed by upgrading our network backbone from 100Mbps to 1Gbps. We also provided a 1Gbps link to all of our servers.
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Activity: Student Workstations and Peripherals - Update

Description: Replace student workstations and peripherals (i.e. printers, scanners, etc.) in all classrooms on an as-needed basis.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009 Finish: Ongoing	\$80,000.00
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Status: In Progress — Upcoming

Date Comment

7/21/2009	All student workstations have been upgraded or replaced during the past two years. Every student computer will have the latest software and plugins to include Microsoft Office 2007. Additionally, 780 laptops were funded partially by the Classrooms for the Future grant in 2008 and 2009.
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Activity: Teacher and Staff Workstations and Peripherals - Update

Description: Replace teacher and staff workstations and peripherals (i.e. printers, scanners, projectors, etc.) in all classrooms and offices on an as-needed basis.

Person Responsible Timeline for Implementation Resources

John Petruzzi	Start: 7/1/2009	\$40,000.00
	Finish: Ongoing	

Status: In Progress — Upcoming

Date	Comment
7/21/2009	All teacher and staff workstations have been upgraded or replaced during the past two years. Every teacher and staff computer will have the latest software and plugins to include Microsoft Office 2007.

Budget

Potential Funding Distribution

Funding Source	2010-2011	2011-2012	2012-2013	Total
360 - SAFE SCHOOLS (Secondary)	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00
Other	\$256,000.00	\$256,000.00	\$256,000.00	\$768,000.00
Grand Total	\$266,000.00	\$266,000.00	\$266,000.00	\$798,000.00

Goal: Academic Safety Nets for Students at all levels

All student progress will be monitored according to learning targets. All students will be given the opportunity to receive instruction that addresses their appropriate educational level and needs.

Development of a Unified Curriculum	2010-2011	2011-2012	2012-2013	Total	Funding Source
Integrate Learning Systems	\$20,000.00	\$20,000.00	\$20,000.00	\$60,000.00	Other
Subtotal	\$20,000.00	\$20,000.00	\$20,000.00	\$60,000.00	

Goal: FOUR-YEAR GRADUATION RATE (for districts and schools that graduate seniors)

Graduate rate will meet an 80% threshold and/or show growth.

Development of a Unified Curriculum	2010-2011	2011-2012	2012-2013	Total	Funding Source
Integrate Learning Systems	\$20,000.00	\$20,000.00	\$20,000.00	\$60,000.00	Other
Subtotal	\$20,000.00	\$20,000.00	\$20,000.00	\$0.00	

Goal: MATHEMATICS

By the year 2012, each grade level tested and all sub-groups, will meet or exceed the goal of 78% proficiency in Mathematics as measured by the annual state-wide PSSA assessment.

Development of a	2010-2011	2011-2012	2012-2013	Total	Funding
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Unified Curriculum					Source
Integrate Learning Systems	\$20,000.00	\$20,000.00	\$20,000.00	\$60,000.00	Other
Subtotal	\$20,000.00	\$20,000.00	\$20,000.00	\$0.00	

Goal: Technology

Enhance current technologies, fully integrate and combine new technologies into curriculum, continue to provide technology staff development, and improve communications and increase access to information within the District and community.

Broadband Telecommunication Services - Inside	2010-2011	2011-2012	2012-2013	Total	Funding Source
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Telephone System Replacement	\$50,000.00	\$50,000.00	\$50,000.00	\$150,000.00	Other
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Broadband Telecommunication Services - Outside	2010-2011	2011-2012	2012-2013	Total	Funding Source
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Telecommunications Services	\$25,000.00	\$25,000.00	\$25,000.00	\$75,000.00	Other
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Safe Schools	2010-2011	2011-2012	2012-2013	Total	Funding Source
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Safe Learning Environment	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00	Other
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Safe Learning Environment	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00	360 - SAFE SCHOOLS (Secondary)
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Technology Integration	2010-2011	2011-2012	2012-2013	Total	Funding Source
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Curriculum Integration	\$1,000.00	\$1,000.00	\$1,000.00	\$3,000.00	Other
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Integrate Learning Systems	\$20,000.00	\$20,000.00	\$20,000.00	\$60,000.00	Other
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Local Technology Resources	\$20,000.00	\$20,000.00	\$20,000.00	\$60,000.00	Other
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Online and Network Resources	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00	Other
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Timely Updating of Technology Resources	2010-2011	2011-2012	2012-2013	Total	Funding Source
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Curriculum and Educational Support Software - Update	\$75,000.00	\$75,000.00	\$75,000.00	\$225,000.00	Other
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Servers and Network Equipment - Update	\$15,000.00	\$15,000.00	\$15,000.00	\$45,000.00	Other
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Student Workstations and Peripherals - Update	\$20,000.00	\$20,000.00	\$20,000.00	\$60,000.00	Other
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Teacher and Staff Workstations and Peripherals - Update	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00	Other
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Subtotal	\$266,000.00	\$266,000.00	\$266,000.00	\$738,000.00	
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Grand Total **\$266,000.00** **\$266,000.00** **\$266,000.00** **\$798,000.00**

Amounts that are struck through are not included in totals because they are from duplicated activities.

Staff Development

Currently, technology staff development is coordinated between the Continuing Professional Education Committee (Act 48 Committee), the Assistant Superintendent, and Technology Director. The technology training activities are overseen by the Technology Director.

Technology staff development courses are offered in-house, through our local intermediate unit, and through our partnership with the University of Pittsburgh at Bradford. We use teleconference, videoconference and Internet webcast initiatives to offer a variety of other technology staff development opportunities during the school year and over the summer break. Technology staff development is also met through flex time. Four flex days and four in-service days are established yearly. Each professional development sessions and flex time activities are evaluated to help determine future staff development activities.

Continuing professional development and education enhances curriculum and related areas, promotes self-improvement, and challenges the educator to develop skills that enable students to meet or exceed learning standards. The District will continue to provide technology training across all levels of technology competencies to enhance the knowledge of both teachers and staff.

Monitoring

The Technology Committee under the direction of the Technology Director will be responsible for monitoring and evaluating the progress of the plan. The Technology Committee will meet yearly to monitor the technology plan. The committee will perform the following:

- Survey will be conducted with randomly selected group of teachers, administrators, parents and community members to provide feedback on the accomplishments and shortcomings of the technology plan.
- Re-assess the goals, strategies and activities to ensure the plan reflects the current situation.
- Assess the degree to which technology has been integrated into the classroom teaching.
- Assess the progress of staff development with regard to faculty, staff and student technology literacy.
- Assess the degree to which technology has enhanced communications and information assess between school and community.

Furthermore, on-going communications with teachers, students, staff and administrators by the Technology Services Department Staff will identify and address issues and areas of concern throughout the school year. This information will be documented to ensure recognition in future technology plans.

Evaluation

As stated above, the Technology Committee will meet yearly to monitor, evaluate and assess the technology plan. The performance measures for the various goals, strategies and activities described in this plan will be identified by the Technology Services Department Staff and Technology Committee under the direction of the Technology Director. The committee will address any issues or areas of concern at this time and recommend appropriate action.

A status report will be developed and made available yearly to all teachers, staff, administrators, board members, parents and the community.