PLAINVILLE PUBLIC SCHOOLS

TECHNOLOGY PLAN
2011-2016

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INTRODUCTION

The original goals and objectives based on the Technology Plan of 1997 were developed as follows:

1. To have the necessary network infrastructure in place in order to have technology integrated into the normal workings of the classrooms and offices, therefore, becoming an integral part of our curriculum.

2. The staff and the students will be able to take advantage of the electronic capability to gather, compile, research, exchange, produce and communicate information appropriate to their needs.

3. The staff and students will use the multitude of technology tools to acquire knowledge and skills and use them as a basis for continual learning.

4. The students will become active participants in the learning process with the teachers serving as facilitators of learning with technology.

Every effort has been made to achieve the goals as outlined in the 5-year plan. Many of the key areas have been accomplished with the exception of a few key areas that needed to be addressed in our 3-year plan. The 5-year plan served as an important guide to the implementation of our goals and strategies as we move towards the future.

Technology has since evolved over the years. The Plainville Public School system is faced with new challenges and has to continue to provide an updated network infrastructure, along with computer hardware, software and technology knowledge and skills, which will allow teachers and students to improve their teaching and learning, and succeed in the digital economy. This technology plan will reflect our goals and strategies for the next three years, building on our accomplishments and addressing the technology needs of the school system. This 3-year plan will be based on *Local Technology Benchmark Standards for 2004-2007, PreK-12 Instructional Technology Recommended Standards and* Plainville Technology Curriculum. With technology moving at a rapid rate, we will continue to monitor our progress in achieving these goals and adjust the technology plan to reflect changes and new opportunities as they arise. The goals of the plan are as follows:

- Provide ongoing professional development training for the staff to equip them with the tools to be technologically literate in order to incorporate the Massachusetts Technology Literacy Standards and Expectations into their curriculum.

- Explore alternate computerized math programs that are aligned to the Common Core Standards to replace Successmaker program at the Jackson School.

- Continue to support and monitor the Accelerated Math program at the Wood School.

- Continue to expand the use of PRS (Personal Response System) in Grades 3-6

- Expand the classroom use of interactive pads in Grades 1-6 with the support of the **online tutorials.**

- **Continue to support and expand** LEGO robotics at the Jackson School and Wood School to build STEM content knowledge and skills.

- Continue to support the use of Tumblebooks into the classrooms.

- Monitor and expand the use of Accelerated Reader Enterprise (AR), and to promote the use of Renaissance Home Connect with Parents. All students in Grade 2 will use the AR program to enrich and enhance their reading abilities.

- Continue to offer digital learning opportunities to Grades 4-6 students by developing and advancing their technology skills through the Student Technology Club (S.W.A.T)

- Explore new and emerging technologies for effective integration into the 21st century classroom teaching and learning.

- Incorporate web 2.0 resources such as Scratch, podcasting, and digital storytelling into curriculum to enhance and promote teaching and learning, and increase technology integration.

- Expand and support the use of Schoolwires (school district content management solution) to create websites as a means of communication to their students and parents.

- Continue to showcase student work on the uses of technology at school events, school committee   meetings,   and   on   bulletin   boards   throughout   the   schools.

- Support teachers' use of technology with the students involving research, multimedia, and collaboration in the classroom learning.

- Support the use of e-learning that include interactive videos, virtual trips, WebQuests, **blended learning (i.e. flipped classroom)** and higher-ed e-learning opportunities.

- Yearly commitment to purchasing hardware and software to upgrade and replace aging equipment and to help support curriculum

BACKGROUND

Plainville is located in southeastern Massachusetts, about 31 miles southwest of Boston and 13 miles north of Providence, Rhode Island. Its location near the intersection of Routes 152 and 106 and close to Rtes 495 and 95 make it accessible to the townspeople and to those visiting from other communities.

The Plainville Public Schools are comprised of two elementary schools, Anna Ware Jackson School and Beatrice H. Wood School. The Anna Ware Jackson School was built in spring 2001

and it consists of Grades Pre-K to 3 students. The Beatrice H. Wood School, which was originally located on South Street (about 2.4 miles from Jackson School), moved to a new location in spring 2004, and it consists of Grades 4 to 6 students. Currently, the Jackson School is located adjacent to Beatrice H. Wood School which has made it accessible and convenient for the Plainville staff in this campus environment.

The support and the involvement of the community of Plainville continue to play an important role in the implementation of the Technology Plan. Their ongoing process includes:

- Computer and library volunteers that help in the use of technology.

- PTO support in Technology4kids by involving community in earning software and equipment for students.

- PTO purchase of World Book online for school and home access.

- Recycling program through Funding Factory by involving community in earning technology equipment for the schools.

- Technology showcases that highlight the use of technology in the classrooms at the school community events

- School Committee in approving funds needed for new software and hardware.

Key area to be addressed: To explore other means of funding, we will create partnerships with new businesses in the area.

As the community continues to be more involved in the school system, there are various ways in which communication and information access is available throughout the building, district, and community. They include voice mail, electronic mail and school website. The school district maintains an up-to-date website that includes important school information for the staff and the parents.

MISSION STATEMENT

The technology mission of the Plainville Schools is our strong commitment to prepare students to be technologically literate in the skills needed to compete in information based global community of the 21st century. To ensure this, we must enhance our curriculum to guarantee that technology becomes an integral and routine part of the learning and teaching experience for everyone in the Plainville educational system.

VISION STATEMENT

Our school district technology vision is to prepare students for a technologically advanced world and workplace. By using technology to help create a more effective and diverse teaching and learning environment, our students will have the confidence they will need to become capable and lifelong learners.

In the global community of the 21st century, technology will no longer be a luxury but an integral part of our life. Technology will be a common place everyday tool.

Students and teachers will use computers and interactive video technologies to access information within school, within the community, and within the greater state, national and world communities. All teachers will use computer technology to process classroom, school-wide, and district-wide administrative and management information. Students and teachers will know when technology is the appropriate tool; determine which technology to use, and then use technology to successfully complete the task.

All Plainville students and teaching staff, regardless of their grade assignment, academic ability, literacy level, physical challenge, race or gender, will have equal access to a wide range of media tools in their classrooms and school libraries. This will provide access to information resources that will enhance their opportunities to learn and grow. Technology will be an integral part of our everyday school life.

By integrating the goals with the Massachusetts State Curriculum Frameworks, we will encourage cooperative learning with our students while they become active participants in their quest for knowledge. This will promote different types of learning, such as project based, exploratory and divergent learning styles which in turn will secure the inclusion of all students.

By providing continued professional development training in support of Education Reform, our teachers and professional staff will use technology effectively to provide the skills and knowledge students will need to communicate with the outside community. This will encourage the students to share knowledge, develop problem solving techniques and pursue information through various media. By integrating technology into their daily routines, administrators will be provided with complete access to the information they require to make administrative decisions in a fast paced and changing educational environment.

TECHNOLOGY TASK FORCE

Stephanie Cheong, Technology Systems Administrator
Charlene McEntee, School Committee Member & Parent
Susan Lareau, Media Specialist & Librarian
Kerrie-Lee Walker, Grade 6 Teacher
Cheryl Mazzeo. Grade 2 Teacher
Laurel Peter, Grade 4 Teacher
Eileen Miller, Grade 1 Teacher
Robin Robert-Pratt, Wood School Principal
Robert Dufresne, IT Technician

ASSISTIVE TECHNOLOGY TEAM

Stephanie Cheong, Technology Systems Administrator
Edward Clarke, Special Education Administrator
Wendy Mullin, Kindergarten Teacher
Cheryl Mazzeo, Grade 2 Teacher
Charlene Ehrlinger, ILC at Jackson School
Susan Boig, ILC at Wood School
Heather Viveiros-Murphy, PT
Marcia Bridgeman, OT

NETWORK INFRASTRUCTURE

For the Local Area Network (LAN), both Jackson School and Wood School have been upgraded with CAT 5e & Cat 6 Ethernet cabling to support up to 1000 mbps of network bandwidth to the desktop switches, which is capable of providing high speed connection to the rooms within each building. Both school buildings have fiber cable running as the backbone between the wiring closets, MDF and IDF, and are capable of providing gigabit speeds to the main switches within the closets. Each room in the building has been installed with 2-7 cable drops to provide network connection and direct access to the Internet.

Each building has at least four (4) servers providing functions to the following: data files, printers, backup, applications, ghosting, ISA and Altiris. Most of the servers have been virtualized using Hyper-V platform. The schools are equipped with high speed Internet connection of up to 50 mbps/10 mbps, along with e-mail and website solutions hosted by third party vendors. The firewall services which include content filtering software are in place as protective measures in order to be CIPA compliant so that students and teachers will be able to surf the web safely. For more details, refer to Internet Access.

For the Wide Area Network (WAN), both school buildings are connected using indoor/outdoor OCC plenum 62.5 micron 12 strand multimode fiber link to provide high speed connectivity between the school buildings. This will bridge the digital gap between both school buildings.

Based on the Benchmark Standard 5, we have fully met the requirements for Internet access and networking but will need to explore e-learning opportunities for the school district.

HARDWARE

In the spring of 2001, the Jackson School was outfitted with Gateway computers and HP printers as part of the new building project. In the summer of 2005, we have begun replacing aging Gateway computers with new high end HP desktops for the administrative staff, teachers and students. In the fall of 2007, the rest of the student classrooms were equipped with new high end HP computers at the Jackson School.

As part of the expansion of the Jackson Computer Lab, a wireless 20 laptop cart is utilized on a regular basis and is currently stationed in the Media Center. We will also be implementing a second wireless laptop cart equipped with 14 laptops to be used as "COW" (Computer on Wheels), thereby bringing the computer lab to the classrooms. This will allow more students to benefit and utilize the laptops simultaneously in the class. As part of the computer replacement plan, six (6) laptops will be replaced next school year. In the coming years, we will continue to invest in wireless technologies for its flexibility, mobility and easy integration into the classroom environment.

In spring 2004, the Wood School received an influx of new HP computers, printers and two (2) wireless mobile carts as part of the new building project. In June/July 2007, we had purchased a third wireless mobile cart to meet the demands of "COWS" (Computer on Wheels) based on increased usage of laptops for whole group instruction in the classroom. The wireless mobile

carts, equipped with 12-16 wireless laptops per cart, will continue to provide many new opportunities for the students to become active participants and learners.

Although majority of the technology equipment acquired in 2004 is no longer covered under the 3-year warranty, we will strive to upgrade and replace them based on the 5-year replacement cycle established by the school district.

Based on the Benchmark Standard 4, both schools have met the requirements of Type A Workstation Category (refer to the Chart A). The Jackson School has achieved a 3:1 student-to-computer ratio whereas the Wood School has achieved a 1:1 student-to-computer. ratio. Overall, the school district has achieved a 2:1 student-to-computer ratio.

Computer Platform (including laptops)	Type A	Type B	Type C
	Function: Multimedia computers capable of running virtually all current software, including the latest high-end video and graphics programs Memory: 256 MB RAM or higher Processor: PC - Pentium 4 (or equivalent) Macintosh - G4 (or equivalent) (or equivalent configurations to meet the stated function)	Function: Multimedia computers capable of running most software except for the latest video and graphics programs. Memory: From 128 up to 256 MB RAM Processor: PC - Pentium 3 (or equivalent)	Function: Multimedia computers capable of running most current productivity applications. Memory: Less than 128 MB RAM Processor: PC - Pentium 2 or lower

Chart A - Based on Local Technology Plan Benchmark Standards of 2004-2007

In the schools, each classroom has 4-5 computers that include a teacher and multiple student machines, and a networked printer. At the Jackson School and the Wood School, except for the Pre-School and the Kindergarten classrooms, each classroom has an LCD projector and audio/video system that will provide multimedia capability to project computer and video images to a pull down screen and amplify audio to the ceiling mounted speakers.

The Pre-School classrooms are equipped with 27" analog TVs with the TView Gold converter to transmit computer images to the TV monitor whereas the Kindergarten classrooms are equipped with 32" TV data monitors that have the built-in capability to project the computer images onto its screen, without the need for converters.

Based on a computer survey taken last year, majority of the families have access to a computer with high speed Internet connection. To ensure that students and staff have access to the Internet after school hours, we have notified and addressed the needs of the staff, and have made the computer labs at the Jackson and Wood School available to the students for

mentoring, tutoring, homework club and other school activities if necessary. The Internet at the Plainville Library is also available for access and the available access hours are published on the school website.

In June 2007, we acquired 41 Interwrite Pads for every classroom teacher in grades 1-6 to engage students in active learning, support various learning styles, enhance the teaching and learning environment, and create an interactive classroom. The Interwrite Pad uses Bluetooth™ wireless device to provide flexibility and mobility for the teachers to teach their interactive lessons from anywhere in the classroom. The Interwrite Pad also comes with Interwrite Workspace, a free software program which includes over 4000 digital teaching resources that can be integrated into curriculum across grade level.

In 2011-2012, we purchased Lumens Ladibug document cameras for the teachers in grades 1-6 in order to replace the overhead projectors that have slowly become obsolete in the digital age. The document camera is a visual presenter that will project papers (eliminates the use for transparencies) and 3-D objects in a classroom. They provide large, crisp images for students to view, making it a great way to keep students captivated and engaged in classroom work. In September and October, the Ladibug training workshops were provided to the Jackson and Wood School teachers which included creative ways to transform teaching and how to reach their students more effectively with their new equipment.

Some of the examples of using a document camera in the classroom are:

- Demonstrating the steps (i.e. involved in a problem)
- Modeling math problems with 3-D cubes, pattern blocks and coins
- Projecting individual student work
- Displaying pictures and words from the books
- Capturing images (has built in camera) for projects
- Comparing book images with live materials and examining the images with the zoom feature

The hardware inventory count continues to be a work-in-progress as technology equipment is replaced and updated throughout the year.

SOFTWARE

We have expanded our library of software over the years. The software includes productivity, utility, administrative, and curriculum based software. The procedure for software requests is to fill out the appropriate form and to be submitted to the building supervisor, technology administrator and the superintendent for approval. This process will ensure that the software will meet the hardware requirements, curriculum standards and is appropriate to all teachers at that grade level. Below is a summary of our software inventory:

ADMINISTRATIVE SOFTWARE	
JACKSON SCHOOL	**WOOD SCHOOL**
Schoolbrains –student information database	Schoolbrains - student information database
Schoolbrains - attendance & seating charts	Schoolbrains - attendance & seating charts

PRODUCTIVITY/UTILITY SOFTWARE	
JACKSON SCHOOL	**WOOD SCHOOL**
MS Office Professional Suite	MS Office Professional Suite
Sophos Anti Virus	Sophos Anti Virus
Adobe Photoshop Elements	Adobe Photoshop Elements
Altiris (remote client solution)	Altiris (remote client solution)
School Lunch Counter (web based)	School Lunch Counter (web based)
	SAILS (automated card library system)

CURRICULUM SOFTWARE	
JACKSON SCHOOL	**WOOD SCHOOL**
STAR Reading and Math (Grades K-3)	STAR Reading and Math
Accelerated Reader (Grades 3); Grade 2 to pilot	Accelerated Math (Grades 4-6)
Type to Learn, Jr (Grades K-3)	Accelerated Reader (Grades 4-6)
Storybook Weaver (Grades K-3)	Mavis Beacon Typing (grades 4-6)
Kidspiration (Grades K-3)	Inspiration (Grades 4-6)
Jump Start Spanish (Grades K-3)	
Nystrom Social Studies (Grades K-3)	
Let's Discover Massachusetts (Grade 3)	
Leapfrog (PreK, Resource & ILC, 1 teacher designated per Grade level K-3)	

Key Areas to be Addressed: To explore Social Studies, Science & Spanish software for the Wood School.

ASSISTIVE TECHNOLOGY SOFTWARE & HARDWARE SCHOOLWIDE DISTRICT	
Crick software (Clicker & Word Bar)	Touch Screen
Boardmaker Plus with Add-ons & Addendums	AphaSmart
Teaching with Symbols	Intellikeys w/ overlays
Premier Assistive Suite	
Trudy's Time & Place	
Jump Start Programs	
Stationary Studio	
Reading A-Z	
Fonts for Teachers	

BUDGET

Over the years, the technology budget for the Plainville Public Schools has increased as a result of our yearly commitment to purchasing hardware and software, to upgrading and replacing aging equipment, and to supporting curriculum. The resources that are used in supporting the technology budget consist of operating funds and grants, with majority of the funds from the operating budget. The support and involvement of the community have continued to play an important role in acquiring technology for the Plainville Public Schools.

In order to continue to meet the benchmark standards set by the state and NCLB, the Plainville Public Schools will strive to acquire sufficient funding to support the necessary software, hardware, and telecommunications that are required to succeed in the digital age. Below is the technology budget that has been outlined for the next three years:

TECHNOLOGY BUDGET FY11-16

Budget Line	Description	Approved Budget Amount FY13	Approved Budget Amount FY14	Proposed Budget Amount FY15	Proposed Budget Amount FY16
2250-4	Contracted Services	$7,755	$7,755	$8,505	$8,505
2250-5	Computer Expenses	$2,300	$2,300	$2,300	$2,300
2451-5	IT Classroom Supplies/Materials/Hardware	$73,800	$87,550	$94,600	$87,550
2451-4	IT Classroom Hardware Contracted Services	$9,200	$9200	$9,200	$9,200
2455-4	IT Instructional Software Contracted Services	$33,209	$37,460	$43,560	$43,560
2455-5	IT Instructional Software Supplies	$8,040	$8,040	$16,640	$8,040
4400-4	Telecommunications/Network	$24,000	$19,980	$19,980	$19,980

EVALUATING TECHNOLOGY GOALS

With technology moving rapidly, we will continue to closely monitor our progress and adjust the technology plan accordingly based on our accomplishments as well as new changes and opportunities that may arise. The evaluation process for the technology goals includes the following timeline:

September -   As part of the annual Action Plan for the Plainville Public Schools, specific technology goals are included in the evaluation process and can be accessed on the school committee webpage at http://www.plainville.k12.ma.us

Monthly -   The Technology Task Force meets once a month to review the technology plan, develop strategies to implement, assess the accomplishments and adjust the plan to reflect changes and new developing technologies if necessary.

December -   Mid-year report on the progress of the technology goals is presented to the Plainville School Committee. Adjustments to the technology plan are duly noted at this time.

During the year -   Technology showcases that demonstrate the use of technology software and hardware by students are presented at the School Committee Meetings.

June -   Final report on the progress of the technology goals is presented to the Plainville School Committee. Adjustments to the technology plan based on accomplishments and new developments are made at this time.

EVALUATING TECHNOLOGY NEEDS

September -   Review of technology goals as outlined in the technology plan; technology survey to assess the staff based on their skills, needs and requests.

October -   Review of technology survey from staff with technology task force to identify technology needs.

December -   Review of current budget; if technology requests from Staff meet the goals of the district, they will be included in future budgets for consideration.

ASSESSING TECHNOLOGY EQUIPMENT

Hardware

The computer equipment, printers, network infrastructure are assessed based on the replacement guidelines established by the Plainville Public Schools. Computers will be replaced every 5 years, laptops will be replaced every 7 years while printers (depending on deskjet or laser) will be replaced every 4-8 years. If new technologies could potentially enhance classroom teaching and learning, the school district is committed to introducing the much needed technology solutions into the school environment. For example, Beatrice H. Wood School has acquired the state-of-the art technologies such as wireless technologies and ceiling mounted LCD projectors that will provide a rich multimedia teaching and learning environment for teachers and students. Our commitment to technology is also evident in the technology budget as funding has increased over the years in support of technology.

To ensure that we meet the requirements of "Type A" multimedia computers as established by the state, we are committed to purchasing technology equipment that are fully capable of running resource intensive curriculum software programs to help improve student performance in the classrooms.

Software

Over the years, our collection of curriculum, software, productivity software, administrative and utility software have expanded significantly. Currently, if a staff member is interested in a new software program, a software request form will have to be filled out so that the form can be submitted for approval. The form can be accessed from the technology information section at http://www.plainville.k12.ma.us   To ensure that the curriculum software is aligned to the state frameworks and is grade level appropriate, the software is reviewed by the curriculum software committee before final approval by the Superintendent of the Schools.

Software is also utilized by those with specific disabilities. The Assistive Technology Committee is in the developing stage of building the Assistive Technology collection to address those who may need specific technologies to access curriculum in their classrooms. The type of disabilities and specific needs based on the students' Individualized Education Plans are part of the criteria to determine the type of software the students will require.   The software is assessed by observations, documenting the progress, guiding questions and inquires from the students to ensure that the software is well received.

To ensure the software is utilized to its full potential, professional development training is provided to the staff members and computer generated reports are printed to assess the usage of the program and students' performance. Other methods of assessing the software are by school district surveys and observations.

Internet Access

The Plainville School district has installed 8mbps/1mbps high speed broadband to deliver reliable Internet service for communication, data exchange, collaboration, research, and on-demand video streaming. The Internet is utilized every day for research such as World book online, Grolier online, WebQuests, unitedstreaming™, virtual tours and other curriculum based online resources to enhance classroom teaching and learning. The Plainville School District is a member of SEMLS consortium which enables the schools to access the library database online.

The Internet is also used for communication such as posting and updating information on the school district website and individual teacher web pages. In addition, we use the Internet for electronic mail and the Blackboard Connect system to notify, record, schedule, send, and track personalized voice messages to students, parents, and staff in minutes.

To protect the school district from hackers, we have leased firewall services that will protect unauthorized access into the network. To further protect the school district from unwanted websites, we have content filtering in place that will block content, images, and materials on websites that are deemed inappropriate and do not meet the standards and educational goals of the school district. As a result of the protective measures, the Plainville School district is in compliance with CIPA (Children's Internet Protection Act).

To help pay for part of the costs of Internet services as well as leased firewall services at the Plainville Public Schools, we receive e-rate funding from the Schools and Libraries Program of the Universal Service Fund which makes discounts available to eligible schools and libraries for telecommunication services, Internet access, and internal connections. In order to receive e-rate funding, we would have to file for Internet services on forms 470 and 471 annually for the requests to be approved.

Telecommunications

The Plainville School district's telecommunication system consists of a PBX that will handle internal and external phone calls using 29 centrex phone lines along with approximately 120 extensions assigned. Every classroom is equipped with a wall analog phone while the administrative offices have administrative digital phones.

To help pay for part of the costs of basic centrex phone lines at the Plainville Public Schools, we receive e-rate funding from the Schools and Libraries Program of the Universal Service Fund which makes discounts available to eligible schools and libraries for telecommunication services, Internet access, and internal connections. In order to receive e-rate funding, we would have to file for telecommunications on forms 470 and 471 annually for the requests to be approved.

TECHNOLOGY SUPPORT STAFF

The technology support staff consists of the following positions:

1 FTE Technology Administrator
1 FTE Media Specialist & Librarian,
1 FTE Media Aide
1 FTE Computer Technician
1 0.5 Data Support Specialist (New in 2014)
1 0.3 Student Intern

Key area to be addressed
- Currently, our full-time Media Specialist & Librarian divides her time between managing the library, teaching and supporting the teaching staff with technology integration in the school district.   Based on past experiences, there would be a higher success rate in technology integration if there was another dedicated full-time Technology Instructional teacher   located   at   the   other   school   to   fill   the   staffing   needs.

- The Computer and Media Aide position have merged into a full-time Media Aide position. The Media Aide plays an important role in supporting the Media library. However, the position is only limited to a supporting role, i.e. assisting the teacher.

- There is not a FTE dedicated Network Administrator in the school district which does not meet the requirement of Benchmark Standards 4E.   The roles of the Technology Systems Administrator/Director include managing the school district network, technical support, technology integration, budgeting, personnel, technology professional development training for the staff, data collection/reporting to the state, updating the website and running a student technology club.

PROFESSIONAL DEVELOPMENT

Technology has become a key element in the development of all curricula and is being integrated into lesson plans. In order to fully utilize the technology resources and tools in the school district, ongoing technology professional development training is a crucial component for the staff. By providing continual in-school technology workshops, they will learn to enhance instruction, increase student learning and increase productivity. This way, we are committed to providing the required technology training and support to the district staff. The technology training workshops include the following:

- Bootcamp workshops – offered during the day for 60 minutes which involved all professional staff members

- Before School – 45 minutes one Tuesday every month

- Inservice Day - district wide participation all day

- Half day workshops – offered during the day for 2-3 hours when introducing or reinforcing a software program.

- After-school workshops – offered after school for 2 hours; PBS teacherline (online)

- In demand workshop – informal training with one on one training as needed (i.e. the Media Specialist works with teachers to produce lesson plans or class projects such as Kidspiration, PowerPoint and WebQuests) and conduct online research with curriculum on each grade level.

The staff has been provided with ongoing training in the use of computer applications to increase professional productivity and enhance their classroom teaching and learning through the use of multimedia such as digital camera, LCD projectors and PowerPoint application for technology integration. Based on the staff assessment of their computer skills, at least 85% of the staff have the basic technology skills and use technology on a daily basis in some of the following areas such as lesson planning, administrative tasks, communications, and collaboration. Based on the professional development workshops, every professional staff has participated in at least 30 hours of required in-school workshops while 75% of professional staff has participated in 40-54 hours of in-school and after-school workshops. To increase professional staff participation, we will continue to offer high-quality technology professional development covering technology skills and the technology integration into instruction.

To determine the effectiveness of technology resources in the school district, the staff is evaluated based on how often the resources are being utilized for teaching and learning in the classroom settings. This is being assessed through a variety of methods: surveys, evaluations after workshop and observation in the computer lab and classes on the level of technology integration being used on a daily basis.

Key Areas to be addressed: Encourage teachers to use technology with the students involving research, multimedia, and collaboration in the classroom learning: This includes the following:

- Promote information based literacy to the teachers and students
- Promote the use of technology to enhance classroom learning
- Promote appropriate use of technology to the teachers and students.
- Continue active learning experiences, cooperative learning, and process learning.
- Promote the use of Assistive Technology to aid students who are of special needs.
- Promote the use of rubrics for project base assessment
- Promote the use of technology as a means of achieving success in alternate assessment practices.

As we encourage the use of technology, policies have to be in place to ensure the appropriate use of the Internet and the computer network. As a result, the school district has developed an Internet Acceptable Use Policy (IAUP) regarding the use of the Internet for the students and a Network, E-mail and Internet Acceptable Use Policy for the staff. To be compliant with CIPA (Children's Internet Protection Act), the schools have filtering software installed in the firewalls to protect the students from accessing inappropriate websites.

As we continue to promote the use of technology in the classroom learning, the students are assessed by other curriculum rubrics and computer generated reports through the STAR Reading & Math, Accelerated Reader and Accelerated Math management systems. Student technology skills need to be assessed based on *Recommended State PreK-12 Instructional Technology Standards.* This way, the students will improve their knowledge in all areas and aspects of technology by providing them with the necessary equipment and training to succeed.

Benchmark 1 Commitment to a Clear Vision and Implementation Strategies

A. The district's technology plan contains a clearly stated and reasonable set of goals and implementation strategies that align with the district-wide school improvement plan. The district is committed to achieving its vision by the end of the school year 2010-2011.

B. The district has a technology team with representatives from a variety of stakeholder groups, including school committee members, administrators, and teachers. The technology team has the support of the district leadership team.

C. Needs Assessment

   1. The district assesses the technology products and services that will be needed to improve teaching and learning.

   2. The technology plan includes an assessment of the services and products that are currently being used and that the district plans to acquire.

D. The district has a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students.

E. Budget

   1. The district has a budget for its local technology plan with line items for technology in its operational budget.

   2. The budget includes staffing, infrastructure, hardware, software, professional development, support, and contracted services (including telephone services).

   3. The district leverages the use of federal, state, and private resources.

   4. For districts that plan to apply for E-rate reimbursement, the technology plan specifies how the district will pay for the non-discounted portion of their costs for the services procured through E-rate.

F. Evaluation

   1. The district evaluates the effectiveness of technology resources toward attainment of educational goals on a regular basis.

   2. The district's technology plan includes an evaluation process that enables it to monitor its progress in achieving its goals and to make mid-course corrections in response to new developments and opportunities as they arise.

Benchmark 2 Technology Integration and Literacy

A. Technology Integration

   1. Outside Teaching Time - At least 85% of teachers use technology every day, including some of the following areas: lesson planning, administrative tasks, communications, and collaboration. Teachers share information about technology uses with their colleagues.

2. For Teaching and Learning - At least 85% of teachers use technology appropriately with students every day to improve student learning of the curriculum. Activities include some of the following: research, multimedia, simulations, data interpretation, communications, and collaboration (See the Massachusetts Recommended K-12 Instructional Technology Standards).

B. Technology Literacy

1. At least 85% of eighth grade students show proficiency in all the Massachusetts Recommended PreK-12 Instructional Technology Standards for grade 8.

2. 100% of teachers are working to meet the proficiency level in technology, and by the school year 2010-2011, 60% of teachers will have reached the proficiency level as defined by the Massachusetts Technology Self-Assessment Tool (TSAT).

C. Staffing

1. The district has a district-level technology director/coordinator.

Benchmark 3 Technology Professional Development

A. At the end of three years, at least 85% of district staff will have participated in 45 hours of high-quality professional development that includes technology skills and the integration of technology into instruction.

B. Technology professional development is sustained and ongoing and includes coaching, modeling best practices, district-based mentoring, study groups, and online professional development. The professional development includes concepts of universal design and scientifically based, researched models.

C. Professional development planning includes an assessment of district and teachers' needs. The assessment is based on the competencies listed in the Massachusetts Technology Self-Assessment Tool.

D. Administrators and teachers consider their own needs for technology professional development, using the technology self-assessment tools provided by the Massachusetts Department of Education or similar tools.

Benchmark 4 Accessibility of Technology

A. Hardware Access

1. The district has an average ratio of fewer than five students per high-capacity8, Internet-connected computer. The Department will work with stakeholders to review the capacity of the computer on an annual basis. (The goal is to have a one-to-one, high-capacity, Internet-connected computer ratio.)

2. The district provides students with' access to portable and/or handheld electronic devices appropriate to their grade level.

3. The district maximizes access to the general education curriculum for all students, including students with disabilities, using technology in classrooms with universal design principles and assistive technology devices.

4. The district has procurement policies for information and instructional technologies that ensure usability, equivalent access, and interoperability.

5. The district provides classroom access to devices such as digital projectors and electronic whiteboards.

6. The district has established a computer replacement cycle of five years or less.

B. Internet Access

1. The district provides connectivity to the Internet in all classrooms in all schools including wireless connectivity, if possible.

2. The district provides bandwidth of at least 10/100/1 Gb to each classroom. At peak, the bandwidth at each computer is at least 100 kbps. The network card for each computer is at least 10/100/1 Gb.

C. Networking (LAN/WAN)

1. The district provides a minimum 100 Mb Cat 5 switched network and/or 802.11b/g/n wireless network.

2. The district provides access to servers for secure file sharing, backups, scheduling, email, and web publishing, either internally or through contracted services.

D. Access to the Internet Outside the School Day

1. The district works with community groups to ensure that students and staff have access to the Internet outside of the school day. [9]

2. The district web site includes an up-to-date list of places where students and staff can access the Internet after school hours.

E. Staffing

1. The district provides a network administrator.

2. The district provides timely in-classroom technical support with clear information about how to access the support, so that technical problems will not cause major disruptions to curriculum delivery.

3. The district provides at least one FTE person to support 200 computers. Technical support can be provided by dedicated staff or contracted services.

Benchmark 5 E-Learning and Communications

A. The district encourages the development and use of innovative strategies for delivering specialized courses through the use of technology.

B. The district deploys IP-based connections for access to web-based and/or interactive video learning on the local, state, regional, national, and international level.

C. Classroom applications of e-learning include courses, cultural projects, virtual field trips, etc.

D. The district maintains an up-to-date web site that includes information for parents and community members.

E. The district complies with federal and state law, and local policies for archiving electronic communications produced by its staff and students. The district informs staff and students that any information distributed over the district or school network may be a public record.

<u>RESOURCES</u>

Local Technology Plan Guidelines (2007-2010)
www.doemass.org/edtech/techplan/07-10guidelines.pdf

Massachusetts Recommended PreK to 12 Instructional Technology Standards
http://www.doe.mass.edu/edtech/standards/itstand.pdf

Educational Technology Standards
http://www.doe.mass.edu/edtech/standards.html