

**Cape Elizabeth School District  
Technology Plan  
2010-2013**

**Presented to the  
Cape Elizabeth School Board  
June 1, 2010**

**Cape Elizabeth Schools Technology Plan  
2010-13**

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## **Introduction**

I have been involved in Technology planning for Cape Elizabeth Schools since our first System-wide Technology Plan was presented to the School Board in 1994. This first plan addressed the issue of trying to get enough technology for our students and staff and to network our schools. We have certainly come a long way since the early stages of technology planning in Cape Elizabeth.

A technology plan is required by the Maine Department of Education and the FCC to qualify for federal Erate funds through the Schools and Libraries Division of the Universal Service Administrative Company (USAC). Cape Elizabeth has qualified and received funding through the Erate program since its inception in the early 2000's. This translates to as much as \$15,000 in reimbursements in any budget year. Erate funds have been used to supplement the district technology budget and help provide services for the district and Thomas Memorial Library. For example, the shared Internet (ATM) connection provided to all three schools and TML cost our district approximately \$24,000 per year. After federal and State Erate reimbursements this cost was reduced to approximately \$7,000 per year in local monies. Funding is certainly a good reason for technology planning but it is also good sound practice for the school district.

This Technology plan is based on the fourteen points in Maine DOE Informational Letter #7 dated July 26, 2002. This informational letter contains the most recent guidelines for technology plans as outlined by the DOE, which is also the approving agent for school technology plans in Maine. "The Federal Communications Commission (FCC) requires applicants to base requests for services to be purchased with Schools and Libraries support discounts on an approved technology plan." Plans are approved for three years and must be revised or updated every three years and resubmitted for approval

The Technology committee has met monthly this past year to examine and revise the following information to submit for your endorsement. The plan must also be submitted to the Maine DOE for official approval. The 14 points below are required as indicated by the DOE's informational letter. The broad category of each point is listed below along with the suggested information the State would like us to provide. Under each point is the information our Technology Committee put together in response to each point. We have included information from Thomas Memorial Library in our plan as we have done in the past.

Please look over the information below and forward any questions to me. The Technology Plan is on the agenda for the June 8, 2010 school board meeting. The Technology Committee would ask that the school board vote on this technology plan at that meeting. I'll be available at the meeting for any additional comments or questions you may have.

***Gary Lanoie, Technology Director***

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## 1. Community and Parental Involvement

*Involve a broad representation of the school community in the planning process. Include a description of how the technology will be used effectively to promote community and parental involvement and increase communication with parents, including a description of how parents will be informed about the technology and its proper use.*

The Cape Elizabeth Schools Technology Committee includes a broad representation of the school community. The committee's objective is to promote community and parental educational involvement by using technology to address the goal of the Future Direction Plan, "To communicate and build support among all stakeholders."

The Technology Plan includes hardware, software, professional development and support services for the following purposes:

- To responsibly share assessment data with parents
- To use technology to encourage curriculum connections beyond the school walls
- To recognize the diverse learning needs of individual students
- To train educators in the use of technology
- To strengthen leadership in technology

### **Technology Committee Members:**

Karen Abbott - Teacher, Pond Cove School  
Patricia Brigham - Parent, Community member  
John Christie - School Board Member  
Steve Connolly - Principal, Cape Elizabeth Middle School  
Tom Eismeier - Principal, Pond Cove Elementary School  
Alan Hawkins - Superintendent of Schools  
Tim Hattaway - Technology Integrator, Pond Cove Elementary School  
Jake Koelker - Technology Integrator, Cape Elizabeth High School  
Gary Lanoie - District Technology Director  
Mark Pendarvis - Teacher, Cape Elizabeth High School  
Gwyneth Maguire - Technology Integrator, Cape Elizabeth Middle School  
Dr. Shari Robinson - Teacher Leader, Pond Cove Elementary School  
Jay Scherma - Director, Thomas Memorial Library  
Matt Whaley - Teacher, Cape Elizabeth Middle School

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## 2. Vision

**Establish a vision statement linking the tools of technology with areas such as curriculum content, instructional practices, professional development strategies, and enhanced services.** (If you have already established a school or district-wide vision statement you may use it rather than establishing a separate statement, so long as it encompasses the requirements above.)

### **Cape Elizabeth School District**

**Our Mission** is to ensure that all of our students develop the knowledge, skills, behaviors, and abilities to become successful individuals and Citizens.

**Our Vision** is that Cape Elizabeth Schools will be one of the top public school systems in the U.S. having created a dynamic organization which inspires an enthusiastic, innovative and collaborative environment that results in a high level of learning and achievement for all.

About Students and Learning we believe that:

- All students can learn.
- All students should be challenged and supported in their learning.
- All students have the abilities and talents that are worthy of being recognized and developed.
- All students benefit when they are held to clear and appropriate expectations.
- As educators, we will connect with the strengths and passion for learning of each student by providing a meaningful and engaging education.
- Education must prepare students to become competent individuals and productive citizens.

About Teachers and Teaching we believe that:

- Teachers need time for collaboration, reflection and professional development on a regular, consistent basis.
- Teachers need to understand and address the different learning styles of their students.
- Our community expects, values, and supports excellence in teaching.

About school as Learning Communities, we believe that:

- Students and staff have the right to a safe, respectful, and challenging environment conducive to learning.
- Education is a shared responsibility among students, teachers, staff, parents, and the community.
- A wide range of learning opportunities must be provided in order for our students and staff to be successful.
- The quality of relationships directly affects learning and achievement.

### **Technology Belief/Vision Statements:**

- Technology supports and is a tool to assist with teaching and learning.
- Technology integrates into all curriculum areas K-12.

- Technology supports and is a vehicle for communication and collaboration between staff, students, parents and the global community.
- Technology professional development provides critical support needed for both students and staff in the lifelong journey of learning in an increasingly digital world.
- Technology provides students and staff with immediate access to information and improves productivity and efficiency.
- Using technology ethically and responsibly (Digital Citizenship) needs to be modeled, integrated and included as an important concept throughout our K-12 curriculum.

## **Thomas Memorial Library**

### **Vision Statement:**

The Town of Cape Elizabeth has established the Thomas Memorial Library to provide a place where patrons, with the assistance of an experienced and helpful staff, can explore the wealth of human knowledge through a dynamic collection of printed materials and related resources selected for the community.

The vision of the Thomas Memorial Library for technology is to support and enhance the efforts of library staff to provide high quality customer service to all citizens and to provide easy, equitable access to multiple sources of information. We believe that technology will:

- Expedite our methods of communicating with customers
- Position the Library as a recognized source of information for the whole community
- Foster enhanced communication and collaboration among library staff across the state
- Provide easy access to all library services for all users, whether inside a library facility or at their home or business.

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### 3. Goals

***Articulate specific goals, aligned with the Maine Learning Results, for using advanced technology to improve student academic achievement.***

#### **The Maine Learning Results: Parameters for Essential Instruction**

THE GUIDING PRINCIPLES – The knowledge and skills described in the Maine Department of Education Regulation 132 support Maine students in achieving the goals established in Maine’s Guiding Principles. The Guiding Principles state that each Maine student must leave school as:

A. A clear and effective communicator who:

- Demonstrates organized and purposeful communication in English and at least one other language;
- Uses evidence and logic appropriately in communication;
- Adjusts communication based on the audience; and
- Uses a variety of modes of expression (spoken, written, and visual and performing including the use of technology to create and share the expressions);

B. A self-directed and lifelong learner who:

- Recognizes the need for information and locates and evaluates resources;
- Applies knowledge to set goals and make informed decisions;
- Applies knowledge in new contexts;
- Demonstrates initiative and independence;
- Demonstrates flexibility including the ability to learn, unlearn, and relearn;
- Demonstrates reliability and concern for quality; and
- Uses interpersonal skills to learn and work with individuals from diverse backgrounds;

C. A creative and practical problem solver who:

- Observes and evaluates situations to define problems;
- Frames questions, makes predictions, and designs data/information collection and analysis strategies;
- Identifies patterns, trends, and relationships that apply to solutions;
- Generates a variety of solutions, builds a case for a best response and critically evaluates the effectiveness of the response;
- Sees opportunities, finds resources, and seeks results;
- Uses information and technology to solve problems; and
- Perseveres in challenging situations;

D. A responsible and involved citizen who:

- Participates positively in the community and designs creative solutions to meet human needs and wants;
- Accepts responsibility for personal decisions and actions;
- Demonstrates ethical behavior and the moral courage to sustain it;
- Understands and respects diversity;
- Displays global awareness and economic and civic literacy; and
- Demonstrates awareness of personal and community health and wellness;

E. An integrative and informed thinker who:

- Gains and applies knowledge across disciplines and learning contexts and to real life situations with and without technology;
- Evaluates and synthesizes information from multiple sources;
- Applies ideas across disciplines; and
- Applies systems thinking to understand the interaction and influence of related parts on each other and on outcomes. These goals are based on the National Education Technology Plan action plan steps published in 2006. These have been updated and modified to fit our district. A new draft of the National Education Technology Plan has just been released (March 2010) as we were in the final stages of completing this current plan.

## **Cape Elizabeth School District Goals**

### **Leadership**

Encourage school and district leaders to not only supervise, but provide informed, creative and ultimately transformative leadership for systemic change of the rapidly evolving development of information and communication technology.

- Invest in leadership development programs to develop a new generation of tech-savvy leaders at every level.
- Retool administrator education programs to provide training in technology decision making and organizational change.
- Develop partnerships between schools, higher education and the community.
- Encourage creative technology partnerships with the business community.
- Empower students' participation in the planning process.
- Provide district level administrative technology support (Technology Coordinator/Director) to provide management, leadership and vision

### **Budgeting and Resources**

Develop a yearly budget generated successfully through innovative restructuring and reallocation of existing budgets to realize efficiencies and cost savings with the new focus geared towards the educational objectives in terms of how they support student learning and specific educational goals.

- Consider a systemic restructuring of budgets to realize efficiencies, cost savings and reallocation.
- Encourage use of alternative funding sources (CEEF, Parent's Associations, etc.) to provide technology resources for students and staff.
- Leasing with 3-5 year refresh cycles.
- Determination of total costs for technology as a set percentage of total spending
- Examine open source alternatives to software
- Examine and implement a move towards cloud computing
- Seek technologies which reduce dependence on local infrastructure, and wherever possible advocate for simplification of that infrastructure



## **Professional Development**

Ensure that all teachers have sufficient training in the effective use of technology to enhance learning within the classroom.

- Provide new staff with support in the use of technology.
- Provide teachers access to research, examples and innovations as well as staff development to learn best practices.
- Provide professional development opportunities for effective technology integration and to benefit teacher/student learning.
- Ensure that every teacher has the opportunity to take online learning courses.
- Ensure that every teacher knows how to use data to personalize instruction.
- Provide professional level (Technology Integrators) along with technical level support to assist staff with the integration of technology into their curriculum areas.

## **Access to Technology and Resources**

Ensure that all staff have the technology resources (hardware, software, Internet access, web resources, etc) to realize the full potential of technology and it's impact in their students and classrooms.

- Broadband access 24 hours a day, seven days a week, 365 days a year to help teachers, students and parents realize the full potential of this technology.
- Ensure broadband capabilities and access are reliable.
- Make broadband available all the way to the end-user for accessing high-quality digital content , online and technology-based assessments, e-learning, and data management.
- Have available adequate technical support to manage and maintain computer networks, maximize educational up-time and plan for future needs.
- Ensure all staff have adequate access to technology.
- Identify and deliver solutions which empower students and teachers to use technology to its fullest extent with diminishing need for support

## **Digital Content**

Encourage the use of multimedia or online information (digital content) which offer many advantages, including cost savings, increased efficiency, improved accessibility, and enhancing learning opportunities in a format that engages today's web-savvy students.

- Ensure that teachers and students are adequately trained in the use of online content.
- Encourage ubiquitous access to computers and connectivity for each student.
- Consider the costs and benefits of online content, aligned with rigorous state academic standards, as part of a systemic approach to creating resources for students to customize learning to their individual needs.
- Provide an environment to make it possible for students at all levels to receive high quality supplemental or full courses of instruction personalized to their needs via an E-Learning environment.
- Provide student and teacher access to E-learning.
- Encourage teachers to teach using an E-learning format (such as MOODLE) to supplement class instruction.

## **Data Systems**

Develop and utilize an integrated, interoperable data system that allows better allocation of resources, greater management efficiency, and online and technology-based assessments of student performance that empower educators to transform teaching and personalize instruction.

- Establish a plan to integrate data systems so that administrators and educators have the information they need to increase efficiency and improve student learning.
- Use data from both administrative and instructional systems to understand relationships between decisions, allocation of resources and student achievement.
- Ensure interoperability between schools for cost savings.
- Use online testing to focus on improved instruction through rapid assessment and feedback.
- Use assessment results to inform and differentiate instruction for every child.
- Provide staff for managing, reporting, and providing professional development for our data systems.

### **Thomas Memorial Library Goals**

- Address the individual technology training needs of the library staff.
- Insure the availability of adequate computer technology through a program of rigorous maintenance and replacement.
- Maximize the effectiveness of the library's web site as an outreach tool.
- Provide electronic resources to the public.
- Integrate new technologies that support improved library services.

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## 4. Technology Assessment

*Gather information about technology currently in use so that what will be needed to meet new goals can be determined. Include a list of the equipment and telecommunication services that are necessary to reach the goals.*

Cape Elizabeth has been fortunate in providing access to technology, network services and support for our schools and staff. Technology resources have been acquired and this plan will maintain and expand on these services with the ultimate goal of impacting teaching and learning in the district. Previous Technology Plans have laid the groundwork and our hope is this plan will move us towards transforming teaching and learning.

### **Current Technology Assessment (2009-2010)**

#### **Laptops:**

Staff in our district in Grades K-12 are provided with laptop computers. The Middle and High school staff through the Maine Learning Technology Initiative (MLTI) and the elementary school with local and grant funding. This allows anytime/anywhere access to computing and network services. The elementary school is currently the school in greatest need with the oldest technology. The proposed 2007-08 technology budget will get us about two thirds of the way to laptops for all teachers at the elementary level. The subsequent budget (2008-09) should finish the elementary school and we can then claim to provide a laptop for all our staff.

#### **Network access:**

Our schools have been wired for network access for approximately 13 years now. In the fall of 2009 both the middle and high school wireless networks were upgraded with Cisco access points through the MLTI project. The Pond Cove wireless network was also upgraded by moving previous MLTI POE access points and switches to this school. If economics and funding permitted, it would be great to upgrade the Pond Cove wireless network to a Cisco system like the other two schools.

#### **Internet:**

Internet connectivity is currently provided by a T-3 (ATM) connection that is brought into our High School. Federal erate and state MSLN funding helps pay for this Internet access each year. This Internet connection is delivered to the Middle School, Pond Cove Elementary School, and our local public library (Thomas Memorial Library) via fiber optic cable connections. We are fortunate to have all of our schools plus the public library located within a campus environment that allowed our district to connect buildings together with fiber cabling. This connection allows our district to share network resources as if they were in the same building.

#### **Centralized district servers and services include:**

FirstClass - Mail Server  
Apache - Web Server  
Windows DHCP/DNS server  
Watchguard - Firewall, spam and Internet filtering  
Destiny Library database server serving all three libraries.  
FileMaker Server , Database access  
PowerSchool Server , District-wide Student Information System (SIS)  
Moodle Server , Course management system  
PaperCut , Print Management software  
Each school has its own server for storage of staff and student data files.

**Software Resources:**

Microsoft Office Professional (Word, PowerPoint, Excel & Access)  
Google Apps for Education  
Web 2.0 Tools  
Blogs, Wikis Podcast server  
iLife software suite (iPhoto, iMovie, iTunes, Garage Band & iWeb)  
Inspiration  
FirstClass Client (E-mail client)  
Internet Explorer, Firefox, Google Chrome & Safari web browsers  
Sophos virus protection software  
Other specialty software tools and titles as required by the curriculum

**Equity of access to technology:**

Computer labs are available for student use during any non-scheduled class periods. Labs are also available many days before and after school. Each school's library has 12-30 computers available for student use. The high school library is open until 4:00 PM Monday - Thursday to provide access to computers and other resources and also provides access to computers beyond the school day by allowing students to check out laptops overnight. The Community Services department uses our computer labs in all buildings for adult education courses during afternoons and evenings. All three schools have access to mobile labs for staff to roll into classrooms for technology access. As part of the Maine Learning Technology Initiative (MLTI) each of our seventh and eighth grade students and staff have an Apple iBook for school and home use. Access to technology is very good in all of our school buildings but probably the best at the middle school through the efforts of the MLTI program.

**Maintenance:**

The Technology Department of Cape Elizabeth is a joint town/school department. This joint venture is something our department has been doing for over five eight years now. Sharing services and support has helped to fund technology staffing. The district currently has three district-wide computer technicians to deal with the day-to-day maintenance of computers & technology in our schools and town. Also available are at least one Ed Tech in each school's computer lab to deal with issues within the lab and sometimes even issues within the building. The technology budget includes funding for consultant and network services to support our increasing complex network.

**Coordination:**

Cape Elizabeth School district hired a district-wide Technology Coordinator in 1996. This position still exists today and is a part of Cape Elizabeth's district leadership team. The Technology Coordinator is responsible for coordination of all the district's technology including budgeting, ordering, inventory, staff development, software purchasing, E-rate, technology planning, etc. The Technology Coordinator meets regularly with representatives from each school, the town office and public library to plan for and to prioritize future technology needs. The focus is to provide a forum for all major players to have a voice in planning for technology.

This Technology Coordinator also handles Town technology purchases. This has allowed for standardization of hardware and software throughout the school/town and also resulted in savings through educational/government pricing.

**Teacher Web Sites:**

Beginning in the fall of 2006, teachers now have the ability to create teacher website for their classes simply by using templates provided through our email system. Simply creating an email through our FirstClass mail server and simply sending the message can modify these teacher websites. Teachers no longer need to learn complicated HTML or design

factors for these websites. The templates provide the structure, all teachers need to do is add content. Included, as a template is a homework/ class calendar where teachers can post assignments or activities and have them immediately available on the web. Students and parents can access this information 24/7. The schools and public libraries have each created a web site to provide easy access to their numerous databases, card catalogs and other resources.

Google Apps for education offers a suite of tools, including Google Sites, that will give teachers the opportunity to publish teacher web sites using this tool. This may prove to be easier for staff than the current FirstClass teacher websites. Support and training on all the Google Apps will be provided beginning early in 2010.

### **Elementary School:**

Our elementary staff all have laptop computers. Some elementary classrooms also have desktop computers and there is a computer lab in the building. There are two mobile computer labs with 20 Apple iBooks available for teachers to use in classrooms. The Media Center at the elementary school has 10 computers for student access. Printing services are delivered through networked laser printers at each grade level and in strategic areas of the building. Three networked color printers are also available for staff use. Staff have access to a server for file storage and backup and several digital camcorders and digital cameras for staff/student use.

Over the last couple of years several grants provided by the parent's association and the Cape Elizabeth Education Foundation have allowed us to equip many elementary classrooms with projectors and in some cases with Smart Boards. The fall of 2009 grant cycle provided 8 Smart Boards and projectors for 14 classrooms. As of this assessment Pond Cove will need projectors in 5 -10 more classrooms to offer projectors as standard equipment in all rooms.

### **Middle School:**

Our Middle school has benefited greatly from the State of Maine's MLTI project. All staff have laptops for computing and network access. Students in grades seven and eight also have laptops for school and home use. Cape Elizabeth is a district that has allowed students to take laptops home from the first year of the MLTI project. Our district feels that there is great benefit in increasing access to technology for our students. Grades five and six have several mobile laptop labs of 24 laptops available for their students use in classrooms. The middle school contains a computer lab that is used for instruction and integration with fifth and sixth grade students. Lab computers are available to all student and staff during free periods. Access is also available in the library through 10 student accessible computers. The middle school also has available many data/computer projectors, digital camcorders and digital cameras and Smart Boards for student/staff use. Printing services are delivered through several networked laser printers at each grade level and throughout strategic areas of the building. There are four networked color printers available in the Middle School. Local printing is available in some classrooms and in Special Education areas. Currently, in process, is a grant proposal to begin an Achievement Center at the middle school.

The Middle School has also benefited from CEEF and parent's association grants. As of this 2010 assessment all classrooms except nine will have been equipped with mounted projectors.

Technology and the Internet can provide opportunities for a wealth of information and resources to supplement materials in most classrooms. Incorporating some of the media rich content available today into our classrooms is our curriculum goal. However, we must make it as easy as possible for teachers to use this content in their classes. Having the capability to display what's on a teacher's computer to the class should be a basic tool of each classroom. This is why we have been working towards getting projectors available in all classrooms in each school.

## **High School**

All classrooms teachers have laptops available or a networked computer in their classroom.

The High School has several labs available for students & staff use:

One Windows/Macintosh lab with 18 computers

Library with 20 Windows computers

Six carts with 24 laptop each assigned by department throughout the high school (English, Math, Foreign Language, Science, Social Studies, First floor cart).

Special Services also has 20 laptops for use within its program.

Achievement center with 12 windows computers

High School library computers are available for student's Monday - Thursday until 4:00 PM to provide access to computers and other library resources. The high school library provides access to computers beyond the school day by allowing students to check out laptops overnight.

Other computer labs in the building are generally available before and after school as well as during free periods.

The high school also has available several data/computer projectors, digital camcorders, digital cameras and Smart Boards for student/staff use.

The high school network was just upgraded through a renovation project several years back.

An ATM (Distance Learning) classroom is available in the high school for videoconferencing capabilities.

Printing services are delivered through several networked laser printers available throughout strategic areas of the building. There are also five networked color printers available to staff & students in the high school. Local printing is available in some remote classroom or office areas and in many Special Education rooms.

## **Thomas Memorial Library**

The Thomas Memorial Library (Cape Elizabeth's public library), which is open 55 hours a week, provides access to community members so students and the general public have the availability of computers and other library resources. The library offers access to a wireless network so students can access schoolwork with their laptops and members of the wider public can utilize their own machines. The town library and schools share the same MSLN (Maine School and Library Network) Internet connection, filtering and other network services. Currently, there are a total of 23 computers in the building; 12 of these are dedicated to general public use. All staff members have access to office computers.

## **Town Hall**

The Town Hall houses Town administrative offices, the Superintendent of Schools and Business and Technology offices. This building contains a wired and wireless network for the Town and school staff. The Technology office in this building contains one of the major network/server areas for our school/town servers.

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## 5. Collaboration with Adult Literacy Service Providers

*Describe how the program will be developed, where applicable, in collaboration with adult literacy service providers.*

The Community Services (recreation and adult education) department consults with our district's Technology Department concerning adult education course offerings and after school/summer offerings for students. Adult literacy, enrichment and many technology based offerings are available to students and citizens of Cape Elizabeth through Community Services. All courses through Community Services are offered to staff regardless of the staff member residential status at reduced costs. Citizens of Cape Elizabeth are also eligible to attend Greater Portland Adult Education for access to adult literacy courses. Check out the many offering of Community Services by going to their website.

The Community Services Department is part of the school/town network and shares many technology services (email, web access, phone, filtering, server access, support, etc.). This department also coordinates all scheduling of facilities within the school/town and handles transportation for the school district. Sharing services and collaboration are an integral part of the Community Services Department of Cape Elizabeth.

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## 6. Strategies for Improving Academic Achievement and Teacher district

*Describe how funds, specifically Ed Tech funds where applicable, will be used to improve academic achievement, including the technology literacy of all students attending schools served by the SAU/LEA; and describe how funds expended will improve the capacity of all teachers in schools served by the SAU/LEA to integrate technology effectively into curriculum and instruction.*

The Cape Elizabeth School District endorses the National Educational Technology Standards for teachers as developed by the International Society for Technology Education (ISTE). All candidates seeking to teach in the district should meet or be working towards meeting these educational technology standards. The school district will support professional development activities towards helping staff achieve these standards.

Full text and description of the ISTE standards for students, teachers and administrators can be found at ISTE's website.

The 2008 National Educational Technology Standards (NETS) for teachers are listed below:  
Facilitate and Inspire Student Learning and Creativity - Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.  
Design and Develop Digital-Age Learning Experiences and Assessments - Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S.

Model Digital-Age Work and Learning - Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

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

Engage in Professional Growth and Leadership - Teachers continuously improve their

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

The following strategies for improving academic achievement and teacher effectiveness through technology integration are being employed:

- Identify needs to achieve our goals for using technology to improve teaching and learning
  - Identify and support technology integration into curriculum, instruction, and assessment
  - Identify necessary technology and steps to increase accessibility to this technology
  - Identify professional development needs
  - Identify funding need and explore options for funding beyond local taxes.
  - Providing teacher release time for professional development
  - Identifying hardware, software and web resources necessary.
  - Repair, upkeep, and replacement of current hardware and network assets.
  - Adequate technology staff for technical and curriculum support.
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## **7. Integration of Technology with Curricula, Instruction, and Assessment**

***Describe how technology (including software and electronically delivered learning materials) will be integrated into curricula, instruction, and assessment and include a timeline for this integration.***

Integration of technology is far more than placing enough computers in enough rooms in enough schools. Rather, it is the culmination of a series of actions which must be taken by a district to assure that not only is the technology placed in the schools, but that it is also supported by competent support staff and purposed by sufficient professional high quality development opportunities. We are moving towards delivering solutions which empower students and teachers to use technology to its fullest extent with diminishing need for support. The vast array of web 2.0 tools available today allows students and staff many options for communications, access and publishing work. These tools also allow our staff to work collaboratively on the work of schools like curriculum, assessment, instruction and other district initiatives. Beginning in the winter of 2009-10 Cape Elizabeth established a Google Apps domain to begin using these collaborative tools district-wide.

Access to Hardware & Software - Before technology can be put to use in support of implementation of the Learning Results, it needs to be purposefully and systemically deployed. Cape Elizabeth has done that. Every member of the school community, both educators and learners, have access to current computers, network access, Internet Access via MSLN. Also provided is appropriate software including a productivity suite and other multimedia authoring tools and educational titles.

One-to-one access is available to students at the 7th & 8th grade levels through the statewide MLTI initiative. The district looked at moving one-to-one forward to the high school level but because of difficult economic times, just could not financially move forward with the program at our high school. This is something we believe in as a district and hope to offer our high school students in the future as the economy improves.

Software resources will not be limited to locally mounted titles. For instance, they will also include: Full text searchable databases as currently available through the State Library at: [libraries.maine.edu/mainedatabases](http://libraries.maine.edu/mainedatabases)

We are moving as a district to more online resources vs locally installed software titles. The 2009-10 school year brought about the first electronic versions of textbooks at our middle school. The schools are looking to potentially expand purchasing electronic versions of any future textbooks.



Technology Staffing - In order for the technology mentioned above to be put to effective use, it has to be available everywhere and all the time. One full-time technology coordinator as well as staff in each of the schools supports Cape Elizabeth's technology. These people play a critical role in helping the school community envision and act on the possibilities presented by the tools:

It is important to note that all of these positions are technically focused rather than curriculum focused. One area that does have room for growth is the recognition of, and action on placement of curriculum-focused technology staff, such as Technology Integrator(s). Three full time Technology Integrators were hired in the 2009-10 school year. These staff work directly with our school staff daily in each building. This is the missing link we've struggled with in this district over the past several years and will help our support our staff use the technology for the teaching/learning process.

Professional Development - Cape Elizabeth provides ongoing opportunities for staff to grow in their knowledge of both "how" and "why" to use technology to support student achievement of the MLR. Rather than purely skills-based sessions, presenters are asked to provide working sessions where educators use session time to create working materials that will directly support their students' achievement.

Assessment - NWEA an online computer test is used for assessment in reading and math in grades 3-10 to inform instruction for staff. We also give the MEA (now the NECAPS) in grades 3-8 and DRA2 at Pond Cove Elementary School. The PSAT and SAT are given at the high school. Other local assessment are given in various school (Ex: writing prompt). All assessment data is stored in our SIS (student information system) for staff access. The district has hired a Data Manager to coordinate gathering all assessment data together into our SIS. This data is available to administrators, teachers and student/parents through our SIS portal. The use of data to inform instruction is an important focus for our district.

## 8. Technology Type and Costs, and Coordination with Funding Resources

*Develop a step-by-step action plan, with timeline, that includes goals, activities, required hardware and software, costs, and funding sources. Describe the type and costs of technology to be acquired and how it fits within the current structure (use the list developed in the technology assessment in # 4, above.). Designate sources of funding, specifically Ed Tech funds, E-Rate funds, and coordination with funds from other Federal programs, and state and local sources, that support technology acquisition and integration.*

### Goal 1 - Leadership

Encourage school and district leaders to not only supervise, but provide informed, creative and ultimately transformative leadership for systemic change of the rapidly evolving development of information and communication technology.

Activities	Timeframe	Hardware/ Software	Costs	Funding Source
Professional development in technology	Ongoing	None	\$1,000	District Tech Budget
Building level staff - Integrators	Ongoing	None	\$35K/Ea.	School Budgets
Access to Workshops/ Conferences	Ongoing	None	\$1,000	District Tech Budget
Access to current technologies	Ongoing	Smart Phones, Laptops, etc.	\$10K	District Tech Budget, Erate
District Level Technology Leadership - Technology Coordinator/Director	Ongoing	None	\$80K	District Tech Budget
District Technology Committee	Ongoing	None	None	District Budget

### Goal 2 - Budgeting and Resources

Develop a yearly budget generated successfully through innovative restructuring and reallocation of existing budgets to realize efficiencies and cost savings with the new focus geared towards the educational objectives in terms of how they support student learning and specific educational goals

Activities	Timeframe	Hardware/ Software	Annual Costs	Funding Source
Purchase through leasing	Ongoing	All Technology	\$30K annually	District Tech
Replacement cycle (3-5 years)	"	All computers & technology	annual lease	District Tech
Restructuring resources	"	None	Reallocating funds	
One-to-one technology	"	Laptops		MLTI
Mobile Carts	"	Laptops, carts, etc	\$8K/cart	District Tech
Innovative Technologies	"	Smart Boards, etc.		Grants

Access to printing resources	"	Printers, Copiers	\$8,000	District Tech
Access to multimedia technology	"	Cameras, Camcorders, etc	annual lease	District Tech
Projection Systems	"	Projectors, Doc Cameras		District Tech, Grants
Phones (POTS & Cell phones)	"	Phones, Cell Phones		District
Examine Open Source Alternatives	"	Software		
Examine & Implement cloud computing	"	Google Apps	\$2,000	
Implement technologies that reduce dependence on local infrastructure	"			
Seek simplification of infrastructure	"			
Partner with neighboring districts to share costs	"	So. Portland - PD		District Tech
Partner with Town to share costs	"	Shared resources		District Tech

### Goal 3 - Professional Development

Ensure that all teachers have sufficient training in the effective use of technology to enhance learning within the classroom.

Activities	Timeframe	Hardware/ Software	Annual Costs	Funding Source
New Staff training	Ongoing	None		District Tech
Professional development in technology	"		\$5,000	District Tech
Professional level support - Technology Integrators	"		\$35K/school	School Budgets
Staff training in use of data	"			District Tech
Technical support staff - Technicians	"			District Tech
Cape (South Portland) Academy	"		\$1,000	District Tech
Online learning opportunities	"		\$1,000	District Tech
Technical Training for Technicians	"		\$1,000	District Tech

### Goal 4 - Access to Technology and Resources

Ensure that all staff have the technology resources (hardware, software, Internet access, web resources, etc) to realize the full potential of technology and it's impact in their students and classrooms.

Activities	Timeframe	Hardware/ Software	Annual Costs	Funding Source
High Speed Broadband access	Ongoing		\$3,000	Erate, NetworkMaine
24/7 Access	"			District Tech

Wireless access to network	"			District Tech, MLTI
Reliability of broadband connection	"			District Tech
Adequate Support Staff for network	"	Support Staff		District Tech
Ensure all students/staff have access	"			District Tech
Deliver solutions which empower students/staff with diminishing need for support	"			District Tech
Filtering systems and procedures	"	Firewall	\$2,300	District Tech
Replacement cycle for networking infrastructure	"	Switches, routers	\$10,000	District Tech
Software for network monitoring	"		Open Source	District Tech
Software for asset management & helpdesk	"		Open Source	District Tech
Adequate network security	"		\$2,000	District Tech

### Goal 5 - Digital Content

Encourage the use of multimedia or online information (digital content) which offer many advantages, including cost savings, increased efficiency, improved accessibility, and enhancing learning opportunities in a format that engages today's web-savvy students.

Activities	Timeframe	Hardware/ Software	Annual Costs	Funding Source
Adequate Training	Ongoing		PP Funds	District Tech
Access to computers & network	"		Annual lease	District Tech
Quality and affordability of online content	"	Textbooks, Web subscriptions		District/School Budgets
Provide accessible online content	"	Web Subscriptions		District/School Budgets
Access to E-learning opportunities	"			District/School Budgets
Training with e-learning format (Ex:Moodle)	"	Moodle Server	\$2,000	District Tech
Digital Text books & resources	"	Online Texts		School Budgets
Projectors in all classrooms	"	&nbsp;Projectors		Grants
Access to multimedia technology	"	Cameras, camcorders		Grants, District Tech
Teacher Web pages	"	Google Sites	&nbsp;	District Tech
Electronic Portfolios	"	Google Sites	\$2,000	District Tech

### Goal 6 - Data Systems

The district will strive to use data for the continuous improvement of teaching and learning. For this to work, relevant data must be made available to the right people at the right time and in a user friendly, understandable format.

<b>Activities</b>	<b>Timeframe</b>	<b>Hardware/ Software</b>	<b>Costs</b>	<b>Funding Source</b>
District Data Staff - Data Manager	Ongoing		\$50,000	District Tech
Integrated Data Systems	"			District Tech
Data Reporting Systems	"	SIS Data	\$1,500	District Tech
Interoperability between schools & systems	"	PowerSchool	\$5,000	District Tech
Online Testing (NWEA)	"		\$14,000	District
Assessment data to inform instruction	"	SIS- PowerSchool	\$1,000	
District-wide student Information System	"	PowerSchool	\$7,000	District Tech
District-wide systems (Library, Lunch, SIS, etc.)	"	Destiny, PCS, SIF	\$5,000	District Tech
Online access to systems & data	"	NWEA	\$14,000	District
Electronic Portfolios	"	Google Sites		District Tech

## 9. Supporting Resources

*Describe the supporting resources such as services, software, other electronically delivered learning materials, and print resources that will be acquired to ensure successful and effective uses of technology.*

### Technology Supporting Resources

In order for the technology in the district to be put to effective use, it has to be reliable and available everywhere - all the time. The following staffing, hardware, network, software and web based resources are available throughout the Cape Elizabeth School District:

### Technology Staffing

Position	Status	Location
Technology Coordinator/ Director	Full time administrative position	Town Hall/Superintendent's Office
Data Manager	Full Time - School year position	Middle School
Computer Technician	Full Time - Year round position	Central Office/Town
Computer Technician	Full Time - Year round position	Pond Cove/Middle School
Computer Technician	Full Time - Year round position	High School
Technology Integrator	Full Time Ed Tech position (School year)	Pond Cove Elementary School
Technology Integrator	Full Time Ed Tech position (School year)	Middle School
Technology Integrator	Full Time Ed Tech position (School year)	High School

### Hardware Resources

Hardware	Location	Continue Current Level	Notes
Laptop Computers	K-12 Staff	X	MLTI & Local Budget
Computer Labs	One per School	X	
Mobile Laptop Carts	All Schools	X	One per department at HS
One-to-One Computing	7th & 8th Grade Students	X	MLTI
Printers/Copiers	All buildings	X	Network printing available to workgroups
Color Printers	All Buildings	X	
Power management - (Battery backup, generators)		X	
Projectors	Available in all schools	X	Goal to mount projectors in all classrooms

Electronic WhiteBoards (Smart Boards, Mimios, Mimeo Pad)	All Schools	X	
Multimedia Hardware (Cameras, Camcorders, MP3 players, audio recorders)	All Schools	X	
Student Response Systems (iClickers, Smart Responder)	Middle & High School	X	

## Network Resources

Resource	Location	Continue Current Level	Notes
Fiber WAN - School	All school Buildings & Supt. Office	X	
Fiber WAN - Town	All town buildings except Public Works	X	
Fire Wall	District & Town	X	
Managed Switches	District & Town	X	
Central Routing Switch	District	X	Scheduled replacement in 2010
Network Management (Nagios, GLPI Help Desk & Asset management, OCS - Inventory)	District & Town	X	
Wireless Network	All Schools	X	
Wireless Networks	Town	X	Town Hall, TML, Community Services, Fire
Backup Systems & Software	Town & School	X	
PaperCut - Print Management Software	Schools	X	
Cape Core - Single Login System, DNS, DHCP	District	X	
Internet Connection - 50MB Fiber - School	District	X	NetworkMaine
Internet Connection - Town	Town Hall	X	Road Runner
Deploy Studio - Imaging System	District	X	
ZIS - Zone INtegration Server	Schools		
ADManager Plus	District	X	Active Directory Manager
Plato Client Access Server	High School	X	Plato is moving to a web based solution for the future
Student Notification Software	District		Implementing in 2010-11 school year
Substitute Teacher Software/Service (AESOP)	District		Implementing in 2010-11 school year

## General Software Resources

Software	Location	Continue Current Level	Notes
Microsoft Office - Windows (Word, Excel, Power Point, Access, & Publisher)	Town/ Administrative School Computers		Moving to Open Source alternatives
Microsoft Office - Mac (Word, Excel, PowerPoint)	&nbsp;Middle School		Moving to Google Apps for Education
Adobe Acrobat Reader & Preview		X	Document Viewers
Internet Explorer, Safari, Firefox, Chrome, Camino	Town/School Computers	X	Browsers
KidPix	Elementary	X	Drawing
PhotoShop Elements		X	Photo Editing
Inspiration		X	Mind Mapping
iLife '09 (iMovie, iPhoto, iTunes, iWeb & Garage Band)	Schools	X	MLTI Computers plus school site licenses
iWork '09 (Pages, Numbers & Keynote)	Schools	X	
OpenOffice		X	Open Source Office Suite
Comic Life		X	
NoteShare		X	MLTI
NeoOffice - MLTI		X	Open Source Office Suite
QuickTime, VLC, RealPlayer, Flash, Flip for Mac, Windows Media Player	All Computers	X	Media Players
Sophos, ClamAV, Kaspersky	All Computers	X	Virus Protection
Google Apps for Education (Docs, Spreadsheet, Presentation, Sites)		X	Online Office Suite
Google Earth		X	
Apple Remote Desktop, Windows Remote Desktop, Chicken of the VNC, LanSchool		X	Remote Management
Backup Exec, PreStore		X	Backup software
FileMaker, Bento		X	Database
HandBrake		X	Open Source DVD Ripping
Burn & CD Burner XP		X	&nbsp;Open Source CD Burning
Parallels or Virtual Box		X	Windows on Mac
Stuffix Expander		X	
Smart Board & Mimio Software		X	Electronic Whiteboard
Skype		X	Internet calling
ProfCast - MLTI		X	Podcasting
Omni Group Suite - MLTI		X	MLTI Laptops
Audacity		X	Audio recording
PrintShop		X	
Smart Notebook Software	All Schools	X	Interactive Whiteboard
Smart Response Assessment Software	Middle School	X	Student Response System



Mimio Studio	Middle School	X	Interactive Whiteboard
iClicker Software	Middle & High	X	Student Response System

## Electronic & Web Based Resources

**Note:** As a district we are moving towards more web based resources vs. installed software whenever possible.

Software	Location	Continue Current Level	Notes
FirstClass email	Schools & Town		Moving to hosted mail
FirstClass (Web publishing templates)	District		Moving to Google Sites
RoadRunner Email & Hosted Town Web Server	Town Hall	X	Potential combining with school
PowerSchool (Student Information System)	District	X	
SIS Data (PHP & MSQL)	District	X	Reporting & Data Access
PowerSchool Portal - (Student/Parent Access)	District	X	
SpedNet (Instructional Support Database)	District	X	
Destiny (Online Library Catalog)	&nbsp;District	&nbsp;X	
Minerva (Public Library Catalog)	TML	X	
Millennium (Public Library Admin Software)	TML	X	
Plato Web Learning Network	Middle School	X	
Plato Client Hosted Server	High School	X	Achievement Center
NWEA - Northwest Evaluation Association	District	X	
NWEA TestTaker Software	District	X	
Moodle (Course/Content Management System)	Middle & High Schools	X	
FileMaker Server	District	X	Database Server
SchoolDude - Maintenance Direct	Schools & Town	X	
Apache Web Server - Web, Blogs, Wikis, and Podcasting	District	X	Web, blog, wikis & podcast
Mac OS X Servers	Schools	X	
Windows 2003 Servers	Schools & Town	X	
Video Surveillance Server	Schools & Town	X	
Door/Card Access Server	Schools	X	
WatchGuard - Firewall, SPAM & Web filter	Schools & Town	X	
Marvel (Maine's Virtual Library)	Schools & Town	X	
URSUS - University System card catalog	Schools & Town	X	

Maine InfoNet - Statewide Library Catalog	High School	X	
NewsBank - USA & International Newspapers	High School	X	
Lexis-Nexis - Newspapers	High School	X	
JSTOR - Journal Articles	High School	X	
CQResearcher - Current Events	High School	X	
CIAO - Columbia International Affairs Online	High School	X	
PowerTeacher Online GradeBook	Schools	X	
PCS - Point of Sale Lunch System	Schools	X	
Northern Data System	Town & School	X	Accounting System
Google Apps for Education Domain	District	X	
DRA Online	Pond Cove	X	K-4 Reading Assessment
Naviance	HS Guidance	X	Guidance - College & Career Planning
Think Like a King	Middle School	X	Chess Club
iCal Server	District	X	Calendar Server
Infinite Campus State Edition	District	X	State Reporting

### Curriculum Specific Resources

Software	Location	Continue Current Level	Notes
<b>Math/Science</b>			
Geometer SketchPad	High School		
Fathom	High School		
Renaissance Accelerated Math	High School		
Green Glob	High School		
Lego Mindstorms	Middle & High School		Robotics
Graphical Analysis	High School		
DataStudio	Middle & High School		Science probes
SkyChart	High School		Astronomy
Math Blaster	Pond Cove		
Millies Math House	Pond Cove		
Numbers Undercovered	Pond Cove		
Ice Cream Truck	Pond Cove		
The Graph Club	Pond Cove		
The Crunchers	Pond Cove		Spreadsheet
Sammy's Science House	Pond Cove		
Learn About Science - Weather	Pond Cove		
Thinkin' Science Series	Pond Cove		
TestGen	High School		Teacher test generating software

Prentice Hall Science Explorer Teacher Express, Presentation Express, Exam View & Lab Zone	Middle School		Electronic Text
Transition Mathematics - University of Chicago Mathematics Project			Electronic Text
<b>Arts &amp; Technology</b>			
Sketchup Pro	Middle & High School		
ArchiCAD	Middle & High School		
Adobe Creative Suite CS3	High School		
Type to Learn, Type to Learn Jr., MicroType, Glencoe Keyboarding	All Schools		Keyboarding software
Final Cut Pro	High School		
Logic Pro	High School		
Band in a Box	High School	&nbsp;	
Finale & Finale Notepad	Middle & High School		
Kid Pix Deluxe	Pond Cove		
Thinking Things	Pond Cove		
Flight Simulator	Middle School		
Robo Lab	Middle & High School		
<b>Language Arts/Lauguages</b>			
Kidspiration	Pond Cove		
Inspiration	Middle & High School		
A to Zap	Pond Cove		
The Logical Journey of Zoombinins	Pond Cove		
Reading Blaster	Pond Cove		
Atajo	High School		Spanish Word Processing
Lexia Reading	K-8		
Mandarin Software	High School		
Bien Dit	Middle School		French Electronic Text
Avancemos	Middle School		Spanish Electronic Text
<b>Instructional Support</b>			
Boardmaker	District		
Picture It & Picture Maker	Pond Cove		
Co-Writer	Middle & High School		
Write-Outloud	Middle & High School		
Solo 6 Suite	High School		
Kurtzweil 3000	All Schools		

Jaws Pro	&nbsp;Middle School		
MacSpeech Dictate	Middle & High Schools		
Dragon Naturally Speaking	High School		
Earobics	Middle & High Schools		
Scoring Software for various testing packages	All schools		

## 10. Steps to Increase Accessibility

***Describe the steps being taken to ensure that all students and teachers have increased access to technology. The description must include how Ed Tech funds, if applicable, will be used to help students in high-poverty and high-needs schools, or in schools identified for improvement or corrective action under Section 1116 of Title I; and how the steps taken will ensure that teachers are prepared to integrate technology effectively into curricula and instruction.***

The district has shown steady growth over the past several years in providing students and staff with increased access to the latest technology. Our technology plan has provided the blueprint to upgrade technology, improve our network and increase access within our district, but shrinking budgets have impacted our replacement schedules. The MLTI laptop project's one-to-one technology initiative has changed access dramatically at our middle school. With MLTI v.3.0 we were able to refresh Middle School technology for students and staff in the 2009-10 school year. We as a district do believe in the fundamental principles of the MLTI program that it's not about the laptops – it's about teaching and learning.

Cape Elizabeth expanded the one-to one program to the ninth grade with limited success several years back. The laptops purchased for ninth grade one-to-one were moved into six carts of 24 laptops and are assigned to a department for their use. This plan is currently working well at the high school as it has enabled us to provide access across the curriculum, grades 9-12. There is some school community support to expand the one-to-one program into our high school but limited funding has hindered our efforts to continue the program. The high school library is open Monday through Thursday two hours beyond the school day to expand access to computers and other library resources.

Cape Elizabeth school district provides all staff with laptops as necessary tools for work. Having access to the same technology and software 24/7 helps our staff with accessibility and incorporating technology into teaching and learning. Staff have been provide many professional development opportunities to increase their comfort level with technology through summer workshops, opportunities to attend ACTEM's and other conferences, Technology days, and presentation at regular school faculty meetings. [EX: We are currently (Winter/Spring 2010) providing workshops on the tools provided through our Google Apps for Education domain to all staff through school-based workshops].

At the Middle School, students are encouraged to take their laptops home. The technology staff has preconfigured many of the local ISP's into our base image that we used to clone the laptops. Students should be able to take the laptop home, change the location setting and they are ready to connect to their home network. The district offers a laptop protection plan for parents concerned about damage to laptops while at home.

Several staff have attended workshops at USM or at ALL Tech on assistive technology and bring back information and software that is targeted to specific special education students. We use this information to provide access for these students with special needs. Special software programs and in some case hardware is provided student with special needs through the Instructional Services Department.

The Thomas Memorial Library (Public Library), which is open 55 hours a week, provides access to community members so students and the general public have the availability of computers and other library resources. The library has a wireless network installed so students can connect to this network with their laptops.

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## **11. Promotion of Various Curricula and Teaching Strategies that Integrate Technology**

*Describe how various curricula and teaching strategies that integrate technology effectively into the general curricula and instruction will be identified and promoted based on a review of relevant research, and promoted to leading to improvements in student academic achievement.*

Expansion of technology in all areas is ongoing. Methods of integration are reviewed and researched by District Leadership Team, building level teams and individual teachers. Staff development by teachers happens all the time both formally and informally. Our staff is constantly sharing among themselves. Three Technology Integrators were hired in the 2009-10 school year, one for each school. These staff members are available during the school day as resources for all staff.

Some of the ways promotion of technology, curricula and teaching strategies occur:

- Teacher Web Sites - Teacher web sites are currently published with templates through our email system. Plans are to move these to Google Sites as we move as a district to a Google Apps for education domain.
- PowerSchool Portal has opened communication about grading and standards for parents and students by making this information available 24/7. We have recently added assessment data (MEA, NWEA, etc.) to the portal.
- Plans are to begin collecting permission forms online through the portal in the 2010-11 school year
- Principals will often highlight technology and curricula areas in their regularly scheduled newsletters to parents.
- Articles published in the school district's newspaper "The View" that is sent to all staff and community members. Many innovative strategies are share via this newspaper.
- Email is the preferred method of communication for our school community.
- Technology Integrator/s provide resources on best practices for use of technology in student learning
- Technology Integrator/s provide web sites links to quality instructional resources
- Mini-workshops or trainings offered by technology staff for students.
- Teachers helping other teachers with workshops and training (Smart Board workshop).
- Teachers and administrators use of blogs to communicate school and district programs.
- Teachers incorporating technology in classrooms daily through use of projectors, interactive whiteboards, tablets, student response systems, MP3 Players and recorders, online rubrics, and more.
- The school and town libraries have provided access to subscription databases and their online catalogs through their websites.
- Librarians and Technology Teacher & Integrators assist other teachers in integrating new software and hardware into their curricula.
- Technology Department provides summer "mini-courses" annually and periodic workshops throughout the school year for school and town staff.

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## 12. Professional Development

***Describe how ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel will be provided to further the effective use of technology in the classroom and library media center.***

As a district, we have continued to delivered professional development in as many varied ways as possible to meet the availability and learning styles of our staff members. This professional development is offered at various times during the day and year; workshop days, after school, weekends, and during the summer. Some of these times are problematic for some staff members and there are a few staff that never have taken advantage of our optional offerings. An addition to these possibilities could be possible online workshops and staff development opportunities. An additional ideal method would be to provide time built into the school day for this professional development to occur. With the addition of one Technology Integrator per school in the 2009-10 school year has provided this opportunity for our staff. Staff can take advantage of these professionals during the work day, free/ planning periods and before or after school. These professionals along with our library/ media staff are great resources for staff in all buildings. One additional resource are peer teachers sharing instruction and resources with other staff in the building.

The 2009-10 school year started with a full day devoted to technology professional development. All staff had the opportunity to choose sessions that met their needs and interests. An overview of the day can be found here and a summary of evaluations of the day is here. Some restructuring was done with staff flex days this school year that allowed for some technology professional development on Monday afternoons in the winter/spring of 2010. Our district is beginning the process of moving to a Google Apps for Education domain to provide software and services through Google's online tools. The Tech Integrators planned and delivered three training sessions on using these Google tools in the classroom to staff at each school. The plan is to continue these professional development sessions during future school years.

A primary premise we follow in delivering technology professional development is not to teach the technology in isolation. An example of this would be teaching an application like, for example, Word as a software tool by itself. We need to incorporate direct linkages within the curriculum, teaching strategies, or improvements in achievement in all our professional development. It's not about the technology but how it can impact teaching and learning. Here is a list of various ways we deliver technology professional development in the district.

Professional development for all staff must be ongoing, varied and delivered in many different formats. Some of these formats for professional learning could include:

- Workshops available after school, weekends, and during the summer
- Workshops available to both school and town staff.
- Technology Integrator support staff in all buildings (Mentoring and coaching)
- One-on-one coaching with staff
- Modeling classroom based activities that include technology
- Web sites with quality resources for teachers
- Atomic Learning and other websites available with software tutorials for 24/7 availability
- New staff technology training

- Provide out of district opportunities for professional development (EX: ACTEM conference, MLTI trainings, etc)
- Bring resources and opportunities into the district for staff
- Collaborate with nearby districts to offer staff development trainings that benefit many districts
- Learning with students
- Offer recertification credits and flextime opportunities for those involved in technology staff development
- Communicate to staff professional development opportunities available through other groups (MLTI, ACTEM, etc.)
- Workshops and courses delivered via distance learning (video conferencing)
- Online learning opportunities (Webinars, online courses, etc.)

When looking at standards for technology we look to the work of ISTE and the NETS project.

The National Educational Technology Standards (NETS) Project is an ongoing initiative of the International Society for Technology in Education (ISTE). What is the NETS project? This project has developed standards for teachers, administrators and students. Click on the links below to access these national standards.

[National Educational Technology Standards for Teachers](#)

[National Educational Technology Standards for Administrator](#)

[National Educational Technology Standards for Students](#)



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## 13. Innovative Delivery Strategies

*Describe how the development and use of innovative strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distance-learning technologies, will be encouraged, particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources.*

The district uses a variety of innovative technology strategies to support the infusion of technology into the curriculum. The following are some of the innovative technologies provided along with staff development and technical support to help with incorporating them into the classroom.

- Classroom resources available via the Internet
- Classroom websites and homework/class calendars
- High School's Achievement Center (Plato software)
- Middle school RTI (Response to Intervention) room (Plato & Lexia)
- Online textbooks and supplemental materials
- Distribute & collect assignments by the teachers
- Students submitting assignments electronically
- Classroom blogging websites
- Podcasting
- Wikis
- NoteShare
- Video conferencing opportunities at all schools
- Interactive White Boards and slates
- Courses available via iTunes University
- Video/voice calls and conferencing
- Online content and courses delivered through the district's Moodle server
- Staffing support for the use on innovative technologies
- Mobile labs at all schools available for staff to roll into their classroom and access online tools
- Use of digital media in classrooms
- Online science and math labs
- E-Instruction
- Sharing, editing and collaborating with online documents
- Porta Portal websites
- Use of virtual online activities (Dissection simulation)
- Online testing and assessment capabilities
- Online Editing
- Online Rubrics
- Web 2.0 Tools
- Collaborative learning
- Digital portfolios (ePortfolios)
- Student Response Systems
- One-to-one Internet access device
- Adaptive hardware and software

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## 14. Accountability Measures

*Describe the process and accountability measures which will be used to evaluate the extent to which the plan activities are effective in integrating technology into curriculum and instruction, increasing the ability of teachers to teach, and enabling students to reach Maine's Learning Results.*

Yearly staff development programs address expansion of curricula and strategies for integrating technology to promote student progress in the Maine Learning Results. The District Technology Committee will evaluate and update our plan yearly. This evaluation assesses the progress made on the yearly action plan and identifies any new outcomes or courses of action. Surveys, examples of data, summary of meetings, professional development data, etc. can be provided to document progress in meeting these outcomes.

- Use of technology to assess students annually (NWEA)
- Analysis of external student performance data yearly (MEA, NWEA, PSAT, SAT, etc.)
- Analysis of internal (local) student performance data yearly (Ex: common writing prompts)
- Gather and analyze data on technology use from students, staff and community members.
- Review Technology Plan annually as it pertains to district budgets
- Make adjustments to Technology Plan as necessary resulting from budgets and district priorities
- Data gathered and kept in one place (PowerSchool - student information system) for easy accessibility
- Improved communication between students, parents and teacher with student data online
- Easy administrative reporting system for parents students and teachers (Report cards & Progress reports online)