Milford School District
SAU#40
Technology Plan

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I.   Introduction: Technology and the Milford School District

Milford School District Demographics: Milford School District serves approximately 2350 students in Milford, New Hampshire, a town of about 15,000 people in southern New Hampshire. Jacques Memorial School is a primary school housing our special education preschool program, kindergarten and grade 1. Heron Pond Elementary School is an elementary school for grades 2-5.   Milford and Mason students in grades 6-8 attend Milford Middle School. Milford High School and Applied Technology Center serves Milford and Mason students in grades 9-12, as well as applied technology students from Hollis-Brookline High School, Wilton-Lyndeborough Cooperative High School and Souhegan High School. Additionally, Project DRIVE, housed in the Bales building, serves approximately 25 students in grades 3-12 needing an alternative setting and a more personalized educational program.

How the technology plan was developed: During the 2016-2017 school year, the District Wide Technology Committee composed of teachers, building and district administrators, classified staff members and school board/community members met throughout the year to develop and revise the technology plan and vision of the district. The composition of the committee was important to ensure that all parties were involved in the decision making process so that the plan served all members of the school community.   We discussed and debated current best practices to determine which best served our community in the integration of technology into the classrooms to improve instruction, student engagement, communication and infrastructure throughout the district.

Technology Committee Members:

District and Community Representatives:
Jennifer Burk, District Business Administrator
Ron Carvell, School Board and Community Member
Jerry Stajduhar, Director of Technology
Michael Tenters, Director of Curriculum & Instruction

Milford High School (MHS) Representatives
Judy Brouillette, Social Studies Teacher, Webmaster & Project DRIVE staff member
Paul Christenson, Director of Student Services MHS
Bryan Field, Science Teacher
Beth Solan, Mathematics Teacher & Community Member
Jean Shankle, English Teacher and Community Member

Milford Middle School (MMS) Representatives
Anthony DeMarco, Middle School Principal
Pamela Moreau, MMS Technology Integration Specialist
Mark Evans, Science Teacher

Heron Pond Elementary School (MESH) Representatives
Don MacIntosh, Computer Teacher
Jenifer Hollander, Grade 3 Teacher

Vision for Technology

We believe that technology can improve communication, enhance the development of problem solving skills, make instruction more efficient and effective and help students to develop critical life skills. In order for the Milford School District to fulfill our technological vision and become a 21st century learning environment, stakeholders need a range of current technologies including software, equipment, tools and applications. This plan will guide us as we help students and educators to use communication and information technologies to enhance and expand teaching and learning in the Milford School community. Users will demonstrate responsible, ethical, safe and legal standards of behavior as they become increasingly more sophisticated in their abilities to apply information literacy skills in their personal and academic lives. Milford students will enter the workplace and higher education with confidence, able to navigate the world of instantaneous information and ever-changing technologies.

II.   Goals

Technology, Our Mission, and District Goals

The mission of the Milford School District is to provide a quality education that challenges all students to succeed. We recognize that students need access to current technological resources and appropriate instruction to support their learning in an ever-advancing technological world.

Data generated through outreach to all stakeholders informed the Technology Plan revision. The impact of technology and its role in preparing our students to meet 21st century challenges are themes that are supported by both the school district and the community.

Technology access and integration have been an ongoing component of the *curriculum and instruction cycle* developed jointly by all district stakeholders. As each curricular area is reviewed (and as we utilize a new tool for recording and publishing curriculum), where, when and how technology is used will be indicated on curriculum guides. Included in the appendix is a copy of the Milford Curriculum Cycle and our curriculum maps are available on the Milford School District website (http://milfordk12.org/district-info/curriculum/). The information technology curriculum is scheduled for review as are other content areas through our regular renewal cycle whereby curriculum is aligned to state and national standards. Additionally, many of the technological advancements suggested in the technology plan are actualized in subject area annual curriculum cycle budgets as we modernize instructional practices and learning opportunities for students.

Technology is a focus area in our *Professional Development Master Plan*. All staff members are required to meet technology professional learning requirements as part of their Individual Professional Development Plans. Our common professional development and technology goal is to support the differentiated technology learning needs for staff members whose expertise and learning priorities are varied. Information about our teacher Portfolio/ePortfolio requirements are explained in the professional development section of this Technology Plan.

The success of every child guides our decision making. A section of this Technology Plan is devoted to this Personalization of Learning. Software and web-based applications are utilized to track student progress, to analyze data that drive instructional decisions, and to communicate with all stakeholders. The school district's commitment to implementing a Google environment and providing students with Google accounts offer much to the management and delivery of personalized education programs and the

realization that our district will be moving forward to provide our students with the most appropriate education utilizing technology.

The Milford School District's "Tech-Ready" Classroom

What is a tech-ready classroom?

A tech-ready classroom provides the tools necessary for the seamless integration of technology and classroom instruction. These classrooms will help students develop and hone technology skills, create e-portfolios and demonstrate mastery of Information and Communication Technology (ICT) skills and concepts.

What would you see in a tech-ready classroom?

Elementary Level:
- One teacher computer/laptop/Chromebook
- Wireless internet access
- Two - five student computers and/or access to Chromebooks
- Access to one-to-one computing for students
- Student accounts with network storage through Google environment
- Access to appropriate assistive and adaptive technologies
- Access to a presentation system which includes the following: LCD projector, computer, Google Classroom, monitor and speakers, document camera
- Interactive presentation device
- Access to digital camcorder and still camera

Middle and High School Level:
- One teacher computer (preferably a laptop)
- Wireless internet access
- Several student computers or other digital productivity devices (graphing calculators, chromebooks, etc.); quantity depending on instructional needs in each classroom
- Access to one-to-one computing for students / classroom carts of Chromebooks
- Student accounts with network storage – accessible from home and school through the Google environment
- Access to appropriate assistive and adaptive technologies
- Access to a presentation system which includes the following: LCD projector and/or SmartBoard (or other similar interactive device) depending on instructional needs, computer with Office productivity pack, Google Classroom, monitor and speakers
- Document camera
- Access to digital camcorder and still camera

III. Action Plan

Technology Action Plan: A: Access to Technology Resources

Milford School District **Technology Plan** **Tech Plan Area: Access to Technology Resources**		
Goal 1: Digital tools and interactive technologies maximize access and support innovative teaching and learning in all content areas.		

Action steps:
  1. Provide and maintain hardware to support tech-ready classrooms.
  2. Facilitate tech-ready classrooms as effective learning environments.
  3. Implement processes and protocols for identifying, selecting, using and evaluating software and online resources that will guide effective technology integration.
  4. Promote developmentally appropriate, effective and creative use of digital tools in the classroom to improve student achievement.
  5. Coordinate tech ready classroom implementation with curriculum development (ICT literacy and other content areas) and related professional development.
  6. Maintain and monitor an inventory of technology resources, using local inventory and state technology survey data to guide budgetary and other improvement decisions.
  7. Work within the parameters of technology budget.		

Success indicators: What does this look like when it is accomplished? ➢ Digital tools are harnessed in the connected classroom and leverage effective learning ➢ Students are engaged and interested in classroom learning activities designed to integrate technology in one-to-one learning environments ➢ Hardware and software is reliable, appropriate, and comprehensible for end users		
Evaluation Questions: To what extent are our classrooms technologically connected? To what extent are digital tools supporting effective and creative instruction?		

Measureable outcome	Data source	Current Status
Classrooms meet SAU 40 "Tech-Ready classroom standard"	Technology inventory; state technology survey	Have inventory; need to analyze data to evaluate status of connected classroom standard
Digital tools and interactive technologies are integrated so the result is effective, creative instruction	Sampling of technology integration lesson plans; use of new online curriculum program	Information is informal through teacher evaluation system and ePortfolio work; need baseline data that includes all classrooms

Access to Technology Resources Three-Year Plan

School Year 17-18
- Maintain current systems and upgrade/replace every 5 years
- Audit technologies to determine status of tech-ready classrooms
- Continue plan for multi-year purchase to get to 100% tech-ready classrooms to include curriculum

cycle and other improvements
- Budget according to plan
  - o For Social Studies Curriculum cycle, purchase 6 Chromebook carts for MHS, 6 for MMS, 2 for Heron Pond and 4 Chromebox labs

School Year 18-19
- Maintain current systems and upgrade/replace every 5 years
- Continue to purchase equipment for tech-ready classrooms per the plan
- Assess need to adjust for technological developments that may enhance or facilitate goals in more efficient ways
- Budget according to plan
  - o For Science Curriculum cycle, purchase 7 Chromebook carts for MHS, 4 for Heron Pond and interactive surfaces for MMS, purchase of 7 Smart boards / Interactive whiteboards for the science classrooms

School Year 19-20
- Continue to assess need to adjust for technological developments that may enhance or facilitate goals in more efficient ways
- Continue to budget for and purchase equipment per plan
  - o For World Language Curriculum cycle, purchase 4 Chromebook carts for MHS
  - o Begin replacement of Chromebooks from initial implementation year (300-400)

Current status – Digital tools

2017 Inventory							
School	**Computers**			**Labs**	**Chrome devices**	**LCD projectors**	**Interactive Surfaces**
	student	teacher	admin				
Milford High School	201	91	21	14	310	39	14
Milford Middle School	116	63	21	4	252	53	24
MES Heron Pond	194	71	18	4	160	22	5
MES Jacques	88	37	9	1	2	19	
DRIVE School	25	8			31	4	4
SAU & Offices of Special Services			21		2	1	
	624	**270**	**73**	**22**	**757**	**138**	**47**

Milford School District
Technology Plan
Tech Plan Area: Infrastructure

Goal 2: Resources are designated to improve infrastructure, increase connectivity, ensure safe and secure storage and use of data and information, and enable and enhance teaching, learning and productivity.

Action steps:
1. Provide and maintain sufficient infrastructure to support connected, effective learning environments.
2. Increase network Wide Area Network (WAN), Campus Area Network (CAN), Local Area network (LAN) and wireless performance, stability and security.
3. Monitor network protection from Spam, viruses, harmful web sites and improve as required.
4. Monitor bandwidth capacity and increase based on user requirements.
5. Improve protocols/procedures for hardware and software deployment and self-help/help desk support.
6. Evaluate staffing needs and increase technology support staff incrementally.
7. Continue necessary upgrades to systems software applications, including update to windows 2016r2.
8. Continue to provide resources for support and maintenance in the regular budget cycle.

Success indicators: What does this look like when it is accomplished?
➢ The network infrastructure is stable, secure, and reliable for use in teaching and learning
➢ The network WAN, LAN and wireless bandwidth is sufficient to provide access in pace with teaching and other school functions
➢ Protocols, procedures and a support system are in place, and staff and students are instructed so they have the ready means to get technology support
➢ Wireless access is in place to meet educational needs requiring mobility
➢ Sufficient technology staff provide staff and students support in a reasonable time frame

Evaluation Question: To what extent does infrastructure support effective and efficient teaching, learning, and operations?

Measurable Outcome	Data Source	Current Status
Effectiveness and stability of network design and capabilities	Feedback from curriculum leaders, user groups, and open forums; analysis of workflow requests	Ongoing improvements target increased WAN, CAN, LAN and wireless bandwidth and stability; Continue to monitor network and feedback and update
Safety and security of network	Sophos virus and Smoothwall web filter reports	Sufficient
Use of protocols and procedures	Feedback from curriculum leaders, user groups, and open forums; analysis of request workflow	Updating procedures to reflect new support flowchart, continue to monitor feedback and update
Base technology support staffing 1 IT staff for approximately every 400 network users	Analysis of staff numbers and needs	Sufficient
Budgeted resources for support and maintenance	Annual District budget	Funding limited by restrictive budgets; recent improvements funded by an increased emphasis on technology; currently working to align technology purchases with curriculum cycles

Infrastructure Three-Year Plan	
Where we are now:	
Network	Wide Area Network sufficient for current usage Local Area Network sufficient for current usage Wireless Network sufficient for current usage
Staffing	1 full time director of Computer Technology 4 full time and 1 part time Technology Associates 6 web managers (annual stipend)
Support protocols and procedures	School Dude – online help desk request and recordkeeping software SYAM - managed services and inventory software Limited mutual feedback through building leaders, user groups, and open forums

School Year 17-18
- Analyze technology staffing and make a plan to increase/reprioritize staffing based upon budgetary investments in Chrome devices
- Continue to evaluate classroom technology and wireless capacity
- Budget to refresh aging hardware
- Analyze wireless system to insure adequate coverage for increasing usage
- Finalize work on e911 phone system functionality
- Expand Etrition EZpay to allow parent payments to other dues and fees
- Move Snap to 100% server based. Integrate it with Powerschool
- Install redundant internet connections at all campuses using Comcast cable modems
- Upgrade Accounting system hardware
- Continue to virtualize hardware
- Phase out legacy Hewlett Packard switching
- If CIP funds are available, install generator and large UPS to support switching and servers at the High School, SAN, virtualization

School Year 18-19
- Budget for increased/reprioritized staffing per plan
- Continue to evaluate classroom technology and wireless capacity
- Budget to refresh aging hardware
- Analyze wireless system to insure adequate coverage for increasing usage. Anticipate need for additional wireless access points
- Increase internet bandwidth to 1Gbps
- Install wireless internet access in the HS athletic fields
- Begin upgrading top-of-rack switches to 10 Gbps
- Maintain feedback groups and workflow analysis. Communicate and update protocols and procedures to all staff

School Year 19-20
● Budget for increased/reprioritized staffing per plan ● Continue to evaluate classroom technology and wireless capacity ● Budget to refresh aging hardware ● Budget for replacement of wireless access points to latest version ● Increase site to site bandwidth to 10 Gbps ● Upgrade Microsoft infrastructure to Server 2016r2 ● Finalize installation of 10 Gbps top-of-rack switches ● Maintain feedback groups and workflow analysis, update protocols and procedures

Technology Action Plan: B: Technology/ICT Literacy

Milford School District **Technology Plan** **Information and Communications Technology (ICT) Literacy**
Goal 3:- **All students learn to employ information technology literacy skills in all content areas, documenting personal progress through electronic portfolios and other media.**
Action Steps: 1. Continue the rollout of the Google Suite for Education and provide staff and students with the training needed to effectively use the platform for research, collaboration and product creation. 2. Reevaluate the usage of ePortfolios and include technology in curriculum documents. 3. Expand access, storage and presentation tools available to students and teachers to create technology rich products. 4. Provide teachers with support, tools and training required (which could include assistive or adaptive technologies) to integrate technology in content area instruction and learning activities in all grade levels. 5. Conduct research to explore how universal design for learning can be used to best accommodate students to ensure we are assessing ICT literacy skills rather than the extraneous ability a student needs to respond to the assessment task.
Evaluation question*:* **To what extent are students able to demonstrate their learning?**

Measureable Outcome	Data Source	Current Status
ICT literacy artifacts created in core classrooms and documented	Sampling of artifacts	Artifacts come from some core classes and technology classes; students collect, save and reflect upon artifacts
Completion of 8th grade ePortfolio requirement and high school technology requirement	Completion data from MMS and MHS	ePortfolio rubrics in place; assessment of ePortfolio at MMS

Current and relevant ICT literacy curriculum aligned to state and national standards	ICT literacy curriculum; state and national ICT literacy standards; student work samples	ICT curriculum recently updated, but components need to be embedded in other curricular areas
Use of technology in classrooms for collaboration and product creation	Sampling of artifacts; usage surveys; teacher observations	A significant increase of tech use began during the 16-17 school year; additional training/PD is needed to increase effectiveness

ICT Literacy 3 Year Plan

Where we are now: – ePortfolios are evaluated in grade 8 and 98% of students meet the 8th grade requirement prior to high school. All students are required to earn one credit in advanced ICT content as part of high school graduation. This is accomplished by taking an advanced technology course or successfully demonstrating advanced ICT literacy abilities in an ePortfolio. ICT portfolio rubrics are included in the Appendix of this plan.

SY 2017-18
- Reevaluate ePortfolios in grade 8 and high school graduation requirement
- Expand in-district and out-of-district access to storage and presentation tools for students and teachers
- Create an assessment tool to measure support, tools and training available for students and teachers; review data to assess the technological needs for students and teachers.
- Continue to implement and embed our new ICT Literacy curriculum that meets state and national standards
- Evaluate ePortfolio Assessment Rubrics

SY 2018-19
- Make any necessary changes to ePortfolio and/or graduation requirements associated with technology
- Continue to expand in-district and out-of-district access to storage and presentation tools for students and teachers
- Provide support, tools and training as indicated by data collected from students and teachers
- Work with the Curriculum Team, administrators and tech integrators to determine needs for lessons and PD on digital citizenship
- Budget to implement the ICT Literacy curriculum
- Review and revise ePortfolio Assessment Rubrics as needed

SY 2019-20
- Determine effectiveness of changes made to ePortfolios
- Take steps to ensure ubiquitous access to storage and presentation tools by students and teachers
- Continue to provide support, tools and training as indicated by data collected from students and teachers
- Review and revise the ICT Literacy curriculum in all core content areas
- Budget for needs around digital citizenship
- Review and revise ePortfolio Assessment Rubrics as needed

References:

Information Literacy/Technology Literacy Curriculum on Milford School District website –
www.milfordschools.net/district/currprofdev/Curriculum/it2004.pdf

ICT Literacy Curriculum: state curriculum document
http://www.nheon.org/ictliteracy/kit1.html

Technology Action Plan: ICT and the Personalization of Learning

Milford School District **Technology Plan** **ICT and the Personalization of Learning**

Goal 4: Digital tools, interactive technologies, and adaptive and assistive resources will facilitate personalized learning and teaching to support each student's success.

Action steps:
1. Research and develop methods to best accommodate all students learning needs.
2. Conduct research to explore how universal design for learning can enable accommodations for students to ensure we are assessing/instructing for intended learning rather than the extraneous abilities a student needs to respond to an assessment task or learning activity.
3. Continue to increase the use of technology toward improving data storage and historical analysis of student achievement information to enable our efforts to assess and track student performance, communicate student progress and leverage data driven decision making for instructional improvement.
4. Leverage online learning communities and distance learning venues connecting all who desire greater participation in education and enabling self-directed learning opportunities (e.g., parents, educators, members of the community as well as students).
5. Engage students with learning experiences both in and out of school that help prepare them to be active, creative, knowledgeable and ethical participants in our globally networked society.
6. Use technology to provide all learners with online access to effective teaching and better learning opportunities and options especially in places where they are not otherwise available.

Success indicators: What does this look like when it is accomplished?
➢ Teachers are able to choose appropriate tools and methods to strengthen student abilities when engaged in technological and other learning activities
➢ Teachers are able to track and monitor student progress through efficient and effective data management systems and to use that information to personalize instruction
➢ Options are available to students and educators for engaging in learning via large groups, small groups, and work tailored to the individual's goals
➢ Staff at all levels in the district continue to revise, create, and implement learning objectives using technology for all content areas that reflect the most current expertise and the power of technology to improve learning
➢ Students have access to learning resources and connections to a wider set of resources (e.g., educators, parents, experts, mentors, etc.) outside of the classroom to enable lifelong learning
➢ Students demonstrate the integration of state and national technology standards through real-world activities, similarly performed by professionals across various disciplines
➢ Teachers create a connected presence for the research, collaboration, and communication to prepare students to be more productive members of a globally competitive workforce
➢ Students can access and receive appropriate credit for the learning opportunities that are otherwise not available in district

Evaluation question: What is the relationship between student achievement and the increased access to digital tools?		
Measureable Outcome	**Data Source**	**Current Status**
Effectiveness of systems designed to document student achievement and its use in planning instruction	Case studies or teacher interviews/surveys; PowerSchool usage data; use of NWEA/Performance Plus reports	Implemented since SY08-09; need information on current effectiveness; some use of data sources, but training and time are needed
Use of technology to personalize instruction and provide intervention	Program evaluation- student achievement data; usage surveys	Being piloted in many areas, including a 1-to-1 environment at DRIVE
Access to online curriculum and resources by students and teachers	Analysis of lesson plans and student artifacts	Students' ePortfolios assessed at grade 8. Only informal review of technology integration through teacher evaluation system
Access to distance/online learning	Data about student enrollment in off-campus learning opportunities	Need data on student enrollments in online courses

Where are we now?
We do not currently have a formal method of evaluating tech use and its effect on student achievement, just teacher stories and informal observation data about individual success stories.

Personalization of Learning Three-Year Plan

School Year 17-18
- Explore additional adaptive and assistive technologies in all classrooms to ensure access to and success with the general curriculum for all students
- Continue to track and communicate student progress and improve data storage methods
- Create (and expand current) infrastructure for learning that is always on, available to students, educators, and administrators regardless of their location or the time of day; it enables seamless integration of in and out of school learning (NETP) p. 11
- Communicate and expand opportunities for students to engage in always-on-learning activities with which they can repeatedly receive high school credits, regardless of their location or the time of day
- Continue the implementation of Google and the Google Suite for Education
- Continue to provide PD for performance tasks, Problem-Based Learning, and competency-based education
- Explore Universal Design for Learning as a way to meet individual needs

School Year 18-19
- Increase utilization of adaptive and assistive technologies to ensure success for all students
- Continue to track and communicate student progress and improve data storage methods
- Provide infrastructure for learning that is always on, available to students, educators, and administrators regardless of their location or the time of day; it enables seamless integration of in and out of school learning (NETP p. 11)
- Continue to communicate and expand opportunities for students to engage in always-on learning activities with which they can repeatedly receive high school credits, regardless of their location or the time of day
- Make modifications to district competencies as needed and continue to provide tools and training for performance tasks, Problem-Based Learning, and competency-based education

School Year 19-20
- Increase student success and independence through seamless use of adaptive and assistive technologies   - Continue to track and communicate student progress and improve data storage methods   - Provide the infrastructure for learning that is always on, available to students, educators, and administrators regardless of their location or the time of day; it enables seamless integration of in and out of school learning (NETP p. 11)   - Review, revise and continue to provide opportunities for students to engage in always-on learning activities with which they can repeatedly receive high school credits, regardless of their location or the time of day   - Determine additional needs for PD and training associated with performance tasks, Problem-Based Learning, and competency-based education

Technology Action Plan: C: Professional Development

Milford School District **Technology Plan** **Professional Development**
Goal 5: The technology plan and the professional development plan provide support for the differentiated professional learning needs of faculty and staff.
Action steps: 1.   Assess individual technology literacy of teachers, principals, paraeducators and other support staff. 2.   Create a structured peer system of support for technology learning. 3.   Structure ongoing, job-embedded professional learning in the use of digital tools and applications. 4.   Increase use of technology coaches/integrators in the district and academies or training sessions available to staff.
Success indicators: What does this look like when it is accomplished? ➢ Staff members continue to improve their skills in using technology to become more effective and efficient doing their jobs ➢ Staff members will provide evidence of how effective technology integration and implementation enhances the curriculum and student learning
Evaluation question: To what extent are the technology learning needs of all staff being met?

Measureable Outcome	Data Source	Current Status
Increased ICT literacy of staff	Individual Professional Development Plan data (CEU summary/Teacher Portfolios); LOTI or other teacher technology competency survey	After school or school day workshops and presentations offered for staff in all buildings
Increased utilization of technology that is appropriate to teachers' content area or grade level	Individual Professional Development Plan data (CEU summary/Teacher Portfolios); LOTI or other teacher technology competency survey	Teachers continue to have increased access to technological resources but need additional training to use these resources efficiently and effectively

Increased number of teacher created websites/use of Google Classroom	District website provides links to teacher websites; Google Classroom usage	There is an increase in the use of websites/Google classroom usage, but more training is still needed
Grade level, team, and/or subject specific shared drives with hyperlinked curriculum, assessment and other resources for professional development	Audit of information in district network shared drives; use of new online platform	Some shared drives are available but not well-organized. New online curriculum program will start during 16-17 school year

Professional Development Three-Year Plan

Where we are now: We currently have broad, district-wide surveys to measure technology literacy. Training in use of new hardware or applications is available for targeted users and is related to using technology for instruction. Differentiated technology-related professional development is increasing, but still somewhat limited. Peer support and collaboration occurs informally. There has been an increase in teacher-created websites. There is a 15 CEU technology requirement in the Professional Development Master Plan. Shared drives for teacher collaboration are available but not organized for easy accessibility.

School Year 2017-2018
- Develop and implement targeted assessments to measure technology literacy for all professional and support staff
- Encourage individualized plans to advance technology skills to be integrated into the professional development goal-setting process
- Continue technology-related professional development with an emphasis on differentiation, Problem-Based Learning, performance tasks, Google tools and Google Classroom and any new hardware/software that is implemented
- Educate faculty and staff about the new technology plan, especially our vision of a connected classroom and a tech-ready teacher
- Develop a system to facilitate collaboration and match professional development needs with peer technology experts who will provide peer support in each building and throughout the district, using approaches such as academies, one-on-one coaching, and guided learning or development planning
- Begin to organize shared drives to make more accessible to all staff
- Begin the use and provide training for a new, online curriculum application
- Explore the addition of Technology Integrators throughout the district

School Year 2018-2019
- Direct teacher professional development to external resources such as regional technology centers and local/online colleges, as well as continue professional development to integrate technology and increase student achievement
- Continue technology-related professional development with an emphasis on differentiation, Problem-Based Learning, performance tasks, Google tools and Google Classroom and any new hardware/software that is implemented
- Organize shared drives to be easily accessible for teachers
- Continue implementation of online curriculum application
- Add a Technology Integrator at MHS

School Year 2019-2020
- Ensure mechanisms/opportunities are fully in place for staff to enrich/extend their technology skills as a natural extension of their needs
- Continue to plan for and implement technology professional learning activities as part of the overall plan for instructional improvement and technology integration
- Regularly archive and assess completed tech integration work for all students and teachers
- Full implementation of online curriculum application

The Milford School District's "Tech-Ready" Teacher
(Based on ISTE Standards: https://www.iste.org/standards/standards/standards-for-teachers)

- Learns and applies new technological tools and applications

- Integrates technology into daily lesson plans, using content specific software in instruction and student data management systems

- Assesses the value and validity of technology in his or her classroom

- Understands, practices and disseminates to students the responsible use of technology

- Uses and instructs students in the use of the internet and other tools to conduct research and create products

- Demonstrates evidence of professional development in the area of technology

- Understands the operation and requirements of our local technology resources and uses them in an appropriate and informed manner

Technology Action Plan: Community Collaboration

Milford School District **Technology Plan** **Community Collaboration**
Goal 6: An effective, efficient and secure infrastructure and telecommunication system will facilitate collaboration and eCommunication among students, teachers, staff, the community and the Global environment.
Action steps: 1. Increase regular, timely and consistent communications to parents and the public utilizing 21st Century tools: **Blackboard** automated telephone system, PowerSchool Student Management System (student and parent portals), parent email distribution lists, teacher generated websites, school websites, the District website and Google Apps. 2. Review eCommunication practices and develop strategies for successful interactions with parents and other stakeholders. 3. Improve access to information and applications from in-district and remote locations by all members of the school community. 4. Utilize extended learning opportunities and virtual learning environments as appropriate (VLACS, long distance learning opportunities, teacher generated websites, other web resources).

Success indicators: What does this look like when it is accomplished?

- All stakeholders have regular, timely and consistent communication through the use of 21st Century Tools
- Collaboration between students, school, parents, and the community will be ongoing and seamless

Evaluation Question: To what extent does our infrastructure and technology system support the communication needs of the District?

Measureable Outcome	Data Source	Current Status
Increase of regular, timely and consistent communications with parents and the public	Usage data - website and PowerSchool hits; parental, student and community feedback	Data available, but needs to be reviewed and analyzed
Determine needs of District and the community	Parent/Community/Staff survey data	Survey/Google form needs to be developed after roll out of Google platform.
Respond to needs of District and community	Interviews; online feedback; survey results	Review of the data after survey will be necessary; some data available from NEASC self-study

Communication and Collaboration Three Year Plan

Where we are now:

Communications Venues:
Community Access Television (CATV) is being utilized to televise school board meetings to provide information to the community. All schools are using email distribution lists to communicate more efficiently, timely and consistently with parents. All staff members have been provided work emails which are published for parents, students and community to use.

PowerSchool:
Was fully implemented during the 2008-2009 school year. Parent and student portals were activated allowing students and parents access to student attendance and grades. Staff is utilizing PowerSchool on a daily basis. Most student data is consolidated. Parent email notification of grades and attendance is functional.

District and School Webpages:
Was redesigned in 2007. Web Pages are regularly updated by district and building webmasters. The district website has been expanded to include a variety of curriculum and instruction resources for parents, students and the community. Organizational structure of website and operational speed need improvement.

Blackboard:
Voice over Internet program actively used for important and emergency communications to parents; data drawn from our PowerSchool database.

The Virtual Learning Academy (VLACS):
Has also been introduced and a number of high school students are taking advantage of these free, online

credit bearing courses. Middle school homebound and home schooled students have been introduced to VLACS.

Google School:

The district became a Google School during the 2016-17 school year. Training has been ongoing and there has been increased teacher and student use of the Google platform.

School Year 17-18
● Review/discuss online student course selection at the high school
● Provide students and staff with increased access to files on high school servers/Google
● Develop a plan to promote and increase web-based collaboration internally and externally (with parents and community)
● Evaluate PowerSchool adaptation and continuation; explore integration of competencies and use at elementary schools for reporting grades
● Review school and District website features, layout and design; begin redesign and updates
● Continued review and adaptation of technology/communication related school district policies
● Develop a plan to increase and promote the use of 21st Century tools to create a home/school/community partnership
● Increase use of Google classroom and continue professional development for Google Apps
● Begin the process of redesigning the district and school-based webpages to be more user friendly

School Year 18-19
● Continue to redesign the district and school-based webpages to be more user friendly
● Implement plan to increase and promote the use of 21st Century tools to create a home/school/community partnership
● Continue exploration of Google Apps to facilitate communication in and out of school

School Year 19-20
● Conduct parent/student/community surveys for feedback and guidance for the next three year plan
● Update and publish Acceptable Use Policy for students and staff
● Continue to implement plan to increase and promote the use of 21st Century tools to create a home/school/community partnership

IV.   Budgeting

Technology Plan Budget:

2017-18 School Year

Description	Budget	Detail
IT Repair/Maintenance/Software	130,000	5% increase for licenses
Technology Professional development	5,500	
IT Supplies	2,500	
IT New equipment	24,000	4 new Chromebox labs 2 MHS, 2 MMS
IT Replacement equipment	31,000	Servers, laptops, desktops
Subtotal	**193,000**	
Curriculum cycle improvements	153,050	Social Studies Curriculum Accounting/Business /Marketing Increase in interactive surfaces
Total Technology Improvements	346,050	

2018-19 School Year

Description	Budget	Detail
IT Repair/Maintenance/Software	140.500	Increase internet speeds
Technology Professional development	5,500	
IT Supplies	4,000	Spare parts for Chrome devices
IT New equipment	30,000	Start upgrading top-of-rack switches, wireless in HS fields
IT Replacement equipment	40,000	Laptops, projectors, switching
Subtotal	**220,000**	
Curriculum cycle improvements	97,800	Science Curriculum Interactive Devices
Tech Integrator at MHS	80,000	
Total Technology Improvements	**397,800**	

2019-20 School Year

Description	Budget	Detail
IT Repair/Maintenance/Software	150,000	Increased WAN bandwidth costs
Technology Professional development	5,500	
IT Supplies	4,500	Spare parts for Chrome devices
IT New equipment	40,000	Finalize switch upgrades, hardware for WAN
IT Replacement equipment	45,000	Servers, upgrade to 2016r2
Subtotal	**245,000**	
Curriculum cycle improvements	120,900	World Language Replacement Cycle - Chrome Devices (300-400)
Total Technology Improvements	**365,900**	

V. Evaluation
Using Data and Evaluation of the Technology Plan

The Technology Director and the Director of Curriculum and Instruction will share the responsibility for the ongoing evaluation of the Technology Plan. Under the guidance of these two leadership positions, the Technology Committee will review data and evaluate progress toward meeting technology goals and recommend actions for the ensuing year or amendments to the plan. The District Technology Committee will propose any substantive amendments to the school board. The committee will reach consensus before any revision is presented to the school board for final approval. Approved revisions will be shared with appropriate staff.

Additionally, student achievement data and teacher evaluation data will be examined to determine the success of our collaborative technology activities and to set direction for future technology planning. The following guiding questions and success indicators will provide focus for our discussions.

To what extent are digital tools supporting effective and creative instruction?

Person responsible: Director of Curriculum and Instruction, Curriculum Team

Timeline: Spring, annually

Data Source(s):   Sampling of lesson plans with technology integration

Audience: Leadership Team

To what extent are our classrooms tech–ready?

Person responsible: Tech Director/Tech Committee

Timeline: Fall - annually

Data Source(s):   Technology inventory, state technology survey

Audience: Leadership Team/School Board

To what extent does infrastructure support effective and efficient teaching, learning and operations?

Person responsible: Tech Director/Tech Committee

Timeline: Fall - annually

Data Source(s):   Feedback from users and analysis of data from workflow requests, virus and filter reports

Audience: Leadership Team/School Board

To what extent are students able to demonstrate their learning?

Person responsible: Director of Curriculum and Instruction/Curriculum Team and Teacher Leaders
Timeline: Spring - annually

Data Source(s):   Sampling of ePortfolios/student artifacts, ePortfolio completion data; ICT curriculum audit

Audience: Classroom Teachers

What is the relationship between student achievement and the increased access to digital tools?

Person responsible: Director of Curriculum and Instruction and Curriculum Team/Director of Special Services

Timeline: Spring - annually

Data Source(s):   Case studies or teacher interviews/surveys; program evaluation/student achievement data, PowerSchool usage data, student enrollment in off-campus learning opportunities, sampling of lesson plans and ePortfolio artifacts

Audience: Leadership Team; School Board

To what extent are the technology learning needs of all staff being met?

Person responsible: Technology Committee, Director of Curriculum and Instruction and Superintendent

Timeline: Mid-year annually

Data Source(s):   Individual Professional Development Plan data, (CEU summary/teacher portfolios); LOTI or other teacher competency survey data; review of teacher websites

Audience: Professional Development Committee, Leadership Team

To what extent does our infrastructure and technology system support the communication and collaboration needs of the District?

Person responsible: Tech Director, Tech Committee

Timeline: Midyear - annually

Data Source(s):   Usage data- website hits and PowerSchool hits, parent, student, staff and community feedback

Audience: Leadership Team

VI.   Policy and Procedures

Policy #2295   Acceptable Computer, Network and Internet Use Policy

The Milford School District provides students and staff access to various technologies and the internet to use for teaching, learning or other school district business. The opportunity to use the network goes "hand in hand" with the responsibility to use computers and the internet properly. Access is a privilege, not a right, and that access requires responsibility. Safe and responsible use of the internet and the devices that connect to it is a priority of the Milford School District.

For purposes of this policy, "user" means any person authorized to access personal or School District computer systems and wired or wireless networks including, but not limited to, the Internet. Users are expected to demonstrate ethical behavior that is of the highest order when using technologies and when accessing the internet for teaching, learning and other school district business. Users are also expected to follow all guidelines stated in this policy as well as any additional guidance provided verbally or in writing by IT staff, teachers or administration.

Use of the Internet

Resources available on the internet vary in quality and appropriateness for school purposes; therefore, it is important that all users make sure that internet materials and information are school appropriate. Unlike other teaching and learning materials, the very nature of the internet may not allow for the same formal selection processes for internet resources as for textbooks and library resources, so the responsibility for appropriateness rests with users.

The use of the internet by students is for research and other educational purposes as assigned by a teacher or related to school curriculum and activities. Within the guidelines of the Children's Internet Protection Act (CIPA), freedom of speech and access to information will be honored.

Activities not permitted include, but are not limited to:

1. Sending or displaying offensive messages or pictures

2. Using obscene or offensive language

3. Harassing, insulting, or attacking others online or any other behavior that can be considered bullying

4. Damaging or disabling computers, computer systems or computer networks or bypassing or compromising the function of the internet content filtering systems

5. Violating copyright laws

6. Using others' passwords, name or accounts

7. Trespassing in others' folders, work or files

8. Engaging in illegal activities

9. Hacking of any kind

10. Soliciting or proselytizing for commercial ventures, political or religious causes, outside organizations or other non-School business related purposes

11. Loading or downloading non-approved software applications like screensavers, games, graphics/multimedia utilities, etc. onto school computers

12. Loading, downloading or accessing any content prohibited in an educational setting as determined by the Superintendent/designee.

Internet Safety

The Children's internet Protection Act (CIPA) and the Protecting Children in the 21st Century Act mandate specific strategies to foster safe and responsible use of technologies and to prevent adverse computer and internet use by school-age children. The District will allow students and staff to access instructional resources and information from the internet using District technologies and networks while protecting them from cybercrime and information inappropriate for minors. It will take the following steps to promote safe and appropriate online behavior:

1. Internet Policy agreement

This internet policy will be provided in staff and student/parent handbooks. Users will be required to agree to adhere to the policy with a signature on an annual acknowledgement form and each time they sign onto the network by accepting the electronic acceptable use reminder.

2. Content filtering

The District will use a content filtering package prescribed by and compliant with CIPA to block obscenity, pornography and other sites deemed harmful to minors.

While the District will make every effort to choose and use appropriate filtering software, it recognizes that filtering is not 100% effective and cannot guarantee that all objectionable material will be blocked. The District also recognizes that the filter may block legitimate material that the student may be able to access outside of school

3. Supervision and monitoring

Teachers and staff will monitor, within reason, the use of computers, other technologies and the internet. During school, teachers will guide students toward appropriate materials. Administrators, or their designees, may review files and communications (including electronic mail) without notice to ensure that users are using the system responsibly. Users should not have the expectation that District-managed files and information are private.

Search of Social Media Accounts
School personnel are permitted to investigate alleged misconduct based on activity associated with a student's social media account. During the investigation into a student's alleged misconduct, school officials may request that a student VOLUNTARILY share a printed copy of specific communication from the student's social media account that is relevant to the ongoing investigation.

School personnel shall not

● Require or request a student or a prospective student to disclose or to provide access to personal social media accounts through the student's username, password or other means of authentication that provides access.
● Require or request a student or a prospective student to access a personal social media account in the presence of a school employee in a manner that allows the employee to observe the social media account
● Compel a student to add anyone to the list of contacts associated with his or her social media account
● Require, request, suggest, or cause a student to change the privacy settings associated with a personal social media account
● Take action or threaten to take action against a student for refusing to disclose information related to social media accounts.

Instruction

The District will develop and implement Information and Technology Literacy curriculum and instruction that promotes safe and appropriate online behavior, including interacting with others through social networking websites, chat rooms and other forms of messaging, and cyberbullying awareness and response.

Policy Violations
Any actions that might harm computer equipment, software, data, another user, or the internet, or that show disregard for the proper procedures set up for network access will not be tolerated. Violations of this

policy may result in restrictions or suspension of the user's technology use or network privileges, disciplinary action, and/or legal action in accordance with the law, Board policy and administrative regulations. Further, any users of the School District's computer systems or networks who intentionally violate the District's policy and who intentionally damage the computer systems or network or misuse the internet shall assume legal and financial liability for such damage.

Approved: 9/1996
Revised: 5/2000, 1/2002, 5/2002, 6/2010, 2/2012, 1/2016, 5/2016
Reference:
      Child Internet Protection Act, 2000**.**
      Protecting Children in the 21st Century Act.
      Milford School District Policy # 2296, Copyright Compliance Policy.
      Milford School District Policy # 5009, Pupil Safety and Violence
      Prevention – Bullying.
      RSA 189:70

Policy # 2296   Copyright Compliance Policy

The School Board recognizes that federal law makes it illegal to duplicate copyrighted materials without authorization from the holder of the copyright, except for certain exempted purpose. Severe penalties may be imposed for unauthorized copying or using audio, visual or printed materials and computer software, unless the copying or using conforms to the "fair use" doctrine.

Under the "fair use" doctrine, unauthorized reproduction of copyrighted materials is permissible for such purposes as criticism, comment, news reporting, teaching, scholarship or research.

The District encourages its employees to enrich the learning programs by making proper use of supplementary materials. All District employees must comply with federal copyright laws, as well as publisher licensing agreements. Under no circumstances shall it be necessary for District employees to violate copyright requirements in order to perform their duties properly. The District cannot be responsible for any violations of copyright law by its employees.

Any staff member who is uncertain as to whether reproducing or using copyrighted material complies with the District's procedures or is permissible under the law should contact the Superintendent/designee. The Superintendent/designee will assist staff in obtaining proper authorization to copy or use protected materials when such authorization is required.

 Adopted: 2/2011