

Table of Contents

- I. The Planning of Technology Integration
 - A. Vision Statement
 - B. Mission Statement
 - C. Introduction to the Plan

- II. Current Educational Technology Practices
 - A. The Technology Department/Committee
 - B. Equipment and Inventory
 - C. Networking
 - D. Software, Email, and Storage
 - E. Technology Policies
 - F. Funding and Technology Budget
 - G. ERATE
 - H. CIPA

- III. Implementation of the Technology Plan
 - A. The Stages of Technology (with strategies and action steps)
 - 1. Infrastructure
 - 2. Integration and Content
 - 3. Data Quality and Security
 - 4. Professional Development
 - 5. Communications
 - 6. Innovation
 - B. Technology Standards
 - C. Community Involvement
 - D. Evaluation of Practices
 - E. Needs Assessment

- IV. Appendices
 - A. Policies
 - B. Technology Standard for District Stakeholders

I. The Planning of Technology Integration

A. Vision Statement

Technology is critical to the learning process. It offers the user a vehicle to access endless amounts of information and resources throughout the world. The field of educational technology has been committed to preparing students with ‘twenty-first century technology skills.’ This cliché has supported the growth of the industry over the past twenty-five years. However, we no longer have the luxury of anticipating the skills of the future because those skills are expected in the workers of today. Technology is a catalyst for obtaining knowledge and our gateway to communication, global economies, information, and educational issues.

The Dartmouth Educational Community is responsible for preparing its’ students to be productive, contributing members of society. This is accomplished through effective, efficient, and meaningful technology education instruction and in part with the appropriate use of technology.

Our information-based culture has demanded that the users have access to these resources. It is because of this that our vision of technology must focus on the four key elements of educational technology to succeed.

1. Access - To provide access to multiple forms of technology
2. Safety - To provide a safe, secure, reliable computer and network environment for active learning
3. Training – To make professional development available to teachers and staff to enhance learning and teaching
4. Integration - To provide a seamless use of technology during the learning process

It is important that educational stakeholders provide and use these educational tools to engage student learning, track student progress, and involve families in their child’s educational experience.

It is the District’s technology vision that every learner and the unique needs of that individual learner be accommodated. These learners will have the ability to access and use information and resources within the classroom, workplace, home, and community. If we are successful in achieving this vision, every student will view technology as an ordinary tool used in learning. It will be transparent to the learning process and will not distract the user from obtaining knowledge and, more importantly, being inspired.

I. The Planning of Technology Integration

B. Mission Statement

The first challenge to a successful implementation of a technology plan is to build a sound technology infrastructure. This infrastructure consists of strong network connections, modern available computers, current software, training, and a technology-infused curriculum. The actions of the Dartmouth Public Schools have demonstrated the commitment to this challenge. **Over the past five years the Dartmouth School Department with the support of the Town of Dartmouth has invested considerable resources in the rebuilding of the Local and Wide Area Networks, replacing desktop and laptop computers, entered the age of Chromebook adoption, integrated new cutting edge equipment through the innovation grant and subscribed to numerous software resources.** The ongoing purchase of computers, electronic whiteboards, laptops, hardware and software is a testament to the District’s dedication to technology in education.

The mission of this plan is to document the effective integration these technologies throughout the school system. We must enhance the delivery method of teacher lessons with these technology tools to maximize student learning. Students, teachers, and administrative staff should be empowered with the knowledge and skills necessary to survive and compete in the modern and future workplaces. To ensure success we must have the support of families and community members who understand the reasons why we are so committed to the utilization of technology.

We must adopt a mission to ensure that our stakeholders have a clear understanding of our goals. We must work to:

- Inform and educate our community as to the increasingly central role that technology plays in our schools and their children’s education
- Provide direction and opportunities for continued professional development and training to our staff, regardless of their role in the district
- Provide tools to support our student learning, both inside and outside of the classroom

At the core of this commitment is the Dartmouth Public School’s continuous pledge to create a “Clear Vision and Implementation Strategies” as documented in previous revisions of this document. This has been accomplished and will continue be worked upon through the “**Stages** of Technology Integration” detailed later in this document. By an understanding of the District’s technology resources, and the policies and procedures used to ensure that technology tools are reliable, we will succeed in the promises of educational technology. To ensure consistency throughout the District, this plan will be used with the guidance of the goals set forth by both the School Improvement Plans and the overall District Improvement Plan.

I. The Planning of Technology Integration

C. Introduction to the Plan

When writing a Technology Plan, we must consider the actions we will focus on in the upcoming school year. Although technology goals are long term and can be documented over a 3 or 5 year period they will be accomplished through the work done in the first year of the plan. There are many educational authorities such as the Massachusetts Department of Education and grant programs, including the Federal Government’s School and Library Division E-RATE which require districts to document their technology plans for eligibility in their programs.

The U. S. Department of Education’s National Educational Technology Plan includes five guidelines themes. These themes are used to build a technology culture within schools to enhance the educational experience. They encourage school districts to recognized areas that will aid in the development of a successful plan. These areas are:

1. The plan must establish clear goals and strategies for the use of technology in an educational setting.
2. The plan must have a professional development strategy to ensure that staff knows how to use these new technologies to improve education.
3. The plan must include an assessment of all technologies; such as hardware, software, and other services to ensure the integrity of the technology.
4. The plan must recognize the cost associated with acquiring and supporting the plan.
5. The plan must include an evaluation process that enables the schools to monitor progress toward the specified goals and make mid-course corrections in response to new developments and opportunities as they arise.

The integration of technology into learning environments is not easy. It requires teachers to look at the processes of teaching and learning in new ways. The use of technology in schools allows educators to infuse a wide range of content material into their classroom curriculum. This provides students the ability to be exposed to material that will address their individual learning needs. This will allow students to take advantage of more opportunities during their educational experience. Technology can enhance student interaction and communication skills and ultimately contribute to cooperative learning and group problem solving in the classroom. It is apparent that technology and information literacy are essential tools that enable students to experience multiple and varied ways of learning. It allows students to add experiences and support collaborative learning while connecting schools with the rest of the world.

The Dartmouth Public Schools Technology Plan is only the first step toward giving all students access to the best possible technology-enhanced resources and learning opportunities. This plan will be revised yearly to ensure that these goals remain current and, more importantly, relevant.

II. Current Educational Technology Practices

A. The Technology Department/Committee

The Dartmouth Public Schools’ Technology Department is comprised of personnel with varied duties and responsibilities related to support of the use and function of technology in the educational process.

Chief Technology Officer - Jonathan Gallishaw

Secretary to the CTO - Tracy Bourgeois

Information Technician - Hallie Larocque

Technology Integration Technician - Christopher Branco

Network Technician - Bill Costa

Computer Technician - Charles Paine

Technology Integration Specialist - Trisha Leary

Technology Integration Specialist - Sandra Chicca

Technology Integration Specialist - Josh Rodriques

Technology Integration Specialist - Helen Mitchell

Building Technology Coordinator at Schools:

Dartmouth High School - Robert Aguir

Dartmouth Middle School - John Kelly

Cushman Elementary School - Vacant

DeMello Elementary School - David Finn-Clarke

Potter Elementary School - Richard Charpentier

Quinn Elementary School - Krystle LeBert

- Cheryl Leandro

The Dartmouth Public Schools Technology Committee was reestablished in the spring of 2014 comprised of members throughout the Dartmouth Educational Community.

II. Current Educational Technology Practices

B. Equipment and Inventory

Identification of equipment and a comprehensive database inventory is the foundation to proper technology planning and maintenance. It is in knowing the district baseline and the lifecycle replacement of those assets that a technology plan can communicate the most efficient methods to supporting a strong technology infrastructure.

Over the past few years Dartmouth School District has invested in the Chromebooks for teacher and student use. The additions to our hardware have proven to be successful and popular with classroom instruction. Dartmouth Technology Department will continue to invest in Chromebook Carts for use in the classroom at these elementary grade levels. ~~When considering the ratios of students to computers we must first look at what the educational technology industry considers to be a “modern computer.” That is a designation for computer which is 1 to 3 years old. Computers may have usefulness in less technology critical areas of the school for a few years beyond that age.~~

In the basic inventory of the schools the computer to student ratio and the computer to teacher ratio it is found that the numbers of computers are very promising. With last year’s teacher laptop initiative the ratio of 1 to 1 teacher to computer ratio was achieved. In future revisions of this plan we will detail the process of replacement and repurposing those laptops.

~~The numbers of student to computer ratios require more evaluation and documentation. We will continue to build a database that will be able to explain the current ratios and, more importantly, give a plan on how that ratio may be maintained.~~

Schools	Enrollment	Computers	Ratio
Dartmouth High School	1073	509	2:1
Dartmouth Middle School	963	431	2:1
Cushman Elementary School	141	90	1.5:1
DeMello Elementary School	385	280	1.4:1
Potter Elementary School	413	280	1.9:1
Quinn Elementary School	665	354	1.9:1

Specifications and Standards

All Technology Purchases of Hardware should be guided by the curriculum decisions and direction through the application or software needed and meet the following criteria:

- Equipment specifications for all computer equipment and related technology peripherals should be configured with the input of a member of the Technology Department.

- Technology Purchases of equipment should be determined by discussions and requests from the school building and district technology personnel.
- Baseline Specifications should be established and should be updated periodic basis. Buildings can contact the Technology Department for district standards for future acquisition of equipment.
- We are currently exploring a one to one initiative at the Middle and High School for the upcoming school years. Further details will be provided as they become available.

Inventory and Installation and Maintenance

All equipment should be tested, inventoried and installed by the Technology Department. All installations must have planning and involvement from the Technology Department to insure the timeliness of complete installation. General maintenance will be the role of the Technology Department and include: setup of hardware, installation of software, software and hardware maintenance, network management, upgrades, management of inventory database, and contact/coordination of district resources to aid in the above maintenance issues.

Teacher Workstations

In the summer of 2013 the Dartmouth Public Schools embarked on a major initiative to provide laptops to all teachers. This forward thinking provides a great boost in the use of technology within instruction. In 2017 Chromebooks were issued to all elementary school classroom teachers to promote the use of the Chromebook carts. We will continue to address teacher needs in hardware and software access to address their desires to push the boundaries of technology instruction and integration.

Classroom Workstations

There needs to be sufficient numbers of adequately powered computers in every classroom. The ratio of students to computers is used to determine the needs and access to technology in each school within a school district. Classroom computer workstations are networked to enable group printing and access to network and internet resources. To determine the type (specification) of computer workstation within a classroom and the number of units needed, the Technology Department and school based Administration will examine needs, educational objectives, and facilities for each situation. We have successfully integrated Chromebook Carts in the Elementary and Middle School Buildings. These carts have had an immediate impact on computer use.

Permanent and Mobile Workstations Labs

There needs to be sufficient numbers of computer labs in each school. To be able to perform organized activities such as testing (MCAS) or classroom work such as AutoCAD or video editing, full service labs or mobile computer carts will be made available in each

school. In cases where full service permanent labs are not able to be accommodated because of building capacity or other reasons, the use of mobile labs (PC or Chromebooks) or even tablet labs may be used to accommodate the educational need.

II. Current Educational Technology Practices

C. Networking

A strong network is essential to access the content that drives the use educational technology. Dartmouth Public Schools currently uses commercial access to the Internet with 600 Mbps connections and will be expanding that speed to 1 Gig on July 1, 2018. Although the amount of bandwidth used is acceptable ~~considered standard~~ for educational use, we must always explore faster, reliable, cost effective alternatives to provide more bandwidth to schools. Because the content of information is becoming more sophisticated, such as video conferencing and video streaming, it is essential to explore new methods of transport. The INET is one of those options. The INET is a fiber optic network connecting all Dartmouth town buildings. We currently use this 10 Gig fiber Network pipe to connect all of our school buildings and channel internet traffic though the High School to a single paid internet service. It has been used in the past for minimal administrative and secondary educational systems. The Dartmouth Public Schools' Technology Department will continue to examine the feasibility and potential of the INET for school use.

The design of the network has created Local Area Networks in all schools to provide students, teachers, and administrators access to technology network resources, such as servers, printers, and the Internet. Implementation of a LAN involves the installation of a cabling system to distribute the network throughout the school structures. Installation of cabling and switches is necessary to support the connection of computers, printers, scanners, or other peripheral devices, network server(s), and to provide for connection to the Internet.

Most of our schools are wired with cabling from more than 10 years ago. Although this may seem a short timeframe from a facilities approach, it does challenge the limits of the capacity and speeds within a building. ~~Considerations will be made in the future for upgrades to the network infrastructure and investments in the modern technology, such as robust wireless networks.~~

- * Firewall – Equipment to protect technology services within the school district
- * DNS Servers – servers that authorize computers within the school network
- * File services - applications and data stored in a common area, files locked to ensure file integrity
- * Print services - printers shared by users on the network, print jobs sent to a network queue
- * E-mail services – access to Gmail services through Google

- * Backup services - fully automated network backups performed on a daily basis, including tape rotation schedules
- * File security - files and directories assigned access rights based on user authorization
- * User account security - password access to network resources, network privileges, user accounts by groups assigned access privileges, time and location restrictions applied to a user name or user type

II. Current Educational Technology Practices

D. Software, Email and Storage

Guidelines for determining software for district wide purchase will be determined by the Chief Technology Officer in conjunction with the Principals, Central Office Administration, **Instructional Technology Specialists**, Technology Department and Technology Committee. The purpose of the district level software selection is to provide a standard group of application software to allow every computer and its user the ability to perform basic operations and to ensure the protection and maintenance of the hardware.

Basic Level of Software

The basic level of software will include:

- * Network/System Operating System
- * Office Products package (Word processing, spreadsheet, presentation, database)
- ~~* Electronic Mail~~
- * Internet Browsers (**Explorer, Firefox, Chrome**)
- * Virus Protection Software
- * **Educational Software through subscription**

Additional software, both educational and curriculum driven, is currently selected and purchased at the school site level with the assistance of School Administration and Teachers. I would like to bring these purchases to the district level so that schools may benefit from software pilots from other schools as well as take advantage of group purchasing.

The Dartmouth Public Schools ~~recently adopted~~ **uses** the Google Gmail System for electronic mail for staff and secondary students. Google has provided access to their email systems as well as many other Google Apps for Education. The cost is nothing to the school district. By law we are required to back up emails for the district for a period of 7 years. There is an annual cost to these backup is \$9,500.00 per year. The Google backup system is capable of email retention for a period of 100 years.

File Backup storage is also conducted by the Dartmouth Technology Department. The district uses the ~~E-Vault~~ **Carbonite** Company to back up administrative files. The technology strategy for disaster recovery **is being redesigned this summer** ~~will reevaluate the content and location of backups~~ for the entire district for the upcoming school year.

II. Current Educational Technology Practices

E. Technology Policies

Technology Policies are essential to create efficiencies, safety, and security in the use of technology in a school system. The Dartmouth Public Schools has a revised Acceptable Use Policy currently in effect (Appendix A). Over the past few years, ~~It is recommended that over the next year this policy be reviewed and republished to maintain a current view of educational use of technology within our district.~~ the Dartmouth Technology Department in conjunction with the Dartmouth Technology Committee has revised and created new technology policies to continue to provide a transparent, informative, and safe environment for learning.

- Network Access Policy
- ~~E-Mail Usage Policy~~
- ~~Software Purchasing Policy~~
- Social Media Policy IJNDD
- ~~Web Posting Policy~~
- School and District Web Page Policy
- Acceptable Use Policy
- ~~Sensitive Information Policy (FERPA) (HIPPA)~~
- ~~Internet Filter Override form~~
- ~~Data Release Policy~~

II. Current Educational Technology Practices

F. Funding and Technology Budget

The current annual technology budget of \$ 384,832.75 includes hardware and software purchases for district and school based technology purchases. It is submitted to the business department on a yearly and discussed in detail with budget subcommittees and presented to school committee and town finance committee for final approval. Software subscriptions are examined annually and proposed to each new school budget. A full list of software subscriptions are available by request. An approved detailed budget of all expenditure may be obtained through the Business Office after budget approval. The costs that are associated with technology spending are used in the following areas of technological investments:

- Hardware: Computers, printers, and other equipment
- Software and other educational material for technology instruction
- Internet Service Provider
- Professional development and training
- Maintenance and upgrading of all equipment and software

- Infrastructure upgrade on wiring or electrical supplies

II. Current Educational Technology Practices

G. E-RATE

The Universal Service Program is administered by the Schools and Libraries Division (SLD) of the Universal Service Administrative Company (USAC). This department was appointed by the Federal Communications Commission (FCC) to ensure that the benefits of telecommunications services reach students and communities across the country. The services include: yearly access to Internet bandwidth, **and networking equipment.** ~~regular telephone service, and cellular phone service.~~ Access to these items has allowed us to provide communication within schools. Under this program we can explore additional benefits of funding through our telecommunications uses to services like IP telephony. ~~modern telecommunications systems can aid in the ever-growing challenge of efficient communication throughout our school district. One requirement to be eligible for this E-Rate funding is to develop and maintain a quality Technology Plan.~~

II. Current Educational Technology Practices

H. CIPA (Children Information Protection Act)

The Dartmouth Public School complies with the regulations of CIPA, the Children Information Protection Act through the following actions.

1. The adoption of a complete and detailed Acceptable Use Policy.
2. The filtering of Internet access to inappropriate material.
3. The ongoing training of all members of the Dartmouth Public Schools on Internet safety and use through material provided by Common Sense Media.

III. Implementation of the Technology Plan

There are certain identify criteria that must be met if educational technology is to be successfully implemented in any school environment. These criteria are similar in all educational technology plans throughout varied school districts. What makes them unique is how a district approaches each criteria based on their community and their needs.

- To pursue equal access to technology for all students, teachers, and administrators
- To enable students to use technology
- To empower teachers to use technology in instruction
- To develop a strong infrastructure of network for voice, video, and data that will connect all communication devices (including computers) in every classroom, school, to all educational resources

III. Implementation of the Technology Plan

A. The Stages of Technology with Strategies and Action Steps.

<i>Technology Stage 1: (Infrastructure)</i>				
<i>Establish a strong technology foundation within the School District</i>				
<i>Strategy #1 – Define Roles & Responsibilities of all Technology Contributors- Publish, promote, and practice technology policies and procedures</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Create policies and procedures for areas of technology use and practices.	CTO and Technology Committee	Review Policies Annually	School Committee Approval – Posted on District Website	None – completed by DPS
2. Define roles and responsibilities of all technology personnel for district understanding.	CTO	Completed June 2024	Presented to Superintendent – within Job Descriptions	None – completed by CTO
3. Establish Technology Committee to address ongoing technology needs, policies, and direction.	CTO and Technology Committee	January 2014 – June 2024	Establish Members and Meeting Dates	None – completed by CTO
4. Utilize a Work Order System to use existing district technology personnel and maximize efficiencies to reduce down time.	CTO and Technology Department	Replace or upgrade summer 2018	Perform work orders within the new system. (reports)	Work Order System - \$2,750.00 per year
<i>Strategy #2 – Provide adequate computer and technology access to teachers, students, and staff</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Provide Laptop computers to all teachers.	Technology Department	Completed– October 2017 – replacement waves as needed	Inventory	\$150,000 – completed July 2017 - \$50,000 - replacements
2. Continue to add computers to classroom, mobile labs, and permanent labs.	CTO, Schools and Technology Department	July 2013- September 2018	Inventory and lab usage	Completed – Replacement added to Capital Improvement

<i>Technology Stage 1: (Infrastructure) Continued</i>				
<i>Establish a strong technology foundation within the School District</i>				
<i>Strategy #3–Document an Inventory of all technology assets for the district</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Create a comprehensive catalog database of technology throughout schools and District.	CTO and Technology Department	October 2013 – September 2018	Database Reports Presented to School Committee	None – completed by DPS
2. Devise a plan for resource distribution.	CTO, Schools, and Technology Committee	October 2013 – September 2018	Published Plan presented to School Committee	None – completed by DPS
3. Document a Lifecycle replacement plan for all technology.	CTO	October 2013 – September 2018	Presented to Superintendent and Business Manager	None – completed by CTO
4. Document a hardware “repurposing” plan for the reallocation of district assets.	CTO and Technology Department	October 2013 – September 2018	Presented to Superintendent and Business Manager	None – completed by DPS
<i>Strategy #4 – Provide reliable network/wireless infrastructure</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Expand bandwidth to all schools and explore reliable/potential information transport for network and Internet traffic (INET – etc.)	CTO and Technology Department	October 2013- February 2017 - Complete	ERATE Application	\$20,000 annual Internet Contract and (INET) future proposals
2. Upgrade High School Network with equipment able to manage network traffic and provide reliable wireless networking.	CTO and Technology Department	February 2014- September 2017 – complete July 2018	Bid Process, Presentation to School Committee, School Committee Approval	\$ 380,000
3. Evaluate and redeploy old High School Networking equipment for possible use throughout the district.	CTO and Technology Department	March 2014- September 2014	Redeployment of Equipment	None – completed by DPS

Technology Stage 2: (Integration and Content)
To increase the integration of technology into the classroom

Strategy # 1 – Document a technology software library for use in the classroom/schools

Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Investigate types of software usage within the district. Look for successful integration models within and outside the district. Devise a procedure for purchasing of software, reviewing and recommending software to be used in the classroom setting.	CTO, principals, teachers, Technology Department, Technology Coach, Administration	Ongoing	Create database of all software used in classrooms for approval.	None – completed by DPS
2. Make District wide decisions on software purchases.	HS and MS Departments and Grades within all Schools	Ongoing	Standardized Software purchases for Computers	\$300,000 for Software

Strategy # 2 – Continue to explore district wide curriculum practices that incorporate technology

Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Ensure that teachers are able to integrate technology into the curriculum to improve student achievement.	CTO, Principals, Teachers, Technology Department, Technology Coach, Administration, Curriculum Coordinator	Ongoing	Technology performance indicators – use and needs assessment	Professional Development Costs

<i>Technology Stage 3: (Data Quality and Security)</i>				
<i>To provide reliable security and access data for planning and decision making</i>				
<i>Strategy # 1 – Teachers and Administrators will have authorized access to relevant district data for evaluation, reporting, and analysis of student information.</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Continue to explore X2 Aspen (Student Information System) for features and capabilities to be used throughout the district for access to information.	CTO and Technology Department	Ongoing	Introduction of New Features	None – completed by DPS
2. Provide ongoing training for student automation system.	CTO, Staff, and Technology Department	Ongoing	Training Dates and Sessions	\$6000 for train the trainer model
3. Evaluate all databases within the district for collection and reporting efficiencies.	CTO and Technology Department	July 2018 – June 2019	Written Profile of all District Databases	None – completed by DPS - ongoing
<i>Strategy #2 –Establish the parameters of Confidentiality, Integrity and Availability (CIA) of district data use and transfer.</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Review and define all user access and privileges to data systems.	CTO and Technology Department	November 2013 – September of 2018	Evaluation of all 650 User accounts.	None – completed by DPS
2. Review, promotion, and training of Data Quality Practices, and State and Federal Data Policies (HIPPA, FERPA, etc.)	CTO and Technology Department	Ongoing – Full Campaign SY18-19	Training Dates	None – completed by DPS
<i>Strategy #3 –Establish a Disaster Recovery Plan for Critical Backup.</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Review currently backup procedures and devise a plan for best practice	CTO, Technology Department, and Technology Committee	Completed July 2014 Reviewed and updated 2018	Publish Plan for School Committee Approval	None – completed by DPS – Implementation may have costs.

<i>Technology Stage 4: (Professional Development)</i>				
<i>Establish professional development training programs to enhance teaching and learning through the use of educational technologies.</i>				
<i>Strategy # 1 –Provide educators with consistent ongoing professional development opportunities to prepare them to use technology effectively to improve teaching and learning.</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Create a professional development calendar to be added to the district Professional Development Plan	CTO and Technology Integrator	September 2018	Publication of Calendar	None – completed by DPS
2. Conduct high quality technology training for administrators.	CTO and Technology Department	Summer 2018 and School Year 18-19	Training Dates and Rosters	None – completed by DPS
<i>Strategy 2 – Adopt district wide standards Benchmarks for technology proficiency for effectiveness of our use and integration of technology.</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Define competencies in areas of instructional technology.	CTO, principals, students, teachers, Technology Department, Technology Integrator, Administration, Curriculum Coordinator	September 2017 – December 2018	Publication and promotion of Massachusetts Computer and Technology Standards	None – completed by DPS

Technology Stage 5: (Communications)				
Maintain a constant flow of information to stakeholders				
Strategy # 1 – Use Student Information System to increase access by families to educational information				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Continue to explore X2 Aspen (Student Information System) for features and capabilities to be used by parents and students for access to information.	CTO and Technology Department	Ongoing	Introduction of New Features	None – completed by DPS
2. Provide training and informational videos to families to increase SIS access and use.	CTO and Technology Department	September 2018 – June 2019	Posting of Information on Website	None – completed by DPS
Strategy # 2 – Provide upgrades to Internal Communications for Administration and Staff				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Install a state of the art video surveillance systems throughout the schools – add Dartmouth Police to Network	CTO, Principals, students, teachers, Technology Department, Administration	Summer 2014 – August 2018	Bid to School Committee - New Video Surveillance system	\$100,000.00
2. Investigate the upgrade to a state of the art phone system for inter-town and school communications	CTO and Technology Department	April 2014 – October 2014 – Done	Options presented to School Committee for FY16 budget preparation	Ongoing Maintenance
Strategy # 3 – Redesign of District Website for better access to School Information				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Investigate new alternatives for district web site	CTO and Technology Department	Completed September 2017	Proposal of new design	None – completed by DPS
2. Redesign web site with easy access and update	CTO and Technology Department	Online January 2018 – ongoing	New Website	None – completed by DPS

<p align="center">Technology Stage 6: (Innovation) Introduce teachers and students to the latest technological advances</p>				
<i>Strategy # 1 – E-learning online</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
1. Use of online course work in current high school educational structure	CTO, Principals, Guidance, Curriculum Coordinator, Administration	September 2017 – June 2018	Identification of E-learning Model	\$ 4,000
2. Explore the use of online coursework for all grade levels including advanced studies.	CTO, Principals, Guidance, Curriculum Coordinator, Administration	September 2017 – June 2018	First Courses available in Fall of 2018	Cost of Software approximately \$5,000
<i>Strategy # 2 – 1 to 1 initiative</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
Explore a 1 to 1 (1:1) initiative within pilot sites and possibly throughout the district.	CTO, Principals, Teachers, Technology Department, Technology Coach, Administration	May 2018 – October 2018	Implementation Plan	\$300,000.00
<i>Strategy # 3 – Use of Social Media for Education</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
Explore the use of social media within the learning environment.	CTO, Principals, Teachers, Technology Department, Technology Coach, Administration	Ongoing	Policies Created and testing begins	None – completed by DPS through other products - website
<i>Strategy # 4 – Creation of the District App</i>				
Action Steps	Responsibility	Timeline (from/to)	Indicators of Accomplishment	Projected Expenses
Development of a mobile phone/tablet app for easy access to school information	CTO, students, Technology Department, Administration	January 2018 – DONE	Release of App	\$2500

III. Implementation of the Technology Plan

B. Technology Standards

The International Society for Technology in Education (ISTE) recognizes and identifies educational computing and technology standards for students, teachers, and administrators. These standards provide a framework for performance indicators within technology understanding. Teachers can use these standards as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills. Students will know what they will be able to do upon completion of the requirements Technology Standards. These standards can be found in Appendix B or at The (ISTE) web site . **Additionally, Massachusetts has released a set of Digital Literacy and Computer Science (DLCS) Curriculum Frameworks for use in schools. Dartmouth Instructional Technology Teachers have begun to review these documents and align them to Dartmouth Instructional practices.**

III. Implementation of the Technology Plan

C. Community involvement

Schools rich in technology driven skills produce graduates with the technological skills that are attractive to potential employers. As technology uses continue to evolve, the need for qualified workers to fill technological jobs will grow. It is for this reason that community involvement is essential. As educators, we must work with members of the community to identify the needs and skills required to fill these jobs.

Dartmouth Public Schools will continue to reach out to our community partners regarding technology projects. These relationships will enhance our ability to make informed decisions on trends in the community and workplace.

A range of partnerships will provide an open line of communication between the school and local organizations. Through engagement with school and local community entities we will collaborate to achieve a learning environment that is both rich and rewarding for schools and community members.

III. Implementation of the Technology Plan

D. Evaluation of Practices and Plan

The Technology Committee will conduct an annual review of this Technology Plan. Issues and comments will be collected by the Technology Department through a web based form throughout the school year. The suggestions and comments will then be discussed at Technology Committee meetings throughout the school year. The plan will be assessed and rewritten as needed to provide an accurate representation of current technologies. The Technology Plan will then be updated by the Chief Technology Officer and redistributed each school year.

Evaluation will include collecting and monitoring data to assess the progress made toward accomplishing the objectives of this plan. Annual reports will contain the results of formal and informal evaluations of our accomplishments and activities. Data will be gathered and analyzed to measure success in the following areas:

- Assess goals and activities of the Technology Plan to ensure that it reflects the current conditions
- Assess the progress of staff development
- Assess the implementation of the Technology Plan
- Review and update inventory of equipment and software
- Expanded technology skills of graduates
- Expanded technology skills of teachers and administrators
- Effectiveness of training

Other data will be gathered from surveys and interviews, through records of use of instructional and management technologies, evaluations from technology training, and hardware acquisition.

The process and accountability measures that will be used regularly to evaluate the extent to which technology goal objectives, activities, resources, and services are effective include:

- ~~Ratio of students to computers~~
- The number of students and educators who are proficient in using computers and other equipment
- The number of curriculum areas in which the classroom computers are integrated
- Student projects and teacher lesson plan reviews to observe technology integration
- Annual surveys of teachers, students, parents and other staff of schools' technology needs

III. Implementation of the Technology Plan

E. Needs Assessment

The impact of technology on learning must be reflected in the outcomes desired by the school system. These outcomes must be the result of the educational process and be reflected in the successful use of technology in the classroom and within the school system. A needs assessment must also address individual learning plans. The value of technology in education should demonstrate the use of technology as a tool to facilitate and enhance learning. A technology performance assessment system must work in conjunction with a district performance assessment. We will work to develop a model that will be similar to other industry models proven to show results.

Additionally, needs assessment will include the process by which we acquire goods and services. All technology expenditures will be evaluated and documented for future publications of this document.

IV. Appendices

A. Policies

- a. [Acceptable Use Policy Employees/Staff IJND-B](#)
- b. [Acceptable Use Policy Students IJND-BE](#)
- c. [Network Access Policy IJND](#)
- d. [Social Media Policy IJNDD](#)
- e. School and District Web Page Policy

B. Technology Guiding Standards for:

- Administrators - ISTE STANDARDS FOR Administrator
- Teachers - ISTE STANDARDS FOR Educators
- Students - Massachusetts Digital Literacy and Computer Science (DLCS) Curriculum Framework