



District Technology Plan 2010-2015

In process of being updated

Franklin Public Schools

<http://www.franklin.k12.ma.us>

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District Vision/Mission Statement

Vision

The Franklin Public School System is committed to becoming a model school system by utilizing the practices of the best schools in America in a climate of continuous improvement. Additionally, development of completely new, innovative ideas and methods to enhance education are always fostered and encouraged.

Franklin Public Schools Mission Statement

The mission of the Franklin Public Schools is to provide the environment and the resources to enable and encourage every student to become:

- An individual who strives to achieve his or her emotional, intellectual, and physical potential.
- An enthusiastic lifelong learner who is self-motivated and inquisitive.
- A critical and creative thinker who can communicate skillfully through a wide range of disciplines.
- An effective collaborator/team member who can develop and maintain positive relationships.
- A compassionate individual, who understands the lessons of history, respects other points of view and appreciates difference.
- A self-confident, responsible, and active member of the ever-changing world community.

Technology Department Mission Statement

The mission of the technology department is to uphold the mission of the Franklin Public Schools by supporting the educational environment with the technological resources to enable and encourage every student to think creatively, communicate skillfully, and meet the challenges of an ever-changing world community.

In the hands of empowered students and teachers, technology can be an important tool for learning. Technology serves as a medium for exploration and inquiry, and we feel it is imperative that we take advantage of how technology can be applied to improve the quality of the instructional program.

For our mission to be successful, we believe:

- The most effective decisions are made when the personnel impacted by the decisions are involved in the process from the start.
- Professional development and training in technology enrich all users.
- All users are to be afforded equal and equitable access to technology resources.

Technology Plan Summary

The Franklin Public Schools prepares on a yearly basis a Technology Plan for purposes of identifying yearly technology goals and initiatives, district status on achievement of goals, district technology statistical data, and updated K-12 Technology Integration Curricula. This five-year Technology Plan will identify long-range technology goals and an action plan for implementation of these goals.

The District Technology Plan is focused on specific goals, including technology integration throughout the curriculum, hardware and software upgrades, and professional development opportunities that will enhance the quality of technology use in the Franklin Public Schools among all staff members and students. Further, district initiatives identified within this plan focus on Networking, Infrastructure, Data Management, and training for the district technology department.

During FY 2008, the department enjoyed a variety of successes in the area of staff training and professional development. The following plan is representative of where the department is currently positioned in the district with regards to technology use and integration, and the direction to which the department intends to focus during FY 2009 and beyond.

The department is an integral component to a district that continues to grow not only in size, but in human resources who value the role that technology can and does play in the education of our students and the educational community. Our mission is to move the Franklin Public Schools to the next level of technology integration through careful and creative planning, training, and acquisition of necessary resources.

Technology Department Assessment

The Franklin Technology Department is comprised of a team of individuals who are responsible for all technological operations in the Franklin Public Schools. The department works with the Director of Instructional Services to train faculty and staff members and maintain all hardware and software. In addition, the department works with the Director of Finances to properly budget for the purchase of all hardware and software.

The department supervises and supports the maintenance of a district information management software package, supports the maintenance of a district student information system, and collaborates with the District Data Analyst and Central Office Administration to oversee the timely submission of data to the DOE. Additionally, the team supports a variety of technologically integrative experiences, manages a complex data network that supports 10 schools, a central office and various additional school related offices. The network currently connects approximately 3000 workstations (both Microsoft Windows® and Apple® platforms) and maintains approximately 50 servers, also multiple platforms.

Direct technology instruction occurs at the student level in all 10 schools. It is the department's responsibility to prioritize and address the countless technology needs and tasks to ensure instruction drives the technology. The department's challenge, therefore, is to remain current on the latest technological advancements for its own growth and to further support emerging technologies in the Franklin Public Schools.

Current inventory of equipment and services

School	Student Computers ¹				Student/Computer Ratio	Computer Labs ²	% Classrooms with Telephones	Internet Speed	AlphaSmarts	Electronic WhiteBoard	PDA's	LCD Projectors	Video Cameras	Digital Cameras	Scanners
	High-End	Average	Low-end	Total											
Annie Sullivan Middle	24	27	90	141	3.4	5	100%	T-1	64	1	2	3	5	12	23
Davis Thayer Elementary	0	75	26	101	3.09	3	100%	T-1	0	1	0	2	4	3	5
Early Childhood (ECDC)	0	7	0	7	29.29	0	100%	8Mb	0	0	0	2	7	7	0
Franklin High School	93	220	101	414	3.83	12	100%	8Mb	8	1	6	9	2	5	13
Hellen Keller Elementary	0	27	162	189	3.15	5	100%	8Mb	59	1	0	3	5	10	23
Horace Mann Middle	4	182	5	191	2.8	7	100%	8Mb	0	11	0	40	6	13	9
JFK Memorial Elementary	8	35	64	107	5.03	1	100%	T-1	54	1	1	10	1	3	4
Jefferson Elementary	0	33	91	124	4.35	2	100%	8Mb	84	2	0	4	1	3	4
Oak Street Elementary	0	151	0	151	3.37	3	100%	8Mb	87	4	0	8	0	17	7
Parmenter Elementary	0	24	66	90	4.73	1	100%	T-1	0	1	0	2	1	13	2
Remington Middle	29	83	77	189	2.71	6	100%	8Mb	20	2	2	4	8	9	8
Totals	158	864	682	1704	5.98	45			376	25	11	87	40	95	98

1. Computers used for instructional purposes

2. Includes Mobile Computer Labs

Curriculum Integration¹

The philosophy of the Franklin Public Schools and the technology department recognizes that curriculum and instruction is the hallmark of quality education. With this as a backdrop, the district has historically used technology as a tool to enhance the development of curricula and its implementation. Additionally, technology as an instructional tool has been proven to motivate the learner and provide a venue for learning that might otherwise be left untapped. Technology is dynamic, and constantly challenges its users to maintain currency and fluency regarding its use. It is unsurpassable as an effective and immediate means of communication. All these points factor into the development and review of curriculum in the Franklin Public Schools.

The FPS public web site includes online curriculum guides that are reviewed periodically by the district curriculum teams under the direction of the Director of Instructional Services. This provides a venue for parents to better understand the learning expectations for their children in the core academic areas. The district curriculum teams have developed more comprehensive electronic curriculum documents that provide a more in-depth translation of the Massachusetts Curriculum Frameworks learning standards. The FPS Curriculum Conference on First Class® collaboration software is accessible for all school employees. This piece of technology allows all classroom teachers, administrators, educational assistants, specialists and special education teachers to access curricula at any grade, level, or discipline in order to make better use of instructional time, integrate subjects, research accommodation and modifications, and/or access resources.

Three technology related practices continue to embed best practice in the integration of technology and research-based curriculum development and instruction. The K-12 Science/Technology Engineering MS Project documents have maintained their dynamic nature. Now three years in existence, the digital work links grade 6-12 course learning expectations with classroom teachers of science providing both horizontal and vertical alignment and interaction. The document serves as a database for specific categories/fields of instructional information including learning standards by grade level assignment, core activities, resources, assessments, vocabulary, Essential Questions/guiding questions, and budgetary information. The technology department has been an integral part of the projects success by supporting the purchase of software, installation, and setting up a dedicated server to house the project data.

A second project, the development of the K-12 *Guide to School Safety Practices* is in its first year of implementation. In collaboration with the entire faculty, building and central office administrators, the Franklin School Committee and the teachers' association, this project serves to identify safety protocols in science instruction (general and lab classroom situations), safe handling and storage of equipment and chemicals, and student/teacher education and awareness. Science coordinators at each building have been appointed and meet with a district science safety coordinator on a regular basis.

¹ This section prepared by Michele Kingsland-Smith, Director of Curriculum and Instruction.

Teachers have received professional development on the content and use of this document.

Another promising technological addition to the district is the Data Warehouse software. The technology department, the district educational data analyst and central office personnel are collaborating on a protocol for identifying key data to be housed in this repository. Key teacher leaders and all administrators are being trained in accessing MCAS and other district/building-based data. The Office of Instructional Services will work with district personnel to identify internal data that will increase the data analysis and decision-making capacity at all levels of instruction.

Curriculum Goals

Goal 1: Research a standards-based web-based elementary reporting system to replace the current district practice of electronic documentation by trimester.

Goal 2: Use technology to revise core curriculum documents, including links to resources and other instructional materials.

Goal 3: Maintain and expand upon the First Class FPS Curriculum Conference in order to provide “personalized” access to all FPS faculty and staff as appropriate.

Goal 4: Continue the development of the MS Project science curriculum to include purchase and installation of software, and establish a dedicated server to house the data.

Goal 5: Maintain and expand upon the Guide to School Safety Practices to include awareness of and protocols for safe practice beyond the science classroom.

Goal 6: Seek meaningful training opportunities that will strengthen teachers’ abilities to utilize technology to enhance their curriculum and instruction.

Goal 7: Continue to expand and support assistive technology devices and software, which enable students with disabilities to access the general education curriculum

Staffing and Training

The Technology Staffing Model in the Franklin Public Schools consists of:

- Director of Technology (.7) ²
- Network Administrator (.7)
- Database administrator (.5)
- Four Technicians – full time tech support responsible for installing and maintaining all technology in all 10 buildings
- Technology Operations Specialist (.5)
- Nine Technology Coordinators – (stipend position 2hrs /week)

Numbers of computers and peripherals continue to grow, and incidents of use by teachers and staff members continue to increase. At the same time the department and its peripheral support (Curriculum Enhancement Teachers – CET's have been eliminated due to budget cuts) is decreasing in size and in its ability to problem solve as issues arise. As a result, it is imperative that the district makes it a priority to commit to the training and, if necessary the addition of staff members in FY 2008 and beyond or the department will continue to be limited in its ability to provide effective and efficient services in the support of the educational program.

Under continuous review are all aspects of the network, hardware, personnel, policies and procedures. Recommendations from this evaluation will be reviewed and a staffing plan will be updated in alignment with district-initiated decisions.

In addition to personnel changes/ additions a training standard of 1 week per tech per year has been implemented. This mandatory training is intended to promote forward thinking and an attitude towards continuous self improvement towards professional goals.

² The Technology Department supports both the Town of Franklin and Franklin Public Schools. The numbers represent the estimated FTE equivalent of the position resulting from this dual coverage.

Technology Budget

The Franklin Public School's administration has been very generous in the area of technology enhancement and integration. The current operating budget of approximately \$191,000 (not including salaries) is sufficient to provide ongoing maintenance of the district's various technology related hardware, software and licenses and contracted services. In addition to the standard operating budget, the town has allotted significant funds each year for capital improvement projects (CIP). Typically the bulk of this money has been used to upgrade computers according to the Department of Education's Technology rating system¹ with the attempt to keep the great majority of computers in the A, B range. When funds permit additional technology is purchased as well, keeping the district's schools on the leading edge of technology in education.

The most recent CIP disbursement (FY 2008) was \$200,000. The bulk of these funds will be used to bring additional technology into the district with a special concentration on license upgrades (Microsoft Office®), interactive whiteboards and secure wireless access at the High School.

Technology budget FY 2009

Category	Appropriation
Materials and Supplies	115,000
Contracted Services	68,863
Utility Services/ Training	6,600
District Travel	1,360
Total	191,823

In addition to the monies detailed above, the district also enjoys (and appreciates) a 40% E-rate discount on selected services. Future eligibility may include requests for reimbursement for large scale rewiring projects.

E-Rate Reimbursement

Service	Vendor	Reimbursement Amount	
		2006-2007	2007-2008
Telephone – Local calling area	Verizon	36,001	44,593
Telephone – Long Distance Service	At&t	2,101	14,100
Telephone – Wireless Service (Cell Phones)	Verizon	2,231	2,151
	Nextel/Sprint	2,056	3,526
Internet Access	Celt	7,706	1,919
Total		48,039	66,289

1. See Appendix I for details.

Network and Infrastructure

Networking Standards: When adding or replacing any existing network components the following standards will be adhered to:

- Network Cabling
 - Local Area Networks (LANs) will be installed using Category 5 (CAT5e+) copper cable installed and tested to support 100 mbps of network bandwidth to the desktop today, with the possibility of supporting gigabit network speeds to the desktop in the future
 - Where required to conform to local Building Codes for fire safety, CAT5 cable will be plenum rated
 - Regardless of the distances between the primary wiring closet (Main Distribution Frame or MDF) and secondary wiring closets (Intermediate Distribution Frame or IDF), backbone cable runs will be multi mode fiber optic cable capable of gigabit speeds
- Network Topology
 - LANs will be built using a star topology
 - Non conforming LANs (e.g., bus, ring) have been phased out and are no longer supported
- Transport Protocol
 - The district is standardized on TCP/IP
 - All other network transport protocols (e.g., AppleTalk®, IPX) have been phased out and are no longer supported
- LAN Protocol
 - The district is standardized on Ethernet running 100 Mbps to the desktop and gigabit backbones
 - Network hardware also supports 10 Mbps to the desktop for older equipment
- Firewall
 - The district has installed a hardware/software firewall between the public Internet and the private school network. All district technology resources are positioned on the private side of the firewall allowing protection from unauthorized access by sources outside of the district's networks. In addition to the firewall, remote routers located at each of the school sites, are configured to block unauthorized access between schools, and between administrative use and student use LANs within a school site.
- Routers
 - The district has remained standardized on router technology from Cisco Systems®, for all installations.
- Ethernet Switches
 - The goal for all future purchases of Ethernet switching equipment is to provide a 10/100 Mbps auto sensing port (100 Mbps for thin client installations) dedicated to each connected network device throughout the district.

Technology Objectives and Goals 2008-2011

Goals from 2008-2009 online tech plan

Goal 1: Create a Technology Committee of Administrators, Principals, Teachers and parents to better accommodate the opinions and advice of this diverse group of individuals.

Goal 2: Install full wireless access throughout High School.

Goal 3: Develop method to give students access to their documents via a web portal.

Goal 4: Allow student WiFi access on personal devices at High School level.

Goal 5: Move towards a 1-to-1 laptop initiative at the High School that will include Student ownership of the laptop.

Goal 6: Implement hardware security system to identify new foreign devices being plugged into the school network.

Goal 7: Install 24 strand fiber optic cables between all schools and the district's administrative offices.

Goal 8: Investigate the possibility of using printer control software to reduce printing costs through

Goal 9: Implement a district wide nursing management software package that integrates seamlessly with our current student information system.

(NOTE: goals 2,3,4,5,9 have been accomplished by 01/2010)

The district intends to develop a technology committee structure that addresses impact on curriculum integration. The technology support staff continues to make improvements to the network infrastructure. More efficient and effective practices are continuing to be implemented to support more computers without additional staff. The following goals represent the cumulative list of priorities for our department over the next 3 years.

Goal 1: Create a Technology Committee of Administrators, Principals, Teachers and parents to better accommodate the opinions and advice of this diverse group of individuals.

Goal 2: Implement a district wide cafeteria point of sale system for food services.

Goal 3: Implement a district wide nursing management software package that integrates seamlessly with our current student information system.

Goal 4: Develop/revise the Acceptable Use Policy for all employees.

Goal 5: Install full, secure wireless access throughout High School.

Goal 6: Implement Microsoft Sharepoint® services to give students access to their documents via a web portal.

Goal 7: Allow student WiFi access on personal devices at High School level.

Goal 8: Upgrade FirstClass® email server to next version

Goal 9: Purchase interactive whiteboard technology for each school (at least 1 unit per school)

Goal 10: Implement hardware security system to identify new foreign devices being plugged into the school network.

Goal 11: Investigate the possibility of using printer control software to reduce printing costs throughout the district.

Goal 12: Move towards a 1-to-1 laptop initiative at the High School that will include Student ownership of the laptop.

Goal 13: Prepare for the eventuality of wireless hand-held devices (Smart phones/PDAs at High School.

Goal 14: Install 24 strand fiber optic cables between all schools and the district's administrative offices.

Professional Development³

The Franklin Public Schools offers professional development opportunities in six distinct ways:

- The district offers two full-day professional development release days. These days are organized based upon the professional development needs of the district. A needs assessment and the work of the Literacy Leadership Committee during the 2007-2008 year identified two literacy goals each for the elementary and middle school levels and assessment of student expectations for learning at the high school. Technology is integrated into all of these areas, both as an application tool and a means of gaining knowledge.
- The district offers three half-day professional release days. These days are organized by each building principal with input from faculty. These initiatives must align with the district's literacy professional development priority. All school improvement plans reflect this priority. Again, technology is applied in the development of literacy assessments, presentations, rubrics and other tools for assessing student progress. It is also used as a tool for gaining knowledge in the topics of professional development.
- The district offers content and software specific technology courses during the school year. While some are cycled yearly because of the need for continual training or in response to long-term district initiatives, others are offered based upon faculty/staff requests for training.
- The district offers after school workshops for technology training and other professional development topics on an ongoing basis.
- The district also offers technology training to administrators and technology integration teachers in the district. This "train-the-trainers" model works for in-class modeling of lessons utilizing technology with students at the elementary and middle school levels.
- Finally, the district continually supports training for district data, reporting, and scheduling personnel in all of our schools.

³ This section prepared by Michele Kingsland-Smith, Director of Curriculum and Instruction.

Professional Development Goals

Goal 1: Offer technology integration training and professional development that supports the District Strategic Plan, Improvement Plan, and Professional Development Plan and the School Improvement Plans.

Goal 2: Provide technology training as it relates to the development and use of literacy assessments and the monitoring of student progress (all levels of the RTI model).

Goal 3: Develop inter- and intranet structures for teachers to support each other as they implement district curricula.

Goal 4: Use technology to enhance the development, communication, and implementation of district curricula.

Goal 5: Provide technology training to enhance the understanding of data and the use of data in the decision-making process.

Goal 6: Continue to develop and modify the district Professional Development Website.
<http://cfweb.smartedu.net/franklin/PD/default.htm>

Scheduled Professional Development Activities 2008-2009

1. Data Warehouse training for PK-12 administrators and teacher leaders
2. Technology training in the content areas: Math, Science, ELA, Foreign Languages, Social Studies, Health/PE, Music, Art
3. Research in web-based elementary reporting system
4. Research and recommendations for RTI student progress monitoring software
5. K-5 Math software training to support implementation of 3rd Edition Everyday Mathematics
6. Research and training in K-8 literacy assessment system
7. Curriculum development/updates to middle school computer technology courses

Appendix I

DOE computer rating chart

Number of Workstations in Each Category

Computer Platform (including laptops)	Type A (high-end)	Type B (average)	Type C (low-end)
	<p>Function: Multimedia computers capable of running virtually all current software, including the latest high-end video and graphics programs</p>	<p>Function: Multimedia computers capable of running most software except for the latest video and graphics programs</p>	<p>Function: Multimedia computers capable of running most current productivity applications</p>
	<p>Memory: 1 GB RAM or better</p>	<p>Memory: From 256 MB up to 1 GB RAM</p>	<p>Memory: Working computers that do not meet the specifications for Type B</p>
	<p>Processor:</p> <p>Windows - 2.0 GHz CPU or better, single processor OR 1.0 GHz Dual Core</p> <p>Macintosh - G5 or better</p> <p>(or equivalent configurations to meet the stated function)</p>	<p>Processor:</p> <p>Windows - 1.0-2.0 GHz CPU</p> <p>Macintosh - G4 or better running OSX</p> <p>(or equivalent configurations to meet the stated function)</p>	<p>Processor:</p> <p>Working computers that do not meet the specifications for Type B</p>