FAIRFIELD PUBLIC SCHOOLS

The Fairfield Public Schools Technology Plan 2015-2018

Members of the Technology Steering Committee

Fairfield Public Schools

Member	Title	Constituency Represented
Karen Parks	Deputy Superintendent	District
Meg Boice	Director of Secondary Education	Secondary Schools
Chris Brand	Application Integration Specialist	Technology
Nancy Byrnes	IT Manager	Technology
Kristen Bruno	Principal	Early Childhood
Carson Greene	Student	students
Christopher LeClerc	Student	Students
Katrina Cronin	AT Specialist	Special Education
Nicki Callahan	Library Media Specialist	Elementary Library Media
Greg Hatzis	Headmaster	High Schools
Ken Lee	Parent	Parents
Karin King	HS Tech Integration Specialist	High Schools
Gregg Pugliese	Curriculum Leader- Social Studies	Grades 6-12 Social Studies
Jason Purzycki	Dean	Secondary Special Education and high school program; Distance Learning
Michael Rafferty	Interim Director Elementary Education	Elementary Schools
Paul Rasmussen	Curriculum Leader- Mathematics	Grades 6-12 Mathematics
Sage Natera	Student	Students
Analisa Sherman	Teacher	Elementary Teachers
Marco Taddei	Webmaster	Web Presence
Michelle Taddei	Teacher	Middle Schools
Meg Tiley	Principal	Middle Schools
Tony Vuolo	Principal	Elementary Schools
Walter Wakeman	Curriculum Leader K-5	Elementary science and math
Carolyn Waters	Library Media Specialist	Secondary Library Media
Paul Zhitomi	Teacher	Business Education- High School

Background

The Fairfield School District Information Technology Department in consultation with the District Technology Steering Committee has created a plan to insure capacity, ease of access and security of the computing network and environment for the next three years, in alignment with the state technology plan. This document will describe the plan, its benefits and strategies, and required resources to meet those planned objectives.

The Committees work put forward the following broad objectives for the next three years:

- Move all instructional resources to be accessible via the Internet in support of 24/7/365 learning
- Update the number of devices available to students at all levels; and equitable access to those resources
- Improve the quality and quantity of storage available to retain student work in a secure environment
- Insure all resources used meet the protection and privacy standards of COPPA, CIPA and FERPA
- Continually evaluate and update wireless access within the schools to meet demand of students, faculty and staff
- Continue to move to electronic document creation, usage and storage to preserve resources

Current State of the Network

The school network was designed originally as a distributed environment; with each school its own mini computer network. This was reasonable at the time, as connections between schools were not always reliable, and minimal resources required access to the Internet or to central office. Students and faculty files and resources were located on school based servers to insure access during the school day. The original network was built on a small business model.

As time has passed, a new wide area network was installed in 2005, increasing capacity and reliability to centralized resources. The use of tools such as email has exploded, and has become a primary communication vehicle for the district.

The state of Connecticut provided Internet access to all schools, which Fairfield uses; which is reliable and has adequate capacity. Many more instructional and productivity resources were automated, and are accessible via the Internet or from the central office, rather than locally on school servers and desktop computers.

As these trends continue, and more business and educational functions are handled through electronic means (e.g. form workflows for approvals; assessments; curriculum content) the necessity of a stable and appropriately sized computer network and systems architecture has become imperative. That said, resources are limited and the department plan is to continue with changes to maximize access to files

and applications while minimizing the cost of equipment, software and support staff required. The district network has grown to an enterprise mid-range network from its original small business origins.

Storage Capacity and Server Consolidation

Over the past three years, the department has instituted the use of virtual servers. This allows the district to use one integrated blade system, which includes server functionality and storage for multiple environments. For example, the 11 elementary school servers have been consolidated onto one piece of hardware. That same hardware supports many other applications.

We have placed blade servers at each high school as well as central office. Initially, this plan allowed for the creation of replacement "student" and "faculty" servers in a virtual environment, rather than have the need for two separate physical servers at each site.

Each of these three blade servers provide for growth as additional storage capacity can be added to them. The storage can also be tiered, meaning lower cost types of storage can be mixed with higher cost storage in the same 'array'. The servers use a software product that enables the server to place data that is not retrieved by users frequently to drive storage that performs at a slower rate than storage that supports high demand data. This is important as it keeps costs down and because it's integrated, requires less engineering resources to implement. The first wave of "smart storage" is requested in the 2015-16 budget proposal.

The engineer also manages the volume of data by utilizing tools such as de-duplication. De duplication is a process wherein the operating system of the server has the capacity to compare data files held by one person or multiple persons on the same server. It maintains the link for each person to get to the files as expected, but rather than storing multiple copies of an exact copy, it keeps only one. This is transparent to the user.

De-duplication not only saves space on the server storage, but also saves back up disk space and overhead as critical production servers are backed up daily to a third party site for disaster recovery and business continuity purposes.

Tri SAN Design

The creation of the Storage Area Network triangle between the central office, FWHS and FLHS is part of the server consolidation process described above. The wide area network which connects all schools uses these three sites as the core. All K-8 schools funnel to one of these three, the majority at one of the two high schools. There is also a direct WAN connection between the high schools to insure connectivity should central office be offline.

The Tri SAN design is to move critical resources between the three sites, so there is not one point of failure. Currently the P drive and the U drive are no longer on the central office servers, but located at the high schools.

As part of this process we will also consolidate virtual servers by level. This means instead of having and managing 11 virtual elementary servers, we would have three- one at each of the three core sites. This reduces overhead (server management, power), while providing redundancy should one site have a power or system failure.

Implementation of VLANs (FY 2015-16)

The district will begin implementation of virtual local area networks which will peel off bandwidth and assign it to discreet functions- such as wireless devices; voice systems and the like. Essentially, this practice creates separate broadcast networks, simplifying IT's ability to segregate traffic on the network by device type or purpose, and therefore applying different quality of service as desired: Voice traffic, for example would get a higher priority than guest Wi-Fi devices. VLANs provide flexibility and adaptability as network requirements change.

Wireless Networking

In 2009 the district installed wireless networking at the two high schools and central office. The K-8 school sites were added in 2012- 2013. Due to the demand for access to wireless access to the Internet, driven by personally owned smartphones as well as wireless district owned laptops and tablets the district increased the density of the wireless network in 2014 at FLHS and plans to do the same at FWHS in 2015. There are also plans to expand wireless access to the athletic fields at the high schools.

Use of Cloud Services or SAAS

The department has recommended, and ultimately moved in coordination with other district departments several key applications to SAAS or software as a service. This moves the need to host or provide these applications on district hardware to private, secure cloud space. Applications moved from traditional in house servers to vendor hosted are: Tyler Munis Financial and Human Resources system; Follett Destiny Library Circulation, Textbook and Asset Manager and Education Logistics' Edulog which handles bus transportation routing and planning.

As a result of these moves the district has saved support resources which can focus on other projects; operating expenses in utility costs and backup systems and capital costs (for replacement servers).

Use of Google and MS365

The district implemented the use of Google and MS365 cloud accounts for students and faculty beginning in 2012. The domains of these cloud systems are fairfieldschools.net for Google and ffldschools.org for MS365. Each student and faculty member has an account, although many may be inactive. As they are introduced and instructional practice is changed to incorporate them. They are one more tool in a teacher's tool box.

The domains are currently secured and set to limit students to correspondence only with others in the Fairfield district. This helps to insure compliance with COPPA and CIPA. There may be compelling reason to expand and create a separate cloud domain space for high school students without this limitation.

Upgrade VPN and Firewall (Summer 2015)

The current Cisco Firewall does not support *web based* virtual private networking, and requires a client install to function. We have attempted to use another Barracuda device for web filtering and VPN access for students, but the navigation proved overly difficult for most users. As these two devices are end of life, we have proposed an upgrade to a new Cisco firewall with Firepower services. This is a next generation firewall which is threat focused and includes protection against targeted and malware attacks. School districts are increasingly seeing attacks from external sources. Introducing web accessible applications where users are operating on non-district equipment increases the ability of malicious attack. The improved firewall system will help to mitigate these threats.

Single Sign On (SSO)

To facilitate student and faculty navigation and access to online resources whether internally or externally hosted the district is pursuing acquisition of a single sign on product. What this does is create a portal screen where students would be presented with all the software applications the district offers through a web page. Once the login information is completed for each application once, the student would be able to click and go. It also provides better navigation to cloud and internal storage to the user and facilitates saving and retrieving files on personally owned and district devices.

Website

The district webmaster has completed the re-launch of our website in January 2015. The new design will simplify navigation for users, provide departments with simplified resources for posting, make the site smartphone and tablet ready, and improve the layout for better web design and management.

As part of this process we moved the host of the website from our local vendor to Rackspace ®, an industry recognized business cloud service. This provides us with scalability and improved support as access to our web resources becomes increasingly crucial to the business of the district.

Work will continue with school and department users to facilitate their use of the website for school and classroom postings.

Disaster Recovery and Business Continuity

The department has implemented back up systems as follows:

Email

The email system can be “failed over” to a duplicate Microsoft Exchange email system at Network Synergy’s offices in Trumbull. This system was tested on December 3, 2014 . Due to the complexity of redirecting email, it requires an approval to implement, and an approval to disengage once the production environment is re-established.

In 2015, the department will be implementing a new email vault system that will put email into the cloud for retrieval for legal and regulatory purposes.

Financial and Human Resource Systems

As previously noted, the district moved to Software as a Service and the Tyler Munis financial and human resource database application is now hosted by Tyler from Maine. Tyler has several remote sites that back up and act as redundant sites should they have an elongated failure in Maine. The system can be reached via the Internet on mobile devices that are set up with the appropriate Tyler VPN client. We have two laptops set up in this manner. Additionally we have subscribed to two mobile hot spots to provide a cellular based alternative to the district's typical Internet access should central office not be available or accessible. Tyler's DR process for the print of checks, should our printing environment be unavailable, is to print them in Maine and deliver them to our designated location by driver or by FedEx.

Student, Staff and Faculty files

All student, staff and faculty files are backed up incrementally during each business day. These backups are retained at the end of each fiscal/school year in late June. At that point, the accumulated files are archived to a year-end master file and a new snapshot is taken. The new snapshot is then the foundation for the New Year's back up, with incrementals added periodically each business day.

This process uses disk to disk storage. The backups are located at our third party vendor site in Trumbull, and are also saved to an out of state back up site. It is important to note that restoring a file from back up requires knowledge of which server the file was originally saved to, and the file name. Additionally, older files may not open correctly as operating systems, Office suite types change over time, causing older file corruption and data loss.

The migration to Google Docs and MS 365 provides for additional location for student work. Each of these providers backs up and stores files in multiple locations to insure access.

Data Analysis and Reporting

The district acquired licenses for Tableau, which is a data analysis/data mining software with the implementation of Infinite Campus in 2013. These two products have facilitated the district's ability to pull data elements from disparate sources for analysis. A server acquired with high I/O capacity (can handle "crunching" large amounts of data) in 2015 will help to support the District Improvement Plan.

A newly formed District Assessment Committee is developing questions for future analysis to aid curriculum leaders and schools meet their goals and objectives.

Infinite Campus

The implementation of Infinite Campus in 2013 has provided more open communication between students, parents, faculty and staff. The product continues to evolve and is planned to launch additional curriculum and lesson plan integration and management tools into the instructional module of the product in the summer of 2015. The five year plan of the software publisher is to integrate the system with a learning management system.

The program currently supports the following Key functions and others:

- Online gradebook/assignments and collaboration
- Web portal access for parents and students which tracks attendance, grades, discipline and assignments
- Online registration for new students
- Several scheduling “systems” to assist in maximizing use of building and teaching resources in support of student requests
- Online document retention
- Electronic access to report cards and transcript data
- Ad hoc reporting

Instructional Technology Goals and Action Plan

Goal 1: Engaging and Empowering Learning Experiences

Goal 2: Assessment

Goal 3: Connected Teaching and Learning

Goal 4: Infrastructure for Teaching and Learning

Goal 5: Productivity and Efficiency

Learning Experiences

National Tech Plan	State Tech Plan
1.0 Learning: Engage and Empower *All learners will have engaging and empowering learning experiences both in and out of school that prepare them to be active, creative, knowledgeable, and ethical participants in our globally networked society.*	***Goal 1: Engaging and Empowering Learning Experiences*** *All learners will have engaging and empowering learning experiences both inside and outside of school that prepare them to be active, creative, knowledgeable, and ethical participants in our globally networked society.*
What will your district do over the life of this local Tech Plan to ensure that learning experiences are empowering, engaging, and supported by digital tools?	

Action Plan for Goal Area 1

What Steps Will You Take?	Who Will Be Responsible?	When? (Be specific, e.g., By 10/1/15)	How will you measure?
Revisit Technology Distribution plan	Building Administrators; Technology Committee	June 2015	Kaseya and Destiny Inventory reports
Provide Professional Development on Utilizing Technology across all curricular areas as part of curriculum revision and roll out.	Curriculum Leaders, Technology Integration Specialists, Directors of Education, Deputy Superintendent	As per curriculum review calendar	Protraxx, Teacher feedback, climate survey

Audit digital resources for application to curriculum	Curriculum Leaders, Technology Integration Specialists, Technology Committee, Teachers	Annually in June; confirmed in October for prep of budget	Inventory of Software, teacher feedback
Create, adopt and implement BYOD Plan and associated usage policies and instructional practice at all levels; including central office.	Technology Committee, Building Administration, Manager of IT	Phased plan over 3 years. Scope for following year to be determined in October for following year adoption in budget	Kaseya tickets
Monitor equitable and fair access to technology resources for all students and staff; adjust as necessary	Principals	Ongoing	Feedback from teachers and administrators via tickets
Encourage and support teacher innovation such as paperless classroom, flipped classroom, and Skype.	Curriculum Office, Deputy Superintendent & IT Manager	Ongoing	Kaseya tickets; feedback from teachers and administrators
Provide a network and Internet capable of meeting the capacity requirements to support multiple devices used by faculty and students	IT Manager; Superintendent	Ongoing	Kaseya Tickets, use of facilities, use of hardware and software

Provide students with skills that empower them to use 21st Century Skills	Teachers; Curriculum Leaders		
Research and implement a 1:1 mobile computing device program where appropriate	Curriculum Office		Curriculum leaders, curriculum documents
Increase staff and student ability to access resources and documents when not in school.	IT Manager		Teachers and students have access to cloud based storage and retrieval.
Provide teachers with ability to utilize adaptive testing software	Curriculum Leaders		
Provide students with more multimedia opportunities to demonstrate content mastery.	IT and teacher committee		
Develop an approval policy for use of online resources that allow timely access to those educational resources.	Directors of Elementary and Secondary Education		Teachers able to utilize new applications when needed as budgets and resources allow

Goal 2: Assessment

National Tech Plan	State Tech Plan
2.0 Assessment: Measure What Matters *Our education system at all levels will leverage the power of technology to measure what matters and use assessment data for continuous improvement.*	***Goal 2: Assessment*** *Our education system at all levels will leverage the power of technology to measure what matters and use assessment data for continuous improvement.*
What will your district do over the life of this local Tech Plan to ensure that technology is used for assessment?	

Action Plan for Goal Area 2

What Steps Will You Take?	Who Will Be Responsible?	When? (Be specific, e.g., By 10/1/15)	How will you measure?
Measure student tech skills k-12	Teachers, curriculum leaders, lms, level directors	Required Annually to be assessed in 8th grade EOY	TBD
Analyze student performance through data analysis tools	District assessment committee; District Improvement Plan Committee	As per District Improvement Plan	As defined in district improvement plan
Use IC data tools such as data viz to assist	Curriculum Leaders,	As per District	

teachers in tracking student performance Use district assessments such as iReady, STAR Reading, DRA and SBAC to measure student success	Level Directors District assessment committee; District Improvement Plan Committee	Improvement Plan As per District Improvement Plan	As defined in district improvement plan As defined in district improvement plan

Goal 3: Connected Teaching and Learning

National Tech Plan	State Tech Plan
3.0 Teaching: Prepare and Connect *Professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that enable and inspire more effective teaching for all learners.*	***Goal 3: Connected Teaching and Learning*** *Professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that can empower and inspire them to provide more effective teaching for all learners.*
What will your district do over the life of this local Tech Plan to ensure that educators are prepared to teach 21st Century learners and are connected to technology resources that support teaching and learning?	

Action Plan for Goal Area 3

What Steps Will You Take?	Who Will Be Responsible?	When? (Be specific, e.g., By 10/1/15)	How will you measure?
Use a data management system with associated data visualization functions to help implement data teams at various levels in all schools (e.g., school, grade, &	District assessment committee; District Improvement Plan Committee		Data visualization functions in place for the use in data teams; data team agendas and minutes with documented graphs,

department).			charts, and illustrations.
Create an Instructional Leader for Technology District across all levels (ES, MS, & HS)			Position in final approved budget. Positions in approved budget
Support all staff in improving the use of the student management system across the district.	Deputy Superintendent, Director of Elementary Education and Director of Secondary Education Principals; IC Coaches	July1, 2017	
PD will reflect changes to the integration of technology into curricula and instructional strategies.	Directors of Elementary and Secondary Education; Curriculum Leaders		Curriculum committee agenda & minutes; SIP and data team

	and Liaisons.		minutes illustrating need for technology for instruction; Protraxx reports; curriculum implementation guides.
Increase the use of the district online resources to support professional learning (e.g., Protraxx, Lynda.com, teacher websites).			Web logs, Protraxx reports, classroom observations.
Increase opportunities for parents and students to utilize the parent/student online resources and portals to maximize learning opportunities.			
Increase opportunities for professional educators to leverage technology to increase communication with the community at large.			Web logs; reports from SIS; feedback from faculty, parents, students, and staff.
Gather information from teachers to determine their technology needs for			

professional growth targeted to specific ICT skills/ISTE standards.			Web logs; reports from SIS; feedback from faculty, parents, students, and staff. Yearly survey results showing improvement in teacher request/skills; evidence of professional development opportunities for staff targeting specific technology skills and ISTE standards.

Goal 4: Infrastructure for Teaching and Learning

National Tech Plan	State Tech Plan
4.0 Infrastructure: Access and Enable *All students and educators will have access to a comprehensive infrastructure for learning when and where they need it.*	***Goal 4: Infrastructure for Teaching and Learning*** *All students and educators will have access to a comprehensive infrastructure for learning when and where they need it.*
What will your district do over the life of this local Tech Plan to ensure that all students and educators will have access to a comprehensive infrastructure for teaching and learning?	

Action Plan for Goal Area 4

What Steps Will You Take?	Who Will Be Responsible?	When? (Be specific, e.g., By 10/1/15)	How will you measure?
Manage the wireless system k-12 to insure coverage and access to all users	IT Manager; Helpdesk staff; Network Engineer	Density improvement Scheduled for summer 2015. Ongoing	Kaseya tickets; Wireless management console
Move towards projection systems-district wide that provide for wireless projection from multiple types of	IT Manager	As required and as budget allows	Annual counts of remaining non-conforming projectors. Include in replacement plan.

devices			Annual Review
Provide a storage platform that provides 24/7 access and has no one point of failure.	IT Manager	As budget allows	Review plan and budget as allowable to attain goal
Conduct a needs assessment by level, classroom, & department to determine the distributed model for technology resources.	District Technology Steering Cmte	April 2015 and October 2015	Measure Inventory against revised plan

2015-2018 Distributed Model for Technology Resources

School Infrastructure:

Goals:

All Schools are to have wireless networks that can support up to 3.5 devices per student & faculty

All schools should have fiber back bone between switch closets and the MDF capable of handling 1-10GB per user.

All schools have a minimum 10GB uplink to the wide area network

All schools will have an Internet connection to the CEN via the wide area network which is filtered and compliant with CIPA. Ideally the filter would be adjustable to be age appropriate by level.

All teachers will be provided with a computer workstation (desktop, laptop, tablet based on the current offerings at the time of hire. Each will be upgraded approximately every 5 years, or as budgets allow).

Classrooms:

Goals:

All classrooms (except where not feasible due to size or safety) will have the following:

1. A multimedia projection system with audio that teachers can connect to wirelessly or through an interface near the teacher's desk(s).
2. All classrooms would have wired and wireless monochrome printing capability.
3. All classrooms would have access to mobile computing carts except where dedicated labs are the actual classroom.

Elementary Classrooms

In addition to the above, all K-2 elementary classrooms will have:

a. 3 tablets in each room for student use
b. A document camera
c. An interactive white board, or other interactive device

In addition to the standard classroom list, all 3-5 elementary classrooms will have:

d. A device per student that will have Internet access to be used for productivity work.
e. A document camera
f. An interactive white board or other interactive device

Middle Schools

In addition to the standard classroom

a. Telephone (Internal and External Call Capable)
b. Teacher workstation with interactive capabilities (For instruction/connecting to multimedia projector, and for inputting into IC checking HW, attendance, etc)
c. Six(6) internet enabled devices for student use (enrichment/typing, research, etc)
d. Universal Charging Station
e. Subject Specific Technology Class Sets -> Microscopes, Scientific Calculators, etc

And, on a building wide basis:

f. class set (set of 30) of tablets w/keyboards per TEAM / COMMUNITY / CREW
g. 1 document camera per TEAM/COMMUNITY/CREW
h. 1 class set (set of 30) of interactive response devices (clickers) per TEAM
i. 1 class set (set of 30) of headphones per TEAM

Resource Rooms/Learning Centers/Reading Labs

- Insure adequate numbers of machines (desktops, laptops, tablets) for enrolled students)
- Printing capability
- Projection/interactive capability

Library Media Center/Commons

Two circulation desktops Plus

a. A class set of USB headphones with microphones
b. A Class set of desktop computers with at least 19 inch flat panel monitors
c. An interactive white board or device of similar capability
d. A projection system with audio
e. Lapel Microphones – two sets to be circulated for use in the building
f. Scanning capability of books and all materials including wide format
g. High capacity and high volume (speed essentially) color laser printer
h. High capacity and high volume monochrome printer with wireless print capability
i. A studio or performance area with green screen, tripod, video camera and sound recording capability

For circulation

j. Multimedia projection systems (with audio) on carts
k. A set of 30 laptop computers
l. A set of 30 tablet computers
m. 50 e Readers per 200 students
n. Carts and/or charging stations for both district and student owned devices

High Schools

Huddle stations for student collaboration- (large monitor; computer, furniture)

Charging station lockers for students in each House, LMC and in the Gym area to support student device charging and security.

Wireless printing capability in each house and the LMC

Multidisciplinary Computer Lab

(Secondary schools)

a. Multimedia projector and interactive white board or alternate interactive device
b. Classroom set of Desktops (set of 30+)
c. Teacher Workstation w/ Dockstation
d. Monochrome and Color Printing capability

Multimedia or Specialty Computer Lab

(Secondary schools)

In addition to the multidisciplinary lab equipment

e. Curricular area equipment as necessary (e.g. music keyboards; specialized printers)
f. 30 unit computer lab (Type, Make, Model, Configuration as required by curriculum)
g. Class set of tablets

Application Support and File Storage

Productivity applications

- Google for Education (GAFE) would be offered grades 3-12
- MS 365 would be offered PreK- 12
- ClassLink will be offered to all students and faculty

File Storage

- All students using SSO would be able to select their choice of location for their files- whether MS365, GAFE; ClassLink or district servers.
- Faculty work will be stored either in Google, Ms365 or district storage.
- Administrative and Business work of the district will be held on district storage.

Instructional applications and curriculum content

Where possible, all district curricular materials will be accessible via the Internet. The committee strongly recommends that all text and ancillary resources selected meet this criterion. The purpose is to provide access 24/7/365 days per year, keeping the resources current. Future analysis of the cost of a district provided or supplemented device in lieu of traditional hardbound text and/or materials shall be undertaken each of the years of this plan to determine if a 1:1 initiative is cost effective.

Instructional apps

https://sites.google.com/a/fairfieldschools.net/school-approved-apps/home

The above site reviews the app approval process, subject to funding.

Students:

Secondary students will be required to bring their own device, or will be provided a device. The device must have up to date antivirus software, and Internet accessibility.

Provided devices will vary upon student need and availability.

Faculty and Staff

All faculty will be provided with a choice of a laptop, desktop or tablet device. One device will be issued per teacher/administrator.

Staff will be allocated a device based on defined role and the standard assigned to that role. Currently the following staff member roles are assigned computers:

1) All administrators

2) All Secretaries
3) All Information Technology Staff
4) All Head Custodians
5) All department heads
6) All certified, full time support staff

Staffing

Technical Support

As of 2015 the district has:

1. 10 school based technicians
2. 4 helpdesk technicians
3. 3 data integrators/ analysts
4. 1 engineer
5. 1 manager

The department continues to restructure the current FTE to maximize support available for the additional equipment and uses of the network.
It is anticipated that an additional engineer will be required to assist in the broader management of the implementation of security equipment and adoption of additional mobile technologies.

Instructional Integration

As of 2015, the district has teachers who support other teachers with the integration of technology into curriculum and instruction at the secondary schools. At one point, ten or so years ago, the district had technology integrators at the elementary schools.

The effectiveness of the integrators in assisting teachers in adopting technologies native to students, such as Google Classroom and Microsoft One Note Classroom demonstrates the need to insure this type of instructional support continues. We propose that a second technology integrator be hired for the high schools. At the middle school level, we propose a review of the current job roles of the resource teachers to facilitate more time for them to work directly with teachers. Elementary schools should have restoration of two of the three positions eliminated to provide technology integration support at that level.

The committee also recommends the creation and adoption of an Instructional leader for Technology position. This was proposed in the 2012-2015 plan as well. This position would assist in the evaluation of software and apps; work with the curriculum leaders and liaisons to insure technology was integrated into the curriculum.