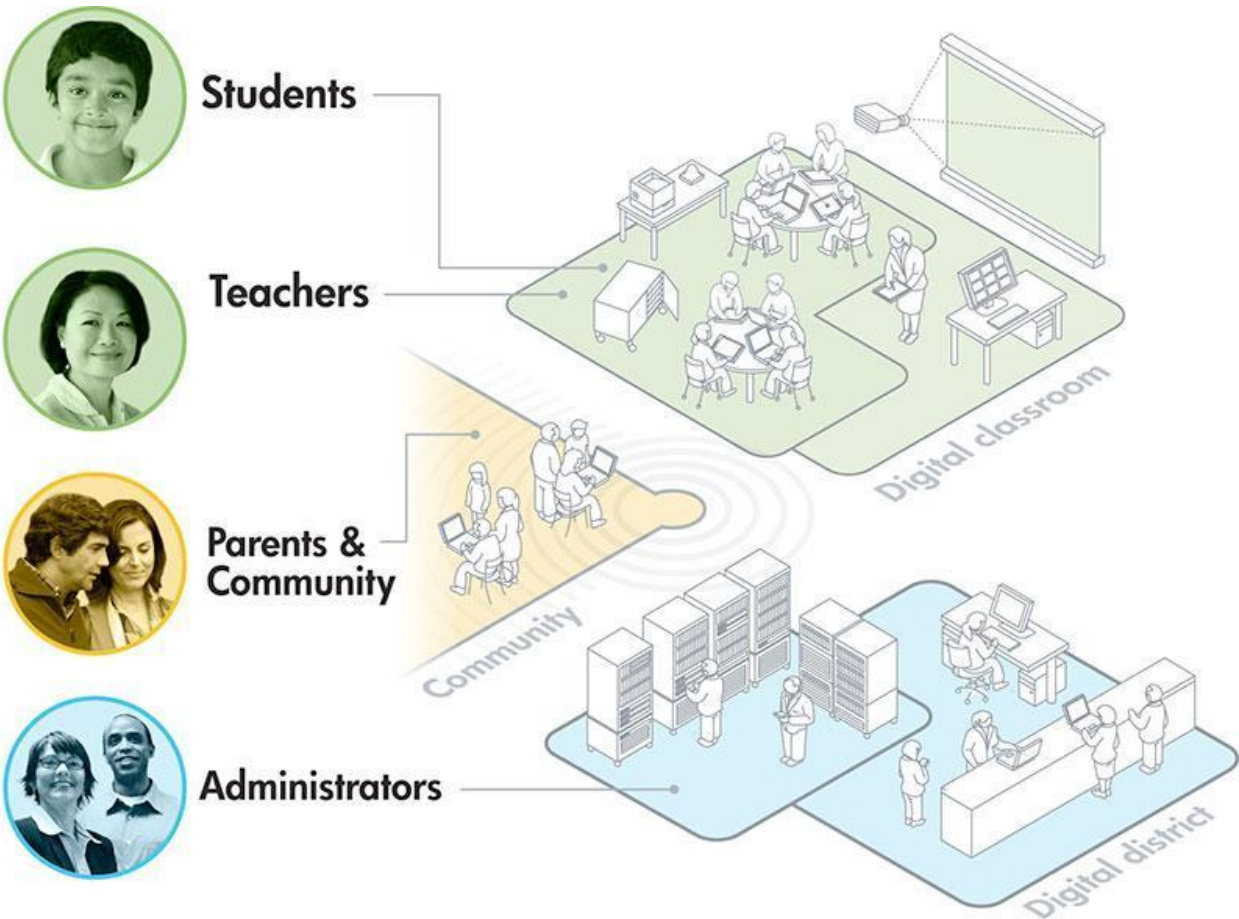


# Fort Lee Public Schools

District Technology Plan  
2013 – 2016

Fort Lee Public Schools  
Fort Lee, New Jersey



Fort Lee Board of Education  
2175 Lemoine Ave., 6<sup>th</sup> Floor  
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## Technology Committee, Board of Education

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Mr. Peter Suh

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Mr. Jason Ruggiero

## I. Executive Summary

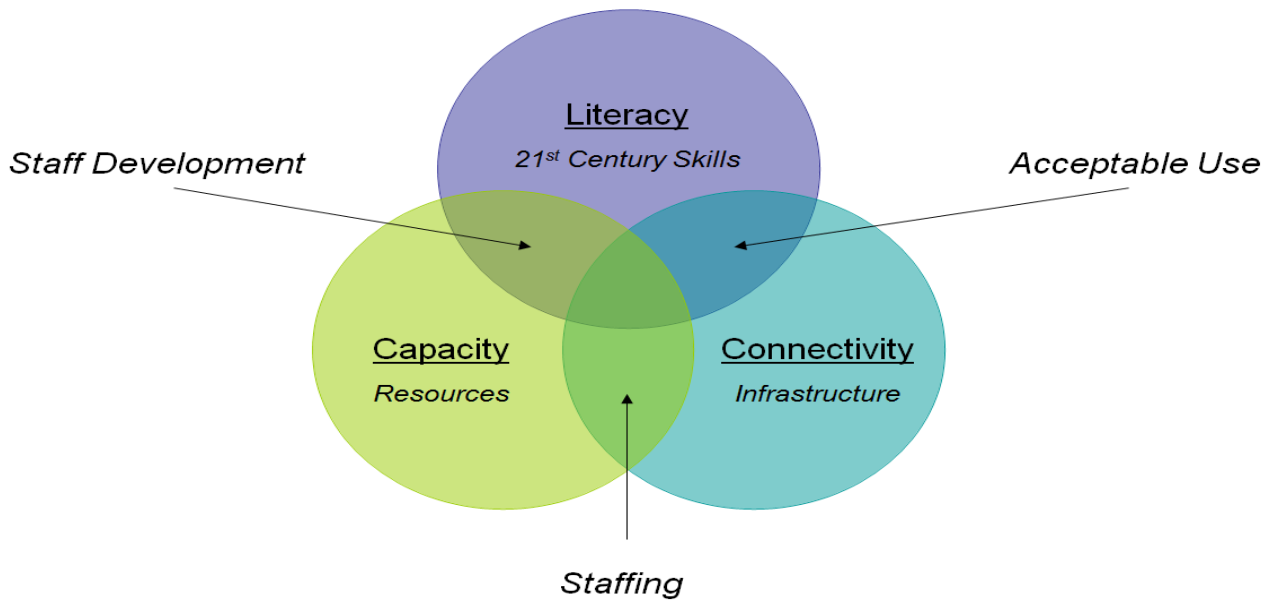
### Vision/Rationale:

Fort Lee Public Schools is committed to preparing our students to be life-long learners and to ensure that all achieve the New Jersey Core Curriculum Content Standards and global skills through a safe, comprehensive learning environment that meets the unique needs of each individual, strong parent-community-school partnerships, and connections to the real world.

Our mission is to create a vision of how teaching and learning and our physical school spaces can change to meet the changing nature of our academic, social, and economic lives as they are impacted by and relate to technology.

The goal is to assist the District in setting directions and implementing action for technology acquisition, staff development, evaluation/assessment of technology, digital communication, and technology integration into curriculum as they relate to the District technology goals: “Literacy,” “Capacity Building,” and “Connectivity.”

- Literacy: We seek to ensure that our students are equipped with the skill sets, understandings, and practices that come with communication literacy, information literacy, and technology literacy preparing them to survive and thrive in the 21<sup>st</sup> century.
- Capacity Building: We seek to provide administrators, teachers, and support staff with a host of learning opportunities and a repertoire of tools allowing them to connect, access, analyze, communicate, and share information in revolutionary and dynamic ways.
- Connectivity: We seek to build and sustain a state-of-the-art, fully integrated information system that will serve students, parents, staff, administrators, and the community through a wide variety of technological tools that support all aspects of Goals 1 and 2.



## II. Prioritization of Needs

1. Replace end-of-life computers
2. Institute a true single point management wireless system
3. Enhance resources to promote parent and community engagement in student education
4. Student technology readiness in preparation for online testing in 2014-2015
5. Technology readiness in preparation for online testing in 2014-2015
6. Improve security video and access systems
7. Enhance teacher observation tools
8. Continued professional development opportunities for online learning and collaboration
9. Move toward 1-to-1 initiative for teachers and students
10. Assure staffing is proportional to increases in technology development plan

11. Improve integration of technology into classrooms and instruction
12. Increase opportunities for students to engage collaboratively online
13. Expand online digital textbooks and online resources
14. Invest in grade and subject-specific applications/services at all levels
15. Upgrade district telephone system with unified communications enhancing security
16. Explore partnerships for distance learning and online collaboration
17. Optimize network infrastructure
18. Optimize data center
19. Optimize printing efficiency

### **III. Needs Assessment**

Data was collected and analyzed by District administrators, teachers, faculty and staff. Our rationale was to create a vision of how teaching and learning and our physical school spaces can change to meet the changing nature of our academic, social, and economic lives as they are impacted by and relate to technology.

#### **Three Concepts Central to 21<sup>st</sup> Century Education**

- Student-centered learning
- Teacher as a facilitator of learning
- Technology as an enabler of learning

#### **Approach**

- Involved district stakeholders in site visits, interviews, guest speakers, workshops, and surveys provided an assessment of district technology service delivery and technology integration into curriculum
- Measured district processes against best practices
- Established district technology vision and goals
- Developed associated recommendations to position the district for the future

#### **Demographic Drivers**

- Need to serve and support diversity
- Continuing technological advancements and associated student home use
- Demand for more school-home communication
- Support for a 1-to-1 initiative or BYOD (Bring Your Own Device)
- Expectation that students will learn 21 century skills
- PARCC online state assessment

#### **Vision and Goals**

- District technology resources promote 21<sup>st</sup> century skills for students and teachers
- Technology fosters parent and community engagement in student education
- Information technology service delivery is appropriately staffed, skilled, responsive, and coordinated throughout the District
- The District's technical infrastructure is secure, reliable, cost effective

- Technology decisions are clearly communicated and aligned with the District’s strategic objectives
- Use technology as an essential resource to implement the Common Core State Standards

**Needs Assessment Findings:**

- Through a multi-faceted staff needs assessment our district has identified the need to access personal mobile laptops to support curriculum mapping, lesson planning, and promote parental involvement and increased communication with parents/guardians through our Student Management System.
- Through a multi-faceted student needs assessment our district has identified the need for students to have access to more multimedia computers with Internet access. This will provide a usable platform for students to access curriculum based applications as well as web-based resources.
- Professional development is needed to ensure that the staff members are able to excel in the use of technology. It will help strengthen practices and acquaint the staff with new systems and ways to use emerging technology tools which will aide in student learning.
- Barriers to the use of technology have been identified. Through faculty meetings and ongoing discussion with the faculty, issues of access and network stability have been identified. Weekly meetings with the Technology Coordinator have allowed for systematic improvement of the network and ongoing planning for improved network stability.
- Proper technology is needed to accommodate the PARCC assessment in the 2014-2015 school year.
- Proper equipment is necessary to seamlessly integrate technology into instruction as required by the Common Core Standards. It includes the understanding of multimedia in instruction.

## **IV. Technology Inventory**

**Current Status**

- A Principals, Supervisors, the Technology Staff Developers, and onsite staff assist teachers in developing technology integrated units and lessons. Library/Media professionals at each school are highly trained in the use of technology as a library and research tool. Staff members use technology to promote problem-solving techniques that lead to project-based learning and authentic data assessment. This is accomplished through integrating technology into their lesson plans using multimedia computers, portable laptops, digital graphing calculators, and digital imaging tools.
- B Based on teacher self-reporting, surveys, administrative observation, and input from our District Technology Coordinator, we assess our staff's proficiency as 5% Beginner, 40% Intermediate, 45% Advanced and 10% Instructor Level.
- C Staff is assured access to educational technology in their instructional areas in the following ways:

- i Access is provided to multimedia computers with Internet access and established Local Area Network (LANs) and a Wide Area Network (WANs) in each of our classrooms, library media centers, computer labs, mobile laptop carts as well as in all of our school offices. Access is provided to e-mail through individual dedicated workstations and/or via Webmail from anywhere with an internet connection. The Elementary, Middle and High School Staff have access to our web-based Student Information System which includes attendance and grade book modules. Access is provided to appropriate software to meet curricular and administrative goals as network/desktop and web-based applications.
- ii Administrators have access to technology via their personal desktop computers and a mobile laptop computer and/or an iPad. All computers have access to the internet, email, shared resources, network applications, network and local printers and web-based applications. Tech support is provided through a web-based helpdesk management system.
- iii All students have access to curriculum-based software, multi-media and peripherals in all instructional areas listed below.
  - a. Fort Lee Early Childhood Center has at least 1 multimedia computer with internet access, 20 mobile laptops in a cart with internet access, 1 mobile SMART board with a projector and laptop with internet access.
  - b. 4 Elementary Schools have at least 1 multimedia computer with internet access in each classroom, a media center with at least 12 multimedia computers with internet access, 30 mobile laptops in carts with internet access, 7 SMART boards with a projector and laptop with internet access.
  - c. Middle School has at least 1 multimedia computer with internet access connected to a 32" television with scan converter in each classroom, a media center with 30 multimedia computers with internet access, 1 computer lab with 30 multimedia computers with internet access, 54 mobile laptops in carts with internet access, 8 SMART boards with a projector and laptop with internet access.
  - d. High School has at least 1 multimedia computer with internet access connected to a 32" television with scan converter in each classroom, a media center with 22 multimedia computers with internet access, 3 computer labs with 30 multimedia computers with internet access in each, a computer lab with 10 multimedia computers with internet access, 66 mobile laptops in carts with internet access, 9 SMART boards with a projector and laptop with internet access, 1 state-of-the-art television studio.

### **Assistive Technologies**

Integration of a vast array of assistive technology is provided to our students. Through the use of voice to text data entry systems, large print keyboards as well as adaptive technologies to accommodate various needs to input and analyze data. Assistive technologies include:

- Co: Writer (spelling and typing speed)
- Write: Outloud (written expression, revision and editing)
- Kidspiration/Inspiration/Draftbuilder (note-taking and organization)
- Pulse SmartPen (note taking)
- Digital planners with audio alerts

- Scan and screen readers
- Portable word processors (netbooks, laptops)
- Online interactive tools
- Universal access on both platforms (PC and Mac)
- Interactive whiteboards (Smartboards)

We continue to explore and provide the latest in software to accommodate all of our staff and student needs. Technology is essential to the implementation of the New Jersey Core Curriculum Content Standards. It is a high priority to have the best district student resources in the classroom, the media center and any other student-based technology access area located through the school. Appropriate software and hardware is used to assure equal access for all, including students with disabilities. Equitable access for all students includes access to content software, online resources, and databases that are integral parts of the curriculum.

### **Interactive Whiteboards and Projectors**

46 interactive whiteboards and supporting laptops, projectors and document cameras are provided throughout our schools for classrooms as a visual aide and to promote interaction. Approximately 30 of these interactive whiteboards are mobile and made available through the school media specialist. In addition to the interactive whiteboards we have 8 SmartTV' that we acquired through the School Parent Teacher Association of Fort Lee Elementary School No. 4.

### **Network Capacity**

Fort Lee Public Schools utilizes private fiber connections to connect each Elementary School, the Middle School and the Administration Office to the High School. The entire LAN/WAN consists of approximately 1000 data drops throughout the campus using switched 10/100/1000base T technology. We are currently using wireless connectivity in all locations implementing WPA encryption using Linksys and Apple Airport access points.

The Fort Lee District Learning/Resource Network is the heart of the three-year technology plan. It provides access to information and home/school communication to the entire community. The cabling, management software, topology, and switches all insure the network can handle our need to promote literacy through capacity and connectivity. Electronic mail, administrative tasks, internet access, intranet access, online databases and educational applications flow quickly and efficiently through a fiber optic backbone. Every classroom, vocational area and office on the campus are interconnected.

### **Telecommunications Services**

30 megabits per second fiber optic Internet connection of bandwidth is provided through Verizon and distributed from the High School to four Elementary Schools, one Middle School and the Central Office.

### **Virtualization Solutions**

Fort Lee Public Schools utilizes server virtualization through VMWare providing a more dynamic and flexible data center.

### **Cloud Infrastructure Solutions**

Fort Lee Public Schools utilizes Google Apps for Education for web-based email, calendar & documents for collaborative study anytime, anywhere.

## **Technical Support**

- Full-Time District Technology Coordinator
- Full-Time Network Specialist
- Full-Time Computer Technician
- K-6 Technology Staff Developers
- (1) 7-12 Technology Staff Developer

## **Filtering Method**

The Fort Lee Public School District utilizes a content filtering device by Sonicwall. The Sonicwall Pro 5060 has in place a high-performance, multi-service security gateway integrating gigabit-class firewall, VPN, gateway antivirus, intrusion prevention, content filter and anti-spam.

Classroom Management Software by Impero provides a second layer of filtering. Key features of this product are managed from a central management interface and include;

- Monitor and record student screens in real-time
- View current and previously opened windows, websites, applications, printed documents
- Detect written keywords or sentences with screenshot or video evidence
- View evidence of attempts to access banned windows, websites and applications
- Instant alerts of violations such as students accessing banned websites
- Perform a number of operations such as log off or send email upon violation detection

## **District Website**

The district's website can be found at [www.flboe.com](http://www.flboe.com), and accessible to all in accordance with Federal Accessibility Standards. We provide people with disabilities the maximum independence and participation while diminishing or eliminating environmental barriers associated with navigation a web page by utilizing high contrast, dynamic colors, alt -tags, text-descriptive links, vertical scrolling, keyboard navigability and multiple languages. Our site contains a link so that anyone who does have difficulty with the site can contact our webmaster.

## **Acceptable Use Policy (AUP)**

We enforce an Acceptable Use Policy (AUP) which sets forth the principles that govern the use by students and staff of equipment, resources and web-based products and services. Our AUP is designed to help protect our students and staff, and the internet community, from irresponsible, abusive or illegal activities. Parents are provided access to information on our web-site outlining cyber safety and our AUP.

## **Internet Safety Policy**

The district's Internet safety policy contains two core components to cyber safety. Technology protection measures through hardware and software applications incorporated in our SonicWall firewall as well as a user/desktop monitoring system called Impero, and through educating minors about appropriate online behavior.

The school district provides the community with public notice and hearing to address our Internet safety policy which was adopted by the school district pursuant to the Children's Internet Protection Act (CIPA).



**Current Computer Age/Inventory**

Computer Age/Inventory																
STUDENT DESKTOPS	Mfg	Model	Acq.	Allocated	H S	MS	S4	S3	S2	S1	CST	CO	CTT	ECC		
	Dell	GX240	7/29/02	Rm 128	35											35
	Dell	GX270	6/15/04	Classrooms	46	26	30	34	25	38				7	1	207
	Dell	GX270	7/1/04	Library	20	30	12	12	12	12						98
	Dell	GX280	6/23/05	Offices	12									5		17
	Dell	GX320	1/31/07	Classrooms										8		8
	Apple	Mac Pro	6/25/07	Band Rm	1											1
	Apple	iMac 20"	7/1/09	CPU Labs	46	30	31	31	30	31		1				200
	Apple	iMac 21"	6/18/10	133, 226	35											35
	HP	AiO	11/12/12	Classrooms					42	14						56
				195	86	73	77	109	96	0	1	20			657	
STUDENT LAPTOPS	Mfg	Model	Acq.	Allocated	H S	MS	S4	S3	S2	S1	CST	CO	CTT	ECC		
	HP	NC6320	7/1/06	Mobile Cart	85	12	1	18		15						131
	HP	NC6320	1/5/06	ESL	1	2	1	10	2	1						17
	HP	6710b	6/30/07	Lab / CST			6				2		4			12
	HP	HP530	7/1/07	ESL	3											3
	Apple	Macbooks	10/1/09	Mobile Cart		30		30	30	30						120
	HP	550	8/11/09	Mobile Cart										15		15
	Apple	Macbooks	8/4/10	Carts	64			25								89
	HP	425	1/18/11	(2) BSI carts		24										24
	Samsung	Chromebook	5/23/12	Elem				30		30						60
				153	68	8	113	32	76	2	0	19	0		471	
STAFF LAPTOPS	Mfg	Model	Acq.	Allocated	H S	MS	S4	S3	S2	S1	CST	CO	CTT	ECC		
	Dell	GX240	7/29/02	Trailer							5				5	
	Dell	GX280	6/8/05	Offices	19	6	3	3	3	3	2				39	
	Dell	P370	6/10/05	Faculty	5					1					6	
	Dell	GX520	7/1/06	Offices	14	2	2	2	1	3	3	2			29	
	Apple	Mac Pro	6/25/07	Staff	1										1	
	Dell	Prec T3400	10/1/08	Staff	4						1				5	
	HP	DC5800	10/20/08	CTT										1	1	
	Apple	iMac 24"	2/1/09	Staff											1	
	Dell	Opt 960	9/23/09	Staff	2							5			7	
	Apple	iMac 21"	3/18/11	Chorus	1										1	
	Apple	iMac 27"	3/15/12	Staff								7			7	
	HP	AiO 8200	7/15/12	Staff	15										15	
				61	8	5	5	4	7	11	14	1	1	117		
STAFF LAPTOPS	Mfg	Model	Acq.	Allocated	H S	MS	S4	S3	S2	S1	CST	CO	CTT	ECC		
	HP	NC6735s	12/16/08	Staff	1							1			2	
	Apple	Mac Pro 15"	10/1/09	Staff	3	1				1					5	
	HP	Mini 5101	11/4/09	Offices	4										4	
	HP	ProBook 4510	6/30/10	History	6	2	1	1	1	1					12	
	Apple	Macbook	8/4/10	Teachers	2			35							37	
	Apple	iPad	2/18/11	Staff	9	2	1	1	1	1	1	2		1	19	
	HP	620	3/8/11	Media Ctr.	3										3	
	Apple	Macbooks	4/18/11	Teachers	8					10					18	
	HP	630	12/6/11	Teachers		35				2					37	
	Samsung	Chromebook	5/8/12	Prof. Dev.	2										2	
	Apple	iPad	9/20/12	Staff								4			4	
				38	40	2	37	2	15	1	7	0	1	143		
				447	202	88	232	147	193	14	22	40	2	1388		

**Three-Year Technology Plan Inventory Table**

<b>Area of Need</b>	<b>Describe for 2013-14</b>	<b>Describe for 2014-15</b>	<b>Describe for 2015-16</b>
<b>Technology Equipment</b>	Centralized wireless Interactive whiteboards with short throw projectors Replace end of life computers Student mobile devices	Interactive whiteboards with short throw projectors FLECC iPad cart Student and Teacher mobile devices	Interactive whiteboards with short throw projectors Move toward 1-to-1 initiative
<b>Software used for curricular support and filtering</b>	BrainPOP, BrainPOP Jr., Compass Learning, Discovery Education, Final Cut Studio, Geometers Sketchpad, Google Vault i-Safe, iLife Suite Impero, Inspiration, Kidspiration, Microsoft Office Suite, Odyssey Smart Notebook, Study Island, Successmaker	BrainPOP, BrainPOP Jr., Compass Learning, Discovery Education, Final Cut Studio, Geometers Sketchpad, Google Vault i-Safe, iLife Suite Impero, Inspiration, Kidspiration, Microsoft Office Suite, Odyssey Smart Notebook, Study Island, Successmaker	BrainPOP, BrainPOP Jr., Compass Learning, Discovery Education, Final Cut Studio, Geometers Sketchpad, Google Vault i-Safe, iLife Suite Impero, Inspiration, Kidspiration, Microsoft Office Suite, Odyssey Smart Notebook, Study Island, Successmaker
<b>Technology maintenance policy and plans</b>	District-wide equipment is reviewed annually All servers and switches are monitored daily Preventative maintenance is performed on district-wide equipment	District-wide equipment is reviewed annually All servers and switches are monitored daily Preventative maintenance is performed on district-wide equipment	District-wide equipment is reviewed annually All servers and switches are monitored daily Preventative maintenance is performed on district-wide equipment
<b>Telco Services</b>	50 MB internet connection Verizon Local Phones AT&T Long Distance Verizon Wireless Web Hosting Instant Alert System	50 MB internet connection Verizon Local Phones AT&T Long Distance Verizon Wireless Web Hosting Instant Alert System	50 MB internet connection Verizon Local Phones AT&T Long Distance Verizon Wireless Web Hosting Instant Alert System
<b>Technical Support</b>	District Tech Coordinator 1 Network Specialists 2 Computer Technicians 2 Tech Staff Developers	District Tech Coordinator 1 Network Specialists 3 Computer Technicians 2 Tech Staff Developers	District Tech Coordinator 1 Network Specialists 3 Computer Technicians 2 Tech Staff Developers
<b>Facilities – infrastructure including central telephone &amp; security systems</b>	Centralized wireless management system 237 data drops 15 POE switches Improved security cameras and access systems	Storage Area Network for virtual server backup recovery Improved security cameras and access systems	IP phone system Security door swipe card locks with access control

## V. Three-Year Goals

The goals and objectives in technology for the Fort Lee School District are intended to advance the acquisition of technical knowledge and promote academic proficiency. Our goals are aligned with the National Educational Technology Goals as established by the United States Department of Education and serve to reinforce the Core Curriculum Standards as defined by the New Jersey State Department of Education.

### **GOAL #1: LITERACY**

The Fort Lee Educational community will foster the growth of self-directed global citizens who are able to access, process, manage, synthesize, share, and evaluate information through the use of technology by designing experiences that ensure both their satisfaction and their achievement while preparing them to survive and thrive in their 21<sup>st</sup> century futures. It will equip them with the skill sets, understandings, and practices that come with communication literacy, information literacy, and technology literacy.

### **GOAL #2: CAPACITY BUILDING**

The Fort Lee School District will provide administrators, teachers, and support staff with a host of learning opportunities and a repertoire of tools that will allow them to engage and explore the capacities that come from automating and infomating with modern technology. In addition to supporting and ensuring Goal 1, these new capacities will allow members of the educational community to connect, access, analyze, communicate, and share information in revolutionary and dynamic ways. These range in purpose and function from instruction (e.g., effective curriculum articulation) to efficiency (e.g., use of resources) to partnership (e.g., communication and collaboration).

### **GOAL #3: CONNECTIVITY**

The Fort Lee School District will build and sustain a state-of-the-art, fully integrated information system that will serve students, parents, staff, and administrators through a wide variety of technological tools that support all aspect of Goals 1 and 2. Ongoing upgrade, replacement, and maintenance plans will drive healthy systems and a healthy infrastructure. Networked technology systems and centralized, standardized distribution systems will provide efficient and effective communications from any location within the District.

## VI. Three-Year Implementation and Strategies Table

District Goal and Objective	Strategy/Activity	Timeline	Person Responsible	Documentation
Literacy	Assess student benchmark skills at each grade level using an appropriate tool for grades 1-3; 4-6; 7-8; & 9-12	Yearly	Principals Teachers	Student assessment reports
Literacy	Provide technology resource availability, schedules and protocols to all staff	Yearly	Media Specialists	Resource inventory, schedules
Literacy	Students demonstrate a sound understanding of the nature and operation of technology systems and tools	Ongoing	Principals Teachers	Student work Lesson Plans Observations
Literacy	Students are proficient in the use of technology such as keyboarding, word processing, spreadsheets, database, internet usage, publications and presentations	Yearly	Principals Media Specialists Teachers	Student work Lesson Plans Observations
Literacy	Students will select and safely use appropriate tools and materials in analyzing, designing, modeling or making a technological product, system.	Ongoing	Principals Media Specialists Teachers	Student work Lesson Plans Observations
Literacy	Students will demonstrate an understanding of the use of social networking in education.	Ongoing	Principals Media Specialists Teachers	Student work Lesson Plans Observations
Capacity Building	Professional Development for instructional staff on K-12 technology curriculum	Ongoing	Principals Tech Staff Developers Media Specialists	Agendas Sign-in Sheets PD Literature
Capacity Building	Professional Development for instructional staff on Google Apps for Education	Ongoing	Principals Tech Staff Developers	Agendas Sign-in Sheets PD Literature
Capacity Building	Create Google Accounts for use of Google Apps in Education	By June 2014	Tech Coord.	Accounts for students

Capacity Building	Create a system for tracking student skill progress and communicating it to teachers as students move up in grades	By June 2014	Principals Math and Language Arts Supervisors PD Comm.	Student tracking system and PD plan
Capacity Building	Assess all teachers' and administrators' benchmark skills in the use of technology in order to determine what is needed in a differentiated staff development program	By March 2013	Principals PD Comm. Tech Staff Developers	PD assessment report
Capacity Building	Professional Development for all staff on building and managing web pages	Ongoing	Tech Staff Developers	Agendas Sign-in Sheets PD Literature
Capacity Building	Expand the use of the PowerTeacher Gradebook	By June 2014	Tech Coord. Principals Tech Staff Developers	SIS enhancements
Capacity Building	Expand the use of the PowerSchool Student Information System to engage parents and students	By June 2014	Tech Coord. Principals Tech Staff Developers	SIS enhancements
Capacity Building	Evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning	Ongoing	Principals	Observations PIPs Surveys
Connectivity	Single point management wireless system	By June 2014	Tech Coord.	WIFI mgmt. reports
Connectivity	Work with administrators to enhance department web pages on the District Web site	By April 2014	Tech Staff Developers Teachers	Department web pages
Connectivity	Work with principals to enhance school web pages	By April 2014	Principals Tech Staff Developers	School web pages
Connectivity	Optimize network infrastructure	By July 2014	Tech Coord.	Network visio maps
Connectivity	Upgrade network to POE 1000baseT	By July 2014	Tech Coord.	Network visio maps

Connectivity	Optimize data center	By July 2014	Tech Coord.	Data center visio maps
Connectivity	Optimize printing efficiency	By June 2014	Tech Coord.	Print server reports
Connectivity	Upgrade district telephone system	By June 2014	Tech Coord.	Phone visio maps

## **VII. Professional Development Strategies**

Teachers demonstrate a strong desire for the training that is necessary to promote effective integration of technology into the classroom. The planned professional development activities for teachers, administrators, and school library/media personnel includes both online and in person workshops, seminars, and training that increases effective use of technology in all learning environments, models 21<sup>st</sup> century skills, and demonstrate learning experiences through global outreach and collaboration in the classroom or library/media center.

Teachers, school library/media persons, and administrators has access to desktops, mobile laptops, iPads, wireless units, SmartBoards, and projectors to facilitate and encourage the integration of technology into the instructional classroom, library, and Board room. This enables learning to occur in any environment in the district, including classrooms, offices & conference areas, library/media centers or computer laboratories.

Teachers, like students, come to the district with varying levels of technology expertise. Many of our faculty members have excellent skills and willingly share their knowledge with colleagues. The availability of expert technology teachers in each building provides strong networking support for other teachers. Staff development opportunities are provided through the District Professional Development Plan to continue to provide ongoing support for teachers in the use of hardware, software and peripherals.

Fort Lee Public Schools has incorporated into our professional development plan an expansion of our current methodologies of technology integration in instruction by improving our networking structure providing greater technological resources, knowledge and skill to teachers and administrators. This includes, but is not limited to, social networking, online collaboration, Google apps for education, content delivery systems, document cameras, SMART boards, Smart response clickers and projection systems for use in the classroom, media center, and board room to increase teacher and administrator proficiency in technology literacy and media literacy.

Assistive technologies are provided to any student or staff member requiring such specialized devices. Training for individuals is provided as needed when new technologies are introduced or changes in personnel require ongoing training to support students in the classroom.

The following training and staff development activities should be implemented to support ongoing growth of skills for all district personnel. Training that corresponds to the implementation of new software and hardware is essential to the effective utilization of technology resources. Training

activities need to have the time and resources needed to allow teachers to stay up to date on the latest technologies available to educators. Inclusion of these factors in the budgeting process must remain a priority of the district. Technology is useless without trained people capable of taking advantage of its potential benefits for student education.

Based on the proficiency of students, teachers, library/media personnel, and administrators and the identified needs for professional development, the highly qualified professional development opportunities planned for 2013-2016 incorporating the integration of technology are:

- Alternative Assessments
- Apple iLife and iWork
- Compass Learning and online instruction
- Discover Education
- Identifying and Supporting at Risk Students
- I-Safe
- Early Literacy Collaborative (Literacy Collaborative) and Reading Recovery
- Final Cut Studio
- Glogster
- Google Apps for Education
- Identifying and Supporting at Risk Students
- Language Arts/Literacy workshops
- New Teacher Orientation
- New teacher/faculty training workshops
- Pearson's Successnet online learning tools
- PowerTeacher Gradebook and Reporting
- Prezi
- SchoolFusion Website training
- Science Workshops
- Smart Technologies training
- STAMP Assessment
- Streaming media resources content area integration
- Teachscape
- Technology training of elementary, middle school, and high school teachers (Basic)
- Using Web 2.0 tools
- Webpage Development and Management
- Understanding by Design

All of these activities are designed to promote teacher knowledge of the use of technology or strengthen their skills in curriculum implementation to allow technology integration to be accomplished more effectively. Successfully provided training in the past have included:

1. Training for administrators

- a. Administrators were able to attend out-of-district workshops provided by the NJDOE to promote their use of technology.
- b. In district training was also provided for use of the technology-based systems used for administrative work, including the student information system, the budget/personnel

management system, and student data management via NJSMART, as well as the observation and evaluation management tool.

c. Administrators were able to attend training provided to teachers.

## 2. Training for staff members

a. Teachers have attended trainings to accommodate the learning of our new student information system, PowerSchool. They have had trainings on using Google Apps for Education.

b. The library/media specialists have been trained on Internet Safety as well as new emerging tools such as Prezi and Glogster.

c. Personalized training has occurred via the implementation of our web-based helpdesk management system. Training was received in the areas the teachers requested.

d. New teachers were provided with technology training during orientation.

e. Varying ongoing professional development via the built in professional development days.

## VII. Evaluation Plan

The evaluation process is a critical component of the district's Three-Year Technology Plan. Evaluation provides the means to measure the effectiveness of the applications of technology in the district by and for the professional staff and students. As educators, we strive for excellence in the acquisition of skills and proficiencies and we expect our students to attain higher levels of achievement. A complete evaluation plan is essential to ensure program excellence. There are four areas of the technology program that this evaluation design will assess and evaluate annually. These are curriculum design, instructional variables, teacher effectiveness, and student performance.

### Evaluating Curriculum Design

The curriculum of the Fort Lee School District is not merely a body of knowledge that educators impart to students. Rather it is a culmination of information, skills, proficiencies, activities and endeavors that in their totality comprises a lifelong learning process. Through technology this process is expanded and enhanced. The design and evaluation of the curriculum is no minor task. It requires the dedicated input of the entire community: teachers, students, parents, administrators and members of the Board of Education. Several elements of curriculum design need to be planned and evaluated on a regular basis including the following:

- District wide instructional philosophy and goals
- Goals of the technology program
- Vertical sequencing and articulation of technology goals
- Sequencing and articulation of content and skills
- Integration of technology as a routine element of instruction
- Grade level benchmarks and exit skills

The Technology Committee would be utilized to periodically evaluate the district's technology program and also to evaluate the implementation of the plan.



### **Evaluating Instructional Variables**

The ongoing evaluation of instructional variables is another key component of a successful technology program. Instructional variables are those elements of the learning environment that can be modified, controlled or replaced so that students can effectively meet all established performance objectives. Instructional variables include, but are not limited to, the following:

- Time
- Curriculum Resources
- Teaching Aids
- Reference Materials
- Workspace Configuration
- Hardware & Software

The classroom instructor should evaluate each learning activity on an ongoing basis, for it is the teacher who serves as the immediate purveyor of the district's technology program.

### **Evaluating Teacher Effectiveness**

It is abundantly clear that each teacher must possess the skills, techniques and knowledge that will allow his or her students to prosper and develop their own abilities in a rapidly emerging information society. Educators must serve as facilitators of learning, focusing more on the means by which students can develop patterns of learning that will allow them to meet the challenges of a new world class workplace. Clearly, technological applications must play a large part in the teacher's instructional repertoire. Yet no one can or should expect this to happen overnight. Therefore, the Fort Lee School District and its teachers must form a partnership for professional growth if these technological applications are to become as common today as chalk and chalkboards were in the last century. It is incumbent upon the school to offer the training necessary for each teacher to acquire these technological skills and it is equally incumbent upon the teacher to accept the responsibility for participating in this training. Teachers and administrators must accept the continuing challenges of change and be willing to be held accountable for implementing this change in the classroom environment. This covenant for progress is a fundamental doctrine of the district's technology plan. Specific teacher-related elements to be evaluated include the following:

- Teachers' technological capacity and literacy levels
- Teachers' effective use of technology within the classroom
- Teachers' effective classroom management to support technology use
- Teachers' knowledge and practice of current trends in the field

Administrators are responsible for the ongoing evaluation of instructional staff. The 100-hour professional development requirements will be utilized to increase instructor proficiencies in this area.

### **Evaluating Student Performance**

The effective evaluation of the above three areas will set the stage for a rich and exciting technology program. However, no effective evaluation program can be implemented without also assessing the performance of students in utilizing the technology made available to them. Methods of evaluating students in a technological environment are starkly different from traditional methods used in content centered classrooms. Traditional assessment tools do not measure a student's ability to solve technological problems, apply higher order thinking skills or communicate effectively with others. Longer term, more creative assessment techniques will need to be employed.

The critical elements of student performance in a technological environment can be grouped into two broad categories: capacity and literacy. While the primary goal of a technology curriculum is to develop high levels of both of these elements, the teacher must take into account each student's experience, cognitive ability, and affective factors when evaluating their pupils. The assessment of a student's performance at the end of a given period of time (i.e. a marking period) must be relative to his or her starting level. Teachers should utilize non-traditional elements of assessing their student's progress. These may include design portfolios, oral and graphic presentations and hands on applications such as projects.

Specific criteria for measuring students' success in using and applying technology may include the following:

**Telecommunications** - Demonstrate proficiency in accessing, sending or receiving information from:

- Bulletin boards
- News services
- Information databases
- Electronic mail
- Social media

**Multimedia** - Show students' ability to produce a presentation that includes:

- Creation of unique presentations of information
- Print & Visuals
- Sound
- Motion from a video camera

**Computer Use** - Be able to use the computer effectively:

- Demonstrate keyboard proficiency
- Prepare a spreadsheet and graph of data
- Create, revise and access a database
- Produce graphic materials
- Create a multimedia presentation

**Design** - Use the computer to:

- Collect scientific data
- Create a design project
- Write a program to make a design
- Use the computer to operate a machine
- Solve problems

**Library Resources** - Know how to access information using:

- Online catalogs
- Remote databases
- Boolean searches
- Interconnectivity with other libraries

It is the evaluation component of the plan that will allow the Fort Lee School District community to effectively measure the implementation of these objectives.

## IX. Funding Plan (2013-2014)

ITEM	DESCRIPTION OF ITEM TO BE PURCHASED	FEDERAL FUNDING	STATE FUNDING	LOCAL FUNDING	MISC. (e.g. Donations, Grants)
<b>Digital curricula (see <a href="#">NIMAS</a>)</b>	iSafe Internet Safety BrainPop, Jr., Espanol Worldbook online			\$3,000 \$3,000 \$291	
<b>Print media needed to achieve goals</b>	Printing Systems, Parts and Media Print Manager Plus			\$43,000 \$500	
<b>Technology Equipment</b>	Storage Network Parts & Replacement Christ the Teacher Security Systems Computers & Peripherals		\$4,017	\$20,000 \$26,000 60,000 \$140,000	
<b>Network</b>	Internet Connection		\$30,529	\$42,931	
<b>Capacity</b>	Student Information SIS Hosting Instant Alert System Web Hosting SIS Online Resource			\$17,100 \$14,400 \$11,000 \$2,500 \$7,000	
<b>Filtering</b>	Content Filter Anti-Virus Accro Monitoring Email Virus Scan			\$6,000 \$4,500 \$2,000 \$1,300	
<b>Software</b>	Raptor Screening			\$500	
<b>Maintenance</b>	Server Warranties Cisco SmartNet Email Archiver VMWare License			\$4,500 \$3,000 \$5,000 \$1,250	
<b>Upgrades</b>	Network LAN Genetec System SIS Customizations			\$30,000 \$12,800 \$3,000	
<b>Plans</b>	Systems Training			\$2,900	
<b>Other services</b>	E-Rate Exchange			\$5,650	