



# LEXINGTON SCHOOL for the DEAF

EDUCATIONAL TECHNOLOGY PLAN

*2018 and BEYOND!*

*October 9, 2018*

## Table of Contents

Introduction & Background	Page 3
Overview of Lexington School	Page 4
Mission & Belief Statements, Core Values & Technology Vision	Page 5
Technology Planning and the Technology Committee	Page 6
Educational Technology Infrastructure	Page 8
Recommendations	Page 17
Appendices	
Hardware Inventory	Page 18
Application Inventory	Page 19

# Introduction & Background

The field of educational technology is a fluid one, in which educators must show constant vigilance to meet the needs of students as they navigate an increasingly technology-based world. This document reflects both where Lexington is, and where we see ourselves, as an educational institution in the coming years. This document is a flexible, living document that will continue to evolve as the field of educational technology continues to grow and mature.

Lexington's Educational Technology Plan was updated in 2018 in response to New York State's Smart Schools Bond Act for Special Education Schools. The Smart Schools Bond Act allocated a \$85,066 grant to Lexington. The grant could be used for school connectivity, classroom technology, or high-tech security. Prior to receiving grant funds, schools had to develop an educational technology plan, determine the best use of the grant funds, provide an opportunity for parents and the community to provide feedback on the plan, and receive school board support for the plan.

Lexington's Technology Committee, comprised of teachers, information technology specialists and administrators, has spent the past year studying the schools' educational technology needs. They have identified classroom technology, and specifically interactive SMART boards, as the area of greatest need. After researching and testing various options, they have recommended the Smart Schools Bond Act grant be used to purchase 20 interactive, flat panel SMART Boards. The cost per SMART board is \$4,226.

The SMART Board 6065 allows teachers to present concepts to students in a more visual and interactive manner. For a population of students that relies on visual learning, this technology proves invaluable in assisting with comprehension and the application of complex or abstract concepts. Such technology also allows for flexibility regarding manipulation and presentation of information so teachers are able to differentiate instruction to most effectively address the ranges and styles of learning seen in our classrooms.

We believe that the purchase of the SMART Board 6065 technology is the most efficacious use of these grant funds and will benefit the greatest number of students. We hope that the school's parents and community concur with our recommendation.

Respectfully,

The Lexington Technology Committee

# Overview of Lexington School for the Deaf

The *Lexington School for the Deaf*, established in 1864, provides a tuition-free education to profoundly deaf children, ages 3 to 21-years-old. Located on Lexington Avenue in Manhattan for many years, the school moved to its current location in East Elmhurst, Queens, in 1968. Lexington is the largest school for deaf children in the state. In 1942, New York State passed Education Law §4201 to provide funding for schools that serve the education needs of physically disabled children. Lexington is one of eleven, non-profit “4201” schools designated by the State to receive funds for the education of children with low-incidence disabilities.

Located in East Elmhurst, Queens, Lexington’s 2018-2019 enrollment of 272 students, reported as of September 30, 2018, includes youth from throughout the five boroughs of New York City (46% Queens, 22% Bronx, 17% Brooklyn, 10% Manhattan, 3% Staten Island) and Nassau County (2%). All students attending the school have been diagnosed as profoundly deaf (e.g. inability to hear any sound below 80 decibels in their better ear). The student body is multi-racial and multi-cultural - 51% Hispanic, 20% African-American, 19% Asian, 6% Caucasian and 4% multi-racial. Lexington’s students come from homes representing 23 foreign languages. Many families (84%) are eligible for the federal free or partially free lunch program.

Lexington offers a range of educational programs, including infants and toddlers (Ready to Learn), preschool, elementary, middle, high school, special needs and foreign language transition. The course offerings include career education, advance placement and the opportunity to earn college credits through Rochester Institute of Technology/National Technical Institute for the Deaf.

Our students enter Lexington as a vastly diverse population with a range of American Sign Language (ASL) and spoken English capabilities. Over half of the student body has a cochlear implant. Our students will face challenges in this new and rapidly changing 21<sup>st</sup> Century. Their ability to succeed and contribute will be dictated by a society that requires them to develop skills far beyond our imaginations. It is our responsibility as educators, coaches and mentors to prepare them for this new world and to provide them with the educational technology and technological skills and know-how to thrive in this uncharted future.

## Mission Statement

The mission of **Lexington School for the Deaf** is to empower deaf students to achieve their highest potential through an exemplary education to become productive citizens in our diverse and rapidly changing society.

## Belief Statements

**Language:** We believe a language-rich environment is essential for learning and teaching.

**Teaching and Learning:** We believe that every individual possesses the capacity to think and learn.

**Leadership:** We believe each of us is an effective representative of the Lexington School.

**Human Dignity:** We believe all staff, students and family members should treat students with, and expect to be treated with, dignity and respect.

**Working Together or Collaboration:** We believe that decisions are based on collegial interactions and collaboration where possible.

## Core Values

**Empower · Achieve · Lead**

## Technology Vision

Lexington's technology vision is that all educators will be able to harness technology in order to empower students/learners to reach greater heights of innovation, to achieve their academic and extracurricular goals, and to become leaders in their chosen fields.

# Technology Planning and the Technology Committee

## The Technology Committee

The Lexington School for the Deaf Technology Committee was formed in early 2014 to address the opportunities offered by technological advancements throughout the educational field. The committee is charged with meeting current needs and advancing academic practices throughout Lexington. The group meets at least twice a year to discuss issues related to devices, applications, programs, platforms, and systems; develop and plan for the acquirement of new devices, applications, programs, platforms, and systems; and assess progress related to technological demands throughout the school.

The Committee is comprised of, but not limited to:

- the Educational Technology Coordinator (chairperson)
- members of the Informational Technology department
- technology teachers
- supervisors from at least two departments
- teachers/assistants from at least three departments
- the Superintendent/CEO or principal

## Staff

Lexington's technology staff includes a part-time Educational Technology Coordinator and two, full-time IT specialists in the Informational Technology (IT) department. The IT department is supported by an IT services consultant, Pure Logic, that provides additional technical expertise and support.

## Standards

The standards for technology in education come directly from the International Society for Technology in Education (ISTE). Below is a brief overview of the technology roles for each of the four groups: students, educators, coaches, and administrators.

### Students

1. Empowered Learner
2. Digital Citizen
3. Knowledge Constructor
4. Innovative Designer
5. Computational Thinker
6. Creative Communicator
7. Global Collaborator

### Educators

1. Learner
2. Leader
3. Citizen

4. Collaborator
5. Designer
6. Facilitator
7. Analyst

### Technology Coaches

1. Visionary Leadership
2. Teaching, Learning, and Assessments
3. Digital Age Learning Environments
4. Professional Development and Program Evaluation
5. Digital Citizenship
6. Content Knowledge and Professional Growth

### Administrators

1. Visionary Leadership
2. Digital Age Learning Culture
3. Excellence in Professional Practice
4. Systemic Improvement
5. Digital Citizenship

# Educational Technology Infrastructure

## Devices, Applications, and Platforms

This section assesses the provision of technology services and the current infrastructure at Lexington. It provides a review of the information technology environment and existing standards for hardware, application software, telecommunications, data and much more. Each of the items includes a brief description along with a current condition and/or strategy for enhancement.

### Major Networking Components (Backbone)

The infrastructure of Lexington's Communication and Information Networks is comprised of fiber optic cabling and converters, category 5e/6 copper cabling and a myriad of distribution frames, wiring panels and electronic components that transport data across the campus. In 2013, Lexington applied for eRate funding to build a comprehensive and secure Wireless LAN environment; this funding is still being sought. However, in order to meet the needs and timelines of various educational initiatives, wireless technology projects at Lexington have also triggered some ad hoc installations of wireless access points.

Lexington's network cabling has matured to facilitate much of its needs. By continuously working to connect servers, computers and printers, as well as providing pathways to videophones, security cameras, wireless access points and emergency LEDs, we have established a high level of dependency on our infrastructure. Internet access aside, computer usage and inter-office communication (i.e. email, instant messaging, broadcast announcements) and other network resources, such as server storage and data backup, are the impetus for connectivity. Today more than 98% of Lexington's computer assets are connected to the network.

### Network Hubs and Switches

The primary components of any data network are the switches that provide connectivity to each computer. The majority of Lexington's switches are Netgear switches, approximately 3 years old and running 10/100/1000Mb. The switches are switch stacked in order to accommodate the VLAN for the VoIP phone system.

### Wireless Access Points (WAPs)

As a "quick-start" to support the Wi-Fi/Laptop project, 100 Aerohive Network Wireless Access Points (WAPs) were purchased and installed. This provides a local, but limited, solution for the Lexington learner to connect to the network. A fully scoped proposal was submitted to USAC/SLD (eRate) for funding, but the cost of the equipment exceeds Lexington's eRate budget for Category II equipment.

### Network Servers

Lexington has a healthy mix of virtual and physical servers within its environment to maximize the efficiency/effectiveness of its IT resources and budget.

Virtualization is a process by which one can maximize the resources of an expensive device and create multiple "virtual" servers in the same machine. Each virtual server is like a "machine within the machine"

and functions as if it owned the entire computer. The deployment of virtual servers is an economical, efficient and dependable way to design and operate a medium-large sized network.

Lexington has three physical machines providing Virtual Host Services:

Machine One: contains five virtual servers (DC1, DC2, LEX, SCHL, School Guardian, Sage, and Symantec).

Machine Two: contains three virtual servers (SQL1, WSS1, 3OLD).

Machine Three: contains the replica of these machines in the event of a failure.

<b>SERVER</b>	<b>FUNCTIONS/ROLES</b>	<b>RECOMMENDATIONS</b>
LSW2K8DC1 10.0.1.10	Primary Domain Controller (Virtual Server)	
LSW2K8DC2 10.0.1.13	Secondary Domain Controller (Virtual Server)	
LSW2K8SCHL 10.0.1.4	Primary "STUDENT" Server (Virtual Server)	
LSW2K8BIZ 10.0.1.20	Business Office / Accounting and HR Server (Physical Server)	
LSW2K3HLP 10.0.1.77	Legacy ADP Server (Physical Server)	
LSW2K8VMW1 10.0.1.14	Virtual Machine Console (Physical Server)	
LSW2K 10.0.1.8	DocWares Server (Physical Server)	
LSW2K12EX1 10.0.1.9	Email Server / MS Exchange 2013 (Physical Server)	
LSW2K8NAV 10.0.1.3	Symantec Antivirus Server I WEB Content Filtering (Virtual Server)	

<b>SERVER</b>	<b>FUNCTIONS/ROLES</b>	<b>RECOMMENDATIONS</b>
LSSQL 10.0.1.106	Intranet Server MS SQL for SharePoint (Virtual Server)	
WSS1 10.0.1.201	Intranet Server SharePoint Application Server (Virtual Server)	
LSW2K8LEX 10.0.1.6	IT Dept Server WEB Content Filtering Symantec AV Console II (Virtual Server)	
EMACS 10.0.1.45	Message Net Server / PC Alerts / LEDs Controller Media Port(s)/TV Lobby (Physical Server)	
LSW2K12AG3 10.0.1.67	Vocational, Hearing and Speech and Mental Health (Physical Server)	
WatchGuard 10.0.1.5	WatchGuard Firewall Server (Physical Server)	

## Workstations

Lexington leases the majority of its workstations so each user has a “next-gen” HP computer on their desk. In simple terms, there are approximately 300 workstations. One third or a hundred (100) PCs are leased each year - on a 3-yr lease - and one hundred (100) older machines are returned each summer. This allows for a cyclical replacing of all the workstations in a three-year period. All the obsolete machines have been taken offline and only a small number of single-purpose computers remain. Lexington may switch from desktops to laptops as leases expire to “mobilize” the workforce and enhance functionality.

The majority of workstations run Microsoft Windows 7 Professional, are monitored and maintained by IT staff and are protected by firewall filtration and anti-malware programs. Lexington also maintains a WSUS Server to support patching the large number of Microsoft devices.

Microsoft releases security, hardware and software updates on the second Tuesday of each month. These updates provide patches, enhancements and fixes to both the server and workstation operating systems (Servers and Windows) as well as the suite of Office products (i.e.: Word, Excel, etc.) and Outlook. These critical updates are deployed and installed on all machines by Tech Support. When time permits, the IT department will also “roll-out” a critical set of updates and cover as many workstations as possible.

Presently the LEX IT department is installing a software management solution that will assist in inventory and asset management. This software can/will be used to manage and deploy software updates.

### Wi-Fi/Laptop Project

In 2013, the NY State Department of Education issued a directive to schools - prepare all students with the knowledge and capacity to take all standardized and regional exams on computers. Lexington complied and leased HP student laptops. With the expiration of the original laptop lease in the summer of 2017, Lexington selected a new vendor, Toshiba, and leased 223 laptops for students in elementary grades 3-5, middle and high school. The new laptops are for school-use; however, Lexington has developed a new procedure to allow students to take home the older HP laptops for completing homework assignments. As funds are available, more Wifi routers will be added to accommodate the growing number of devices.

### I-Pad Project

Lexington’s preschool, first and second graders use I-pads for their classwork. The first batch of I-pads was purchased in 2014. Newer I-pads are purchased, and older I-pads are replaced, as funds allow.

### Data Protection/Safeguards

There are several levels of data protection and safeguards that provide Lexington with a safety net for disaster recovery. This document does not go into the specifics of backup and storage, but it highlights certain measures of in-house and off-site protection.

Lexington has four-12TB My Cloud EX4 Personal NAS Western Digital devices and two 12TB My Cloud EX4 NAS devices dedicated to the backup of our servers, which is performed on a nightly basis. In addition to the backups, some of our more critical school-based applications have been moved to “cloud-based” applications, i.e. IEP Direct, PowerSchool and ADP. The contracts and conditions with these providers come with their own guarantees of backup and off-site redundancy.

### Printing/Copiers

Lexington educators and administrators rely on physical and printed materials to disseminate information. This is notably true of any school for the deaf. Lexington’s business office has negotiated a contract with Toshiba to provide technical support and supplies for all of our printing requirements. Black and white printers are located throughout the building and color printers are located in select locations (e.g., main office, library, preschool area) to monitor usage. The IT department and the Business department work in unison to control the school’s printing and copying expenses. One such initiative, offered by the CEO/Superintendent, is to install a PDF document creator as the “default” printer for each computer. Lexington has one MakerBot 3-D printer, which is located in the graphic arts computer lab. The 3-D printer is housed on a mobile cart so it can be used in classrooms and other areas of the school.

## Internet Services

Lexington has three service providers for three very distinct purposes.

TOWERSTREAM 1 provides point-to-point wireless service of 400/400Mbps for the basic Internet and data network.

TOWERSTREAM 2 provides point-to-point wireless service of 200/200Mbps for the videophones used throughout the campus. Lexington School for the Deaf relies heavily on the use of videophones and they are not “supplemental devices” in our communication plans.

BROADVIEW provides 3Mbps for the VOIP telephone system. Broadview has backup failover via Spectrum/Time Warner Cable. TIME WARNER CABLE provides 50/5Mbps for the basic Email Server.

90% of the funding for our Internet Service comes from the Universal Services Administration or eRate. This funding percentage is based on the population of students receiving free or reduced student lunches and is subject to change.

Lexington immediately felt the impact of the NYS Wi-Fi/Laptop project as it quickly used up the school’s internet bandwidth. With the help of eRate funding, Lexington’s was able to double its bandwidth from 200 to 400Mbps, and from 100 to 200Mbps for videophones, between the 2017-18 and 2018-19 school years.

## Schoology

Schoology is a learning management system (LMS) for K-12 schools that has all the tools Lexington needs to create engaging content, design lessons, and assess student understanding. Through Schoology, students and teachers can connect with people, cultures, knowledge, and experiences from around the world. Also known as a course management system (CMS) or virtual learning environment (VLE), the cloud-based Schoology platform provides tools to manage any classroom or blended learning environment. The Education Technology Coordinator has received designation as a Schoology Ambassador. Approximately twelve staff have attended a Schoology conference and the Technology Coordinator has provided multiple trainings and resources to faculty and staff to increase their utilization and comfort with this application.

## Google Drive

Beginning with the 2017-18 school year, staff and students were trained in the use of Google Drive as a resource for sharing and collaborating on projects.

## Microsoft SharePoint and LEXNET

One of the necessary shifts in our working paradigms is collaborative processing. This is where a particular business process is supported by the use of technology and the efficiency of information sharing. The IT department has designed, developed and distributed secure access to Lexington’s Intranet. Built on a robust and secure platform, Lexington’s Intranet (LexNet) is poised to take us into the future of “working smarter not harder.”

Designed to be simple, user-friendly and easily accessed, SharePoint allows departments to share information through a familiar browser interface across the campus. Human Resources can post forms,

policies and directives for the entire employee population and High School administrators can share scheduling and subject information within their entire department. In essence, business efficiency is optimized in a secure and organized manner.

Lexington's IT staff provides turn-key solutions for the various departments including presenting overviews, training end-users and maintaining the platform for intelligent computing.

### CIPA / Cyber Filtering

The Children's Internet Protection Act (CIPA) is a federal law enacted by Congress to address concerns about access to offensive internet content on school and library computers. CIPA imposes certain types of requirements on any school or library that receives funding for Internet access or internal connections from the E-rate program.

Lexington's network is protected by its Watch Guard firewall appliance. To ensure redundancy, a database of "unwanted/improper" websites is maintained on two servers. The content filtering software is configured by a dynamic set of Internet criteria. This list of blocked sites is developed and distributed (downloaded onto our server) from the company's website on a regular basis. These "black sites" are consistently maintained by Watch Guard to guard against the presence of new threats and conversely, resolutions to improper classifications of current web sites. On the rare occasion that a particular site is blocked, but is needed by Lexington, a list of "white sites" can be created for the firewall to permit access to the website.

### Remote Access – VLANs

Remote access is the ability to gain access to a computer or a network from a remote location. A remote access server, and the associated software licenses, handle users seeking access to network resources. Sometimes called a communication or terminal server, a remote access server usually includes, or is associated with, a firewall server, to ensure security, and a router to forward the remote access request to another part of the corporate network. As a part of E-rate stipulations, Lexington is restricted from providing access to the Internet through these connections. Currently, Lexington's Business Office has remote access enabled to their business server.

### ERate Success

Every year Lexington applies for federal funding from USAC /SLP (Universal Services Administration Co./Schools & Libraries Program) commonly referred to as eRate. The eRate funding, secured by our Business Office, is instrumental in keeping the initiatives of Lexington's network and communication systems functioning. Guidelines as to how funding is obtained and used are strictly applied in accordance with the Universal Services program.

## Tele-Communications, Video Phones and Other Technology

### **Telephone System**

In 2011, Lexington moved from their circa 1997 legacy phone system to a hosted VoIP solution from Broadview Networks. Over 350 extensions with individual DID access and two dedicated, bonded T1 lines

provide 3Mbps of bandwidth throughout the campus. Each extension has all the latest features including conferencing and voice mail.

### ***Video Phone Communications***

Video communications for our deaf students and staff requires a robust and separate network to handle the amount of (use) traffic. The Sorenson videophone system is used at Lexington. We have a dedicated 200Mbps pipeline through Towerstream 2 to handle the videophone (VP) call volume. The demand for video units continues to increase; however, our latest strategies have shifted to include more “public” access VPs rather than “individual” use.

### ***TV Lobby and Corridor Media Presentations***

The TV in the lobby area is designated to run slideshows and PowerPoint presentations developed by the students. Two teachers maintain administrative control for both content and postings. The concept behind this content is to welcome parents and guests, to display current information and to enhance school spirit. In early 2018, an additional ten TVs were mounted in corridor hallways around the school. The content will provide incidental learning to students as they travel the corridors. At present, there are no funds to wire these TVs to a central server. The IT department must use individual flashdrives to play content on the TVs.

### ***The Ralph and Ricky Lauren Auditorium***

The IT department is responsible for the support, maintenance and enhancement of Lexington’s Auditorium. The auditorium is used extensively by the school for assemblies, pep rallies and school performances. The 18-year-old analog audio and video equipment housed in the various control booths is starting to fail. Lexington has identified a audiovisual media consultant to help with the design and acquisition of a new audio and video system, however there are no funds for the project at this time.

### ***Visual Media & Curriculum***

The area of visual media, while not new, has been recently integrated into the student class work in both the art department and computer/technology classes. This work is displayed on the TV in the lobby.

### ***Presentation Platforms/Classroom Technology***

Because Lexington is a school for the deaf, our teachers rely heavily upon visual teaching technology (e.g. SmartBoards). Over the years, Lexington has used Title One funds to outfit most classrooms with SmartBoard technology. However, we are not at a point where the existing SmartBoards are beginning to fail. The faculty and the Technology Committee have identified the lack of reliable SmartBoards as the biggest educational technology challenge facing the school. The Technology Committee has researched the various SmartBoard technologies available in the marketplace and recommends the acquisition of 20 flat panel, interactive SmartBoards as the best usage of the Smart Bond Act grant funds. While twenty interactive SmartBoards will not fulfill the total school-wide need for classroom technology, it will allow the school to replace the SmartBoards that are most in need of repair. The school will explore other sources of funding to purchase the remaining SmartBoards.

### ***Conference Center Technology***

Located on the first floor in Wing 2, our Conference Center was designed and outfitted with state-of-the-art conferencing equipment to facilitate video conferencing and distance learning. There is a PolyCom VoIP phone, Mitel Desk phone, 70-inch TV/ with computer and VP from Sorenson. Lexington has recently started to use Zoom conferencing, which allows audio and visual access during meetings.

### ***Sorenson nTouch VP2 Video Conferencing Solutions***

In August 2010, Sorenson donated six (6) nTouch VP2 Systems complete with a 40" LCD TV display. Two of these units were permanently installed; one in the Lecture/Board Room and the other in the Mini-Theatre; two were mounted on mobile stands to be used primarily in the Lecture room and the Conference Center. Internet connectivity for these units was provided in all of these locations on a permanent basis. These 40" TVs can provide Lexington with additional opportunities to utilize TV/Lg Screen video solutions.

### ***Website: LEXNYC.ORG and LEXNYC.COM***

Lexington's website was redesigned in 2014-15 and is maintained/hosted through a yearly contract with Edlio, an educational website company. The site has a robust CMS system allowing secure access to specific users who are responsible for updating the site on a periodic basis. School administration, the athletic department and human resources post school calendars and news, sports scores and job opportunities on the website. Each department is responsible for keeping their content current on the website. Overall administrative control is held by the superintendent and his executive assistant. The website was recently modified to be mobile-responsive as more parents use cell phones and tablets to access the internet. Ideally, the website should be redesigned within the next one to two years to keep pace with changes in technology to better support parent-school communications.

### ***Power School***

The conversion from a locally supported student information system to an Internet based application (Power School) has been a very successful transition from an IT Department standpoint. Lexington's Pupil Personnel Service is responsible for data entry and reporting. This system maintains demographic information on students, student grades and information related to individualized education plans (IEPs).

### ***IEP Direct***

Along with the Power School application, there is an IEP generating program that is used by Lexington faculty to document student progress and educational planning. The review of each student's individual plan at a specific time of year also accounts for high-peak usage during certain periods.

### ***Tech Support***

The Information Technology department consists of two support staff backed up by a contracted technology consultant. The department receives many calls for support throughout the school day and this impacts the department's ability to take on new projects, handle installation of new equipment and trouble-shoot potential problems.

## ***End Users***

Most of the users have average computing skills. The IT department would like to see users take on more accountability and responsibility for their area of computing. More users need to follow the instructions given by the support document titled “How to Get Help,” which gives an ordered number of steps to follow when you have an issue. When this document is followed effectively, it limits the unnecessary calls that enter the department and results in us being more productive.

## Recommendations

The core of our business processes and services are immersed in a metaphorical sea of changing technology. Clear, articulated strategies in combination with a sustained vision are crucial elements of technology-based decisions.

What we can do is identify our strategies, prioritize our needs, prepare our staff, engage our resources, and sustain the things we are doing “the right way”. This will enable Lexington to nurture the information technology culture and transform it into a positive force to improve the efficiency and quality of educational technology services provided to students.

While this document has listed of areas where funding is needed to improve educational technology, the biggest challenge facing our faculty and students is the lack of reliable classroom SMART Boards. This need was clearly articulated by faculty over the past year and especially by those who had experienced malfunctioning SMARTBoards in their classrooms.

Lexington’s Technology Committee has spent the past year studying the schools’ educational technology needs. They have identified classroom technology, and specifically interactive SMART boards, as the area of greatest need. After researching and testing various options, they have recommended that the Smart Schools Bond Act grant be used to purchase 20 interactive, flat panel SMART Boards. The cost per SMART board is \$4,226.

The SMART Board 6065 allows teachers to present concepts to students in a more visual and interactive manner. For a population of students that relies on visual learning, this technology proves invaluable in assisting with comprehension and the application of complex or abstract concepts. Such technology also allows for flexibility regarding manipulation and presentation of information so teachers are able to differentiate instruction to most effectively reach the ranges and styles of learning seen in our classrooms.

We believe that the purchase of the SMART Board 6065 technology is the most efficacious use of the grant funds and will benefit the greatest number of students.

# Appendices

## Appendix A – Hardware Inventory

Desktops/Monitors

Laptops

iPads

Printers

Scanners

Fax Machines

Copiers

Document Cameras

Smart Boards

Projectors

Mobile Smart TVs

Mobile Sorenson nTouch TVs

Closed Circuit Cameras (Security)

TV's (CCTV)

LED Signs

Video Phones

PolyCom 7000 VRX

Servers

Switches

NAS Data Backup

EMACs

(26) LED Displays: Gym, Teacher Lounges,  
Waiting room, and Cafeteria areas

(1) Media port : Lobby

(300) PC Alert Installations

(1) Server

## Appendix B – Application Inventory

AccuMed	Message Net Systems	Safari
Adobe Products:	Microsoft Exchange 2013	SAGE 50 Accounting
Adobe Acrobat	Microsoft Server 2012 R2	Security Video NetVU / Network
Adobe Air	Microsoft Server 2003	Skype
Adobe Creative Suite	Microsoft SilverLight	SMART Education Software
Adobe Flash Player	Microsoft SQL Server 2013	SMART Image Mate
Adobe InDesign	Microsoft SharePoint Server	SMART Ink
Adobe Illustrator	Microsoft Web Server	SMART Notebook
Adobe Photoshop	Movie Maker	SMART Sync Student
Adobe Reader	Mozilla Firefox	Symantec EndPoint Protection (Anti-Virus)
Adobe Shockwave	MS Office 2013 & 2016	Symantec System Recovery (Backup)
ADP	Microsoft Access	TourGuard (Detex)
AIM (Instant Messaging)	Microsoft Excel	Type To Learn
Assorted Printer drivers	Microsoft One Note	Veem Backup and Replication

CPR Devices	Microsoft Outlook	Virtual Machine Tools
CyberLink Media Suite	Microsoft PowerPoint	VMWare
Direct X	Microsoft Publisher	Windows 7 Pro
Firewall / Smart Filter	Microsoft Word	Windows 10 Pro
Folder Sizes	NOAH Auditory Software	Windows Internet Explorer
Google Chrome	OHM	Windows Apps
IEP Direct	PDF Professional	Windows Updates
iTunes	Peachtree Quantum 2016	WinZip
Java	Spam Soap	TI. (Texas Instruments) calculator software
MAC OS 10	PowerSchool	Filmora (Movie Editing)
Malwarebytes Anti-Malware	QuickTime	Absolute (Tracking Software)
Medicaid Swipe Card	Reflector	Schoology
NWEA Lock Down Browser	ST Math	SchoolGuardian Security
PTAR Web Login	AWARDS Web Login	

