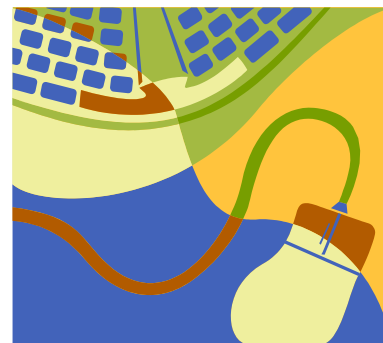
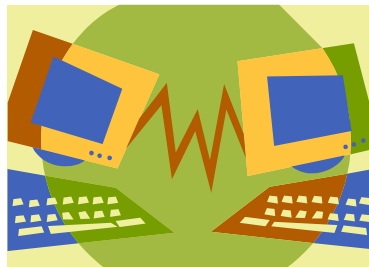


# Lynchburg City Schools

## Educational Technology Plan 2010 – 2012



Lynchburg City Schools  
Information Technology

[WWW.LCSEDU.NET](http://WWW.LCSEDU.NET)



The world starts *here.*

## EXECUTIVE SUMMARY

The Lynchburg City Schools is an educational community of diverse individuals who are developing their intellectual, artistic, and physical talents to the highest degree. These individuals have an exalted sense of purpose in their lives. This purpose inspires our community to transcend barriers, work harmoniously, and mobilize positive change. Our school division is a sought-after teaching institution that exemplifies the highest professional standards, scholarship, and innovative instructional practices. Our vision encompasses six critical focus areas that affect the future of public education: academic eminence, sound and honorable character, exemplary personnel, parental involvement and community investment, respect for diversity, and model facilities. The Educational Technology Plan for 2010 - 2012 expands the school board vision to ensure that technology plays an integral role.

For 2010 - 2012 and beyond, the focus of this plan is to address needs that were identified in the area of technology and their influence on needs in operational infrastructure, professional development, and instruction.

This technology plan recognizes the greatest challenges facing teachers in the use of instructional technology are to become adept at both integrating technology into instruction and using supportive software to supplement their classroom instruction. As teachers become more effective in these areas, student academic achievement, as measured by the Virginia Standards of Learning test results, will increase.

All activities described in this plan directly or indirectly focus on the integration of technology into daily curriculum and instruction. It is this focus that impacts the greatest number of teachers and therefore the greatest number of students through the development of integration methods and activities.

By actively participating in professional development opportunities, faculty and staff members become more knowledgeable in teaching content and in integrating technology into instruction. Our faculty and staff members are also trained in the area of cultural competency and learning styles theory and techniques. All of these efforts are intended to increase the knowledge and skills of our employees and, through them, our students.

This Educational Technology Plan for 2010 – 2012 and beyond provides a financially sensible roadmap that allows us to continue to meld a strong infrastructure and state-of-the-art equipment with sound instruction to address our needs and ultimately to accomplish the school board's mission and vision.

*The Lynchburg City Schools, with its Tradition of Excellence, recognizes the uniqueness and worth of all students and will teach each student the concepts, knowledge, and skills necessary to be a thinking, productive, and responsible citizen.*

Lynchburg City School  
Mission Statement  
Adopted June 2, 1998

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# LYNCHBURG CITY SCHOOLS EDUCATIONAL TECHNOLOGY PLAN 2010 - 2012

## BACKGROUND

The Lynchburg City Schools is an urban school division serving the community of Lynchburg, Virginia, which has a population of approximately 68,000. The current student population is approximately 8,300. There are eleven elementary schools supporting grades K-5; three middle schools supporting grades 6-8; and two high schools supporting grades 9-12. There are eleven sites providing Pre-K programs. There are also three sites that provide alternative education services.

## MISSION

*The Lynchburg City Schools, with its Tradition of Excellence, recognizes the uniqueness and worth of all students and will teach each student the concepts, knowledge, and skills necessary to be a thinking, productive, and responsible citizen.*

Lynchburg City School  
Mission Statement  
Adopted June 2, 1998

## VISION

The Lynchburg City Schools is an educational community of diverse individuals who are developing their intellectual, artistic, and physical talents to the highest degree. These individuals have an exalted sense of purpose in their lives. This purpose inspires our community to transcend barriers, work harmoniously, and mobilize positive change. Our school division is a sought-after teaching institution that exemplifies highest professional standards, scholarship, and innovative instructional practices. Our vision encompasses six critical focus areas that affect the future of public education: academic eminence, sound and honorable character, exemplary personnel, parental involvement and community investment, respect for diversity, and model facilities.

Under each of these six focus areas, the school board has identified several principles that will enable it to achieve its vision. Principles connected to technology are noted in bulleted form under each of the six focus areas.

### Academic Eminence

Academic Eminence is the distinguishing characteristic of the school division. Fully accredited schools offer academic programs that challenge the intellect and maximize the potential of each student to acquire knowledge, concepts, and skills necessary to become thinking, productive, responsible citizens. Excellence in academics results in a love of lifelong learning and a supportive, involved community.

- We resolve to measure the quality of education in the City of Lynchburg through the accreditation of our schools, the productive transition of our students to satisfying

careers or higher education, and the positive accomplishments of our students.

- All educational programs are rigorous and demand that each student thinks, learns, and performs at the highest possible level.
- Students will be technologically adept and will develop the initiative and self-discipline necessary to take command of a changing world in which traditional structures of employment give way to new forms based on ever-increasing information and entrepreneurship.
- We will provide a broad array of extra- and co-curricular activities that allow students to explore and develop their interests, gifts, and talents to help guide them toward a fulfilling future.

### **Sound, Honorable Character**

We foster a culture of mutual respect that builds trust and engages students in learning. Each student develops strong character modeled by caring adults and reflecting those values cherished by the Lynchburg community.

### **Exemplary Personnel**

We are in the business of developing human potential. We value our employees as the lifeblood of the organization. They serve as ambassadors for education in the community. Our dedicated employees are highly qualified, superbly talented, and exemplary individuals. They embody professionalism that compels personal and group commitment to excellence in education for all students.

- We will provide a technology-rich professional development program of distinction for all categories of personnel which addresses the needs of the individual and the needs of the school division.

### **Parental Involvement and Community Investment**

Parents want the best for their children and share in the responsibility and the process of educating their children. These involved parents serve as catalysts to unite the community in support of education, bringing Lynchburg to new heights of prosperity, prominence, and promise.

- Because parental involvement is a cornerstone that under girds the schools' efforts, we will create avenues for increased dialogue with parents and the community.
- We will engage in high profile public relations activities that result in a community that is well-informed of its schools' desired outcomes, programs, and needs.
- Acknowledging our common goal for a strong public education system, we resolve to work collaboratively with City leadership, including City Council and City administration, in planning, communicating our needs, and coordinating our budgetary processes.

### **Respect for Diversity**

Our schools are a just and inclusive community in which people from different cultural, ethnic, racial, and religious backgrounds learn, live, and work harmoniously with mutual respect, without compromising their beliefs and their identities. We pioneer the cause of excellence and equity. We are committed to eliminating racism and discrimination in the schools. Learning about the contributions of all races and cultures

promotes understanding and social justice.

- Beginning in kindergarten, the learning environment will encourage and challenge minority students to pursue higher level classes.
- We will pursue programs and activities to assist minority students in overcoming barriers that hinder success in academic areas.

### **Model Facilities**

Our schools are the heart of our academic, economic, and social development and evoke deep civic pride. Structurally sound, diverse in design, and unique in character, our state-of-the-art schools are adaptable and foster technologically advanced and optimal learning environments. Each of our buildings enhances a new era of education and the life of the community.

- We will continually assess our facilities in relationship to program, curriculum needs, student enrollment, and community demographics.
- We will work cooperatively with city council and state and federal representatives to secure essential funding to renovate, upgrade, and create viable learning environments in our facilities.
- We will promote our facilities as resources for the community so that they serve as hubs for lifelong learning.

### **Expanded Vision and Goals**

This technology plan expands the school board vision to ensure that technology plays an integral role, and that the goals and objectives of the *Educational Plan for Virginia* are addressed:

- A safe, flexible, and effective learning environment will be provided for all students.
- Students will be engaged in meaningful curricular content through the purposeful and effective use of technology.
- Students will be afforded opportunities to apply technology effectively to gain knowledge, develop skills, and create and distribute artifacts that reflect their understandings.
- Access to authentic and appropriate tools to gain knowledge, develop skills, extend capabilities, and create and disseminate artifacts that demonstrate their understandings.
- Technology will be used to support a culture of data-driven decision making that relies upon data to evaluate and improve teaching and learning.

The expanded vision and goals of the Technology Leadership Team and The Lynchburg City Schools are noted below.

- New and innovative instructional technology will continue to be investigated, tested, and evaluated for utilization in classrooms and libraries.
- The latest and most effective instructional software and programs designed to enhance learning for both students and staff will continue to be researched, piloted, and evaluated for implementation division-wide.

- Library media specialists at all levels will provide instruction and guidance to students and staff as they become independent, skillful, and discriminate users of research, information, and technology.
- Learning will be expanded in non-traditional ways for non-traditional groups of students. Students in supervision with the court system will be able to access learning software and packages from a computer workstation at a remote site. Students at alternative sites will utilize the network to access learning resources. Adults who want to expand their knowledge will be able to access learning activities from the Adult Education Center.
- Neighborhood recreation centers and centers housing after school tutorial programs will link to the wide-area network allowing students to access instructional software after school as part of a city-wide commitment to reading.
- Professional development will be provided in a variety of formats including division-wide and on-site technology in-services, one-on-one assistance, instructional modules, web sites, and graduate classes. Teachers will demonstrate the ability to perform technology skills defined by the school division and by the Virginia Department of Education's Technology Standards for Instructional Personnel.
- Each school will have a web page describing its program that will be linked to the school division's web site and to the Virginia Department of Education's web site. Each school's web page will include up-to-date accountability data contained on the state report card.
- The Lynchburg City School's web page will link to the web pages of the city and to the department of economic development. It will describe all programs in the school division, provide current data for accountability, and highlight special programs.
- Workstations will be upgraded to support instructional programs and to allow students to take the state SOL tests online. Additional computers will be available in a lab setting or through placing more computers into schools on an as-needed basis.
- The school division will continue to work with city government and the community to broaden a wide-area network linking all schools, government buildings, agencies, and the community through fiber optics and additional wireless connections. This network will allow better utilization of resources and will lead to increased activities to support families within the city.
- By using a central fiber connection, the city and schools will be able to share resources and better utilize funds. Citizens will be able to access many of these resources. Opportunities to share and jointly fund projects will be maximized.
- Central Internet access will continue to enable teachers and students at all schools to utilize Internet resources simultaneously and cost-effectively. A firewall located at the central Internet access point will monitor and block sites on the Internet which may be inappropriate for students. Internet access will be enhanced as the need arises.
- Security policies will govern operations on every computer in the school division. This program will prevent unauthorized access or changes to computer settings and resources. It also will provide logs of computer usage.
- Secondary schools will have electronic classroom capability to provide new and different instructional opportunities for both students and staff.

## STAKEHOLDERS

The superintendent approves the composition of a Technology Leadership Team on an annual basis. The membership is composed of representatives from each school in the division including parents, teachers, administrators, instructional technology specialists, and media specialists. The committee also includes the director of information technology, network administrators, and the coordinator of administration applications. The responsibility of the committee, which meets monthly, is to review, evaluate, and modify the school division's Educational Technology Plan to ensure its compliance with state and federal directives and with the school division's Comprehensive Plan. The Technology Leadership Team uses the school division's mission statement and vision as the foundation for all decisions. Current members of the team are as follows:

Dr. Greg Sullivan, Director, Department of Information Technology (Chair)  
Mr. Doug Wickham, Network Administrator, Department of Information Technology  
Ms. Jan McKinney, DP Coordinator, Department of Information Technology  
Ms. Susan McGlothlin, Teacher, Hutcherson Early Learning Center  
Ms. Linda Webb, Instructional Technology Specialist, Dearington Elementary School  
Ms. Rhonda Miller, Instructional Technology Specialist, Linkhorne Middle School  
Ms. Julianne Edwards, Teacher, Middle School Learning Center  
Ms. Lisa Lee, Teacher, Heritage Elementary School  
Mr. Charles Butcher, Teacher, Sandusky Elementary School  
Ms. Jan Suddith, In-District Instructor, Department of Curriculum and Instruction  
Mr. Scott Goodwin, Network Administrator, Department of Information Technology  
Mr. Frank Hutchinson-Department of Information Technology  
Ms. Kelly Beckham, Media Specialist, Heritage High School  
Ms. Karen Bell, Instructional Technology Specialist, Heritage High School  
Mr. John Blakely, Principal, R. S. Payne Elementary School  
Ms. Nancy Hunt, Instructional Technology Specialist, Heritage Elementary School  
Ms. Lea Pruitt, Media Specialist, Linkhorne Elementary School  
Mr. Brian Wray, Principal, Dunbar Middle School  
Ms. Meghan Hayes, Teacher, Sandusky Elementary School  
Ms. Gaynell Harper, Teacher, Sandusky Middle School  
Ms. Tamera Jamerson, Teacher, Heritage High School  
Dr. Mark Mear, Principal, Heritage High School  
Ms. Rebecca Scott, Teacher, R. S. Payne Elementary School  
Ms. Aimee Hassinger, Teacher, Heritage Elementary School

The Technology Leadership Team also shares proposals regarding policy, strategic planning, and other division-wide initiatives with a variety of other groups for review and input. Among these are the Secondary Leadership Team, the Elementary Leadership Team, the Superintendent's Personnel Advisory Committee, the Superintendent's Parent Advisory Committee, and the superintendent's Cabinet. The Educational Technology Plan for 2010 - 2012 was available in draft form to each of these bodies. A copy of the school board-approved version of the plan is available to the general public through the Lynchburg City Schools' web site at [www.lcsedu.net](http://www.lcsedu.net).



Paper copies are also accessible at each school site and at the Public Library for review.

The Technology Leadership Team intends to review this interim plan and provide a new updated 2012 – 2015 version to the school board for approval at the beginning of the 2012 – 2013 school year.

## STRUCTURE

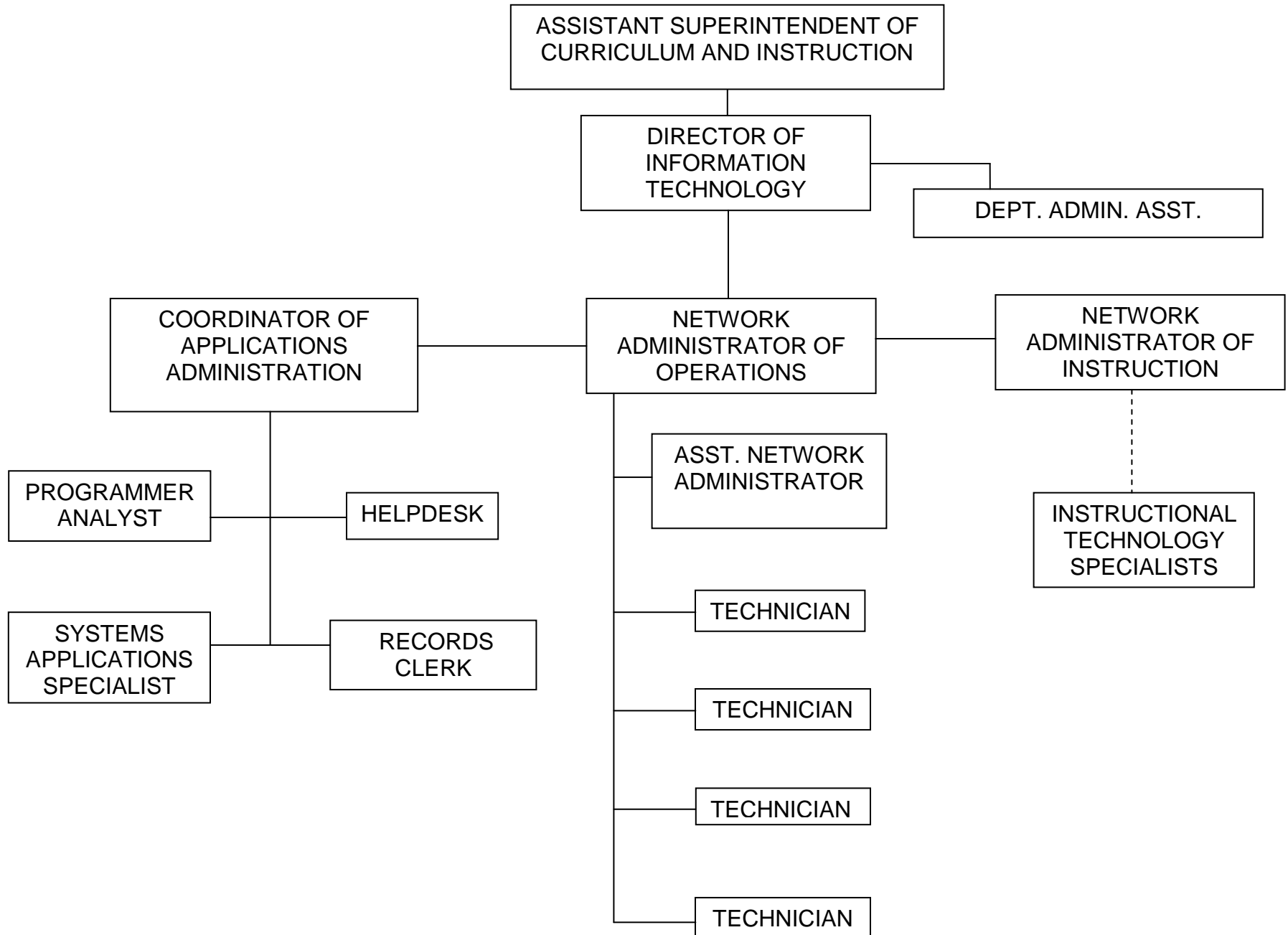
In July 2003, the Lynchburg City Schools created the Department of Information Technology to house all aspects of administrative and instructional technology. Over the course of the next few months, an organization chart was created to illustrate the various positions and the chain of command for the new department. Currently, the department is overseen by the director of information technology who reports directly to the assistant superintendent of curriculum and instruction. The director is assisted by an executive team that includes the network administrator for hardware, the network administrator for software, the assistant network administrator, and the coordinator for data processing.

The department also includes four technology technicians who have installation and service duties. A technology clerk oversees the help desk and an automated employee absence reporting system powered by SubFinder. In addition, a systems and data analyst works with the iSeries and CIMS databases and files.

There are fifteen Instructional Technology Specialists (ITS) assigned to the Department of Information Technology who are placed in each of the elementary, middle, and high schools. Their primary duties are to assist teachers and students with technology-related instruction and to troubleshoot hardware and software issues that arise at the building level.

For the execution of this plan, the Department of Information Technology will restructure into three sections. The sections created under this plan include Applications Administration, Operations, and Instruction. The current network administrator for hardware assumes the duties of supervising operations. The network administrator for software assumes the duties of supervising instruction. The coordinator for data processing begins supervising applications administration. The current organizational structure is displayed graphically in the following chart. The 2010 – 2012 Educational Technology Plan includes no proposals for added positions.

# ORGANIZATION CHART FOR LCS DEPARTMENT OF INFORMATION TECHNOLOGY



## Applications Administration

- Systems – Management of all data
  - iSeries – Finance, Personnel, Student Services
  - SQL/Access – Division-Wide Testing Program (DWAP), TSSM, Cafe Terminal
  - Proprietary Software – Bookkeeping, Star, Accelerated Reader (AR), Standards Of Learning (SOL), Electronic Documents, Personnel and Student Records, Microfilm, SubFinder
- Reporting/Research – Management, Administration and Dissemination of all Reports
  - iSeries
  - Crystal Reports
  - SQL/Access
  - Division-Wide Assessment Program (DWAP)
  - Stanford Diagnostic Reading Test (SDRT)
  - Virginia Department of Education (VADOE) Requests
- Application Development
  - iSeries DB2
  - SQL/Access – Visual Basic for Applications
  - Crystal Reports
  - Java
  - Perl
  - Hypertext PreProcessor (PHP)
  - School Interoperability Framework (SIF)

## Operations

- Infrastructure – Management and Administration

- Cable – Vertical and Horizontal
  - Copper
  - Fiber Optic
  - Audio Visual
- Equipment
  - Switches
  - Routers
  - Uninterrupted Power Supplies (UPS)
- Service Networks
  - Metro Ethernet
  - T1
  - Digital Subscriber Line (DSL)
  - Lattice
- Back Office – Management and Administration
  - Hardware
    - Servers
    - Data Backup
    - Service Application Provider (SAP)
  - Software – Network Operating System
    - Domain Name System (DNS)
    - Dynamic Host Configuration Protocol (DHCP)
    - Active Directory (AD)
    - Windows Internet Naming Service (WINS)
    - Distributed File Service (DFS)
  - Services
    - Proxy Server
    - Content Filter
    - Web Mail
    - SQL
    - Antivirus
    - Instant Messaging
    - Backup
    - Disaster Recovery

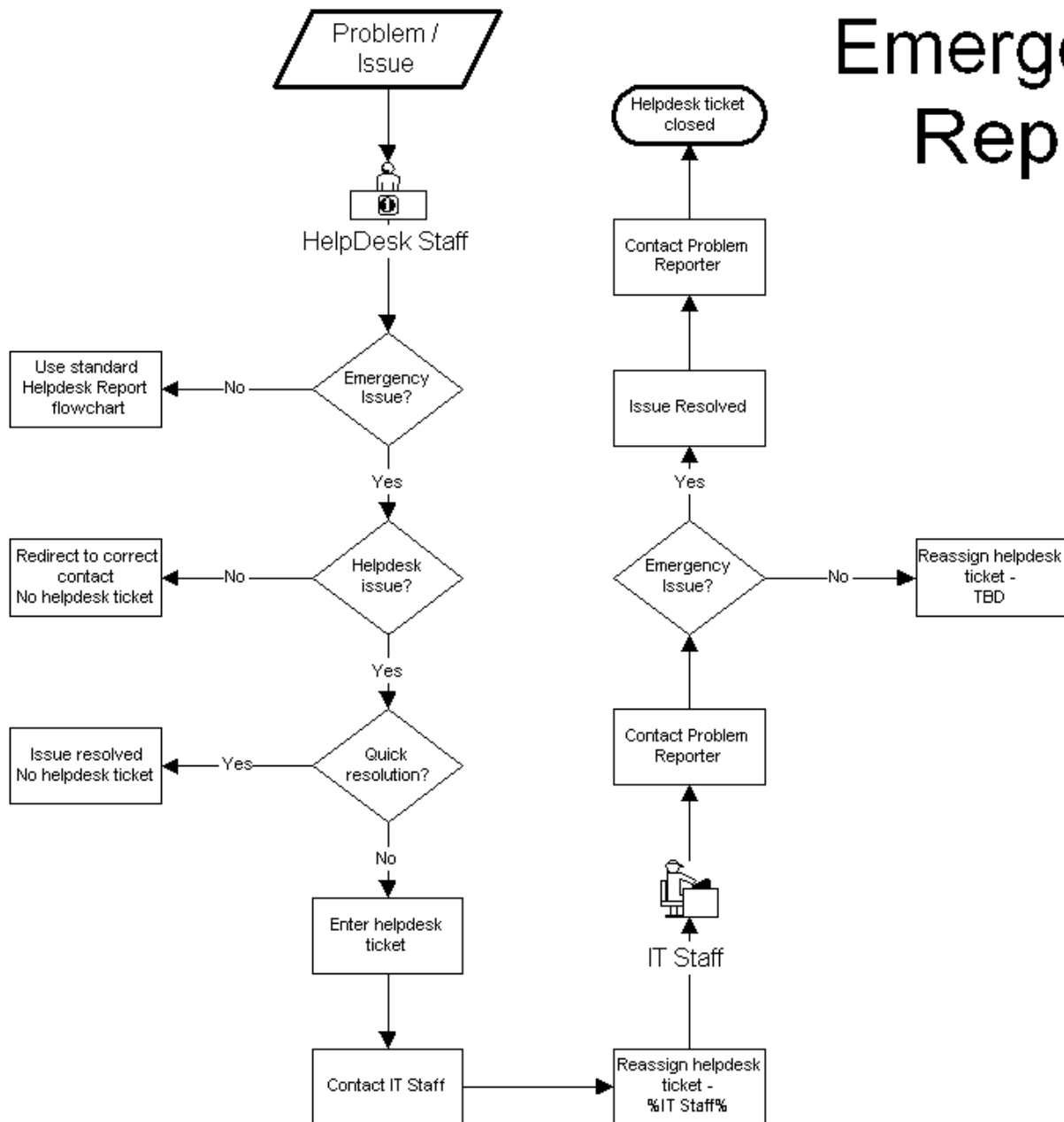
- Distributed File Service
- Updates
- Installers
- Group Policy
- Front Office – Installation and Support
  - Workstation
    - Hardware Only
  - Other Hardware – Hardware Only
    - Voice over Internet Protocol (VoIP)
    - Personal Digital Assistant (PDA)
    - SmartBoard
    - Video Projection Unit (VPU)

## Instruction

- Workstation – Administration and Management
  - Software – Instructional and Administrative
    - Operating System
    - Imaging
    - Updates
  - Other Hardware – Software and Training Only
    - Audio Visual
    - Video Projection Unit (VPU)
    - SmartBoard
    - Voice over Internet Protocol (VoIP)
    - Personal Digital Assistant (PDA)
- Training and Implementation
  - Administrative
  - Instructional
- Testing – Management and Administration
  - Standards of Learning (SOL) Assessments
  - Division-Wide Assessment Program (DWAP)
  - Stanford Diagnostic Reading Test (SDRT)

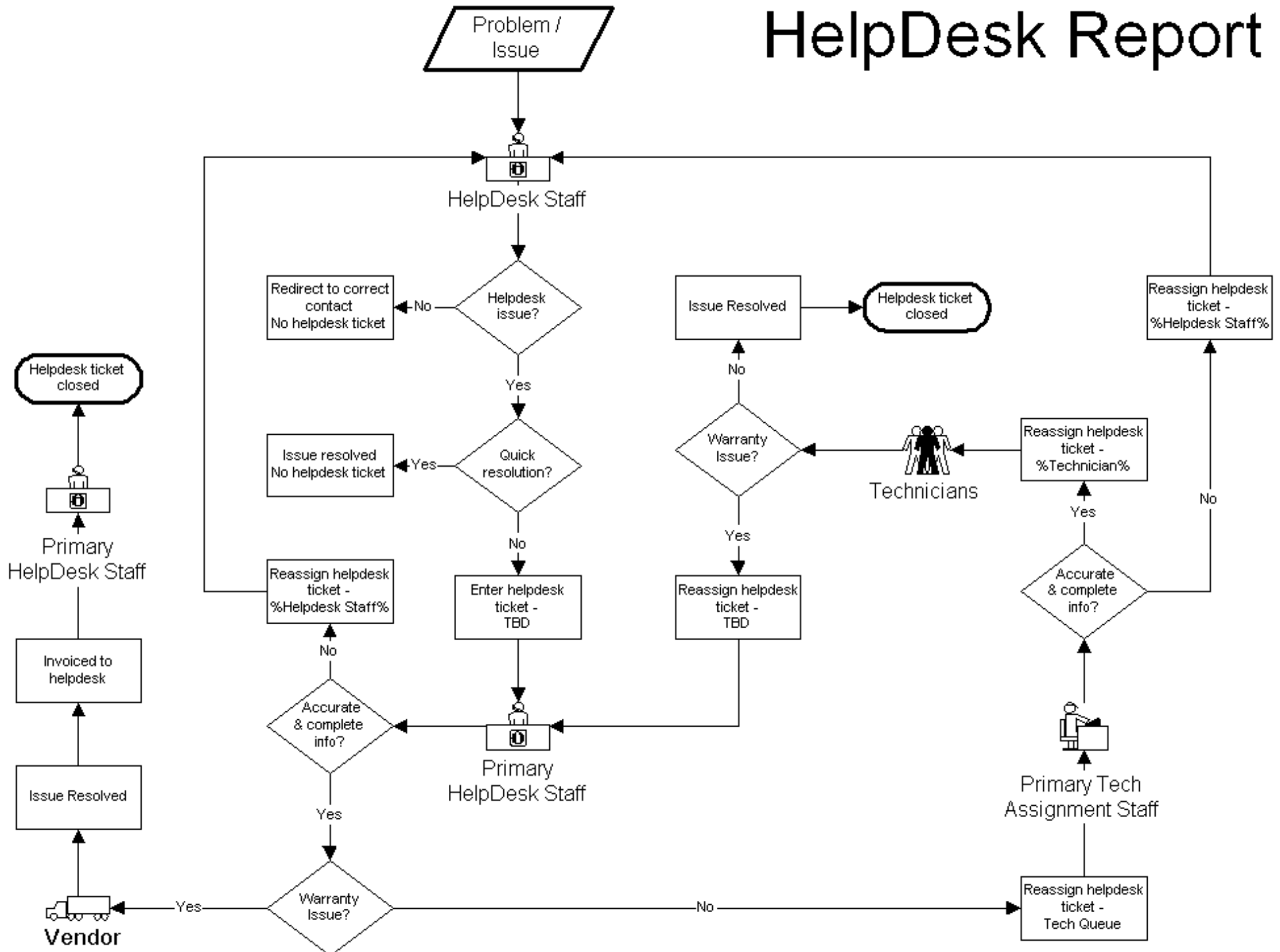
## SUPPORT FOR TECHNOLOGY

The Department of Information Technology designed and implemented a help desk program to assist all end users in the school division with any hardware or software problems they may be experiencing. Flow charts were developed and distributed to illustrate the proper channels to follow when reporting problems to the help desk.

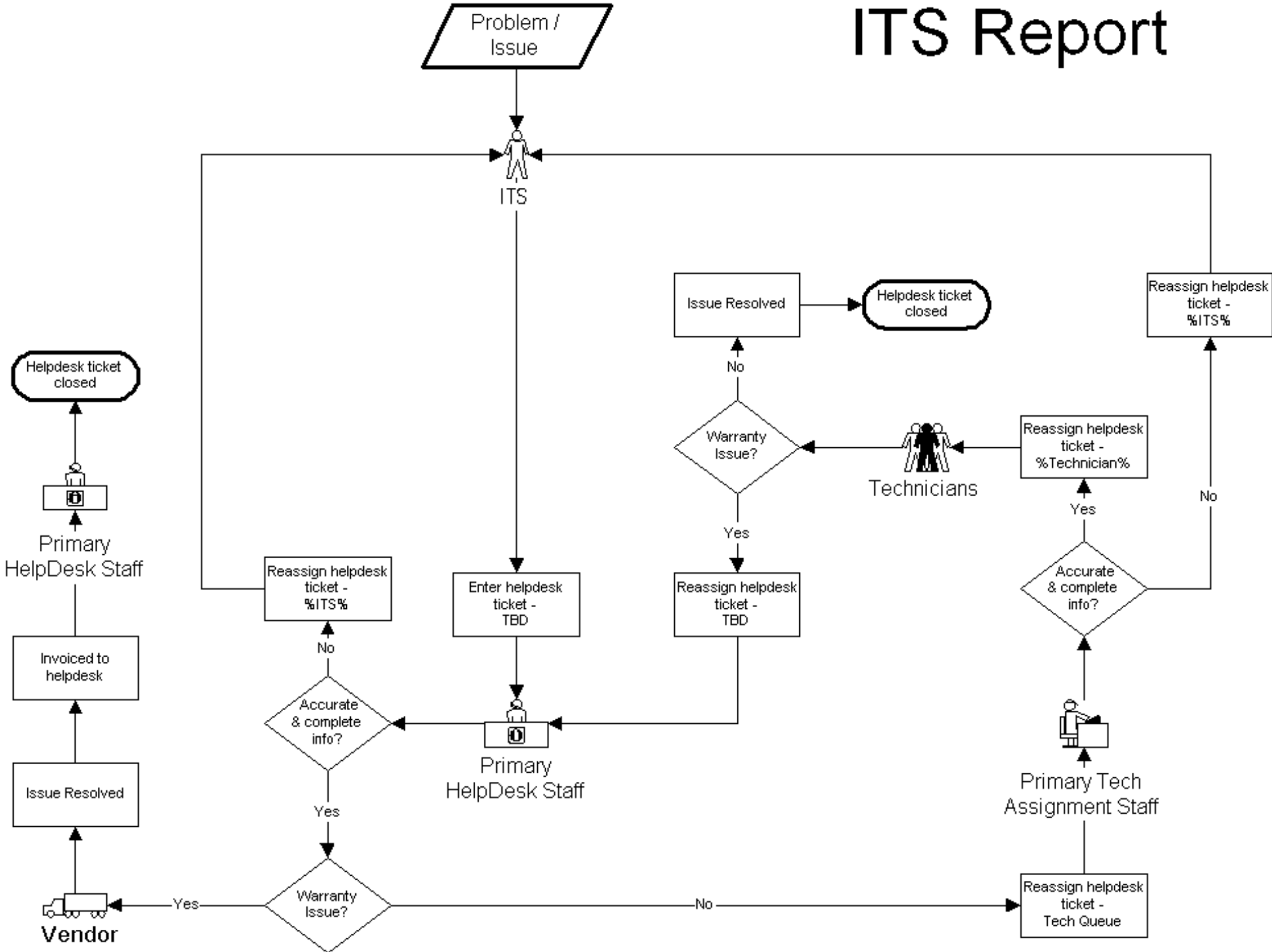


# Emergency Report

# HelpDesk Report



# ITS Report



## **LYNCHBURG CITY SCHOOLS ACCOMPLISHMENTS IN EDUCATIONAL TECHNOLOGY 2003 – PRESENT**

Since 2003, the Lynchburg City Schools' Educational Technology Plans have been designed to accomplish goals in applying technology in the areas of administration, professional development, student achievement, and curriculum and instruction. Some highlights of those endeavors include:

### **Administrative and Instructional Technology**

- Streamlined Helpdesk system and procedures
- Revised Acceptable Use Policy (AUP) and associated student and employee agreements
- Implemented division-wide password policy
- Mapped networks at identified locations
- Developed and implemented a plan to dispense surplus technology
- Designed and implemented a plan for redistribution of usable technology
- Devised and proposed a plan to reduce printing costs division-wide
- Developed a catalog of hardware standards for LCS to include audio-visual, network, and computer equipment and support
- Developed and implemented a plan to centralize servers housed in the school sites
- Implemented division-wide use of Active Directory
- Installed hardware firewall
- Designed and implemented a Distributed File System (DFS) for all users
- Provided a network folder for public use, site use, and personal use on the DFS
- Presented a plan to define the fiscal and technological impact of electronic school board meetings
- Implemented electronic school board meetings
- Developed and implemented a plan to systematically replace technology division-wide on a four-year rotating basis
- Purchased computers for administrative personnel
- Installed administration computers
- Purchased computers for middle schools
- Installed middle school computers

- Installed middle school network upgrades
- Purchased computers for high schools
- Installed computers for high schools
- Installed high school network upgrades
- Purchased computers for elementary schools
- Installed computers for elementary schools
- Installed network upgrades for elementary schools
- Secured video projection units with computers for all elementary schools
- Secured video projection units with computers for all secondary schools
- Installed Easy IEP and provided division-wide access to online documentation system for special education records
- Redesigned and installed a back up system to improve and expand LCS ability to respond to increased data storage needs
- Provided external email access for employees
- Implemented EduLog student transportation software
- Developed desktop access to digital images from bus surveillance cameras
- Implemented Cafeteria Enterprise hardware and software division-wide for School Nutrition Program efficiency
- Installed Ascent Graphical User Interface (GUI) for the iSeries' Student and Employee Management Systems
- Developed and implemented online applications for both professional and classified staff positions
- Developed and implemented a digital imaging system for both student and personnel records archiving
- Installed ConnectEd parent/guardian school information communication system
- Installed and upgraded SubFinder employee absence reporting system
- Installed and maintained KRONOS employee timecard system
- Piloted Principalm student data software for personal digital assistant (pda)
- Implemented Edline student/parent information access online



## Professional Development

- Provided technical/administrative support for Best Practices Conference day each year
- Developed and implemented a plan to provide electronic mentoring for first-year teachers
- Provided training for video streaming
- Provided training for online resources
- Provided training for COMPASS reading and math software
- Provided training for NCS Writing Mentor CD
- Provided training for school division technology standards
- Provided training for Advanced Learning System (ALS) software 2-8
- Provided training for technology integration projects
- Provided training for supplemental electronic textbook media for K-12 science
- Provided training for supplemental electronic textbook media for K-5 reading
- Provided training for use of SIRS, GALE. eLibrary electronic databases
- Provided training for InteGrade Pro
- Provided training for SubFinder absence reporting system
- Provided training for TSSM and Easy IEP
- Provided training for The Learning Company software
- Provided training for Marco Polo website resource
- Provided training for ANGEL online course management
- Provided training for STAR reading assessment program
- Provided training for Math Keys software
- Provided training for Microsoft Office Products
- Provided training for peripheral devices
- Provided training for online testing
- Provided training for Follett/Destiny Library Management Software

## Student Achievement

- Posted school SOL/NCLB report card data on school websites
- Posted division SOL/NCLB report card data on LCS website
- Participated as a pilot site for Electronic Information Management System (EIMS)
- Obtained high school certification for ESOL testing
- Obtained middle school certification for ESOL testing
- Developed and implemented a plan for ESOL testing for grades 6, 7, and 8
- Participated in online SOL testing at all secondary schools
- Obtained elementary school certification for ESOL testing
- Developed and implemented a plan for ESOL testing for grades 3, 4, and 5
- Entered STAR, ARDT, and PALS scores into iSeries for data mining
- Developed and implemented a system for tracking and posting SOL data for verified credit validation
- Developed and implemented a plan for the administration of the Stanford Diagnostic Reading Test (5 – 9)

## Curriculum and Instruction

- Revised and standardized the configuration of middle school course numbers
- Revised and standardized the configuration of high school course numbers
- Administered and scored division-wide six-week assessments for grades 1-8
- Created and posted PowerPoint versions of six-weeks assessments for review purposes
- Implemented Advanced Learning System (ALS) to replace Novel at the high schools, MSLC, Pride, and Pride Plus
- Maintained ALS database
- Provided ALS reporting for teacher and principal decision-making
- Updated ALS enabling objectives for each standard in four core areas for grades 2-8
- Administered Career Scope career-technical assessment software
- Administered Learning Styles Inventory to all students in grades 3, 6, and 9
- Cataloged and distributed textbook supplemental electronic media for reading K-5

- Cataloged and distributed textbook supplemental electronic media for science K-12
- Implemented Gateway textbook management software
- Created web interface for reporting of student data from the division-wide assessment program
- Reviewed textbook supplemental electronic media for mathematics K-12
- Reviewed textbook supplemental electronic media for language arts 6-12
- Reviewed textbook supplemental electronic media for literature 6-12
- Reviewed textbook supplemental electronic media for foreign language K-12

## CURRENT STATUS OF TECHNOLOGY FOR 2010 – 2012

### Metropolitan-Area Network

The school division has a Metropolitan-Area Network (MAN) allowing personnel at all schools to access outside resources quickly and cost-effectively. In cooperation with the City of Lynchburg, the Lynchburg City Schools maintains a city-wide fiber optic network backbone to connect most of the school division's sites. Other sites are connected to the network through a dedicated Digital Subscriber Line (DSL) connection. The MAN consists of:

- multiple fiber optic rings for redundancy
- fiber gigabit links between all backbone nodes
- gigabit fiber spurs connecting sites not on the backbone
- Cisco equipment-based layer 3 switching which allows Internet Protocol (IP) routing, Virtual Local Area Networks (VLANs), Quality of Service (QOS), Spanning Tree Protocol (STP), etc.

A schematic drawing showing the city/school division MAN is included in the appendices.

The following sites are connected to the city's fiber optic backbone with a direct fiber connection to each site: Bass Elementary, Bedford Hills Elementary, Dearington Elementary, Heritage Elementary, Linkhorne Elementary, Thomas C. Miller Elementary, Robert S. Payne Elementary, Paul Munro Elementary, Perrymont Elementary, Sandusky Elementary, Sheffield Elementary, Hutcherson Early Learning Center, Paul Laurence Dunbar Middle School, Linkhorne Middle, Sandusky Middle, E.C. Glass High, Heritage High, Amelia Pride Center, Governor's School for Science and Technology, LAUREL Regional School, Department of Transportation, Information Technology Center, and the School Administration Building.

The Adult Learning Center, and numerous recreational centers and school partners connect to the fiber optic network through a Digital Subscriber Line (DSL) (768 K) connection. As part of the negotiations on the purchase of the city network, nTelos agreed to provide up to 18 DSL connections to sites identified by the school division. These sites would be in partnership with the school division and would house after school tutorial programs. The DSL connection will allow these sites to access instructional software at the schools.

The school division and city share a single Internet connection that allows for centralized access into and out of the network. This Metro Ethernet Circuit (50 Mbs) is protected by an enterprise grade firewall appliance that incorporates firewall features, intrusion detection, event monitoring, content filtering, antivirus scanning, and Virtual Private Network (VPN) support. Web and File Transfer Protocol (FTP) access are controlled by a proxy server that uses list based technology to filter inappropriate content. A centralized connection to the Internet allows a hardware firewall to exist at one site for more effective monitoring. The firewall decreases the possibility of students accessing inappropriate sites on the Internet. Equipment at the central sites is also standardized so that costs and personnel can be shared by the city and the school division.

## Local Area Network

A Local Area Network (LAN) is installed at each site to allow access to the network and Internet. Every classroom, media center, office, lab, and workroom workstation is connected to the network and Internet. The LAN at each site consists of:

- 100 megabit backbone
- Cisco equipment based layer 2 switching which allows Virtual Local Area Networks (VLANs), Quality of Service (QOS), Spanning Tree Protocol (STP), etc.
- Single or multiple servers to support network services – Dynamic Host Configuration Protocol (DHCP), single point of sign-on/authentication, Network Time Protocol (NTP), etc.
- Shared resources – printers, software, shared files, etc.

Division-wide resources are located at the School Administration Building on a separate service network. These resources include:

- Domain Name Service (DNS), Windows Internet Naming System (WINS)
- Directory Services – Windows Server 2003 and Active Directory
- user folders
- iSeries
- Centralized email access
- Web and FTP proxy
- Customized division applications – special education management, SOL assessment & content
- Intranet site
- Division backup system
- Video over Internet Protocol (VoIP), Multi-point Control Unit (MCU), and management station

## Collaboration

Collaboration in the area of technology has been extensive. The school division and city government collaborated to build a fiber infrastructure of more than 45 miles which connects more than 50 sites. It utilizes 100 Mb Ethernet, 1000 Mb Ethernet, and Metro Ethernet (50 Mbs) connections. The network is used for the Geographic Information System, Internet access, system monitoring, computer data, and communication.

The school division has more than 150 formal school-business partnerships with more than 20 of them being technology related. Technology partnerships include, but are not limited to, University of Virginia, AREVA, BWXT, Virginia State Police, Centra Health, R.R. Donnelley, Progress Printing, and Craddock Cunningham Architectural Partners.

Through creative partnerships, learning has been expanded in non-traditional ways for non-traditional groups of students. Students at the regional detention center can access software programs at the alternative education center through a Digital Subscriber Line (DSL) connection. Students in short-term placements at local centers also have access to the instructional software programs through a DSL connection.

Students have the opportunity to develop skills and competencies through a variety of technology rich career-technical programs. Each of the fourteen career-technical program areas has an advisory committee composed of business and industry representatives from the community. A sampling of the changes that have recently been implemented or are under way would include the Computer Systems Technology program, which allows students to receive A+ and Network+ certifications. This laboratory is scheduled to add modules on copper and fiber optic cable systems that will allow students to receive IC3 and HTI (Home Technology Integrator) certifications. The Automotive Service Technology (AST) lab has recently added a laser alignment station that is comparable to those found in factory authorized service centers. The AST program has also implemented Alldata and Shop Key computer repair database capabilities. The Dental Careers program, under the guidance of the Lynchburg Dental Society, added digital radiography equipment with scan x software and an intra-oral camera with related software and tools/instruments. The Technology Education program at Paul Laurence Dunbar Middle School for Innovation installed a WeatherNet weather station in cooperation with WDBJ television. This gives our school division and WDBJ access to instant weather data and live camera feeds. Included with this system is the option to have the site registered with the Homeland Security network, thus allowing the federal government to access our live data feeds in the event of a disaster.

The alternative education program, located at several sites, relies on COMPASS software and staff generated online courses as an integral part of its program.

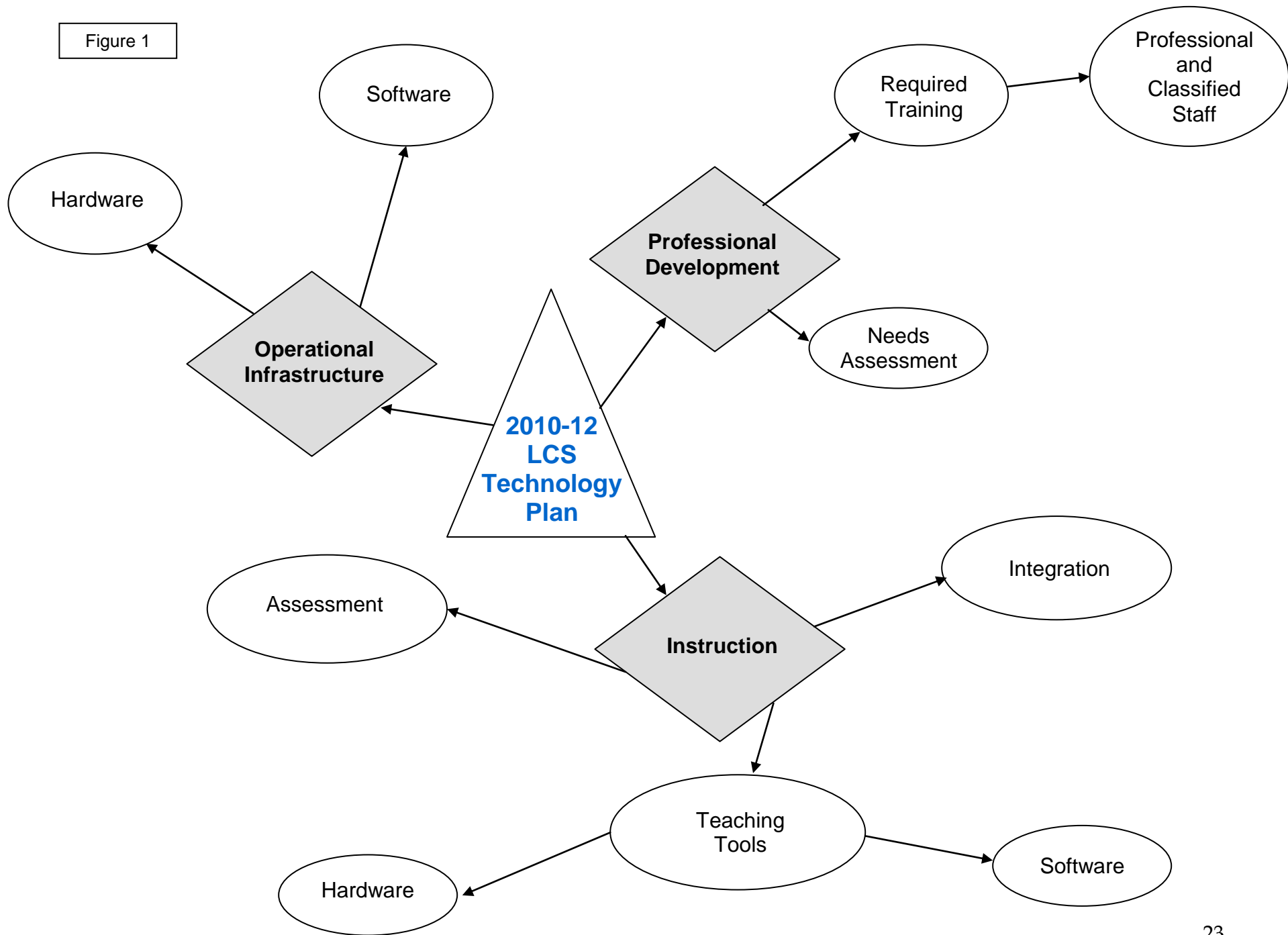
## The Lynchburg City Schools Technology Plan for 2010 – 2012 Overview

Members of the Technology Leadership Team, in cooperation with other stakeholders, crafted a plan for the use of educational technology for the next two years. The overall plan, graphically represented in Figure 1, has three major components. The first of these deals with *Technology Infrastructure*. This section outlines the technological features of our physical plant, with attention to both hardware and software applications.

The second component expands on the use of educational technology in the area of *Instruction*. This component is divided into sub-headings of Assessment, Integration, and Teaching Tools.

The third section calls for *Professional Development* for all staff members in the use of technology. The proposal outlines a plan for a needs assessment as well as required training for both professional and classified employees.

Figure 1



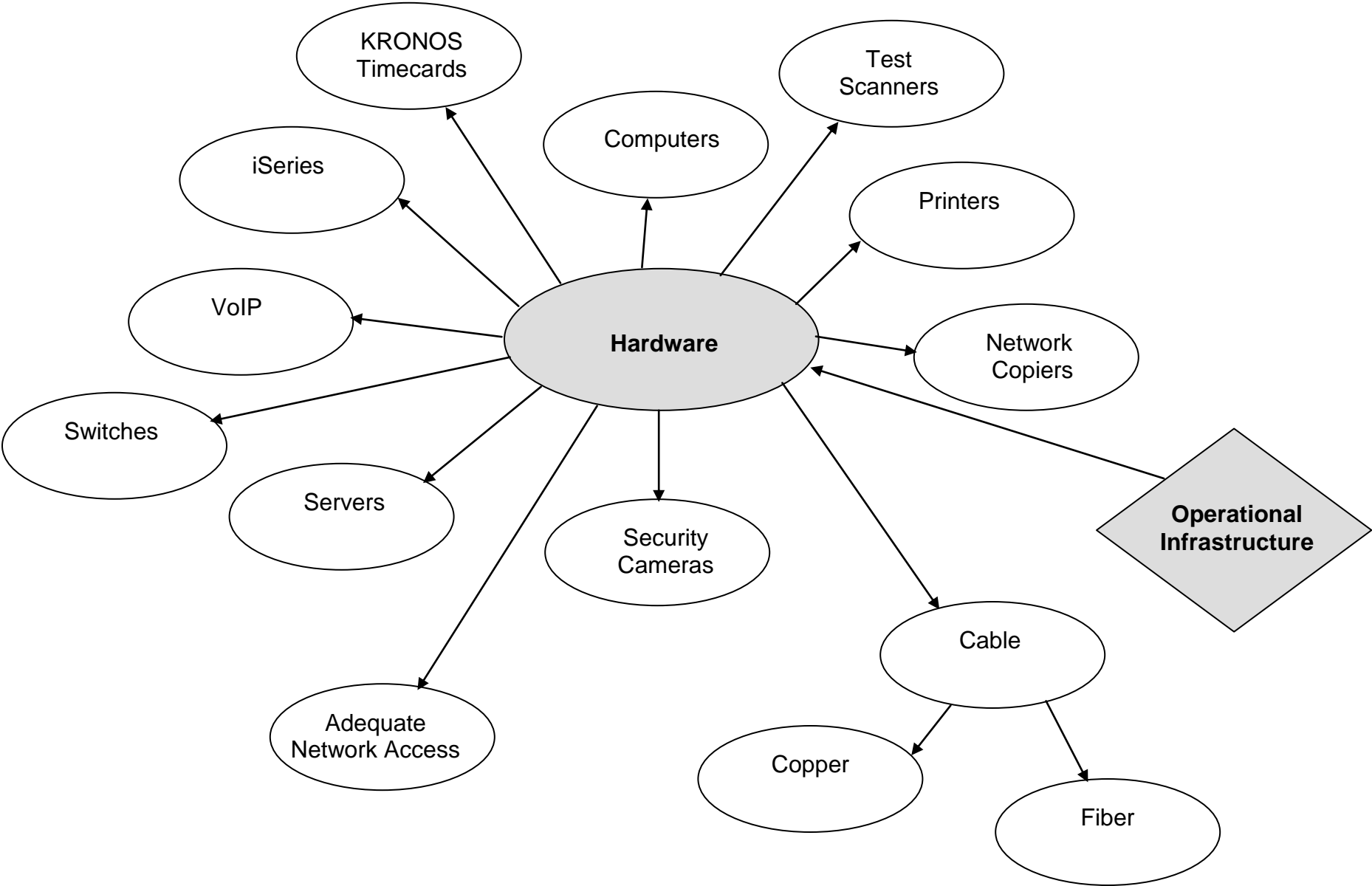


## Operational Infrastructure - Hardware

The Lynchburg City Schools' Department of Information Technology is responsible for the purchase, repair, replacement, and assignment of any hardware-related item used in the operational infrastructure of the school division, as shown in Figure 2. Examples of these would include, but are not limited to:

- Computer workstations – used for employees in personnel, finance, information technology, curriculum, instruction, maintenance, facilities, and transportation in the performance of assigned duties
- Printers/Network copiers – over 1,000 network and desktop models available for the exchange of data via hardcopy
- Servers – over 45 program and print server models for the efficient storage and transfer of electronic data
- Safe network access – firewalls and content filters in place for the protection and safety of end users
- Switches – nearly 250 switches operating continually online to quickly and efficiently move information both inside and outside our network
- Assessment scanners – available at sites for processing diagnostic and assessment scoring instruments
- KRONOS timecard system – network-based card-swipe clock systems for payroll and timekeeping purposes
- Security cameras – posted at strategic locations at all sites in the school division for the safety of students and staff. Digital cameras are also mounted in school busses for monitoring and recording student behavior
- iSeries – used to house critical applications and sensitive data including the student information and employee management system
- Voice over Internet Protocol (VoIP) – an application used to provide phone services over a system's existing network infrastructure. This project will be evaluated using the new construction site at Sandusky Middle School
- Cable – over 150 miles of copper network wiring provides network access to end users at their workstations. In addition, over 50 miles of fiber optic cable runs throughout the city of Lynchburg connecting school sites to the Metronet and to each other. The fiber optic cable also joins network closets within each building for redundancy or continuation of service in the event of a break in the wiring

Figure 2



## Operational Infrastructure - Software

The Lynchburg City Schools' Department of Information Technology is responsible for the evaluation, purchase, installation, application, and trouble-shooting of any software-related item used in the operational infrastructure of the school division, as shown in Figure 3. Examples of these would include, but are not limited to:

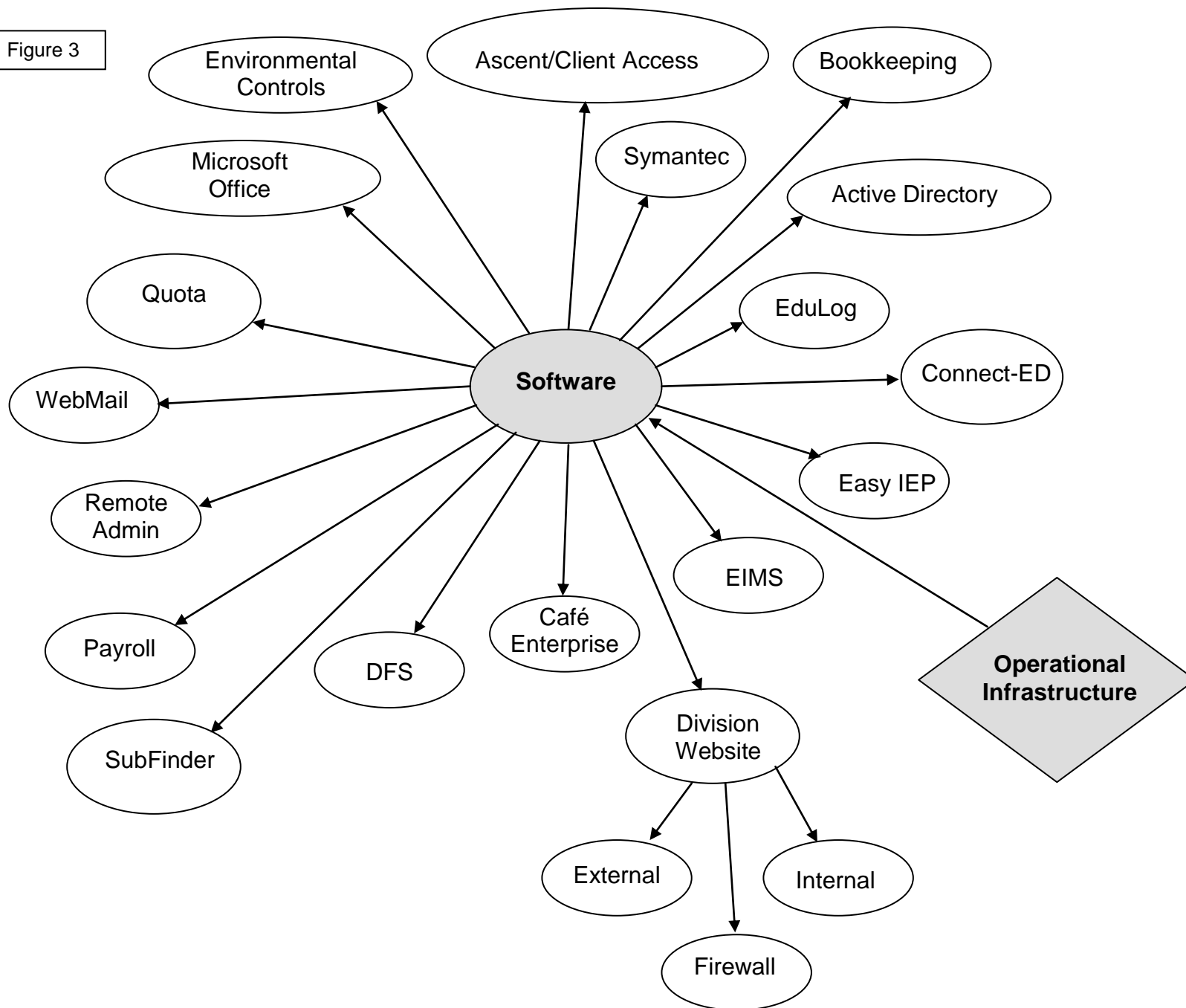
- Active Directory (AD) - AD is a hierarchical collection of network resources that contains units of users, computers, printers, and other directories. Using AD allows administrators to handle and maintain most network resources from a single location.
- Distributed File System (DFS) - DFS allows administrators to group shared folders located on different servers by transparently connecting them to one or more DFS namespaces. A DFS namespace is a virtual view of shared folders in an organization.
- Quota Server - Through its interface, Quota Server gives systems administrators the ability to set quotas on space to be allocated to a drive, directory, file, and/or an individual.
- Remote Administrator (Radmin) - Radmin is remote access and control software that enables a technician to work on a remote computer as if the user were sitting right in front of it and to access it from multiple places.
- WebMail - WebMail is an email client that allows a user to check mail using a web browser. This means an individual can check email using any computer that is connected to the Internet. WebMail has several features including address books, personalized display settings, and support for mail folders.
- Microsoft Office - Microsoft Office is a software suite that consists of different applications that complete different activities. Microsoft Word provides tools for creating and sharing professional word processing documents. With Microsoft Excel, the user can create detailed spreadsheets for viewing and collaboration. Microsoft PowerPoint provides a complete set of resources for creating powerful presentations. Microsoft Access gives the user tools for managing databases.
- Ascent/Client Access - The focus of this type of system access is to deliver the strengths and capabilities of the iSeries applications and data to the user's desktop through easy-to-use screens and wizards.
- SubFinder - SubFinder is a fully automated Employee Absence Management and Substitute Placement System which provides both Internet and telephone access for employee absence reporting, substitute placement, and data management tasks.

- Payroll – iSeries payroll applications encompass all duties involved with processing all bi-weekly and monthly employee compensation.
- Education Information Management System (EIMS) - The Virginia Department of Education partnered with Pearson Educational Measurement to develop the EIMS. The system's primary purpose is to create, assign, and track a unique State Testing Identifier (STI) for each Virginia public school student and to offer data disaggregation capabilities to report Standards of Learning and alternate assessment scores from 2000-2001 to the present. Longitudinal data begins with the fall 2005 assessments.
- Symantec - Symantec/Norton AntiVirus (SAV) is a virus protection program distributed by the Symantec Corporation, offering protection features including infected file quarantine, online virus protection updates, and an automatic scheduler. SAV is designed to start running as soon a computer's operating system starts. It runs in the background, checking all vulnerable files for possible infection by mischievous, sometimes malevolent, programs called viruses and worms. SAV does this by looking for the identifying signatures of these worms and viruses and comparing them to known viruses for which it has files. When it detects an infected file, it notifies the administration and manages the infection according to pre-established preferences.
- Easy IEP – Easy IEP is designed and managed by Public Consulting Group. It is a web-enabled student case management software program, particularly designed for special educators' use. Through this application, special education professionals produce student assessment and progress reports, which meet the requirements of state and federal regulations.
- Connect-ED - The Connect-ED® service enables school administrators to record, schedule, send, and track personalized voice messages to populations of students, parents, and staff in minutes. The Connect-ED ® service offers a bundled set of emergency communication, survey, and community outreach notification tools designed to help schools at all levels improve awareness, increase involvement, and audit communication on a regular basis.
- EduLog - This bus routing and scheduling software combines ease-of-use, power, and flexibility which gives transportation personnel the ability to know which student belongs on which bus, and where that bus has been and should be going to, with nearly to-the-minute certainty.
- Bookkeeping – EPES school accounting software is used at sites to maintain financial records for Parent Teacher Organization funds, booster clubs, and other local accounts.
- Café Enterprise – This is a division-wide school nutrition software program that assists students and management with cafeteria accounts. In school nutrition,

students have an established debit account, although they are not required to make advanced payments because the system still has the ability to act as a cash register and can accept cash payments on a daily basis. However, parents/guardians may wish to choose one of the options for making advanced payments. To prevent fraudulent use of a child's account, each register is equipped with a digital camera that takes a digital image of the student and downloads it into the system the first time they purchase foods in the cafeteria. This digital image will appear on the monitor for the cashier to view every time a child accesses his or her account, therefore insuring that no other student can use that child's account. Money will only be deducted from an account when the student uses the account to purchase meals and/or a la carte items.

- Environmental Controls – Maintenance technicians can remotely access a site's supervisory controllers to view temperature and air flow readings on heating and air conditioning equipment. This system allows them to make necessary adjustments for efficiency and comfort over the network.
- Division Website – The LCS website is maintained by a webmaster in the Public Information Office. The external site is located at [www.lcsedu.net](http://www.lcsedu.net), and it contains information that is pertinent to any public entity. The internal site, LCSNET, is open to employees of the LCS and can only be accessed from inside the network and firewall. This site contains information like forms, policies and regulations, and similar documents and links.

Figure 3



## Instruction – Assessment

The Lynchburg City Schools' Department of Information Technology is responsible for the evaluation, purchase, installation, and maintenance of any software application used to assess students and programs in the school division, as shown in Figure 4. Examples of these would include, but are not limited to:

- Standards of Learning (SOL) - PEMSolutions (Pearson Educational Management Solutions) is used to create, deliver, score, report, and analyze summative, formative, and alternative assessments, and provides many other custom online and paper-based testing and reporting services.
- Division-Wide Assessment Program (DWAP) – This program uses LCS-generated, common formative assessments that are administered to students in grades 2-8 each six weeks. They are designed to gauge student progress along curriculum timelines established at the division level.
- Stanford Diagnostic Reading Test (SDRT) - The Stanford Diagnostic Reading Test (SDRT) measures the major components of the reading process and is used to diagnose students' strengths and weaknesses in reading. The results can be used by teachers to group students according to their specific instructional needs. Raw scores are converted to percentiles, stanines, normal curve equivalents, grade equivalents, and scaled scores. Students in grades 5-8 are tested each year.
- InteGrade Pro (IG Pro) - InteGrade Pro is an electronic gradebook software program. IG Pro manages students' scores, assignments, and up-to-the-minute calculated grades, helping teachers to track student performance over the duration of a course. With InteGrade Pro, teachers can organize tasks and put them into categories such as homework, quiz, or lab exercises. They can reward good performance with bonus scores and correct poor performance by graphically showing a student's progress. At the end of a marking period, InteGrade Pro can transmit final grades back to the student information system to print report cards, reducing administrative time and effort.
- Phonological Awareness Literacy Screen (PALS) - PALS is the state-provided screening tool for Virginia's Early Intervention Reading Initiative (EIRI). The purpose of the EIRI is to reduce the number of children with reading problems by detecting those problems early and providing research-based, small-group intervention. By screening Pre-K - 2 students with PALS, the school division can identify struggling readers and receive incentive funds for intervention. All students not meeting the entry level benchmark for their grade level must receive intervention services in addition to their regular classroom instruction.

## Instruction - Integration

An important goal of this plan's curriculum initiatives is to seamlessly integrate technology tools into daily instruction, as shown in Figure 4. By identifying technology solutions and instructional strategies at the curriculum development stage, LCS professionals can act to maximize the impact of technology on system-wide teaching and learning and support the expansion of "pockets of technology integration excellence" that currently exist in most of our schools. Therefore, it is critical for school leaders to invest time and resources in system-wide planning for technology integration. Done in advance, and at the curriculum-development level, such planning allows the Lynchburg City Schools to optimize its use of available funds and technology resources.

### Maximizing Resources

When schools across the division have different equipment and tools and varied levels of technical expertise, it can be difficult to support technology integration efforts and ensure that technology is supporting the curricula and instruction. A cohesive and well-designed plan for resource management is one way that we can maximize our investment in technology.

### Software

Any school division that has a wide range of disparate software packages is often handicapped when attempting to implement a cohesive technology integration plan. Providing both support for a wide range of skills and guidance in the integration of a wide variety of software stretches our support staff to their limits and results in unfocused professional development. Establishing a division-wide tool kit of standardized software for use across all schools is the approach we have used. Identifying a set of software tools that is limited in number and is versatile and valuable across subject areas and grade levels can maximize the impact of our investment. For example, the LCS has elected to use a consistent "suite" of tools (i.e., Microsoft Office) or decided on common needs (i.e., word processing, spreadsheets, presentation software). In conjunction with a tool kit, a careful selection of additional software that supports specific curriculum initiatives encourages efforts to integrate technology by linking technology with the broader initiatives of our school division.

In conjunction with a tool kit approach, we organize resources based on curriculum needs. For example, software (and hardware) is purchased to align with specific curriculum units and support teaching approaches. Using this method, resources in a first grade classroom differ from those in a third or fifth grade classroom. We continue to utilize a "software review" committee approach, comprised of both curriculum and instructional technology specialists, to plan for the purchase, integration, and support of such resources.



## Hardware

School divisions, whose goal in acquiring hardware is support for the integration of technology with curricula and instruction, think beyond the computer lab concept. Our planning for hardware purchases focuses on optimizing access. Creating a variety of designs for hardware deployment increases access to technology, and therefore better supports the integration of technology with curricula and instruction. The LCS approach has been to equip all classrooms with at least one computer with an Internet connection. This method of technology integration helps to make technology a fixture in the daily life of teachers and students and aids faculty in forming the habit of using basic electronic communication (email and Internet). As their comfort with the technology increases, teachers will be more likely to take the next step to integrate it into classroom lessons. (Apple Classrooms Of Tomorrow, 1995, in <http://www.neirtec.org/products/techbriefs/8.htm>).

The next step was to acquire presentation equipment. Video projection units proved to be a cost-effective way for teachers to integrate technology into a variety of lessons. Whether to show satellite photos of weather patterns or to display video streaming of a Martin Luther King, Jr., speech, this application of technology engages all types of learners.

The Lynchburg City Schools also implemented a combination of computer labs, classroom computer pods (two to six computers), and mobile carts of wireless laptops as effective ways to access technology. It is clear that group work can be enhanced in powerful ways by providing a computer as one of the many resources individuals can use during investigations. Both wireless technologies and laptop computers have become less expensive, making mobile carts of wireless workstations more affordable. In addition to aiding in online testing, these technologies have the potential to place technology wherever learning is taking place rather than displacing the class to one of the labs.

## Teacher

A school division's single most important resource is its personnel. Successful initiatives carefully plan how personnel will play a part in achieving goals. "The success or failure of technology is more dependent on human and contextual factors than on hardware or software."

(Valdez et al., 2000, p. iv, *Computer-based technology and learning: Evolving uses and expectations* (<http://www.neirtec.org/products/techbriefs/8.htm>)).

Administrators, Instructional Technology Specialists (ITS) and technical support staff are required to help teachers achieve technology integration. These roles are essential, and the absence of any can derail efforts. The Lynchburg City Schools has recognized the need to separate these roles and assign different individuals to each. This division of responsibility requires technicians to take charge of setting up and maintaining equipment, and assigns the ITS and administrators the duty of working with teachers and leading technology related professional development at the school sites. Using this model, the ITS must have classroom expertise and be able to work with the

teachers within the context of their school day (extracted from <http://www.neirtec.org/products/techbriefs/8.htm>).

## Student

Recently the focus has moved from teaching students how to use technology to relying on technology to support content. This is due much in part to the elimination of Standards of Learning testing in this area. Up until 2002, school accreditation was dependent upon passing scores on the technology Standards of Learning tests for grades five and eight. Since the Virginia Department of Education discontinued testing on the associated standards, technology can no longer be looked at in isolation but rather as part of a planned program of school change as it relates to student achievement. Technology can broaden the range of students' choices as they learn. Students routinely use technology tools to find information, collect, organize and interpret data, and present results. In addition, technology offers teachers options for adapting instruction to special student needs. The following strategies suggest ways technology is used to support improved academic achievement for students.

1. Technology is used in support of student learning in key content areas by linking to existing division or school initiatives. For example, process writing goals are supported with portable smart keyboards and webbing tools (e.g., Inspiration). Technology is built into the math curriculum in areas such as data organization and interpretation (databases and spreadsheets) or exploration of mathematical concepts (see <http://standards.nctm.org/document/eexamples/>). In addition, and for the first year of this plan, the school division will focus on the review, acquisition, and implementation of software to support mathematics foundations, remediation, and enrichment for all students in grades three through eight. Early literacy initiatives are also supported with technologies that incorporate reading, writing, speaking, and listening.
2. Teachers work within specific content areas to integrate technology rather than making technology a separate subject area. They consider what students need to learn and how technology can promote those learning goals. When revising curriculum in a specific subject area, the committee that is charged with this task is also charged with researching the selection of technology tools and resources to best support learning in this area. Curriculum and instruction and technology leaders continually work together to create planning documents to ensure that the school division's student achievement goals are in both the curriculum and technology plans. Working together, they create curriculum and instruction plans that include technology skills and resources where appropriate and beneficial to student learning; identify student and teacher competencies needed to use technologies for learning; and plan where these competencies and skills are to be integrated into professional development (for teachers) and curriculum and instruction (for students).
3. School division leaders use technology tools to collect, organize, analyze, disaggregate, and report on student achievement data. While student

achievement data is complex, it gives LCS professionals an opportunity to identify strengths and weaknesses in curriculum and instruction when properly analyzed and synthesized. Data organization and manipulation tools such as spreadsheets, relational databases, and automated student information systems assist in this task. Administrators involve teachers in the process of looking at student performance data from the Division-Wide Assessment Program (DWAP) and SOL trends for better informed curriculum and instruction decisions and practices.

4. Technology is used to support different learning styles and meet the needs of all learners in our school division. Learning Styles Inventories are administered to students in the Lynchburg City Schools at grades four, six, and nine. Used in conjunction with these inventories, technology supports a district-wide focus on differentiated learning with concepts such as: multiple means of expression (multimedia presentation tools), multiple means of engagement (simulations, online manipulatives, content-based software), and multiple means of representation (digital images, digital sound, animation, text-to-speech resources). Curriculum materials are varied and diverse and include digital and online resources in addition to traditional text resources. Technology also facilitates developmentally appropriate learning experiences by providing information in a variety of ways (visual, auditory) and at a variety of levels (<http://www.neirtec.org/products/techbriefs/8.htm>).

### Integrating Technology Effectively Into Curriculum and Instruction

All activities in this plan directly or indirectly focus on the integration of technology into curriculum and instruction. The activity that potentially impacts the greatest number of teachers, and therefore the greatest number of students, is the development of integration activities.

A sample integration project was recently introduced under the name of “Technology Academies” where teachers could find the time during the summer or on weekends to develop activities that they could use to integrate technology into their teaching. Over the last two years, the academy model has continued and teachers have developed activities and received classroom technology for their efforts. This past year, a means was created for teachers to share these activities. By sharing, teachers benefit from each other’s efforts and do not feel a need to create new integrated activities every time they are presenting a topic to their students.

A network-accessible server is in place to house all teacher-made activities. Activities are stored in a folder system based on grade level in every subject area tested through the state’s assessment-accreditation process. As an illustration, a second grade teacher may decide to work on an integrated activity that correlates with a specific enabling objective in science. Once she has created the activity, she copies it to the appropriate folder on the “sandbox” server. The teacher and the subsequent user are responsible for content accuracy, enabling objective relevance, and technological compatibility. Any teacher in the school division is free to access these activities.

An additional feature of this server is that the school division is working on making the database accessible to teachers from home. If a teacher is planning lessons at home, he can preview the content on the server to decide which materials he wishes to use with his students. Thus, teachers have access to this resource at their convenience.

Teachers have enjoyed the opportunity to develop these integrated activities. Groups of teachers have met after the contracted day and developed activities they use with their students. Because they have already achieved a level of competence in the eight technology standards, the Instructional Technology Specialist (ITS) who works with the teachers serves as more of a consultant than as a provider of direct instruction.

Conceptually, teachers often know how they want to use technology, but they may not have the technical knowledge to complete a project. The ITS provides the guidance and direction so that the teacher is able to complete the activity.

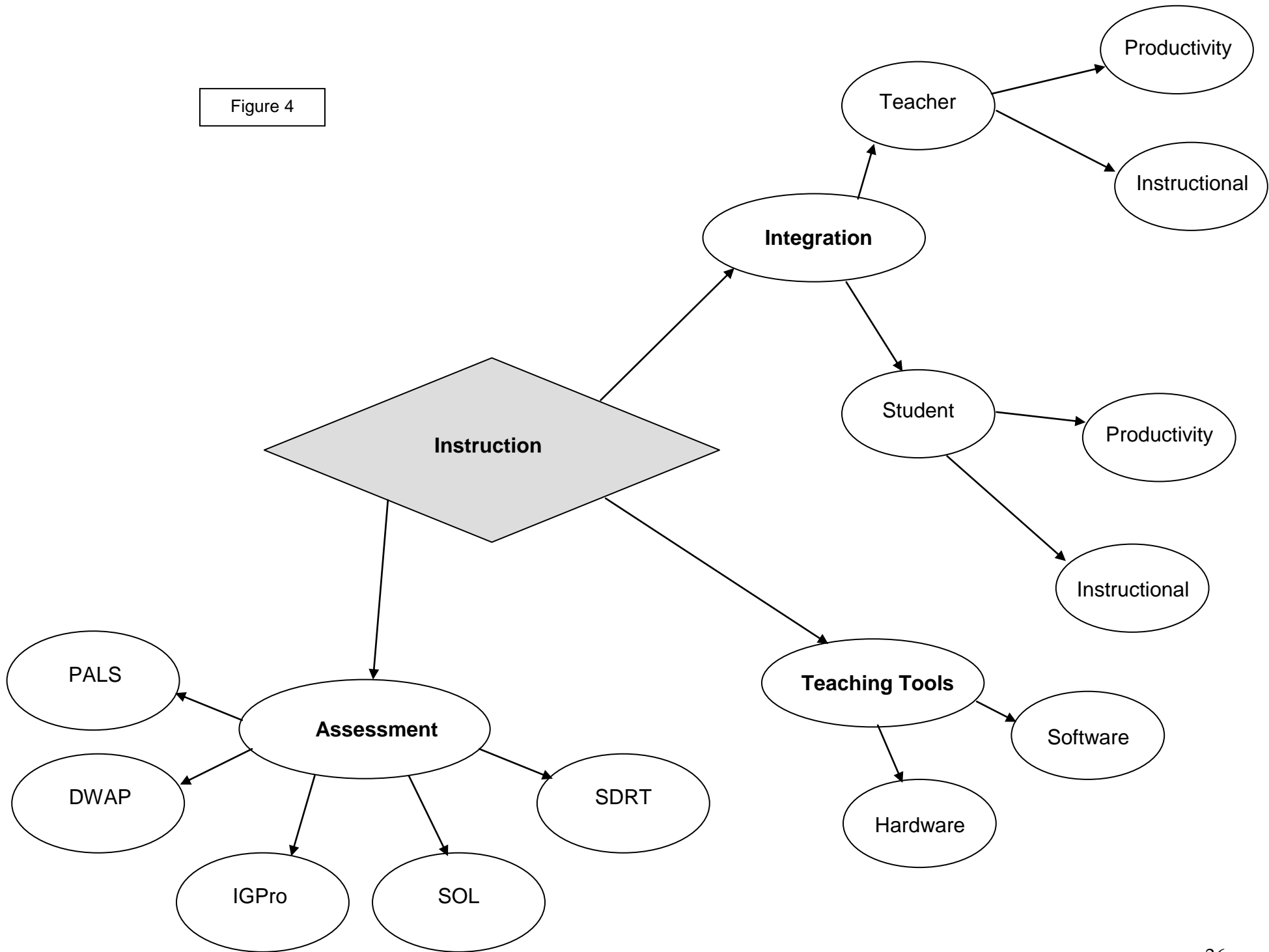
For example, a teacher may know that she wants her students to look at some actual census data from 1860 and 1870 to see if they can determine some effects of the Civil War. An ITS would collaborate with the media specialist to help the teacher find an appropriate site, and then teach her ways to have her students access this site. The ITS would also show the teacher how to maneuver through the site so that she could assist her students when they came to the lab to complete the assignment.

This activity is perhaps the most far-reaching example within this project of strategies that integrate technology, but there are certainly other possible integration activities. Teachers using video streaming will employ these clips to reinforce and visually support their classroom instruction. They will see ways to use these short clips and will move away from necessarily assigning students to view 15-30 minute videotapes. Thus the integration of this technology will impact the use of instructional time. Through the activities in which teachers examine the various software programs, they will learn ways to integrate this technology to aid in large-group instruction and also provide individual practice opportunities.

### Internet Safety Instruction

The Virginia Department of Education is committed to helping school divisions develop and implement Internet safety policies and programs, as directed by HB58. The legislation also compels The Lynchburg City Schools to integrate Internet safety into our curricula. While the VDOE guidelines document offers recommendations, specific curricular details are left to the discretion of local school systems. As former state superintendent Billy K. Cannady, Jr. pointed out, “as a school division perhaps our greatest priority is to protect the students. In terms of online safety, the ever-changing nature of the Internet makes this objective a constantly moving target. Although the task is daunting, we must stay ahead of the curve in detecting and reporting Internet threats and predators. Instructors need to be well informed about the latest computer threats and integrate Internet safety into their curricula throughout the school year. Administrators should keep staff and community members apprised of new developments. They also need to evaluate the Internet safety program’s quality and effectiveness and make regular adjustments and revisions.” To that end, a summary of our K-12 Internet safety instructional program is included in the appendices.

Figure 4



## Instruction – Teaching Tools

### Hardware

The Lynchburg City Schools' Department of Information Technology is responsible for the purchase, repair, replacement, and assignment of any hardware-related item used in the instructional program of the school division, as shown in Figure 5. Examples of these would include, but are not limited to:

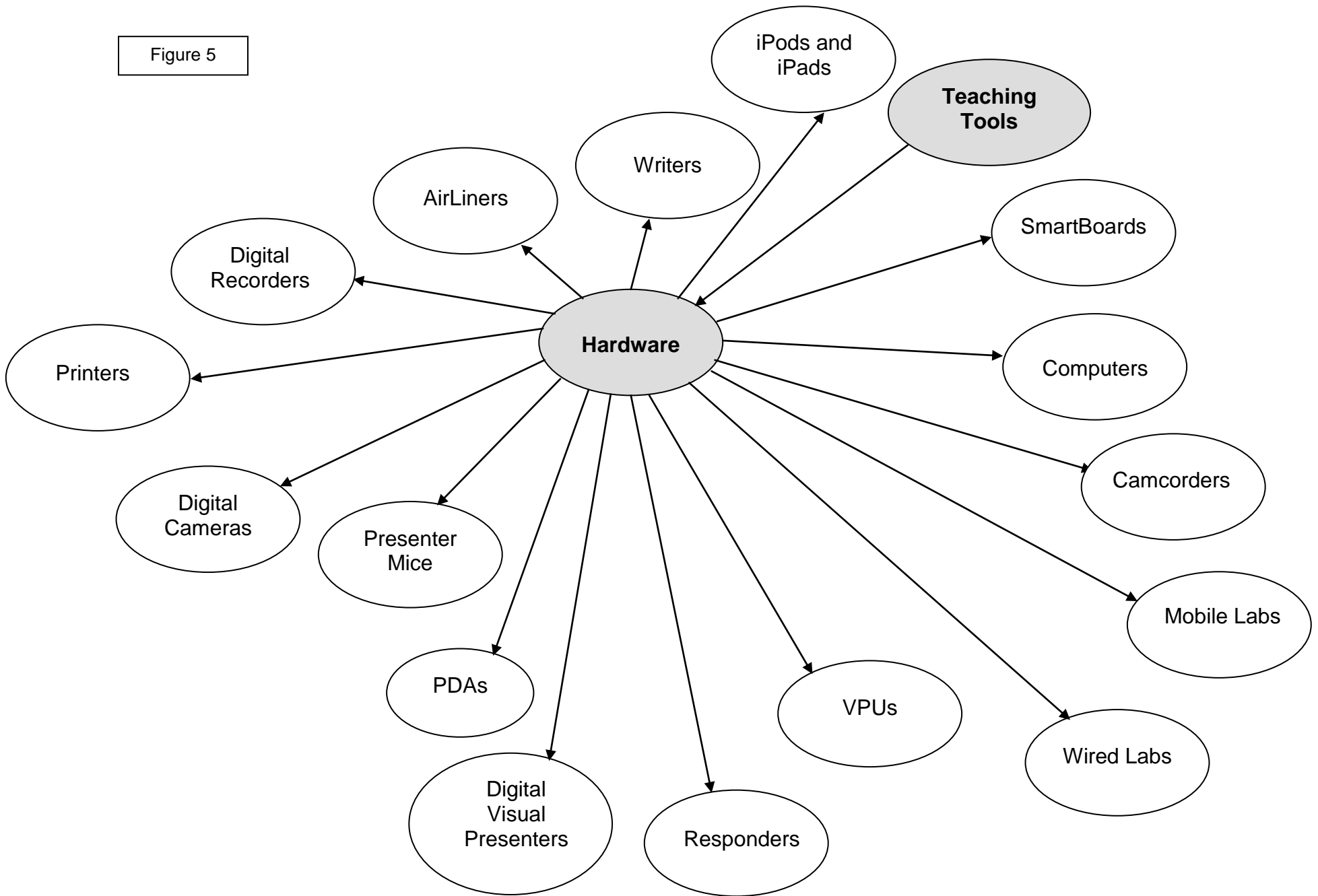
- Computers – used by instructional personnel and students as both a teaching and administrative tool
- Printers/Network copiers – over 1,000 network and desktop models available for the creation and exchange of instructional material via hardcopy
- Wired labs – Nearly 60 computer labs of 25 to 30 workstations each are available for student and staff group instruction in the school division.
- Mobile Labs – Seven, 25-laptop station, mobile units are being piloted at the elementary and middle school level for their effectiveness in the instructional program.
- Video Projection Unit (VPU) - A video projector is similar to a film or slide projector in that they both accept a source and project the image from that source onto a screen. However, inside a VPU is processing circuitry that converts an analog or digital video input signal into something that can be projected onto a screen.
- Presenter Mice – A presentation device that allows the user to move freely about while advancing slides or controlling a computer mouse remotely
- SmartBoard - The SmartBoard is an interactive whiteboard used in conjunction with a computer and data projector as a tool for teaching and presenting. With the monitor image projected on the SmartBoard, the user simply presses a finger on the large touch sensitive surface to control the computer. This allows students to do presentations from the front of the room instead of having to be at the computer. Using one of the pens from the SmartBoard pen tray, the user writes on the white surface and the touch-sensitive screen tells the computer what color pen is being used. These notes are projected onto the screen in the correct color and can be saved on the computer or sent to the printer to be distributed as a study guide.
- Camcorders - A camcorder is a portable electronic recording device capable of recording live-motion video/audio for later replay through VCRs, TVs, and, in some models, a personal computer

- Responders – Otherwise known as handheld response systems, these are similar to the handsets used for audience involvement in TV shows. Pupils are asked a question with a multiple-choice answer then, using the touchpad, they select what they think is the correct one. Teachers can devise their own questions based on the school's existing curriculum material, as well as those provided by the manufacturer - including "true or false," or, with some models, questions with numeric answers. The teacher gets an instant display on their computer of all student responder replies and can instantly see who has answered correctly on the concept. Using this feedback, the teacher can also identify students who may need some individualized monitoring and support. Among the advantages of this system is that no student gets embarrassed about getting it wrong in front of their peers, because only the teacher can see the responses. Also, there can be no avoiding interaction in group sessions. All of the class has to be involved because anyone trying to evade participation can be electronically detected.
- Digital Visual Presenters - A visual presenter is a color video camera mounted on a movable arm that is positioned over a large base on which objects can be placed. The base, called the stage, usually has side and bottom lights to illuminate the objects such as books, solid objects, or transparencies. The camera has a lens that lets the user obtain an image of the entire object or it can zoom in for close up views to see very small areas. The image produced by some visual presenters is identical in electronic form to that of a VCR or DVD player and thus can be seen using a TV, plasma panel, or a video projection unit. The images can be used to study an object or can be shared with a class or other audience.
- Digital Cameras - A camera that stores images digitally rather than recording them on film. Once a picture has been taken, it can be downloaded to a computer system, and then manipulated with a graphics program and printed. The big advantage of digital cameras is that making photos is both inexpensive and fast because there is no film processing.
- Digital Recorders - Digital voice recorders are a solution for users who want to record notes, meetings, and ideas without the inconvenience of tapes. These devices have the ability to record and transfer information to a computer, making it easier to organize, edit, and play back voice files.
- AirLiners - With the AirLiner slate the user can interact wirelessly with a Smart Board interactive whiteboard from 52 feet (16 m) away. The battery-free tethered pen lets teachers control any software application, write notes, and highlight information in digital ink. The AirLiner wireless slate enables you to teach from anywhere and allows students to interact with information from their seats. Multiple slate users can write at the same time as someone at the SmartBoard interactive whiteboard.

- Writers - An affordable, portable, easy-to-use laptop that helps teachers improve students' basic skills in keyboarding and writing. These devices integrate seamlessly into the classroom without requiring network support. Teachers can control student access to programs and selected functions. They can also easily transfer an entire class of student assignments to any workstation computer and review it at their convenience. Writers include learning software for developing writing, keyboarding, and quizzing skills. Unlike traditional laptops, they purposely do not include Internet capabilities. Students stay on task without distractions like Web surfing.
- Personal Digital Assistant (PDA) - A personal digital assistant is a handheld device designed to facilitate organizational ability from a mobile platform. While the original models were somewhat limited to keeping address, phone, calendar, and task lists, today's PDA can function as a cellular phone, fax, provide Internet connectivity, and much more. There are many different types of PDAs, but most models work with an operating system like Palm software or a special version of Microsoft Windows. All models can interface with a laptop or desktop system, though optional accessories may be required.
- iPods and iPads - The iPod Touch (trademarked, marketed and stylized as iPod touch) is a portable media player, personal digital assistant, and Wi-Fi mobile platform designed and marketed by Apple Inc. Various instructional software applications (called apps) are available for download and use in the classroom.



Figure 5



## Instruction – Teaching Tools

### Software

The Lynchburg City Schools' Department of Information Technology is responsible for the evaluation, purchase, installation, and maintenance of any software application, or web-based application service provider, used in the instructional programs in the school division, as shown in Figure 6. Examples of these would include, but are not limited to:

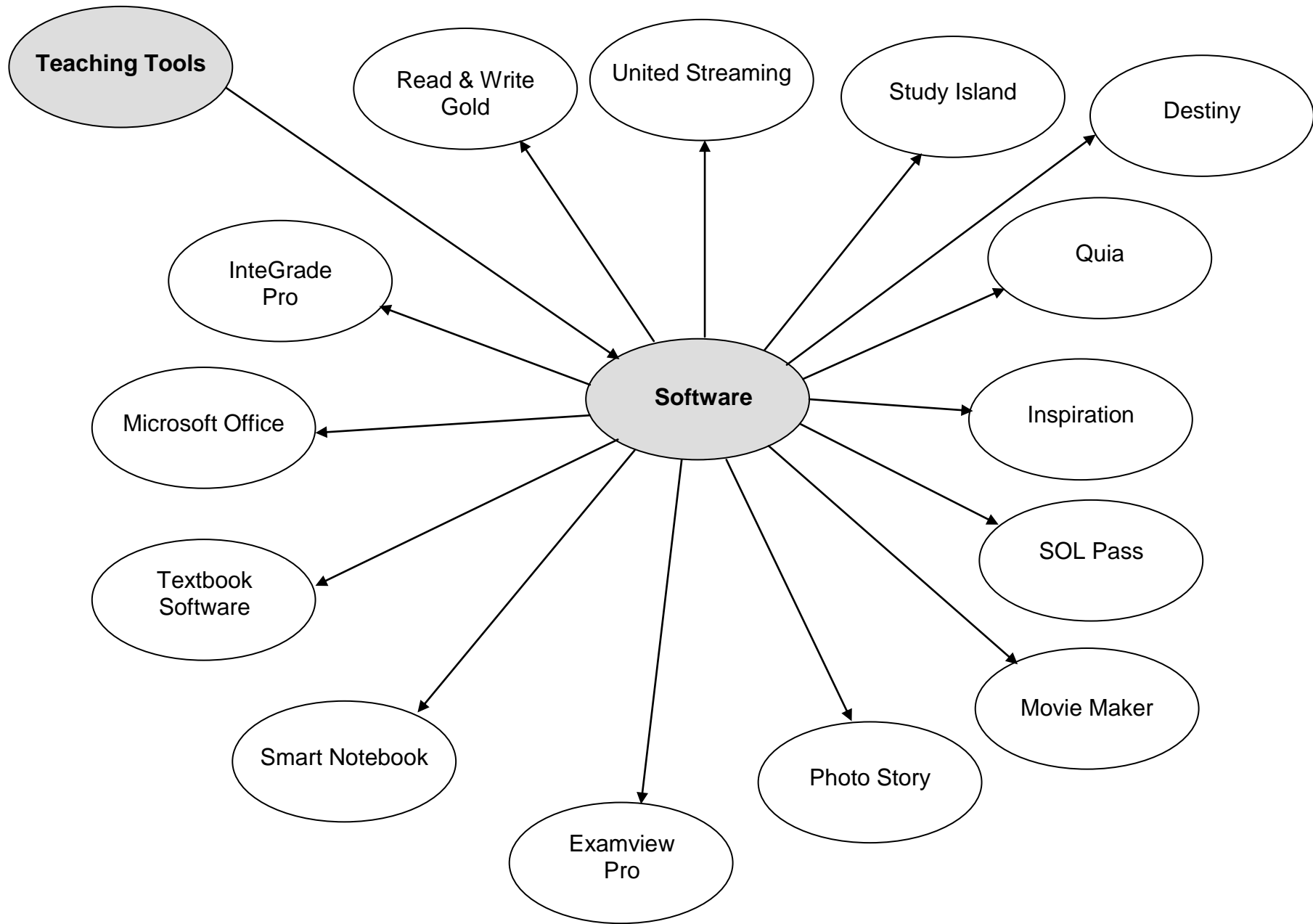
- Read&Write Gold – Read&Write Gold is a software solution for reading and writing needs, offering a comprehensive set of support features available to a user with literacy or learning difficulties. Read&Write Gold allows users to work in a truly inclusive environment using standard Windows applications. This mainstream compatibility means there is no need to learn a whole new way of creating and editing text, as Read&Write GOLD works seamlessly within Windows applications such as Microsoft Word and Excel.
- United Streaming – United Streaming is a large online multimedia library of K-12 educational videos, video clips, and images. There are 4,000 videos, 40,000 video clips, and 20,000+ photos and clip art images. The libraries are correlated with state standards and are searchable by keywords, subject/topic, grade level, and curriculum standards. There are lesson plans, quizzes, and teacher materials that accompany many of the videos.
- Study Island – Study Island is a powerful, yet simple to use, learning and teaching tool provided in a completely web-based format. This format makes the program accessible from home as well. In addition to featuring specialized preparation programs for state standardized tests like the Virginia Standards of Learning, Study Island offers free tools to all users.
- Destiny - Destiny Library Manager™ combines circulation, cataloging, searching, reporting, and management in one centrally installed library system. Students and faculty patrons access the system through any workstation with a supported web browser or through the school division's network and the Internet. This application software is an easy-to-use library management solution that offers integrated circulation, cataloging, searching, and reporting to help each library in the school division work more efficiently. It also includes division-wide features such as searching, interlibrary loan, holds, reporting, and system administration.
- Quia – Quia is pronounced *key-ah*, and is short for *Quintessential Instructional Archive*. This web-based application provides a wide variety of tools, including templates for creating many types of online activities each designed with different learning styles in mind to suit the needs of all students. It also includes testing tools that allow teachers to create quizzes, grade them with computer assistance, and receive detailed reports on student performance. Also provided is a class

web page creator that includes a course calendar and methods to post teacher-made Quia activities for students and parents.

- Inspiration – Inspiration® integrates dynamic diagramming and outlining environments to help students learn, understand, and integrate new knowledge and concepts. It also teaches them to capture, develop, organize, and share thoughts, ideas, and information. Using this application, users create and modify concept maps, webs, and other graphical organizers using Inspiration's Diagram view. An intuitive interface keeps the focus where it should be - on the ideas, not the drawing process. The symbols, templates, and example files in Inspiration® are designed specifically for diagramming, outlining, flowcharting, knowledge mapping, brainstorming, systems thinking, and multimedia design.
- SOL Pass – Solpass.org is a web site that offers test practice and reviews. Besides studying at school, students have the possibility of working with this material at home. The page provides students with different activities to practice with therefore preparing them to succeed on the Virginia SOL tests. Each review contains all the subjects tested in the SOL tests. The information is divided into different categories, depending on the grade students are in.
- Movie Maker – Movie Maker is a user-friendly, entry-level video editing application included in all versions of Windows XP and Vista. Most individuals can employ this software to mix still pictures, video clips, music, and audio into instructional or home movies and top them off with a wide assortment of titles, text overlays, and credits.
- Photo Story – Users can create a photo story that includes motion, narration, and music. Photo Story includes dramatic pan and zoom effects, picture rotation, and cropping tools to customize photos. Individuals can also compose an original soundtrack from directly within Photo Story, narrate a story, and add special effects, transitions, and other features.
- Examview Pro – Examview features a user-friendly testing environment that allows teachers to not only publish traditional paper and computer-based tests, but also web-deliverable exams. The Quick Test Wizard allows users to create an exam in less than five minutes, take advantage of the question banks, or even customize their own exams.
- Smart Notebook – Smart Notebook software allows teachers to create, instruct, and manage interactive lessons within a single application. Notebook collaborative learning software is an easy-to-use application that lets teachers add interactivity to lessons through an array of multi-media educational tools and resources.

- Textbook Software – Sometimes referred to as print and nonprint ancillaries or supplements, this is a collection of instructional support materials that is most often included with the purchase of a K-12 textbook.
- Microsoft Office – Microsoft Office is a software suite that consists of different applications that complete different activities. For example, Microsoft Word provides tools for creating and sharing professional word processing documents. With Microsoft Excel, the user can create detailed spreadsheets for viewing and collaboration. Microsoft PowerPoint provides a complete set of resources for creating powerful teacher or student presentations. Microsoft Access gives the user tools for managing databases.
- InteGrade Pro (IG Pro) – InteGrade Pro is an electronic gradebook software program. IG Pro manages students' scores, assignments, and up-to-the-minute calculated grades, helping teachers to track student performance over the duration of a course. With InteGrade Pro, teachers can organize tasks and put them into categories such as homework, quiz, or lab exercises. They can reward good performance with bonus scores and correct poor performance by graphically showing a student's progress. At the end of a marking period, InteGrade Pro can transmit final grades back to the student information system to print report cards, reducing administrative time and effort.

Figure 6



## Professional Development

### Needs Assessment

The Lynchburg City Schools and the Department of Information Technology strive to provide a balance between the expenditure of resources for hardware/connectivity and for professional development, as shown in Figure 7. Efforts are made to avoid expending available funds on hardware and connectivity only to find that teachers don't have the knowledge to use the technology now taking up space in their classrooms. On the other hand, efforts are also made to avoid using available funds on professional development only to have teachers return to their classrooms unable to utilize their new skills because they have no access to the technology.

In order to gauge the technology needs and abilities of the employees of the Lynchburg City Schools, a division-wide survey was administered to all administrative and instructional personnel to include teachers, principals, secretaries, and assistants. The data was collected and analyzed to prepare for subsequent professional development opportunities. This technology plan calls for the survey process to be conducted each year of its span. It will be administered through both paper and pencil forms and online resources such as WooFoo. The instrument and complete results from the most recent survey are included in the appendices.

## Professional Development

### Required Training

While all teachers in the Lynchburg City Schools have access to technology in their classrooms as well as in computer labs, and most are competent in the basic uses of technology, they need time and assistance in the development and implementation of lessons that integrate technology. Consequently, the greatest needs facing teachers in the use of instructional technology are to become adept at both integrating technology into instruction and using purchased software to supplement their classroom instruction. As teachers become more effective in integrating technology and enhancing their instruction through the use of software and Internet resources, student academic achievement as measured by the Standards of Learning (SOL) tests should increase.

Technology available for staff and student instruction throughout the school division is continually upgraded to the most up-to-date configuration. All software purchases and applications are designed to improve student learning and, therefore, improve student performance on SOL tests. By participating in scheduled technology sessions and combining their knowledge of technology with their understanding of student learning styles, teachers use and manage software so that the potential for student learning is maximized. In short, teachers will be able to lead students through activities and lessons using technology to master SOL content material. Teachers who have not yet demonstrated competence in the technology standards will be involved in competency training in order to use technology more effectively with their students.

Through a variety of professional development activities, faculty and staff members are becoming more knowledgeable in the teaching of reading and

mathematics, and in the area of integrating technology into instruction. We are in the midst of implementing the *Skillful Teacher* program that is designed to provide a common instructional language, strategies, and competencies. Our faculty and staff members are also being trained in the area of cultural competency and learning styles theory and techniques. All of these efforts are intended to increase the knowledge and skills of our employees and, through them, our students.

This Educational Technology Plan supports goals designed to improve student academic achievement and teacher effectiveness through professional development. Some of the specific goals are listed below.

- Continue training all PreK-12 teachers in the use of video streaming
- Continue training all K-5 teachers to identify lessons in math and reading software that can be used either to reinforce classroom instruction or to present instruction to students
- Continue training middle school math and English teachers in the various software programs purchased to support classroom instruction
- Continue training specified elementary teachers to use the NCS Writing Mentor CD so that students will become more proficient writers
- Continue training middle and high school English teachers to use the NCS Writing Mentor CD so that students will become more proficient writers
- Continue assisting teachers in the development and implementation of integrated lessons and activities that will enable students to master new learning through technology-rich activities
- Continue improving teachers' technological competence so that they will be able to use technology effectively with their students

This Lynchburg City Schools Educational Technology Plan endorses the following major and overarching goals for using teachers and technology to improve student academic achievement.

- Continue to train teachers in the use of various instructional software programs and technology-based teaching aides so that teachers can use these programs to supplement their instruction or to provide relevant practice opportunities for their students to master SOL-specific learning
  - The focus of this goal for the two years of the plan will center on reviewing, acquiring, and implementing mathematics software to support instruction in grades three through eight
- Continue to assist teachers who are competent in technology in the development of technology-rich lessons and activities in the SOL content areas and then to share these products with other teachers across the network
- Continue to train new teachers and others who have not yet demonstrated competence in the eight technology standards so that they will be effective in their use of technology with their students

For the software training referenced in goal one, all teachers having access to the software are invited to participate in training sessions. Teachers attend sessions designed to teach them how to use the software with their students. They are also taught how to use student progress reports generated by the software to monitor student progress toward the achievement of specific SOL.

For goal two, technology training sessions focus on some specific lessons or objectives that students may comprehend more readily if supported by hands-on or visual aids generated through the use of technology. The Instructional Technology Specialists (ITS) develop activities that present the lesson in a technology-rich manner. They are on hand to assist the teachers by demonstrating how to create instructional materials—for example, an interactive PowerPoint activity. As stated earlier, teachers are also able to save and store this activity on the network so teachers throughout the school division can share it.

### Required Training - Technology Standards for Licensed Personnel

To address goal three, teachers who have not yet demonstrated competence in the technology standards will be involved in competency training in order to use technology more effectively with their students. The ITS will assist any new teachers and other individuals who need to master all the competencies. Teachers will attend sessions designed to teach them how to use technology instructionally and administratively. Certain competency tests and activities already exist in the school division for teachers to complete in order to meet the division-wide criteria for competence in the eight technology standards. These trainings are designed to help teachers achieve mastery of the technology standards for instructional personnel now required by the Virginia Department of Education for initial and renewed teacher licenses. The previously listed teacher training activities are included in the Title II, Part D funding and are also linked to the school division's major professional development initiatives.

While these three goals correlate to the activities in this plan, the ultimate goal is to improve academic achievement as measured by the SOL assessment process. This goal is consistent with goals delineated in the school division's Strategic Plan. As outlined earlier, one of the vision focus areas for the school division is "Academic Eminence," which is defined as, "the distinguishing characteristic of the Lynchburg City Schools. Fully accredited schools offer academic programs that challenge the intellect and maximize the potential of each student to acquire knowledge, concepts, and skills necessary to become thinking, productive, responsible citizens."

### Required Training – Best Practices Professional Development Day

Each year, one professional development day is set aside for a division-wide "Best Practices" professional development conference. Prior to that day, teachers are encouraged to submit proposals to present an educational practice for one, two, or three one-hour blocks called sessions. A committee reviews the proposals for content and, if accepted, they are placed online for participant registration. Each conference participant is assigned three sessions based on their preference selections and a



scheduling process. The Best Practices Conference has been a five-year project and provides staff with an opportunity to share and to benefit from the many exemplary teaching practices available in the Lynchburg City Schools. Many of the offerings provided during the day are technology related and support its integration into daily instruction.

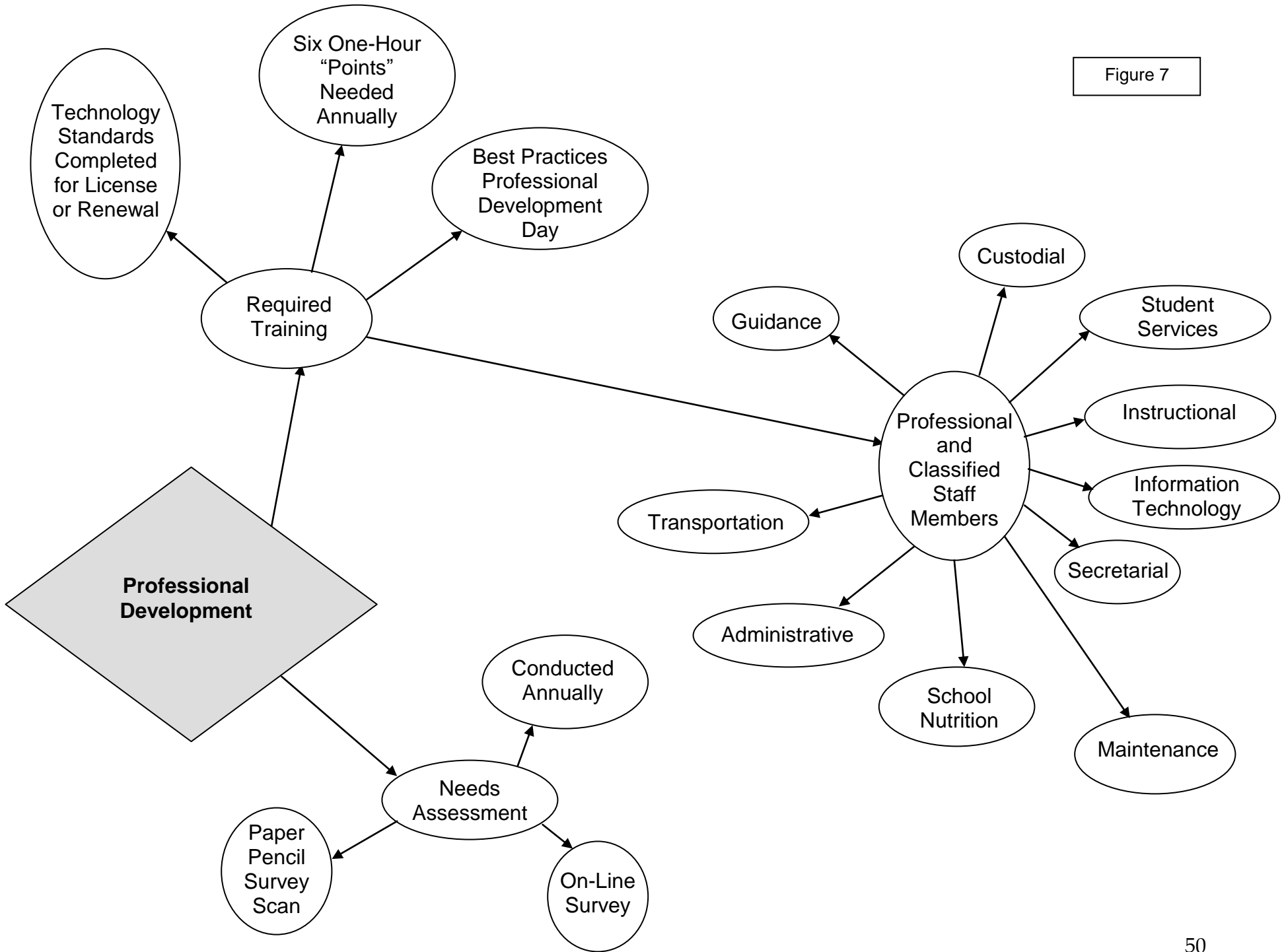
### Required Training – “Technology Points”

For this plan, the Technology Leadership Team proposes that all staff members be required to accumulate a minimum of six “technology points” each year as a portion of their professional development requirement. Employees, both classified and professional (see Figure 7), earn these points through participation in workshops, ITS led technology sessions, independent study activities, and other means. In an effort to phase this program in, four technology points will be needed for the 2009 – 10 school year, five for the 2010 – 11 year and six for the final year of the plan. Across the school division, the following will apply:

- It will be the staff member’s responsibility to earn the required technology points each year, with a minimum of two points during the first semester. Licensed personnel will be expected to earn a minimum of two points through direct instruction in a workshop or similar venue.
- The site administrator or supervisor, working with the ITS, will approve any activities for credit that are not sanctioned at the building or school division level.
- Training may take place during staff periods, before school, after school, or any customized time set by the site and/or division administration.
- Sessions will be sponsored and conducted at the school site as well as at the division level.
- Sessions will be advertised using a professional development calendar of offerings and will be accessible over the Internet.
- The ITS at the school sites will be responsible for maintaining a database of individuals and the number of points they have accumulated for that school year.
- The principal or supervisor at alternative sites and departments will be responsible for assigning a staff member to coordinate the technology points database at their respective building.
- A Lynchburg City Schools’ “Technology Points Log” or similar form will be available for employees to keep a written record, with instructor signatures, of their accumulated activities and associated points.

- It will be the responsibility of the director of professional development, the Department of Curriculum and Instruction, and the Department of Information Technology to provide appropriate, relevant, and timely training sessions in suitable numbers for all participants to be successful in meeting the required amount of points.

Figure 7



## **Maintaining and Increasing Accessibility**

All schools in the division are connected to each other and the Internet via over 45 miles of fiber optic network. All schools also have local area networks with all classrooms connected. At least one multi-media computer and printer are in every regular education and special education classroom. Teachers have access to resources on both the local-area network and wide-area network, including direct Internet access. Students have access to technology through either computer lab settings or workstations in classrooms. Elementary schools have at least two networked labs that are connected to the LAN, MAN, and Internet. All middle schools have at least four 25-station networked labs that are connected in the same manner. Both high schools have a minimum of eight 25-station networked labs. All three levels of schools have achieved readiness certification.

Over the years, the school division has been committed to providing teachers with quality hardware. The school division's Department of Information Technology in conjunction with the Technology Leadership Team devised a four-year rotation plan to upgrade technology at all sites. The outline of the plan follows.

## **Plan for Lynchburg City Schools Technology Purchases for 2010 - 2012**

The Department of Information Technology has developed a plan to systematically replace the technology at all sites on a four-year rotating cycle. This plan calls for a combined use of available federal, state and local funds to buy computers and other equipment under a four-year warranty period. Reductions in any of these funding sources over the course of the plan timeline will be reflected in appropriate amendments to the budget.

### **Fiscal Year 2010-2012 and Forward**

All computer workstations will be replaced with workstations purchased from state contract. Some principals, directors, and supervisors will have the option to use a notebook computer with a port replicator that allows an external mouse and keyboard. This option provides the portability of a notebook for use during teacher observations or for working at home, but also the connectivity and function of a typical workstation. The current operating system will be Windows XP Professional, Windows 7 and the productivity package will be Microsoft Office 2007. The make and models of these computers were chosen from the state contract; however, future purchases will be re-evaluated for both price and specifications.

Proposed configuration for the workstation:

Windows XP  
Core 2 Duo E6550 2.3 GHZ / 1.3 GHZ Processor  
Q35 Chipset  
2 GB – DDR2-667 – 2 DIMMS RAM  
160GB SATA Hard Drive  
24x/8x CDRW-DVD  
Integrated Video & NIC  
USB Keyboard  
USB Mouse

No Monitor  
4-4-4 Warranty (Parts-Labor-Next Business Day On-site)

Proposed configuration for the notebook:  
Windows XP  
Core 2 Duo E6550 2.3 GHZ / 1.3 GHZ Processor  
Q35 Chipset  
2 GB – DDR2-667 – 2 DIMMS RAM  
160GB SATA Hard Drive  
24x/8x CDRW-DVD  
Integrated Video & NIC

4-4-4 Warranty (Parts-Labor-Next Business Day On-site)

It is important to note that computers at any site will not be replaced on a one-for-one basis. Schools will be provided computers for instructional labs, libraries, and for classroom stations. All equipment that is replaced will either be removed from the site or used to replace peripheral stations such as those on multi-media carts. In addition, any and all equipment not meeting the current model configuration and standards is also subject to removal. Each building will have uniform equipment and operating systems upon full installation of the plan. Any requests for additional equipment above and beyond the allocation listed in the plan will need to be presented in a proposal to the Department of Information Technology for consideration.

Equipment bought with lease purchase funds will be tracked to meet the requirements of the agreement. The units that remain at the end of the four-year warranty and replacement cycle will be stored, used to supplement programs at other buildings, reassigned to special projects, or reallocated for supplemental SOL online testing labs at the middle and high schools.

Useable equipment removed from sites and meeting acceptable standards will be reallocated to other buildings with programs in most need of a temporary upgrade and positioned further down the replacement cycle.

### **Proposed Sites for Fiscal Year 2010 – 2011 (As Funding Allows)**

#### **Elementary Schools:**

Instructional computers at each of five elementary sites will be replaced. This will include all labs, libraries, and classroom workstations. The sites selected for this phase of the plan are Bass, Dearington, T. C. Miller, Payne, and Perrymont. Hutcherson Early Learning Center will also be incorporated into this cycle.

Due to the reduced volume of computer workstations during this cycle year, the Department of Information Technology may recommend the replacement of computers at Pride Center, Adult Learning Center, and Fort Hill Community School.

## Proposed Sites for Fiscal Year 2011 – 2012 (As Funding Allows)

### **Elementary Schools:**

Instructional computers at each of six elementary sites will be replaced. This will include all labs, libraries, and classroom workstations. The sites selected for this phase of the plan are Bedford Hills, Heritage, Linkhorne, Paul Munro, Sandusky, and Sheffield.

Due to the reduced volume of computer workstations during this cycle year, the Department of Information Technology may recommend the replacement of equipment at other sites.

## Proposal for Technology Purchases for 2010 - 2012

### Fiscal Year 2010 – 2011 (As Funding Allows)

Site or Group	Equipment	Number Needed	Cost per unit	Workstation Cost
Bass	Workstations	100	\$620.00	\$62,000.00
	Laptops	0	\$0.00	\$0.00
Dearington	Workstations	87	\$620.00	\$53,940.00
	Laptops	0	\$0.00	\$0.00
Hutcherson	Workstations	40	\$620.00	\$24,800.00
	Laptops	0	\$0.00	\$0.00
Miller	Workstations	84	\$620.00	\$52,080.00
	Laptops	0	\$0.00	\$0.00
Payne	Workstations	132	\$620.00	\$81,840.00
	Laptops	0	\$0.00	\$0.00
Perrymont	Workstations	115	\$620.00	\$71,300.00
	Laptops	0	\$0.00	\$0.00
Subtotal				
	Workstation	558	\$620.00	\$345,960.00
	Subtotal Laptop	0	\$0.00	\$0.00
			Equipment Cost Subtotal	\$345,960.00
	Microsoft Licenses	648	\$66.00	\$42,768.00
			Total Cost for Year 2010 - 2011	\$388,728.00

## Proposal for Technology Purchases for 2010 - 2012

### Fiscal Year 2011 – 2012 (As Funding Allows)

Site or Group	Equipment	Number Needed	Cost per unit	Workstation Cost
Bedford Hills	Workstations	92	\$620.00	\$57,040.00
	Laptops	0	\$0.00	\$0.00
Heritage Elem.	Workstations	107	\$620.00	\$66,340.00
	Laptops	0	\$0.00	\$0.00
Linkhorne Elem.	Workstations	101	\$620.00	\$62,620.00
	Laptops	0	\$0.00	\$0.00
Paul Munro	Workstations	100	\$620.00	\$62,000.00
	Laptops	0	\$0.00	\$0.00
Sandusky Elem.	Workstations	114	\$620.00	\$70,680.00
	Laptops	0	\$0.00	\$0.00
Sheffield	Workstations	90	\$620.00	\$55,800.00
	Laptops	0	\$0.00	\$0.00
Subtotal				
	Workstation	604	\$620.00	\$374,480.00
	Subtotal Laptop	0	\$0.00	\$0.00
			Equipment Cost Subtotal	\$374,480.00
	Microsoft Licenses	604	\$66.00	\$39,864.00
			Total Cost for Year 2011 - 2012	\$414,344.00



## GOALS AND ACTION ITEMS

With input from the Technology Leadership Team, the Department of Curriculum and Instruction, the Secondary Leadership Team, the Elementary Leadership Team, and the Department of Information Technology, goals and action items were developed for the school years outlined in the Lynchburg City Schools Educational Technology Plan.

The focus of the goals and action items listed in the following section was centered on the 2010-2012 school years. Once these items are accomplished, the focus will shift to future years of the plan. The Technology Leadership Team concluded that using a short-term approach when dealing with technology was the most appropriate strategy. Therefore, the primary objectives for educational technology in the near future are:

- To collect and analyze data to make sound choices in the selection and use of new and existing instructional technology.
- To collect and analyze data to make sound choices in the selection and application of new and existing instructional software.
- To provide timely technology-related professional development opportunities to all staff in the areas of instruction, communication, and productivity.
- To exercise fiscal responsibility in the use of funding to provide the most current and appropriate educational technology for the students and teachers in the Lynchburg City Schools.
- To continue to explore new and emerging technologies and electronic media that may benefit the students, teachers, staff, and parents of the Lynchburg City Schools.
- To deliver appropriate and challenging curricula through face-to-face, blended, and virtual learning environments.
- To provide the technical and human infrastructure necessary to support real, blended, and virtual learning environments.
- To provide high-quality professional development to help educators create, maintain, and work in a variety of learner-centered environments.
- To support innovative professional development practices that promote strategic growth for all educators and collaboration with other educators, content experts, and students.
- To actualize the ability of technology to individualize learning and provide equitable opportunities for all learners.
- To facilitate the implementation of high-quality Internet safety programs in schools.
- To provide and support professional development that increases the capacity of teachers to design and facilitate meaningful learning experiences, thereby encouraging students to create, problem-solve, communicate, collaborate, and use real-world skills by applying technology purposefully.
- To ensure that students, teachers, and administrators are Information and Communication Technologies (ICT) literate.
- To implement technology-based formative assessments that further produce growth in content knowledge and skills development.

- To provide resources and support to ensure that every student has access to a personal computing device.
- To provide support to help teachers disaggregate, interpret, and use data to plan, improve, and differentiate instruction.
- To promote the use of technology to inform the design and implementation of next-generation standardized assessments.

## ACTION ITEMS RELATED TO OPERATIONAL INFRASTRUCTURE

<b>ACTION</b>	<b>RESPONSIBILITY</b>	<b>TIMELINE</b>	<b>EVALUATION</b>	<b>STATUS</b>
Rollover plan developed for 2008-2012	Director of Information Technology, Network Administrator	July 2008	Plan complete	Achieved
Purchase computers for administration	Director of Information Technology	July 2008	Computers delivered	Achieved
Purchase computers for middle schools	Director of Information Technology	July 2008	Computers delivered	Achieved
Install administration computers	Department of Information Technology	August 2008	Computers installed	Achieved
Install middle school computers	Department of Information Technology	August 2008	Computers installed	Achieved
Café Enterprise Software upgrade	School Nutrition, Department of Information Technology	August 2008	Implementation complete at all sites	Achieved
Destiny Library Management and Search Software implementation	Media Specialists, Department of Information Technology	September 2008	Implementation complete at all sites	Achieved
Principalm Software implementation division-wide	Department of Information Technology	October 2008	Implementation division-wide	Achieved
Voice over Internet Protocol (VoIP) evaluation and implementation review	LCS School Board, Administration, Department of Information Technology	October 2008	Evaluation report	Achieved
E-mail program upgrade	Network Administrator	December 2008	Upgrade complete	Achieved
Develop a catalog of hardware standards for LCS to include audio-visual, network, and computer equipment and support	Network Administrator Software and Technology Leadership Team	December 2008	Standards document	Achieved
Catalog administrative, network, and instructional software for LCS	Network Administrator Software	December 2008	Catalog document	Achieved

## ACTION ITEMS RELATED TO OPERATIONAL INFRASTRUCTURE

ACTION	RESPONSIBILITY	TIMELINE	EVALUATION	STATUS
Mobile laboratory resource pilot program review	Pilot site representatives, Department of Information Technology	December 2008	Evaluation report	Achieved
Online application for employment upgrade	Webmaster, Director of Personnel, Department of Information Technology	December 2008	Upgrade complete	Achieved
Ascent Interface for iSeries upgrade	Coordinator of Data Processing	December 2008	Upgrade complete	Achieved
Employ electronic classroom at each secondary school	Network administrators	2008-2009	Functioning electronic classroom	Capability Achieved
Upgrade servers	Network Administrator	2008-2009	Upgrade complete	Achieved
Video over Internet Protocol evaluation and implementation review	Department of Information Technology	June 2009	Evaluation report	Achieved
Online access to student information	Department of Information Technology	2008-2010	Online access	Achieved
Re-evaluate asset management software	Department of Finance, Department of Curriculum and Instruction, Department of Information Technology	June 2011	Evaluation report	Progressing
Upgrade electronic document imaging system and storage	Department of Finance, Department of Personnel, Department of Information Technology	June 2011	Upgrade complete	Progressing
Purchase computers for remaining elementary schools	Director of Information Technology	July 2011	Computers delivered	Progressing
Install computers for remaining elementary schools	Director of Information Technology	August 2011	Computers installed	Progressing
Investigate options for revitalizing division finance software	Department of Finance, Department of Personnel, Department of Information Technology	2010-2011	Plan for revitalization of finance package	Modules added. Training proposed. Consolidation with COL investigated.

## ACTION ITEMS RELATED TO OPERATIONAL INFRASTRUCTURE

ACTION	RESPONSIBILITY	TIMELINE	EVALUATION	STATUS
Investigate options for revitalizing division finance software	Department of Finance, Department of Personnel, Department of Information Technology	2010-2011	Plan for revitalization of finance package	Modules added. Training proposed. Consolidation with COL investigated.
Investigate options for installation of uniform division-wide security camera technology	Department of Facilities and Transportation, Department of Information Technology	2010-2012	Plan for installation of uniform security camera technology	Pilot program at new SMS successful. Progressing
Develop and implement a disaster recovery plan for LCS with city officials to jointly protect IT services	Directors for Information Technology Lynchburg City and LCS	2011-2012	Disaster Recovery Plan	Progressing
Devise and propose a plan to introduce wireless networking division-wide	Network Administrators and Technology Leadership Team	2011-2012	Plan developed and proposed to Superintendent	Progressing
Explore implementation of online course registration module	Coordinator of Data Processing	2011-2012	Online registration	Progressing
Migration of resources to the ITC	Department of Information Technology	2011-2012	Migration complete	Progressing
School Interoperability Framework horizontal compliance	Coordinator of Data Processing	2011-2012	S.I.F. horizontal compliance complete	Progressing
Design and implement a plan for redistribution of usable technology	Network Administrator Software	Ongoing	Plan document	Ongoing
Explore emerging technology for possible implementation	Technology Leadership Team	Ongoing	Committee minutes	Ongoing
Map networks at identified locations	Network Administrator Hardware	Ongoing	Library of maps	Ongoing

## ACTION ITEMS RELATED TO PROFESSIONAL DEVELOPMENT

ACTION	RESPONSIBILITY	TIMELINE	EVALUATION	STATUS
Provide electronic mentoring program for first year teachers	Director of Professional Development and Director of Information Technology	Ongoing	Site Logs	Ongoing
Provide training for video streaming	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for online resources	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for Compass reading and math software	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for NCS Writing Mentor CD	Instructional Technology Specialists and Instructional Reading Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for Ascent interface to iSeries Employee Information System	Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for Ascent interface to iSeries Student Information System	Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for school division technology standards upgrade	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for integration projects	Instructional Technology Specialists and Media Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for supplemental electronic textbook media for K-12	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for use of SIRS, GALE. eLibrary electronic databases	Media Specialists and Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for InteGrade Pro	Instructional Technology Specialists	Ongoing	Grade books	Ongoing
Provide training for SubFinder absence reporting system	Instructional Technology Specialists	Ongoing	SubFinder logs	Ongoing

## ACTION ITEMS RELATED TO PROFESSIONAL DEVELOPMENT

<b>ACTION</b>	<b>RESPONSIBILITY</b>	<b>TIMELINE</b>	<b>EVALUATION</b>	<b>STATUS</b>
Provide training for Easy IEP	Department of Special Education	Ongoing	Easy IEP logs	Ongoing
Provide training for The Learning Company software	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for ThinkFinity website resource	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for STAR reading assessment program	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for Math Keys software	Instructional Technology Specialists, Instructional Math Specialist	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for Microsoft Office Products	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for peripheral devices	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Provide training for online testing	Instructional Technology Specialists	Ongoing	Lesson plans and teacher observations	Ongoing
Coordinate Best Practices Conference registration, scheduling, and technology needs	Department of Information Technology	Ongoing	Conference complete	Ongoing
Provide training for Café Enterprise software	School Nutrition, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Deliver customized technology training for required professional development points	Instructional Technology Specialists, Department of Information Technology	Ongoing	Technology training provided	Ongoing
Provide training for OWA e-mail system interface	Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for Destiny Library Management Software	Media Specialists	Ongoing	Training plan and implementation schedule	Ongoing

## ACTION ITEMS RELATED TO PROFESSIONAL DEVELOPMENT

ACTION	RESPONSIBILITY	TIMELINE	EVALUATION	STATUS
Provide employee access to Ascent Customer Service application	Department of Finance, Department of Information Technology	Ongoing	Ascent employee service module implemented	Ongoing
Provide training for Microsoft Office 2007	Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for Read&Write Gold software	Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for Quia website resources	Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for Smart Notebook software resources	Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for Study Island website resources	Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for teacher developed websites	Webmaster, Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing
Provide training for website content manager	Webmaster, Instructional Technology Specialists, Department of Information Technology	Ongoing	Training plan and implementation schedule	Ongoing



## ACTION ITEMS RELATED TO PROFESSIONAL DEVELOPMENT

ACTION	RESPONSIBILITY	TIMELINE	EVALUATION	STATUS
Develop and implement a plan to cross train information technology staff in all areas of vital service	Director of Information Technology	2011-2012	Plan document	Progressing
Design and implement online pilot of training modules for technology applications	Instructional Technology Specialists, Department of Information Technology	2011-2012	Pilot modules implemented	Progressing
Develop technology orientation session for new and incoming employees	Instructional Technology Specialists, Department of Information Technology	2011-2012	Orientation session completed	Progressing

## ACTION ITEMS RELATED TO INSTRUCTION

ACTION	RESPONSIBILITY	TIMELINE	EVALUATION	STATUS
Destiny Library Software Implementation	Media Specialists, Instructional Technology Specialists, Department of Information Technology	September 2008	Destiny implemented	Achieved
Implement video streaming capability at all schools	Network Administrator, Instructional Technology Specialists, Department of Information Technology	December 2008	Video streaming operational	Achieved
Investigate and implement instructional software for mathematics in grades 3 - 8	Department of Curriculum and Instruction, Department of Information Technology	December 2008	Implementation and subsequent data analysis	Achieved
Investigate and implement a plan to expand the use of Alpha Smart or similar Writer technology division-wide	Technology Leadership Team, Director of Information Technology	January 2009	Plan complete and proposal for purchase of Writers	Achieved
Develop and implement a plan to provide electronic registration for returning students	Department of Curriculum and Instruction, Department of Information Technology	November 2011	Plan document and electronic registration available for 2011-2012 school year	Progressing
Post school SOL/NCLB report card data on school websites	Webmaster	Ongoing	Current data on web sites	Ongoing
Administer and score division-wide six-week assessments for grades 1-8	Department of Curriculum and Instruction and Assistant Network Administrator	Ongoing	Six week assessment scores	Ongoing
Maintain ALS database	Assistant Network Administrator	Ongoing	Database access	Ongoing
Provide ALS reporting for teacher and principal decision-making	Assistant Network Administrator	Ongoing	ALS Reports	Ongoing
Administer Career Scope career-technical assessment software	Career Guidance Counselor	Ongoing	Career Scope Reports	Ongoing

## ACTION ITEMS RELATED TO INSTRUCTION

ACTION	RESPONSIBILITY	TIMELINE	EVALUATION	STATUS
Incorporate SmartBoard interactive whiteboards in appropriate classrooms	Instructional Technology Specialists, Department of Information Technology	Ongoing	SmartBoard installation	Ongoing
Incorporate Airliner slates in appropriate classrooms	Instructional Technology Specialists, Department of Information Technology	Ongoing	Airliner slate installation	Ongoing
Incorporate Digital Document Imagers in appropriate classrooms	Instructional Technology Specialists, Department of Information Technology	Ongoing	Digital Document Imager installation	Ongoing
Incorporate digital scanners in appropriate classrooms	Instructional Technology Specialists, Department of Information Technology	Ongoing	Digital scanner installation	Ongoing
Investigate new and emerging technologies for implementation in the Lynchburg City Schools	Technology Leadership Team, Department of Curriculum and Instruction, Department of Information Technology	Ongoing	Technology pilot program	ongoing
Administer Kuder Career Orientation Website	Career Guidance Counselor	Ongoing	Kuder reports	Ongoing
Administer Learning Styles Inventory to all students in grades 3, 6, and 9	Guidance Counselors and Coordinator of Data Processing	Ongoing	LSI reports to schools and parents	Ongoing
Post division SOL/NCLB report card data on LCS web site	Webmaster	Ongoing	Current data on web site	Ongoing
Participate in online SOL testing at all schools	Testing Coordinator and Director of Information Technology	Ongoing	Test administration	Ongoing
Enter STAR, ARDT, and PALS scores into iSeries for data mining	Assistant Network Administrator and Coordinator of Data Processing	Ongoing	Reports for data comparison to SOL test scores	Ongoing

## ACTION ITEMS RELATED TO INSTRUCTION

ACTION	RESPONSIBILITY	TIMELINE	EVALUATION	STATUS
Education Information Management System data updated	Department of Information Technology	Ongoing	Current data on web site	Ongoing
Pearson Educational Management Solutions data updated	Department of Information Technology	Ongoing	Current data on web site	Ongoing
Stanford Diagnostic Reading Test data updated	Department of Information Technology	Ongoing	Current data in ALS	Ongoing

## APPENDICES

## Technology Needs Assessment Survey



# Instructional Technology Survey



This survey is intended to gather information that will help the Lynchburg City Schools promote the integration of instructional technology through hardware/software purchases and professional development offerings. Your input is greatly appreciated.

Please place an “X” in all boxes that describe your proficiency in the following areas:

## Microsoft Word

- I can create documents, change text font/size, use bold/underline/italic, change alignment, change margins and page orientation
- I can insert graphics/clip art, set text wrapping, create numbered/bulleted lists, change font color, create header/footer, insert auto fields (page numbers, date, etc)
- I can set custom tab stops with leaders, create columns with breaks, use optional tools (forms, mail merge, etc.), create templates, track changes in documents, create macros

## Microsoft Excel

- I can enter data into cells, change text size/font, increase column/row size, format cell data, change text color
- I can use preset functions (sum, average, etc.), merge and center data, create simple graphs using chart wizard, increase/decrease decimal, insert graphics, sort data
- I can create custom formulas, link data from multiple sheets in a workbook, manipulate charts once created, protect/unprotect data, import data, create templates, link to Microsoft Word

## Microsoft PowerPoint

- I can launch a show that has been created, create shows using wizards and templates, insert pictures from clip art, use simple animations
- I can create a slide show from scratch, insert graphics from file, use WordArt, draw AutoShapes, set custom animations/slide transitions, change background templates
- I can create custom backgrounds, edit master slides, use action buttons, use shadow and 3-D effects, loop a show, use narrations/preset timings, save as html

## Microsoft Access

- I can manipulate created databases, run created queries, run created reports, add/delete records, find records
- I can create a database from scratch using wizards, create queries using wizards, create forms using wizards, create reports using wizards, filter data, sort records, edit format of reports/queries
- I can create databases/queries/reports/forms without the use of wizards, format data, validate data input, create a switchboard, merge data into Microsoft Word/Excel, link tables using primary key, use lookup tables

## Internet Explorer

- I can use Google to complete searches, save a site under favorites, copy picture/text from pages
- I can use other search engines other than Google, can print part of a webpage, can use advanced search features, can use “find text on this page”

**What format for professional development opportunities would you prefer? Select more than one if needed.**

- In-service activities offered immediately after school
- In-service activities offered in the late afternoon (4:00-6:00 p.m.)
- In-service activities offered in the early evening (6:00-8:00 p.m.)
- In-service activities offered on Saturday (\_\_morning or \_\_afternoon)
- Summer workshops (1-2 hour offerings)
- Summer “boot camp” workshops (all day or multiple day offerings)
- Summer “tech camp” curriculum development
- In-service activities offered at the School Administration Building
- Self directed packets of information
- Online managed classes
- No in-service needed

In which of the following areas would you like to see in-service activities offered? Mark each box with an "X".

**Microsoft Word**

- |  |   |
|--|---|
| <input type="checkbox"/> Basics of Microsoft Word                                      | <input type="checkbox"/> Using tables                                 |
| <input type="checkbox"/> Using the forms toolbar to create fill-in forms               | <input type="checkbox"/> Creating columns                             |
| <input type="checkbox"/> Using customs tabs (left, right, center, decimal) and leaders | <input type="checkbox"/> Using header/footer                          |
| <input type="checkbox"/> Linking to Internet sites                                     | <input type="checkbox"/> Inserting graphics and setting text wrapping |
| <input type="checkbox"/> Creating mail merges  | <input type="checkbox"/> Using the reviewing toolbar to track changes |
| <input type="checkbox"/> Creating labels/envelopes                                     | <input type="checkbox"/> Integration into lessons                     |
| <input type="checkbox"/> Creating templates  | <input type="checkbox"/> More advanced topics needed                  |

List any specific parts of Microsoft Word you would like to know more about that are not listed above: \_\_\_\_\_

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**Microsoft Excel**

- |   |  |
|---|--|
| <input type="checkbox"/> Basics of Microsoft Excel                  | <input type="checkbox"/> Adding borders to cells                 |
| <input type="checkbox"/> Using the paste function command           | <input type="checkbox"/> Integration into lessons                |
| <input type="checkbox"/> Linking pages for interactive spreadsheets | <input type="checkbox"/> Using drop-down lists and lookup wizard |
| <input type="checkbox"/> Creating graphs/charts                     | <input type="checkbox"/> More advanced topics needed             |

List any specific parts of Microsoft Excel you would like to know more about that are not listed above: \_\_\_\_\_

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**Microsoft PowerPoint**

- |   |   |
|---|---|
| <input type="checkbox"/> Basics of Microsoft PowerPoint                 | <input type="checkbox"/> Grouping/ungrouping clip art |
| <input type="checkbox"/> Making a Photo Album                           | <input type="checkbox"/> Adding custom animations     |
| <input type="checkbox"/> Using Action buttons to make interactive shows | <input type="checkbox"/> More advanced topics needed  |

List any specific parts of Microsoft PowerPoint you would like to know more about that are not listed above: \_\_\_\_\_

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**Classroom Performance Systems (CPS) – Response Pads**

- |  |  |
|--|--|
| <input type="checkbox"/> Basics of CPS             | <input type="checkbox"/> Setting up classes              |
| <input type="checkbox"/> Creating lessons          | <input type="checkbox"/> Getting data into InteGrade Pro |
| <input type="checkbox"/> Using Fast Grade          | <input type="checkbox"/> Integration into lessons        |
| <input type="checkbox"/> Using CPS with PowerPoint | <input type="checkbox"/> More advanced topics needed     |

List any specific parts of CPS you would like to know more about that are not listed above: \_\_\_\_\_

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## SmartBoard

- Basics of SmartBoard
- Setting up the SmartBoard
- Using the Notebook software
- Using PowerPoint with the SmartBoard
- Using Classroom Response Systems with the SmartBoard
- Integration into lessons
- More advanced topics needed

List any specific parts of SmartBoard you would like to know more about that are not listed above: \_\_\_\_\_

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**Please mark with an "X" any software titles/technology that you would like in-service activities offered on:**

- Harcourt Math Center
- IG Pro
- SOL to Go
- Compass
- Inspiration
- United Streaming
- MochaSoft
- Exam View
- Movie Maker
- Digital photography
- QX3 digital microscope
- Digital recorders
- Marco Polo
- CD burner
- Digital video
- Worksheet Maker
- Textbook software
- Photo Story
- Google Earth
- Photo Editor
- Microsoft Access
- Athena/PinPoint
- iSeries client
- Email

Please list any software titles/technology you would like to see in-service activities offered on that are not listed above

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Please list any software titles/technology you would like the Lynchburg City Schools to consider purchasing

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My location is: \_\_\_\_\_

My position is:

- Administrator
- Teacher
- Secretary
- Teacher Assistant
- Other \_\_\_\_\_


## Technology Needs Assessment Survey Results

### Abstract

### Percent Feeling Proficient by Personnel Classification

	Teachers (546)	Teacher Assistants (98)	Secretaries (48)	Administrators (36)
<b>Proficiency Area</b>				
Word Processing Simple Tasks	98	91	96	92
Word Processing Intermediate Tasks	94	59	73	81
Word Processing Advanced Tasks	47	23	31	44
<hr/>				
Excel Spreadsheet Simple Tasks	92	62	75	83
Excel Spreadsheet Intermediate Tasks	63	31	23	69
Excel Spreadsheet Advanced Tasks	29	13	8	33
<hr/>				
Power Point Simple Tasks	89	44	35	81
Power Point Intermediate Tasks	75	35	27	75
Power Point Advanced Tasks	52	21	19	47
<hr/>				
Access Database Simple Tasks	60	23	42	58
Access Database Intermediate Tasks	36	14	23	44
Access Database Advanced Tasks	16	4	8	22
<hr/>				
Internet Explorer Simple Tasks	97	86	79	92
Internet Explorer Advanced Tasks	83	57	50	81
<hr/>				
<b>Method of Delivery</b>				
Prefer Self-Directed Instruction	56	46	42	58
Prefer In-Service After School	57	35	44	44
<hr/>				
<b>Noted Topics By Percent Interested</b>				
Creating Fill-In Forms			46	
Creating Mail Merges		32	48	39
Creating Templates	28	28	58	42
Using Tables			40	
Basics of Excel Spreadsheet		35	40	19
Interactive Spreadsheets		28	42	42
Basics of Power Point		46	48	
Interactive Power Point Slides			38	42
Basics of Classroom Performance Units	33	24	42	42
Basics of SmartBoard		47	19	36
Using Digital Photography	25	26	33	33



			I can set custom tab stops with leaders, create columns with breaks, use optional tools (forms, mail merge, etc.), create templates, track changes in documents, create macros	I can enter data into cells, change text size/font, increase column/row size, format cell data, change text color	I can use preset functions (sum, average, etc.), merge and center data, create simple graphs using chart wizard, increase/decrease decimal, insert graphics, sort data	I can create custom formulas, link data from multiple sheets in a workbook, manipulate charts once created, protect/unprotect data, import data, create templates, link to Microsoft Word	I can launch a show that has been created, create shows using wizards and templates, insert pictures from clip art, use simple animations	I can create a slide show from scratch, insert graphics from file, use WordArt, draw AutoShapes, set custom animations/slide transitions, change background templates	I can create custom backgrounds, edit master slides, use action buttons, use shadow and 3-D effects, loop a show, use narrations/preset timings, save as html
Instructional Technology Survey Results	I can create documents, change text font/size, use bold/underline/italic, change alignment, change margins and page orientation	I can insert graphics/clip art, set text wrapping, create numbered/bulleted lists, change font color, create header/footer, insert auto fields (page numbers, date, etc)							
All Respondents (845)									
yes responses	807	719	352	718	462	208	645	544	367
percentage	95	85	42	85	55	25	77	65	44
Teachers (546)									
yes responses	534	513	259	500	342	158	485	411	286
percentage	98	94	47	92	63	29	89	75	52
Teacher Assistants (98)									
yes responses	84	58	23	61	30	13	43	34	21
percentage	91	59	23	62	31	13	44	35	21
Secretaries (48)									
yes responses	46	35	15	36	11	4	17	13	9
percentage	96	73	31	75	23	8	35	27	19
Administrators (36)									
yes responses	33	29	16	30	25	12	29	27	17
percentage	92	81	44	83	69	33	81	75	47



Instructional Technology  
Survey Results

	I can manipulate created databases, run created queries, run created reports, add/delete records, find records	I can create a database from scratch using wizards, create queries using wizards, create reports using wizards, filter data, sort records, edit format of reports/queries	I can create databases/queries/reports/forms without the use of wizards, format data, validate data input, create a switchboard, merge data into Microsoft Word/Excel, link tables using primary key, use lookup tables	I can use Google to complete searches, save a site under favorites, copy picture/text from pages	I can use other search engines other than Google, can print part of a webpage, can use advanced search features, can use "find text on this page"	In-service activities offered immediately after school	In-service activities offered in the late afternoon (4:00-6:00 p.m.)	In-service activities offered in the early evening (6:00-8:00 p.m.)	In-service activities offered on Saturday (___morning or ___afternoon)	Summer workshops (1-2 hour offerings)
All Respondents (845)										
yes responses	443	269	119	790	643	439	126	40	58	264
percentage	53	32	14	94	76	52	15	5	7	31
Teachers (546)										
yes responses	326	198	90	529	455	310	66	19	31	173
percentage	60	36	16	97	83	57	12	3	6	32
Teacher Assistants (98)										
yes responses	23	14	4	84	56	34	22	8	10	29
percentage	23	14	4	86	57	35	22	8	10	30
Secretaries (48)										
yes responses	20	11	4	38	24	21	14	3	4	17
percentage	42	23	8	79	50	44	29	6	8	35
Administrators (36)										
yes responses	21	16	8	33	29	16	7	2	3	21
percentage	58	44	22	92	81	44	19	6	8	58



Instructional Technology Survey Results	Summer "boot camp" workshops (all day or multiple day offerings)	Summer "tech camp" curriculum development	In-service activities offered at the School Administration Building	Self directed packets of information	Online managed classes	No in-service needed	Basics of Microsoft Word	Using the forms toolbar to create fill-in forms	Using customs tabs (left, right, center, decimal) and leaders	Creating mail merges	Creating labels/envelopes	Creating templates
<b>All Respondents (845)</b>												
yes responses	142	121	105	448	232	53	355	176	130	223	166	268
percentage	17	14	12	53	28	6	42	21	15	26	20	32
<b>Teachers (546)</b>												
yes responses	98	92	50	306	156	37	309	91	82	121	100	153
percentage	18	17	9	56	29	7	57	17	15	22	18	28
<b>Teacher Assistants (98)</b>												
yes responses	9	3	10	45	25	3	32	29	15	31	24	27
percentage	9	3	10	46	26	3	33	30	15	32	24	28
<b>Secretaries (48)</b>												
yes responses	10	7	11	20	6	1	12	22	9	23	10	28
percentage	21	15	23	42	13	2	25	46	19	48	21	58
<b>Administrators (36)</b>												
yes responses	10	8	13	21	9	1	2	8	6	14	4	15
percentage	28	22	36	58	25	3	6	22	17	39	11	42



Instructional Technology  
Survey Results

	Using tables	Creating columns	Using header/footer	Inserting graphics and setting text wrapping	Using the reviewing toolbar to track changes	Integration into lessons	More advanced topics needed	Basics of Microsoft Excel	Using the paste function command	Linking pages for interactive spreadsheets	Creating graphs/charts	Adding borders to cells
<b>All Respondents (845)</b>												
yes responses	120	123	86	141	122	141	102	169	86	231	201	137
percentage	14	15	10	17	14	17	12	20	10	27	24	16
<b>Teachers (546)</b>												
yes responses	56	63	40	63	59	106	62	75	42	33	112	73
percentage	10	12	7	12	11	19	11	14	8	6	21	13
<b>Teacher Assistants (98)</b>												
yes responses	19	23	18	20	22	16	9	34	18	27	20	25
percentage	19	23	18	20	22	16	9	35	18	28	20	26
<b>Secretaries (48)</b>												
yes responses	19	12	12	18	14	5	8	19	7	20	15	9
percentage	40	25	25	38	29	10	17	40	15	42	31	19
<b>Administrators (36)</b>												
yes responses	6	6	7	10	4	4	5	7	6	15	13	9
percentage	17	17	19	28	11	11	14	19	17	42	36	25



Instructional Technology  
Survey Results

	Integration into lessons	Using drop-down lists and lookup wizard	More advanced topics needed	Basics of Microsoft PowerPoint	Making a Photo Album	Using Action buttons to make interactive shows	Grouping/ungrouping clip art	Adding custom animations	More advanced topics needed	Basics of CPS	Creating lessons	Using Fast Grade
<b>All Respondents (845)</b>												
yes responses	134	169	104	189	275	230	164	233	124	261	226	177
percentage	16	20	12	22	33	27	19	28	15	31	27	21
<b>Teachers (546)</b>												
yes responses	104	99	63	88	163	141	91	142	82	181	196	154
percentage	19	18	12	16	30	26	17	26	15	33	36	28
<b>Teacher Assistants (98)</b>												
yes responses	13	21	18	45	37	27	24	36	17	24	12	10
percentage	13	21	18	46	38	28	24	37	17	24	12	10
<b>Secretaries (48)</b>												
yes responses	3	13	7	23	22	18	17	16	6	3	2	1
percentage	6	27	15	48	46	38	35	33	13	6	4	2
<b>Administrators (36)</b>												
yes responses	5	14	5	4	17	15	9	12	4	15	6	6
percentage	14	39	14	11	47	42	25	33	11	42	17	17





Instructional Technology  
Survey Results

	Using CPS with PowerPoint	Setting up classes	Getting data into Integrate Pro	Integration into lessons	More advanced topics needed	Basics of SmartBoard	Setting up the SmartBoard	Using the Notebook software	Using PowerPoint with the SmartBoard	Using Classroom Response Systems with the SmartBoard	Integration into lessons	More advanced topics needed
<b>All Respondents (845)</b>												
yes responses	224	177	184	186	92	288	227	226	234	245	229	117
percentage	27	21	22	22	11	34	27	27	28	29	27	14
<b>Teachers (546)</b>												
yes responses	186	150	159	159	77	190	170	183	187	195	197	98
percentage	34	27	29	29	14	35	31	34	34	36	36	18
<b>Teacher Assistants (98)</b>												
yes responses	11	14	10	11	6	46	27	17	22	22	15	7
percentage	11	14	10	11	6	47	28	17	22	22	15	7
<b>Secretaries (48)</b>												
yes responses	1	1	2	1	1	9	3	2	3	2	2	1
percentage	2	2	4	2	2	19	6	4	6	4	4	2
<b>Administrators (36)</b>												
yes responses	9	8	8	7	3	13	11	9	11	13	10	5
percentage	25	22	22	19	8	36	31	25	31	36	28	14



Instructional Technology  
Survey Results

	Harcourt Math Center	IG Pro	SOL to Go	Compass	Inspiration	United Streaming	MochaSoft	Exam View	Movie Maker	Digital photography	QX3 digital microscope	Digital recorders
All Respondents (845)												
yes responses	52	46	91	46	78	95	44	54	183	211	36	73
percentage	6	5	11	5	9	11	5	6	22	25	4	9
Teachers (546)												
yes responses	38	38	68	33	61	70	36	47	134	138	30	53
percentage	7	7	12	6	11	13	7	9	25	25	5	10
Teacher Assistants (98)												
yes responses	8	2	11	9	3	9	2	3	18	25	2	6
percentage	8	2	11	9	3	9	2	3	18	26	2	6
Secretaries (48)												
yes responses	3	2	2	2	2	4	3	1	5	16	1	3
percentage	6	4	4	4	4	8	6	2	10	33	2	6
Administrators (36)												
yes responses	3	3	4	1	2	5		1	12	12	1	4
percentage	8	8	11	3	6	14		3	33	33	3	11



Instructional Technology  
Survey Results

	Marco Polo	CD burner	Digital video	Worksheet Maker	Textbook software	Photo Story	Google Earth	Photo Editor	Microsoft Access	Athena/PinPoint	iSeries client	Email
All Respondents (845)												
yes responses	38	0	144	164	71	123	79	123	79	37	39	27
percentage	5	0	17	19	8	15	9	15	9	4	5	3
Teachers (546)												
yes responses	30	0	101	129	53	88	51	78	38	29	21	14
percentage	5	0	18	24	10	16	9	14	7	5	4	3
Teacher Assistants (98)												
yes responses	1	0	9	20	8	9	9	9	15	3	5	4
percentage	1	0	9	20	8	9	9	9	15	3	5	4
Secretaries (48)												
yes responses	2	0	8	2	4	5	4	10	6	1	3	2
percentage	4	0	17	4	8	10	8	21	13	2	6	4
Administrators (36)												
yes responses	3	0	8	3	2	4	3	7	5	1	3	
percentage	8	0	22	8	6	11	8	19	14	3	8	

## **Lynchburg City Schools' Technology Policies**

## Password Policy for The Lynchburg City Schools

A computer system and its data are only as secure as the password of the users who access it, particularly users with administrator level permissions. For this reason, good password security is a concern. The following is the password policy that will be enforced for employees of the Lynchburg City Schools.

The Department of Information Technology is working to implement and maintain a strong security plan for our entire computer network. The chart below lists basic system password policy settings and the defaults for the Lynchburg City Schools, followed by an explanation of each.

Enforce password history	6 passwords remembered
Maximum password age	90 days
Minimum password age	7 days
Password length	6 – 12 characters
Passwords must meet complexity requirements	Enabled

### Enforce password history

This setting governs how many different passwords must be used before the user can reuse one of them. For example, if this is set to "three passwords remembered," users who have three or more children will always have guessable passwords. The Lynchburg City Schools' setting is a year's worth of passwords with the exact amount dependent on the maximum password age setting below.

### Maximum password age

This setting controls how long a password is good before a user is forced to pick a new one. Depending on the minimum password age setting (below), users can choose to change it sooner, but this is the longest it will be allowed. The Lynchburg City Schools' setting is 90 days or roughly two times during the school year.

### Minimum password age

This setting controls how long a new password must be used before it can be changed. This setting really works hand-in-hand with the maximum password age above. Without a minimum number of set days, a user could keep changing a password several times in a row, and then return to the original password (effectively NOT changing the password at all). The Lynchburg City Schools' setting is seven days.

### Minimum password length

This setting controls how many characters must make up the password. A short password is easier to observe when being entered by a user, so this setting is more important in more public environments like a classroom. A setting of 0 characters means that no password is required at all (simply entering in the user name and pressing return will log in successfully). The Lynchburg City Schools' setting is six characters.

## Passwords must meet complexity requirements

Adopting a strong password policy is one of the most effective ways to ensure system security. The following bulleted list is a summary of the Lynchburg City Schools' password complexity requirements:

- User passwords must contain characters from at least three of the following four classes:

Description	Examples
1. English Upper Case Letters	A, B, C, ... Z
2. English Lower Case Letters	a, b, c, ... z
3. Westernized Arabic Numerals	0, 1, 2, ... 9
4. Non-alphanumeric ("special characters")	For example, punctuation, symbols. ({}[],.:;'"?/\`~!@#%&*()_ -+=)

- At a minimum a password must be at least six characters long. For stronger security, users may create longer passwords with characters from all four classes
- Complex passwords must not be made up of the username, user login, or any part of the user's full name.
- Passwords must be changed every 90 days.
- New passwords cannot be the same as any of your last six passwords.
- Passwords should not be a "common" word (for example, it should not be a word in the dictionary or slang in common use). User passwords should not contain words from any language, because numerous password-cracking programs exist that can run through millions of possible word combinations in seconds.
- A complex password that cannot be broken is useless if it cannot be remembered. For effective security, choose a password that is complex, yet can be remembered. For example, Msi5!YOld (My Son is five years old) or IhliVf5#yN (I have lived in Virginia for 5 years now).

**(Excerpt from the Lynchburg City Schools' School Board Policy Manual)**

**INSTRUCTION**

**P 6-48**

**Acceptable Use Policy for School Division Technology Resources (AUP) P 6-48**

**A. Generally**

An acceptable use policy (AUP) is a written agreement signed by students, parents, and staff members which outlines the terms and conditions of technology use. It establishes acceptable use guidelines, rules of online behavior, and access privileges for all users. Users are identified as all Lynchburg City Schools' students and staff members, as well as other individuals who utilize the school division's technology. The AUP also covers penalties for violations of the policy, including security violations and vandalism of the system and/or equipment. Prior to using school division technology resources, each user is required to sign an AUP agreement and to know that it will be kept on file as a legal, binding document.

By using a school division computer, students and staff can connect to the Internet to gain access to information from the outside world. The Lynchburg City Schools provides Internet access free of charge to students and staff in all the schools. While the ability to communicate is an invaluable resource, there are sites on the Internet which are inappropriate for access and use by students and staff. Staff members will make reasonable effort to reinforce required Internet safety instruction and to ensure that student use of the Internet is appropriate and educational. Connections to the Internet from all schools will be made through a central access point.

In compliance with the Children's Internet Protection Act (CIPA), access to content available on the Internet is filtered, which includes pornographic content, access to non-educational social spaces, private web-mail services, and other content considered objectionable by the Lynchburg City Schools (LCS). Using proxy servers or other means to bypass this filtering mechanism is a violation of this policy.

The Department of Information Technology is responsible for evaluating and revising network and data security. It is the responsibility of the Department to ensure the confidentiality of personal data by implementing strict network security policies that prevent unauthorized access to sensitive data. When appropriate, network appliances will be used to help enforce data encryption and limit access as determined by user identifications.

**B. User Responsibilities**

Access to technology is a privilege, not a right, and with use comes responsibility. The school division network, including the Internet, was established for educational purposes.

As a result, users have no personal privacy rights on the network. Files, including e-mail, located on individual computers as well as the network can be reviewed by network and school administrators to ensure that users are using the system appropriately.

Users are responsible for adhering to the following guidelines.

1. **Personal Safety:** Students will not post personal information about themselves or other people. Students will not arrange meetings with anyone contacted on-line through the local network or Internet. Students will promptly disclose to a teacher or administrator any message containing text, graphics, pictures, or video clips that they feel is inappropriate or that makes them feel uncomfortable.
2. **Illegal/Inappropriate Activities:** Users will not attempt to gain unauthorized access to any computer system. This includes logging onto the system through another person's account or accessing anyone else's files. Users will not deliberately attempt to disrupt systems or destroy data by spreading computer viruses or by any other means. Users will not engage in any illegal or inappropriate activities or behaviors. Users will not access proxy sites on the Internet in an effort to by-pass existing school division firewall and web filtering devices. Students and employees will not access on-line gaming sites and/or save gaming software files on division servers or other storage media. Users will not launch executable files from personal storage devices. Students will not alter computer settings.
3. **System Security:** Users will take all reasonable precautions to prevent others from using their accounts. Users will not reveal their passwords. They will notify a teacher, building administrator, or network administrator of any possible security violations. Users will log off or lock any computer when left unattended.
4. **Inappropriate Behavior:** Users will not engage in inappropriate behavior which includes, but is not limited to, using obscene, pornographic, profane, threatening or disrespectful language; engaging in bullying through personal attacks including prejudicial or discriminatory attacks; harassing others; and posting false or defamatory information. These restrictions apply to public messages, private messages, and material posted on web pages.
5. **Respect for Privacy:** Users will not post private information about another user, nor will they re-post messages sent privately without permission of the author.
6. **Respect for Resource Limits:** Users will not download files or programs without permission (refer to Form SR1). Unused or unwanted files should be deleted on a regular basis including those located on network servers, e-mail, and individual hard drives. Files needing to be archived should be copied to personal storage devices.
7. **Electronic Communications:** Use of any electronic communication including, but not limited to, e-mail, instant messaging, texting, podcasting, external blogs, social media sites, forums, wikis, and bulletin boards, will be professional and appropriate.



Users are responsible for division information sent electronically with large, multi-user mailings being approved by the superintendent or his designee prior to transmitting. End users should check e-mail daily. They will not post or forward chain letters or any solicitation not sponsored by the Lynchburg City Schools.

8. Use of external devices. The use of smart electronic devices not provided by the school division including notebook computers, phones, hand-held gaming or other wireless devices on the school network is prohibited without prior approval from school officials.
9. Plagiarism: Users will not plagiarize works found on the network, which includes the Internet. Plagiarism means taking credit for someone else's work as one's own by not recognizing the source. Whenever information is taken from a resource on the network, proper citations will be made and direct quotations will be enclosed in quotation marks or otherwise properly distinguished.
10. Copyright Infringement: Users will respect the rights of copyright owners. When any work is copyrighted, that material cannot be legally used without permission of the author except in specific circumstances. When users encounter copyrighted resources on the network, they will seek assistance from teachers or network administrators before using any such copyrighted work.

Content (documents, video, audio) produced by students using technology resources owned by the Lynchburg City Schools is the property of the individual(s) creating the content. Content produced by employees of the LCS using division technology resources becomes the intellectual and tangible property of, and thereby owned by, the Lynchburg City Schools. Employees may petition for copyright ownership for materials created outside of contractual hours.

11. Software: Users will not violate the school division's software license agreements. Software will not be loaded on school division computers without proper authorization (refer to Form SR1). Any software loaded onto school division resources becomes the property of the Lynchburg City Schools (refer to Form SR1.) Users will not copy school division software for personal use nor will they use the school division's computers to copy software not owned or licensed by the school division.
12. Access to Material: Users will not access material that is profane, pornographic or obscene, that advocates illegal acts, or that advocates violence or discrimination. This restriction includes network, Internet, and personal storage media resources. Students will access the Internet for instructional purposes only as stipulated in Section B. Staff will access resources in a professional and appropriate manner.
13. Personal Accounts: Users will not access personal e-mail accounts

using school division equipment or software. Students may not subscribe to any service for which there is a fee. With administrative permission, school staff and, in some cases, students may subscribe to or access an educational service for which there is a fee.

### C Teacher Responsibilities

Teachers will provide students with a sequential, structured approach to gaining the skills that will allow them to become independent, responsible users of technology. In all cases, teachers will make reasonable effort to ensure that students are directed to sites with age- and topic- appropriate materials and resources. All students and staff members will receive required instruction in Internet safety using the Lynchburg City Schools' approved curriculum.

1. In grades Pre-K-5, teachers will actively supervise and model appropriate use of the Internet. Students will have Internet access under direct teacher supervision; however, students will experience guided practice leading toward gaining skills to become independent and responsible users of the Internet. Teachers will explore an Internet site before directing students to that site.
2. In grades 6-8, teachers will provide guided practice and model appropriate use of the Internet. Teachers will supervise student-initiated information search activities and provide support for students as they begin to assume responsibility for becoming independent users of the Internet.
3. In high school, grades 9-12, teachers will model appropriate use of the Internet and will monitor and advise students in independent Internet use.

### D. Discipline

Inappropriate use of the network which includes the Internet is a violation of school division discipline policies. Inappropriate use may result in termination of access and may result in disciplinary action, which may include suspension from school or in case of employees, termination of contract. Depending on the severity of the violation, criminal or civil liability is also possible.

### Legal Reference:

Code of Va., § 22.1-70.2. Acceptable Internet use policies for public and private schools. "A. Every two years, each division superintendent shall file with the Superintendent of Public Instruction an acceptable use policy, approved by the local school board, for the international network of computer systems commonly known as the Internet. At a minimum, the policy shall contain provisions that (i) are designed to prohibit use by division employees and students of the division's computer equipment and communications services for sending, receiving, viewing, or downloading illegal material via the Internet; (ii) seek to prevent access by students to material that the school division deems to be harmful to juveniles as defined in

§ [18.2-390](#); (iii) select a technology for the division's computers having Internet access to filter or block Internet access through such computers to child pornography as set out in § [18.2-374.1:1](#) and obscenity as defined in § [18.2-372](#); and (iv) establish appropriate measures to be taken against persons who violate the policy. The policy may include such other terms, conditions, and requirements as deemed appropriate, such as requiring written parental authorization for Internet use by juveniles or differentiating acceptable uses among elementary, middle, and high school students.

B. The superintendent shall take such steps as he deems appropriate to implement and enforce the division's policy.

C. On or before December 1, 2000, and biennially thereafter, the Superintendent of Public Instruction shall submit a report to the Chairmen of the House Committee on Education, the House Committee on Science and Technology, and the Senate Committee on Education and Health which summarizes the acceptable use policies filed with the Superintendent pursuant to this section and the status thereof.

D. In addition to the foregoing requirements regarding public school Internet use policies, the principal or other chief administrator of any private school that satisfies the compulsory school attendance law pursuant to § [22.1-254](#) and accepts federal funds for Internet access shall select a technology for its computers having Internet access to filter or block Internet access through such computers to child pornography as set out in § [18.2-374.1:1](#) and obscenity as defined in § [18.2-372](#).”

(1999, c. 64; 2001, c. 269.)

Adopted by School Board: May 6, 1997

Revised by School Board: June 15, 1999

Revised by School Board: March 16, 2004

Revised by School Board: August 7, 2007

Revised by School Board: May 18, 2010

## INSTRUCTION

### **Acceptable Use of School Division Technology Resources**

The following forms will be used to support the documentation of employee and student understanding of School Board Policy 6-48: Acceptable Use of Division Technology Resources

Student Acceptable Use Policy Agreement

Staff Acceptable Use Policy Agreement

**All Lynchburg City Schools' staff must sign an Acceptable Use of School Division Technology Resources Agreement (AUP) upon employment. This AUP will be reviewed annually with the employee at his respective site. All students and their parent/guardian will sign an AUP agreement upon entering elementary, middle, and/or high school, including any alternative education site. This agreement will be reviewed annually with the student. Each year, students and staff will also participate in Internet safety instruction using an approved Lynchburg City Schools' curriculum.**

Adopted by School Board: June 15, 1999

Revised by School Board: March 16, 2004

Revised by School Board: August 7, 2007

Revised by School Board: May 18, 2010

## INSTRUCTION

**Acceptable Use of School Division Technology Resources (continued)****Student Acceptable Use of School Division Technology Resources  
Policy Agreement (AUP)****Student Section:**

Student Name \_\_\_\_\_ Grade \_\_\_\_\_  
(please print – include middle initial)

I agree to abide by all guidelines listed in School Board Policy 6-48: Acceptable Use of School Division Technology Resources Policy.

I realize the purpose of the school division's technology is educational.

I realize the use of technology is a privilege, not a right. I accept that inappropriate behavior may lead to penalties, including revoking my account, disciplinary action, and/or legal action. I realize that school personnel (school administrators, teachers, network administrators) can access all of my current and past network materials and my student accounts.

I agree not to access or transfer inappropriate, pornographic, or illegal materials through the school division's network or storage media

I agree not to allow other individuals use of my account(s), nor will I give anyone my password(s).

I agree to abide by the school division's software licenses and guidelines.

I will not access on-line gaming sites and/or save gaming software files on school division equipment. I will not launch programs from personal storage devices.

The Acceptable Use Policy has been read to me or I have read the Acceptable Use Policy. I agree to abide by the guidelines established, and understand that violation of the guidelines may result in termination of my access to school division technology. I also realize I may be subject to additional disciplinary action, including suspension from school and/or possible criminal charges.

**Student Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**Parent Section:** (A parent or guardian must also read and sign.)

As the parent or guardian of this student, I have read the Acceptable Use Policy. I understand that school division technology is designed for educational purposes and that the school division has taken precautions to eliminate inappropriate materials. I understand, however, that it is impossible to restrict access to all controversial materials, and I will not hold the school division responsible for materials acquired through school division technology. I understand that my child will participate in Internet Safety instruction and will use the school division's technology resources including the Internet under the guidelines established.

**Parent Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

Each staff member is responsible for adhering to school board policy relating to the use of school division technology resources. Each staff member has read the Acceptable Use Policy and has agreed to abide by the provisions included and to promote this policy with students. All staff members will ensure acceptable use of the Internet and proper network etiquette using the approved Lynchburg City Schools' Internet Safety curriculum.

**Staff Acceptable Use of School Division Technology Resources  
Policy Agreement (AUP)**

Name \_\_\_\_\_ School/Location \_\_\_\_\_  
(please print - include middle initial)

I agree to abide by all guidelines listed in the School Board Policy 6-48: Acceptable Use of School Division Technology Resources.

I realize the purpose of the school division's technology is educational. I will use the network appropriately and professionally in accordance with the Employee Code of Conduct. I will only use the school division's computers and network, including the Internet, for limited personal use when it does not conflict with my instructional and supervisory responsibilities with students and does not conflict with my employment responsibilities in general.

I realize that information technology personnel can access all of my current and past network materials and accounts, including e-mail.

I realize that I am responsible for adhering to all school board policies and procedures relating to the use of technology.

I realize that the use of technology is a privilege, not a right. I accept that inappropriate behavior may lead to penalties, including revoking my account and/or personnel action.

I agree not to access or transfer inappropriate, pornographic, or illegal materials through the school division's network or storage media.

I will not access on-line gaming sites and/or save gaming software files on school division equipment. I will not launch programs from personal storage devices.

I agree to abide by the school division's software licenses and guidelines.

I realize that content produced using division resources is the property of the Lynchburg City Schools.

I agree not to share passwords and to lock out or log out when away from my computer in order to maintain network security.

I agree to promote the Acceptable Use Policy and Internet safety with students. I will ensure that student access to the network, including the Internet, is appropriate.

I have read the Acceptable Use Policy, agree to abide by the guidelines established, and understand that violation of the guidelines may result in termination of my access to school division technology. I also realize I may be subject to additional personnel action, up to and including termination of my employment contract, as well as possible criminal charges.

Signature \_\_\_\_\_ Date \_\_\_\_\_

## **Surplus property; sale, exchange or lease of real and personal property.**

### A. Generally

The sale of school property must be for the benefit of the school division and consistent with good business principles. The school board does have the power to make a gift of school property.

### B. Personal (movable) Property

The superintendent shall be authorized by the board to sell or exchange personal property not exceeding \$1,000.00 per item in value. The superintendent shall make every effort to ensure receiving the best possible price.

Surplus vehicles may be sold:

1. at public auction,
2. by a licensed public surplus vendor, or
3. through Internet sales on eBay or other licensed online services.

### C. Real (immovable) Property

The sale or exchange of real property shall be in accordance with state law.

### D. Lease

The leasing of real and personal property shall be in accordance with state law.

### Legal Reference:

Code of Va., § 22.1-129. Surplus property; sale, exchange or lease of real and personal property. “A. Whenever a school board determines that it has no use for some of its real property, the school board may sell such property and may retain all or a portion of the proceeds of such sale upon approval of the local governing body and after the school board has held a public hearing on such sale and retention of proceeds, or may convey the title to such real property to the county or city or town comprising the school division or, if the school division is composed of more than one county or city, to the county or city in which the property is located. To convey the title, the school board shall adopt a resolution that such real property is surplus and shall record such resolution along with the deed to the property with the clerk of the circuit court for the county or city where such property is located. Upon the recording of the resolution and the deed, the title shall vest in the appropriate county, city or town.

If a school board sells surplus real property, a capital improvement fund shall be established by such school board and the proceeds of such sale retained by the school board shall accrue to such capital improvement fund. The capital improvement fund shall only be used for new school construction, school renovation, and major school maintenance projects.



B. A school board shall have the power to exchange real and personal property, to lease real and personal property either as lessor or lessee, to grant easements on real property, to convey real property in trust to secure loans, to convey real property to adjust the boundaries of the property and to sell personal property in such manner and upon such terms as it deems proper. As lessee of real property, a school board shall have the power to expend funds for capital repairs and improvements on such property, if the lease is for a term equal to or longer than the useful life of such repairs or improvements.

C. Notwithstanding the provisions of subsections A and B, a school board shall have the power to sell career and technical education projects and associated land pursuant to § 22.1-234.

Notwithstanding the provisions of subsections A and B, a school board of the City of Virginia Beach shall have the power to sell property to the Virginia Department of Transportation or the Commonwealth Transportation Commissioner when the Commissioner has determined that (i) such conveyance is necessary and (ii) when eminent domain has been authorized for the construction, reconstruction, alteration, maintenance, and repair of the public highways of the Commonwealth, and for all other purposes incidental thereto, including, but not limited to, the relocation of public utilities as may be required.

D. School boards may donate obsolete educational technology hardware and software that is being replaced pursuant to subdivision B 4 of § 22.1-199.1. Any such donations shall be offered to other school divisions, to students, as provided in Board of Education guidelines, and to preschool programs in the Commonwealth.”

(Code 1950, § 22-161; 1968, c. 261; 1973, c. 220; 1980, c. 559; 1989, c. 102; 1991, c. 298; 1995, c. 513; 1997, c. 686; 2000, c. 93; 2001, c. 483; 2005, c. 446; 2007, c. 813.)

Adopted by School Board: January 6, 1981

Revised by School Board: September 3, 1985

Revised by School Board: September 18, 2007

# Lynchburg City Schools' Internet Safety Instructional Program

# LCS Internet Safety Curriculum K-5

The goal of the K-5 Internet Safety Curriculum is to provide safety awareness for children and empower them with knowledge to make safer choices using the Internet. Key points to foster:

- Help children to understand that people they “meet” on the Internet may not be who they claim to be
- Encourage children to discuss what they encounter on the Internet with a trusted adult
- Promote understanding of the dangers of the Internet and skills to avoid them

This program is designed to provide a lesson for each grade-level K-5. There are animated videos, interactive Notebook lessons which could be used with a SmartBoard or shown on a large screen. Activities include material from NetSmartz which is an interactive, educational safety resource from the National Center for Missing and Exploited Children (NCMEC) that creates age-appropriate activities to help teach children how to be safer while online. Another source of interactive lessons comes from Media Awareness Network. We use their “Cyberpig’s Adventures” to help illustrate the dangers of online predators and online bullying in age-appropriate lessons.

The following detailed instructions are provided to assist the ITS or the teacher presenting each lesson. It was created in Notebook software, version 9.7.

# Internet Safety Kindergarten



- 1) Open folder called O\_K and 1<sup>st</sup> Grade
- 2) Open Notebook file called "K Internet Safety Lesson.notebook"
- 3) Click on Link for "Important Rules for using computers"
  - a. Discuss these 2 rules of the lab
  - b. Click the back button to return to main menu
- 4) Discuss what is meant by "Personal Information"
  - a. Click on Link called "What is Personal Information"
  - b. Click the frog - each word that comes out is considered personal information (there are 10 words)
  - c. Click the back button to return to main menu
- 5) Click on Link "Introduction to Internet Safety - Clicky's Be Safe online" \*\*
  - a. Click on Clicky's picture to start presentation (See Troubleshooting tips if you get any errors here)
  - b. Go through interactive presentation the same way we did last year
  - c. Click the back button to return to main menu
- 6) Time - permitting - Go to Game Links page
- 7) Click the Back button to return to the menu after games
- 8) Always say "NO" when asked if you want to save the Notebook file

\*\* The presenter's guide for the dialogue between you and Clicky is also located in this O\_K and 1<sup>st</sup> Grade folder \*\*

# Internet Safety 1st Grade

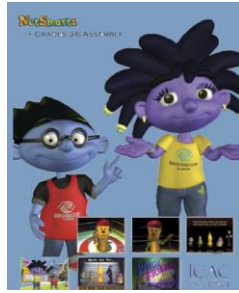


- 1) Open folder called O\_K and 1<sup>st</sup> Grade
- 2) Open Notebook file called "1<sup>st</sup> Grade Internet Safety Lesson.Notebook"
- 3) Click on Link for "Important Rules for using computers"
  - a. Discuss these 2 rules of the lab
  - b. Click the back button to return to main menu
- 4) Click on Link "Clicky's Presentation & the Webville Outlaws"
  - a. Click on Clicky's picture to start presentation (see troubleshooting guide if any error here)
  - b. Go through interactive presentation the same way we did last year
  - c. After the presentation ends, click "X" to get out of the program and back to Notebook, then click the back button to return to the main menu
- 5) Click the link "Outlaw Challenge" & play game
- 6) Time - permitting - Go to Game Links page
- 7) Click the Back button to return to the menu after games
- 8) Always say "NO" when asked if you want to save the Notebook file

\*\* The presenter's guide for the dialogue between you and Clicky is also located in this O\_K and 1<sup>st</sup> Grade folder \*

\*

# Internet Safety 2nd Grade



- 1) Open folder called 2<sup>nd</sup> Grade
- 2) Open Notebook file called "2<sup>nd</sup> Grade Internet Safety Lesson.Notebook"
- 3) Click on Link "Review Internet Safety Rules from K-1 Netsmartz"
  - a. Review the 4 Webville Outlaws and Internet Safety Pledge (links to pdf file)
  - b. Close the pdf file to return to main menu
- 4) Click on Link "Nettie and Webster's Internet Safety Lesson" \*\*
  - a. Click on picture of Nettie and Webster to start presentation (see troubleshooting guide if any errors here)
  - b. Go through interactive presentation the same way we did last year
  - c. After the presentation ends, click "X" to get out of the program and back to Notebook, then click the back button to return to the main menu
- 5) Time - permitting - Go to Game Links page
- 6) Click the Back button to return to the menu after games
- 7) Always say "NO" when asked if you want to save the Notebook file

\*\* The presenter's guide for the dialogue between you and Nettie and Webster is also located in this 2nd Grade folder \*\*

# Internet Safety 3rd Grade



- 1) Open folder called 3<sup>rd</sup> Grade
- 2) Open Notebook file called "3<sup>rd</sup> Grade Internet Safety Lesson.Notebook"
- 3) Click the Link "Communication On-line"
  - a. Go through PowerPoint presentation (condensed version - from last year)
  - b. Discuss terms presented here such as *Internet, World Wide Web, E-mail, Chatrooms, Blogs*
  - c. Discuss dangers of talking to strangers
  - d. Close the Powerpoint window- this takes you back to Notebook (Menu page)
- 4) Click on Link "Are you Netwise?"
  - a. Go through each abbreviation by pulling down the screen shade - scroll down & when you get to UYN - ask what they think it might mean
  - b. Click the NEXT button



- c. Ask if they remember Nettie and Webster from the 1<sup>st</sup> grade presentation
- d. Click the NEXT button again
- e. Click the Link to UYN Netsmartz video "A Lesson in Personal Safety"
- f. When the movie finishes and you close the windows media player window, it will take you right back to the Notebook page where you left off


- g. Click the Next button
  - h. The next two pages are questions to ask students (when you click the correct answer it will spin)
  - i. Click the BACK button to return to the menu
- 4) Click link "Remember the Wizzy Wigs"
- a. Remind that last year Nettie and Webster showed us what wizzy wigs were - like "hot heads" and "Follow you Fionas", etc.
  - b. Click Next button
  - c. Click link to watch "The Boy Who Loved IM"
  - d. Click Next button
  - e. Have students answer the next 2 questions (correct answer spins)
  - f. Click Back button to return to menu
- 5) Click the Link to "Review Internet Safety Rules"
- a. Click BACK button again to return to menu
- 6) Time permitting - Click Link to play - "Who's Your Friend on the Internet" and / or games from Internet Safety games page
- 7) Click the Back button to return to the menu after games
- 8) Always say "NO" when asked if you want to save the Notebook file





# Internet Safety 4th Grade



- 1) Open folder called 4<sup>th</sup> Grade
- 2) Open Notebook file called "4<sup>th</sup> Grade Internet Safety Lesson.Notebook"
- 3) Click the Link "What is the Internet?"
  - a. Ask Question on screen "What is the Internet?" & discuss
  - b. Click ONCE on the box to reveal the answer
  - c. To go to the next question - click the Next button  

  - d. Ask the next 3 questions the same way:
    - i. What is a Network?
    - ii. What is the World Wide Web?
    - iii. Why do we study Internet Safety?
  - e. Click the Back button to return to the menu
- 4) Explain that you are going to watch the "Cyberpigs Adventure"
  - a. Ask them to be looking for answers to the following questions:
    - i. How much is too much information to give out?
    - ii. Is chatroom chatting safe?
    - iii. What is spam?
    - iv. What are on-line predators?
  - b. Click the link "Cyberpigs Adventure 1"
    - i. Click the "Privacy Playground" to watch the video
    - ii. Answer questions together as you go through it
    - iii. Close the Internet window and it will return to Notebook
    - iv. Click the Back button to return to the menu

- 5) Click the link "Are you Netwise - Take the Quiz"
  - a. Ask the class the first question and click their answer choice
  - b. Click "Next" to go through the 3 questions, then "Finish"
- 6) Click either "Return to Menu" or if time permits - click "Internet Safety Games"
- 7) Click the Back button to return to the menu after games
- 8) Always say "NO" when asked if you want to save the Notebook file



# Internet Safety 5th Grade



- 1) Open folder called 5<sup>th</sup> Grade
- 2) Open Notebook file called "5<sup>th</sup> Grade Internet Safety Lesson"
- 3) Click the Link "Review Privacy Playground"
  - a. Remind students of what they saw in the previous Cyberpigs video in 4<sup>th</sup> grade (there are 2 pages of review with screenshots from Cyberpigs Adventure 1)
  - b. Review terms such as "Spam", "Internet predator" and why we shouldn't give out personal information on the Internet
  - c. To get back to the menu, click the back button



- 4) Explain that you are going to watch the "Cyberpigs 2<sup>nd</sup> Adventure - Cybersense and Nonsense"
  - a. Have them watch for new terms
    - i. Cyber-Bullying
    - ii. Flaming
    - iii. Netiquette
  - b. Click the link to "Cyberpigs Adventure 2"
    - i. Click "CyberSense & Nonsense" to start the video
    - ii. Answer questions together as you go through it
    - iii. Close the Internet window and it will return to Notebook
    - iv. Click the Back button to return to the menu
- 5) Click Link "Are you Netwise?"
  - a. Have students play the matching game and check answers
  - b. Click the Next button

- c. Have students answer the 3 question quiz - click Finish
  - d. Click back button to return to the menu
- 
- 6) Time - permitting - Go to Game Links page
  - 7) Click the Back button to return to the menu after games
  - 8) Always say "NO" when asked if you want to save the Notebook file



## **Internet Safety Program Middle School Students**

### **Program Objectives**

Students will:

- Develop a comprehensive understanding of the concept of cyber community and good cyber citizenship.
- Exhibit legal and ethical behaviors when using information and technology.
- Recognize and avoid dangerous, destructive or unlawful online behavior.
- Demonstrate an understanding of the consequences of misusing technology.
- Demonstrate the correct use of fair use and copyright regulations.
- Demonstrate compliance with the school division's Acceptable Use Policy and other legal guidelines.

### **Computer Technology Standards of Learning for Virginia's Public Schools**

- The students will demonstrate knowledge of ethical, cultural, and societal issues related to technology (VA SOL C/T 6-8.3).
- The students will practice responsible use of technology systems, information, and software (VA SOL C/T 6-8.4).

### **Units of Study**

#### A. Cyber Citizenship

1. Powerpoints 6-7-8
2. Online Instructional Information and Discussion
3. Activities 6-7-8

#### B. Cyber Bullying

1. Powerpoints 6-7-8
2. Video
  - 6<sup>th</sup> Grade - Feathers in the Wind
  - 7<sup>th</sup> Grade Best Friend
  - 8<sup>th</sup> Grade Can't Take it Back
3. Activities 6-7-8
4. Morning Announcements Video Clips
  - Cyber Bullying
  - Don't Get Pushed Around

#### C. Cyber Safety

1. Powerpoints: Personal Safety 6-7-8 and Predator Identification 6-7-8
2. Video
  - 6<sup>th</sup> – Soccer Girl and Tracking Teresa
  - 7<sup>th</sup> – Teen PSA Promises and Amy's Choice
  - 8<sup>th</sup> – Teen PSA Promises and Julie's Journey
3. Activities 6-7-8

#### D. Cyber Copyright

1. Powerpoints 6-7-8
2. Video
  - 6<sup>th</sup> and 7<sup>th</sup> – Hands (start at 1:40 using slider in Media Player)
3. Activities 6-7-8

### **High School Internet Safety Program Goals**

1. Recognize and avoid dangerous, destructive, or unlawful online behavior
2. Demonstrate knowledge and understanding of Internet Safety issues

#### **Objectives:**

1. Students will demonstrate knowledge and understanding of issues relating to their personal privacy and social use of the Internet.
2. Students will demonstrate knowledge and understanding the concepts of Intellectual Property including but not limited to plagiarism, copyright, and public domain.
3. Students will demonstrate knowledge and understanding of malicious code and identity theft as it relates to security of computers and information on the Internet.
4. Students will demonstrate knowledge and understanding of issues relating to cyber-citizenship, including but not limited to steganography, computer hacking, and cyber terrorism.
5. Students will demonstrate knowledge and understanding of cyber harassment.

## Implementation:

Materials used for the implementation of this program will be primarily derived from the *i-Safe* program. Supplemental materials will be added as needed to specifically meet the needs of Lynchburg City School high school students.

Ninth grade students will complete the online *i-Safe* pre-assessment survey during library media orientation through English classes each September. Upper classmen will complete the survey in their targeted classes prior to the presentation of the lesson.

Specific topics will be addressed in the health and family living classes, English and social studies classes, and applicable computer classes. The lessons will include an *i-Safe* webcast and structured class discussion and activities to be conducted by the classroom teacher, Instructional Technology Specialist, Media Specialist, and / or School Resource Officer as deemed necessary by the material being presented. The teacher will notify the building Instructional Technology Specialist when the appropriate *i-Safe* webcast lesson has been completed.

Below is a chart of targeted classes and webcasts.

<b><i>i-Safe</i> Webcast</b>	<b>Target class</b>	<b>Grade level</b>
Privacy and the Internet	Health and Family Living	9 <sup>th</sup>
Cyber Relationships	Health and Family Living	9 <sup>th</sup>
Cyber Harassment	Health and Family Living	9 <sup>th</sup>
Intellectual Property	Selected English and Social studies classes	9 <sup>th</sup> and 10 <sup>th</sup>
Cyber Citizenship	Government / AP Political Science	12 <sup>th</sup>
Security: Malicious Code	Computer Maintenance	10 <sup>th</sup> – 12 <sup>th</sup>
	Computer Systems Technology	11 <sup>th</sup> – 12 <sup>th</sup>
	Computer Programming I and II	9 <sup>th</sup> – 12 <sup>th</sup>
	Computer Applications	9 <sup>th</sup> – 12 <sup>th</sup>

## Additional Materials Available Online:

Objective	Resource material
1	<a href="http://www.missingkids.com/adCouncil/lingo.html#">http://www.missingkids.com/adCouncil/lingo.html#</a> (Internet safety quiz)
	<a href="http://www.netSMART.org">www.netSMART.org</a> (video – “Tracking Teresa”)
	<a href="http://www.webwisekids.org">www.webwisekids.org</a> (tour – statistics)
	<a href="http://www.netSMART.org">www.netSMART.org</a> (video – “Amy’s choice”)
	<a href="http://www.idtheCreep.com/">http://www.idtheCreep.com/</a> (interactive game)
	<a href="http://tcs.cyberTipline.com/knowthedangers7.htm">http://tcs.cyberTipline.com/knowthedangers7.htm</a> (tips for posting information)
	<a href="http://www.livewwwires.com/">http://www.livewwwires.com/</a> (“Missing” game)
	<a href="http://www.livewwwires.com/">http://www.livewwwires.com/</a> (“Mirror Image” video)
2	<a href="http://pinetlibrary.com/classpage.php?page_id=3841&amp;status=last">http://pinetlibrary.com/classpage.php?page_id=3841&amp;status=last</a>
	<a href="http://owl.english.purdue.edu/handouts/research/r_paraphrEX1.html">http://owl.english.purdue.edu/handouts/research/r_paraphrEX1.html</a> (practice paraphrasing activities)
	<a href="http://www.library.ucla.edu/b BruinsSuccess/">http://www.library.ucla.edu/b BruinsSuccess/</a> (Success with Less Stress)
	<a href="http://www.definetheline.com/">http://www.definetheline.com/</a> (software piracy)
	<a href="http://www.copyrightkids.org">www.copyrightkids.org</a>
3	<a href="http://www.securityfocus.com/news/8908">http://www.securityfocus.com/news/8908</a> (Avoiding Identity Theft)
4	
5	<a href="http://www.netSMART.org">www.netSMART.org</a> (video – “Cyberbullying – You can’t take it back”)
	<a href="http://www.netSMART.org">www.netSMART.org</a> (video - “Cyberbullying – Broken friendship”)
	<a href="http://www.ncvc.org/tvp/main.aspx?dbID=dash_Home">http://www.ncvc.org/tvp/main.aspx?dbID=dash_Home</a> – teen victim project/ bullying
	<a href="http://www.stopcyberbullying.org/index2.html">http://www.stopcyberbullying.org/index2.html</a> (click 14-17, then <i>Are you a cyberbully?</i> )
	<a href="http://www.stopcyberbullying.org/index2.html">http://www.stopcyberbullying.org/index2.html</a> - what’s the law?
General	<a href="http://www.emck.net/reelschool/documents/d4_contest_topics_sec.doc">http://www.emck.net/reelschool/documents/d4_contest_topics_sec.doc</a> (general information sheets on numerous topics related to objectives)
	<a href="http://www.emck.net">www.emck.net</a> (ReelSchool links to student produced PSAs on a variety of Internet safety topics)

### Good sites for younger students:

<http://www.cybercrime.gov/rules/kidinternet.htm>