Abbeville County School District
Technology Plan 2014-2017

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Table of Contents

Section I. Executive Summary

Section II. Background Information

Section III. Mission Statement

Section IV. Needs Assessment

Section V. Technology Plan Framework

1. Student Learning and Classroom Technology
2. Infrastructure and Security
3. Professional Development
4. Collaboration Opportunities

Section VI. Ongoing Efforts

Section VII. Timeline

Section VIII. Appendices

1. Budget Summary
2. Hardware Needs Assessment
3. Professional Development Needs Assessment
4. Network Diagram
5. Acceptable Use Policy

Section I. Executive Summary

The purpose of this document is to provide guidelines for the planning, implementation, and maintenance of technology systems and services in Abbeville County School District. It seeks to provide a method for monitoring and evaluating the effectiveness of technology related efforts in support of instruction.

Section II. Background Information

Abbeville County is a rural county in the upstate of South Carolina containing several small towns with the city of Abbeville at the County Seat. As of the 45th day of the 2013-14 school year, 3,148 students were being served by two high schools, one middle school, four elementary schools, one primary school, and a career center. There are currently 74 students in the district classified as ESL and the graduation rate for the 2012-13 school year was 83.6%, with a rate of 83.8% for Abbeville High and 83.3% for Dixie High. On the October, 2013 lunch report, 67% of all students were classified at free and/or reduced lunch status. The district E-rate discount for the District was calculated to be 81% based the percentage of students receiving free and reduced lunches during the month of October as detailed below.

BEDS CODE	SCHOOL	FREE	RED	F/R	PAID	TOT	% F/R
0160001	**Abbeville High**	258	53	311	239	550	57%
0160995	**Abbeville County Career Center**	N/S	N/S	N/S	N/S	N/S	N/S
0160018	**Cherokee Trail Elementary**	165	44	209	207	416	50%
0160019	**Diamond Hill Elementary**	144	40	184	96	280	66%
0160003	**Dixie High**	171	41	212	204	416	51%
0160007	**John C. Calhoun Elementary**	155	8	163	20	183	89%
0160020	**Long Cane Primary**	266	24	290	121	411	71%
0160016	**Wright Middle**	228	41	269	155	424	63%
0160017	**Westwood Elementary**	213	33	246	111	357	69%
0160000	**District**	1636	293	1929	1317	3148	61%

Section III. Mission Statement

The mission of the Abbeville County School District is to develop proficient, creative, self-motivated students by providing quality educational opportunities in a safe, nurturing environment, which supports innovations and lifelong learning.

Section IV. Needs Assessment

Methodology:

Physical infrastructure needs such as cabling and electrical service improvements are determined by physical inspections, integrity tests, and user feedback. Service addition decisions are influenced by student and teacher populations, administrative decisions, instructional initiatives and funding availability.

District asset management information and server reports are used to determine the age of computers, servers, and network equipment across the district. The oldest equipment is replaced first in annual upgrade cycles as funding allows.

Technology surveys are conducted to determine the professional development needs of teachers and staff. Portions of these surveys are used to evaluate the effectiveness of the Technology Department with regards to support services and technology systems reliability and dependability. Sample survey results are included in the appendices of this document.

Student and parent technology surveys are conducted periodically to gain feedback about student and parent perceptions of technology in the district. This information is used to guide technology efforts in areas and grade levels where needs have been identified.

Needs Assessment Highlights 2014

Workstations: Over one thousand workstations in the District are considered mission critical. This does not include student computers in classrooms and mobile devices such as laptops and tablets.

29% of all administrative and teacher workstations (approx. 300) are below acceptable performance and reliability standards as of February, 2014

33% of instructional workstations (approx. 330) in labs and common areas are below acceptable performance and reliability standards as of February, 2014

Instructional Resources: Includes technology equipment used in classrooms by students and teachers for instruction, assessment, accommodations and technology integration projects.

30% surveyed did not have an installed projector/interactive whiteboard in good/acceptable condition as of February, 2014

44% surveyed did not have a visual presenter in good/acceptable condition as of February, 2014

78% of survey respondents did not have access to a mobile lab for student access
25% of survey respondents did not have access to a computer lab for student access

Section V. Technology Plan Framework

V.1. Student Learning and Classroom Technology

Goal: Abbeville County School District will improve student learning through technology.

Objectives:

V.1.1 Make digital content available before during and after school for all users

- Increase student access to digital content
- Incorporate digital content into instruction and decrease use of print materials
- Expand collaboration with local organizations to provide access outside of school

V.1.2 Increase access to instructional technology in classrooms

- Develop evaluation criteria for adopting instructional technology
- Explore cost effective technology options for student use
- Establish "best practices" for integrating technology into classroom instruction
- Expand access to online training resources for teachers and students
- Expand access to assistive technology for students with IEP and 504 plans

V.1.3 Students will demonstrate technology literacy prior to entering ninth grade

- Incorporate technology literacy standards for students and teachers
- Implement reliable methods of measuring technology literacy
- Create successful pilot programs with accountability measures

Summary of Findings:
In surveys conducted in 2014 55% of teachers reported using the Internet daily to support instruction and approximately 70% required students to use the Internet at some time during the current school year. 70% of teachers surveyed have a mounted projector and interactive whiteboard in their classroom. 66% of survey respondents reported having access to a computer lab for students to use with their technology integration projects and 15% reported having access to a mobile device lab for students. Only 24% surveyed reported having a laptop deemed to be in good or acceptable condition. 15% reported having a teacher only Chromebook and 13% reported having an iPad for teacher use.

Recent Progress:
Standardization exists in classrooms with regards to teacher workstations, projectors and interactive whiteboards. All school libraries share a common web-based catalog system. All schools have access to common instructional software in computer labs and web-based systems. All schools use a common web-based benchmark assessment. There are a minimum of 50 student workstations per school in labs and media centers.

Spotlight on Success:
Using Federal Title I funding, John C. Calhoun Elementary was able to purchase mobile device labs for student use. In 2012 iPads were purchased and used for a variety of student centered activities. After the implementation of Google Apps across the district in 2013, Chromebooks were purchased as well. Teachers continue to find creative ways for students to use these labs in the instructional setting.

Challenges and Improvement Opportunities:
Some legacy systems and services still exist and must be replaced with current technology. The video distribution network still relies heavily on outdated CCTV infrastructure. There has been inadequate funding to support implementation of more modern streaming video services. Teachers rely heavily on Internet sources for streaming media content and bandwidth can become an issue at times. There is no efficient and effective means of distributing content created locally by students, teachers and administrators.

V.2. Infrastructure and Security

Goal: Abbeville County School District will provide reliable, secure and cost effective infrastructure to insure equitable access to appropriate technologies for all schools in the district.

Objectives:

V.2.1 Provide one computer per teacher/administrator for instructional and administrative use

V.2.2 Provide student access to computers in common areas at every school

V.2.3 Provide access to a variety of technology devices to maximize student learning

V.2.4 Provide one projection/display device per classroom and other instructional areas

V.2.5 Provide a computing environment that ensures safe access and data security

- Establish and reassess annually the minimum specifications for workstations
- Practice cost-effective methods of procurement
- Coordinate purchases across all schools in the district
- Review/update infrastructure standards and documentation
- Review/update district policy so that it reflects current practices

Summary of Findings:
During the 2013-14 school year it was determined that a large percentage of workstations need to be replaced or upgraded. Cabling, servers, network equipment and WIFI coverage at several locations is inadequate. Telephone and intercom systems at many locations are in need of replacement. Robust secure, and reliable connectivity exists between school sites and the district office data center. Internet access is compliant with Federal CIPA requirements. Acceptable use policy exists and has been updated to remain compliant with changing CIPA requirements. Further revision is needed to address changing behaviors and attitudes with regards to teacher and student use of technology in the instructional setting, including student BYOD policies.

Recent Progress:
Prior to the start of the 2013-14 school year teacher and administrator workstations were upgraded to Windows 7 and Office 2010 thereby establishing minimum workstation performance standards and consistency of document version across the organization. The Novell network operating system was replaced with Microsoft services, including System Center Configuration Manager, which streamlines workstation imaging, software deployment, and desktop security. Deployments of virtual server infrastructure and clustering at the central office accommodated server consolidation efforts reducing and/or eliminating the need for dedicated servers at schools. Internet bandwidth was upgraded from 100 Mbps to 200 Mbps and remotely located schools using Metro-E circuits were upgraded from 100

Mbps to 200 Mbps with a 1Gbps aggregate at the central office. Schools nearest the central office using dedicated fiber links with 1Gbps and 10Gbps connections back to the central office received updated network equipment which allowed for more efficient and secure configurations of school networks.

Spotlight on Success:

During the 2012-13 school year Google Apps was implemented for the entire district phasing out legacy email systems and file storage services in favor of more accessible cloud-based technologies. Many user files were migrated to Google storage, reducing the dependency on more traditional and cost-prohibitive local storage options. District and school websites were migrated to Google sites where edit and share capabilities are much easier to manage.

Challenges and Improvement Opportunities:

Traditionally, access to district technology resources has been limited to the school setting due to concerns about performance, security and the availability of technology in the home. Recent developments have made it possible to expand access to district resources from outside the district. Most technical hurdles have been overcome but access from outside the school setting is constrained by other factors. Often students who need it the most have limited technology access when not at school and funding limitations prevent schools from providing take-home technology. Concerns about students not completing their own assignments have slowed progress towards distance learning opportunities.

V.3. Professional Development

Goal: Abbeville County School District will develop and implement a professional development program to assist in integrating technology systems and services into the curriculum.

Objectives:

V.3.1 Design and implement technology standards

- Standards will be designed that meet the technology needs of the district
- Standards will be implemented and evaluated appropriately

V.3.2 Ensure that teachers and library media specialists meet established education technology standards

- Develop hybrid, online courses, and e-communities to provide anytime, anywhere technology training courses
- Create and implement a reward system for teachers achieving proficiency meeting adopted technology standards
- Develop criteria used for evaluation to check for instructional staff competency related to adopted technology standards

V.3.3 Ensure that administrators at school and district level meet established technology standards

- Evaluation criterion will be established and administrators at both school and district level will be evaluated

V.3.4 Define technical training staff, technical support staff and other roles and responsibilities

- There will be a clear definition of which staff members are responsible for training, support, and other technology related roles and responsibilities

V.3.5 Provide access to classroom and online training for classroom technology to teachers

- Professional development, both in a physical classroom and online learning environment, will be developed and implemented
- A focus on internet safety, cyber-bullying, digital citizenship, and information security will be implemented in professional development

V.3.5 Provide resources, support and information regarding effective practices in classroom technology

- Surveys to evaluate instructional technology needs and resources will be conducted and the results will be used for purposes of continuous improvement
- Data from surveys will be used to make decisions on current and future instruments of instructional technology
-

Summary of Findings:

In 2014 professional development surveys, 69% of respondents considered themselves to be "intermediate" when asked what best describes their technology abilities with 24% considering themselves to be "advanced". Even though teachers have been using interactive whiteboards for several years, training has been inadequate. Interactive whiteboard was one of the top five (non-Google Apps) training needs as identified in the 2014 surveys.

Recent Progress:

Many new staff development opportunities were made available during the 2013-14 school year. After the successful implementation of Google Apps the District was able to offer new and creative staff development sessions including information sharing options and project collaboration. A more efficient means of tracking teacher participation and feedback was also developed using online surveys.

Spotlight on Success:

Diamond Hill Elementary was the first school to take advantage of the information sharing opportunities afforded by the Google Apps implementation. Every teacher was issued a Chromebook to make planning more efficient and to improve collaboration between teachers. Also, teachers developed classroom websites to improve communication with parents and the community.

Challenges and Improvement Opportunities:

The biggest challenge in providing quality professional development lies primarily with the limited amount of time available to conduct it. There are very few days in the calendar set aside for teacher professional development. This challenge is further compounded by increased competition for this time brought about by changing curriculum and State mandated accountability measures.

V.4. Collaboration Opportunities

Goal: Enhance learning experiences and opportunities for students by identifying creative ways for the district to collaborate with local business, organizations, and other non-profit agencies.

Objectives:

V.4.1 Increase communication with stakeholders

- Provide websites, portals, surveys and notification systems.
- Conduct technology open-house nights.
- Offer parent technology training and cyber safety awareness courses.

V.4.2 Increase public awareness of technology successes

- Promote district technology innovation through local public access TV stations.
- Promote district technology successes at local meetings and conferences.
- Develop a program to publicly recognize exemplary technology teachers and students.

V.4.3 Establish partnerships with local businesses and community organizations

- Host training for local businesses in district technology labs.
- Host certification testing sites for local businesses and their employees.
- Provide qualified personnel to local businesses for training.

Summary of Findings:
Many district employees serve in various capacities on local boards and committees. In turn, community leaders are involved in district strategic planning. District technology resources are made available to these committees and organizations. Technology training is offered to the community through our adult education facility. Partnerships have been established with local business whereby our computer labs are used as training locations for employee and customer training programs.

Recent Progress:
One area representing significant improvement with regards to community collaboration has been in the area of school safety. During the development of the district emergency preparedness plan officials from all over the county have been involved. Representatives from law enforcement, emergency response, and fire departments have met with district leaders to insure our schools are prepared to handle emergency situations. Technology systems and services are vital to the success of school safety and emergency preparedness efforts.

Spotlight on Success:
During the 2013-14 school year Abbeville County Adult Education became certified as an official Pearson VUE testing facility. This is a significant resource for students, employees, and the community to take professional certification tests online through the Pearson VUE network.

Challenges and Improvement Opportunities:
The district needs to publicize successes more frequently. Many stakeholders are not aware of the significant advances and improvements in technology implemented throughout the district. Greater efforts should be made to insure these improvements make a difference in educating students and improving the lives of our citizens.

Section VI. Ongoing Efforts

- Provide secure, filtered, efficient, reliable and pervasive Internet access to all students and employees through cabled and wireless infrastructure.

- Provide functional workstations to all teachers and administrators in the district. A minimum of fifty (50) student workstations located in labs and common areas are provided to each school. Acceptable performance standards for workstations are adjusted as needed to facilitate operational changes.

- Provide reliable and effective communications services.

- Facilitate school goals of providing adequate instructional technology resources to classroom teachers.

- Provide technology professional development to schools as requested by school administrators in support of instructional goals and school initiatives.

- Provide secure, reliable, and efficient access to systems and services for operations and administration including student information management, food services, finance, special services, facilities, and transportation.

- Provide secure, reliable, and efficient access to systems and services to support instruction across all grade levels.

Section VII. Timeline

2014-2015

- Install network cabling and equipment as needed at Cherokee Trail Elementary, Abbeville High School and the Abbeville County Career Center.
- Install wireless network equipment at Long Cane Primary, Westwood Elementary and Abbeville County Career Center.
- Install network servers at Cherokee Trail Elementary, Diamond Hill Elementary, Dixie High, and John C Calhoun Elementary.
- Install phone and intercom systems at Diamond Hill Elementary.
- Replace teacher/administrator workstations and lab computers which do not meet minimum standards. Conduct needs assessment to determine percentage of workstations to replace for 2015-2016 school year.
- Replace projection and/or interactive display devices which do not meet teachers' instructional needs. Conduct needs assessment to determine percentage of projection and/or interactive display devices to replace for the 2015-2016 school year.
- Create and implement technology professional development courses "Google University".
- Establish partnership with local technology services provider.

2015-2016

- Install network cabling and equipment as needed at Long Cane Primary and Diamond Hill Elementary.
- Install wireless network equipment at Abbeville High and Wright Middle.
- Install network servers at central office.
- Install phone and intercom systems at Abbeville High and the District Office
- Replace __% teacher/administrator workstations and __% lab computers which do not meet minimum standards. Conduct needs assessment to determine percentage of workstations to replace for 2016-2017 school year.
- Replace ___% of projection and interactive display devices which do not meet teachers' instructional needs. Conduct needs assessment to determine percentage of projection and interactive display devices to replace for the 2016-2017 school year.
- Google University II

2016-2017

- Install phone and intercom systems at Westwood Elementary and Wright Middle.
- Replace __% teacher/administrator workstations and __% lab computers which do not meet minimum standards. Conduct comprehensive needs assessment to create 2017-2020 technology plan.
- Replace ___% of projection and interactive display devices which do not meet teachers' instructional needs. Conduct comprehensive needs assessment to create 2017-2020 technology plan.
- Google University III

Section VIII. Appendices

1. Budget Summary

2. Hardware Needs Assessment

3. Professional Development Needs Assessment

4. Network Diagram

5. Acceptable Use Policy

Appendix 1: Budget Summary

Technology Operations:

ACCOUNT		BUDGETED EXPENDITURE
100-266-110-0000-01	PATHWAYS ADM SALAF	104,607.00
100-266-115-0000-01	TECHNOLOGY CLERK D	31,441.00
100-266-115-0001-01	TECHNOLOGY HOURLY	0.00
100-266-210-0000-01	TECHNOLOGY GROUP H	20,064.00
100-266-220-0000-01	TECHNOLOGY RETIREM	21,836.00
100-266-230-0000-01	TECHNOLOGY FICA	10,408.00
100-266-230-0001-01	TECHNOLOGY HRLY FIC	0.00
100-266-270-0000-01	TECHNOLOGY RETIREM	843.00
100-266-332-0000-01	PATHWAYS TRAVEL	6,000.00
100-266-345-0000-01	TECHNOLOGY SERVICE	26,500.00
100-266-360-0000-01	TECH COPIER MAINTEN	0.00
100-266-410-0000-01	PATHWAYS SUPPLIES D	35,000.00
100-266-445-0000-01	DATA PROCESSING TEC	0.00
100-266-445-0005-03	TECHNOLOGY SUPPLIES	0.00
100-266-545-0000-00	PATHWAYS COMPUTER	0.00
100-266-545-0000-01	PATHWAYS COMPUTER	28,500.00
100-266-690-0000-00	PATHWAYS OTHER EXP	0.00
100-266-690-0000-01	PATHWAYS OTHER EXP	1,200.00
		286,399.00

Communications:

ACCOUNT		BUDGETED EXPENDITURE
100-254-340-0000-01	OPER & MAINT COMMU	60,000.00
100-254-340-0000-03	OPER & MAINT COMMU	4,000.00
100-254-340-0000-04	OPER & MAINT COMMU	2,800.00
100-254-340-0000-06	OPER & MAINT COMMU	2,800.00
100-254-340-0000-08	OPER & MAINT COMMU	5,200.00
100-254-340-0000-09	OPER & MAINT COMMU	2,800.00
100-254-340-0000-10	OPER & MAINT COMMU	2,800.00
100-254-340-0000-12	OPER & MAINT COMMU	3,800.00
100-254-340-0000-14	OPER & MAINT COMMU	2,800.00
100-254-340-0000-16	OPER & MAINT COMMU	2,600.00
		89,600.00

Appendix 2: Hardware Needs Assessment

The table below provides details on current district workstation inventory and the percentage needing replacement. There are currently over 1,000 workstations considered mission critical. This does not include laptops, tablets, and student workstations in classrooms. Workstations identified as falling below acceptable technology standards should be replaced.

	Admin/Teacher			***Labs***			***Total Replacement***		
	Total	***Replace***	***Percent***	***Total***	***Replace***	***Percent***	***Total***	***Replace***	***Percent***
ABHS	44	11	25%	105	20	19%	149	31	21%
ACCC	12	3	25%	34	34	100%	46	37	80%
CTES	42	7	17%	65	24	37%	107	31	29%
DHES	33	13	39%	65	0	0%	98	13	13%
DXHS	46	35	76%	97	47	48%	143	82	57%
JCCE	24	4	17%	65	33	51%	89	37	42%
LCPS	40	6	15%	58	25	43%	98	31	32%
WRMS	40	9	23%	82	32	39%	122	41	34%
WWES	40	6	15%	61	3	5%	101	9	9%
DO/AE	30	7	23%	25	0	0%	55	7	13%
TOTAL	**351**	**101**	**29%**	**657**	**218**	**33%**	**1008**	**319**	**32%**

The table below details current (2013-14) district instructional technology inventory

Instructional Technology Piece	% Good/Acceptable	%Poor/Without
Mounted/Installed Projector	70%	30%
Visual Presenter	56%	44%
Interactive Whiteboard	70%	30%
SMART Responder	15%	85%
Teacher Laptop	24%	76%
Classroom Phone	93%	7%
Teacher Chromebook	15%	85%
Teacher iPad	13%	87%
Apple TV	3%	97%

Appendix 3: Professional Development Needs Assessment

Summary

Type of Responses

229 Total Responses
169 Teachers
19 Administrators
41 Classified as other positions

Knowledge and Skills in Using Technology

16 Beginner
157 Intermediate
55 Advanced
1 Expert

Top Five Training Needs

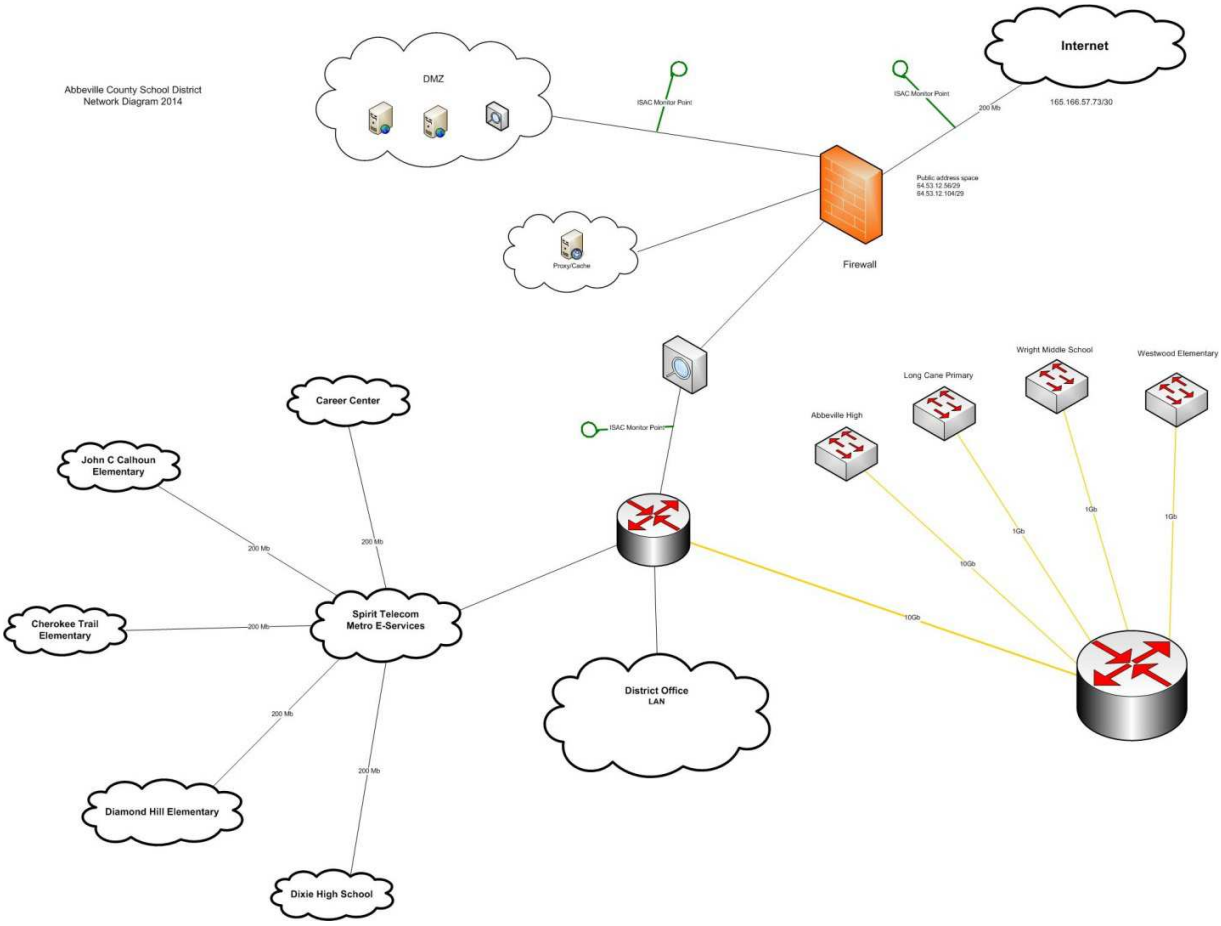
92 iPad/iPhone
92 SMART Board
73 Chromebook
65 Internet (webquests, hotlists, etc.)
57 Photo editing

Top Five Google Apps Training Needs

80 Google Documents
73 Google Presentations
69 Google Drive File Management
67 Google Sites
64 Chrome Browser

148 Respondents Expressed Interest in "Google University"

Appendix 4: Network Diagram



Appendix 5: Acceptable Use Policy

Policy IJNDB Use of Technology Resources in Instruction

Issued 6/12

Purpose: To establish the board's vision and the basic structure for the use of technology resources in instruction.

The purpose of technology systems access, including computer, handheld, network, Internet access, email access, telecommunications and media retrieval in the district is to promote educational excellence. Access to technology systems supports the district's mission by providing opportunities for communication, research, collaboration, professional development and the sharing of successful programs, practices and materials.

Users

These guidelines and conditions of use apply to all students, employees, contractors, board members, parents/legal guardians, guests or anyone else with access to any technology resources owned and operated by the district. The use of the district's technology systems is a privilege, not a right, thus, all users must submit a signed acceptable use policy to gain access. **Individuals who gain access to technology systems without a signed acceptable use policy may not claim ignorance of the policy as an excuse for violating the stated conditions and guidelines.**

Responsibilities and acceptable use

As members of a networked community, users have specific responsibilities with regard to the efficient, ethical and legal utilization of computer devices and networked and Internet resources and must strictly adhere to the following guidelines and conditions of use.

Security

Security on any technology system is a high priority.

Users are responsible for the proper use of accounts issued to them such as email, Internet or access to software and must not provide or display their passwords and login information to anyone, nor leave an application open when unattended.

Users should change their passwords regularly and make efforts to use passwords that are unique and not easily guessed.

Users are responsible for all activity under their account.

Attempts to compromise the security, integrity or functionality of the system, or possession of tools while on school or district property designed to do so, is a violation of this policy. This includes, but is not limited to, the following.

- intentional uploading or creation of computer viruses
- deletion or alteration of other user files or applications
- removing protection to gain access to restricted areas
- unauthorized blocking of access to information, applications or areas of the network

Downloading, printing or uploading files to a computer, the server or any electronic devices by student users must be approved by a teacher and must be related to schoolwork.

It is a federal offense to break into any security system. Financial and legal consequences of such actions are the responsibility of the user.

If a user feels he/she has identified a security problem on the network, the user must notify a network system administrator. The user will not demonstrate the problem to other users.