

An Educational Technology Plan

For

Appomattox County Public Schools

“Enhancing Education through Technology”

When students have access to technology as a tool, they become more curious about their world. Students become self-motivated, ready to collaborate with others to research and discover the possibilities. – Challenger Center for Space Science Education

Appomattox County Public Schools

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2004-2009

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Introduction

The Educational Technology Plan for the Appomattox County Public Schools (ACPS) addresses five components: integration, professional development, connectivity, educational applications, and accountability as outlined by the Department of Education's Educational Technology Plan. The plan states that "technology planning should be a collaborative venture by those who share a vested interest in educational technology, teaching and learning, and that planning is an evolving process guided by data and results" (pg. 3)

The ACPS Technology Plan not only commits to providing updated technology resources, but also suggests that to accomplish higher student achievement, our goals and objectives must assure that:

1. The use of technology resources are anticipated, planned, and directed;
2. The use of technology resources are an integral component of the curriculum design process;
3. The use of technology resources are implemented by informed, supportive, and supported personnel;
4. Instructional technology exists to enhance the delivery of instruction;
5. The use of technology is a natural and supportive component of the learning environment;
6. The use of technology opportunities is equally available to all students.

The Appomattox County Schools are committed to preparing all students in meeting the required standards for the Virginia Standards of Learning (SOL) assessments and to have students leave school with the knowledge and skills necessary to demonstrate success and proficiency in the use of technology. Preparing students and staff to meet the challenges of the 21st century demands a high level of literacy, a broad range of understanding, an ability to work productively in groups and to be lifelong learners.

Executive Summary

“No Access, No Use, No Impact: Snapshot Surveys of Educational Technology in K-12,” recently published in the *Journal of Research on Technology in Education*, reports unsettling statistics about technology use in schools, given the billions of dollars invested over the past decade. According to the study, 45 percent of teachers use computers for instruction less than 15 minutes per week, and over 25 percent make no use of the Net whatsoever. Researchers cite lack of meaningful access to technology as the culprit: 63 percent of teachers work in one-computer classrooms, for example.

The Appomattox County Public School division must focus on creating classroom environments to support curriculum-based teaching and learning processes. These environments will require a variety of tools for technology-embedded instructional activities. The educational technology plan will determine goals, targets and strategies to assist the division in future implementation resulting in cost-effective solutions and improvement of student achievement.

In developing the Appomattox Educational Technology Plan, we brought together many key stakeholders from varied areas to gather their thoughts on using technology to improve student learning and to develop a collaborative vision for our school division.

As we annually measure the progress of this plan, we will collect and utilize data to guide our decisions. The district and school technology committees will be the leaders in coordinating this evaluation process each year.

The five pillars of the educational plan are listed with specific goals. In subsequent sections, these goals will be detailed by suggested targets/objectives and strategies that will assist us in meeting the state assigned overall goals.

Pillar One: Integration – refers to the appropriate use of specific technologies as highly effective tools in facilitating learning across all levels of cognitive inquiry and development.

Goals:

- Improve teaching and learning through the appropriate use of technology.
- Improve equity in the implementation of technology-enhanced teaching and learning.

Pillar Two: Connectivity – includes such concerns as the development of state and school division electronic infrastructures and the supporting software and hardware that would allow all users to have equitable technical access to local, state, and worldwide educational resources.

Goals:

- Ensure that our school division has access to integrated instructional and administrative services across interoperable high-speed networks.
- Ensure sufficient support for ongoing, reliable network operations.
- Provide leadership and resources to promote efficient procurement of infrastructure, including the identification and procurement of emerging technologies.

- Ensure that school divisions have in place network security, filtering, and disaster recovery plans.

Pillar Three: Professional Development – covers both preservice and in-service training with a specific focus on the Virginia Technology Standards for Instructional Personnel (TSIP’s).

Goals:

- Establish partnerships for identifying and delivering effective technology training to assist our staff as they help students achieve high academic standards.
- Administer grant programs and financial assistance initiatives that support implementation of educational technology integration.
- Establish and maintain instructional technologists in our school division.

Pillar Four: Accountability – addresses the broad assessment of information technology and its specific value to teaching and learning environment, data management, and decision support functions related to K-12 schools.

Goals:

- Assess the value that information technology (IT) adds to teaching and learning environments.
- Provide appropriate decision support capabilities for all stakeholders.
- Assess information technology (IT) literacy.
- Ensure that our local technology plan is consistent with the state technology plan.

Pillar Five: Educational Applications – relate to the instructional and administrative applications that will run over the infrastructure “highway” referenced in the Connectivity element.

Goals:

- Improve teaching and learning through the appropriate use of network-accessible educational applications.
- Promote and develop web-based applications, services, and resources
- Offer digital learning opportunities for our division.

When our teachers prepare for and manage their classes, we want them to see how technology can be used to the point where it’s almost invisible. The students will not even realize they are using it; it’s just another way to communicate information. Teachers will see that, when students are actively engaged in learning and using technology, it deepens their understanding.

Stakeholders

In developing an educational technology plan, many stakeholders were commissioned to plan for the purposeful use of new, emerging technologies in order to increase student learning. This team of stakeholders held a sequence of meetings to analyze the current status of technology and to plan for the future integration of technology into all aspects of our educational environment. An initial draft of the plan was presented to the Superintendent and administrative team. After revisions were made, the final plan was submitted to the Department of Education and to all schools and administration. The executive summary will be posted on our website as well as given to parents, teachers, community members and other stakeholders. An annual evaluation of the whole technology plan will be made and revisions shared with all stakeholders.

2002-2003 TECHNOLOGY PLAN UPDATE COMMITTEE:

Martha J. Eagle Director of Career and Technology Education, Central Office
Deborah Hamlett Media Specialist, Appomattox Primary School
Danny Richardson Teacher, Appomattox Primary School
Nancy Williams Media Specialist, Appomattox Elementary School
Vic Meadows Teacher, Appomattox Middle School
Susan Williams Media Specialist, Appomattox Middle School
Crystal Wilhoit Teacher, Appomattox County High School
Ceil Fahrman Teacher, Appomattox County High School
Janet Scott Media Specialist, Appomattox County High School

2003-2004 TECHNOLOGY PLAN COMMITTEE:

Deborah Hamlett Media Specialist, Appomattox Primary School
Nancy Williams Media Specialist, Appomattox Elementary School
Freda Layne Teacher, Appomattox Middle School
Joey Hearl Teacher, Appomattox County High School
Amy Stump Teacher, Appomattox County High School
Martha J. Eagle Director of Career and Technology Education
Joyce Jamerson Testing Coordinator
Gerald Ryan Network Administrator/Computer Technician
Dr. Walter F. Krug Superintendent of Schools
Dr. Greg Wheeler Principal, Appomattox Middle School
Annette Bennett Principal, Appomattox Elementary School
Dr. Dorinda Grasty Director of Remedial and Special Education
Students Tori Williams, ACHS
..... Jake Rogers, AMS
Parents Martha Moore
Business Partner and Parent Penny Taylor
School Board Member Marcie Jones
Board of Supervisors Member Tom Conrad
County Government John Spencer

Mission

Enhancing Education Through Technology

Vision

Update and implement a comprehensive technology plan so that access and use by staff and students prepares them to use technology as a tool for lifelong learning and as a tool in the workplace. A variety of technological tools should be an integral part of the teaching-learning environment in all disciplines.

To this end, computers and other technologies should be:

- Utilized to promote the integration of technology into curricula, instruction, and professional development for the purpose of improving student achievement.
- Funded and promoted as a significant tool for management and instruction.
- Accessible to all students throughout the instructional program.
- Utilized at an optimal level by staff and students.

Current Status and Needs Assessment

Appomattox Primary (K-2)/Appomattox Elementary (3-5) Schools:

Technology is used to provide supplemental instruction in all academic areas for access to resources for learning and for students to practice for SOL tests. In grades K-2, technology is used as needed to support the Virginia Standards of Learning. All K-5 classrooms have at least three networked computer available for students/staff use with instructional software. In addition, a computer lab with age-appropriate software can be utilized.

Technology is used often in grades 3-5. The school has 3 computer labs and age-appropriate software (eg, Accelerated Reader, Jostens/Compass Learning) which supports the Virginia Standards of Learning. Each 3rd, 4th, and 5th grader spends a minimum of 120 minutes each week using this and other instructional software, doing research, and writing. Elementary teachers use computer technology integrated with their lessons, to communicate with each other and parents and for other professional applications.

Appomattox Middle School (6-8):

Technology is used at the middle school level with classroom lessons to provide instruction and accommodate a variety of student learning styles. Each student is given ample opportunities to do online research, write and edit informational writings. Technology is used to communicate with co-workers and parents via email, school web page, and teacher web pages. It provides supplemental instruction and remedial support for the VA SOL assessments via Jostens/Compass and EduTest Software. The administrative purpose of using SASIxp and CLASSxp for grades and attendance is important for reports. Also, professional applications for online instruction and self directed in-services are provided.

Appomattox County High School (9-12):

In the high school, technology is used to enhance many classes and serves as the content for some classes. High school students use technology to supplement classroom instruction in all subject areas, to take online tests both actual and practice, to do research, and to write. Teachers use computer technology integrated with their lessons, for communicate with each other and parents, for administrative purposes (attendance & grades), and for other professional applications.

In all schools:

Administrators and staff use SASIxp software to manage student records. Middle and High Schools use SASIxp for scheduling, report cards, attendance records, etc. Library Media Specialists use Follett software to manage circulation and cataloging of all library records. Teachers and staff use computer technology to communicate with each other, administrators, and parents. All school media centers feature online circulation and catalog workstations as well as numerous student workstations for doing online research.

Technology in Appomattox County Public Schools:

- The technology staff includes a Director of Career and Technology Education – (includes supervision of Career and Technical Education, Adult Education and other areas), one full-time Technician/Network Administrator, one part-time SASI coordinator and part-time Instructional Technologists/Coordinators at each school.
- Our areas of support include, but are not limited to:
 - Software (research, purchase, installation, maintenance, and training)
 - Maintenance of servers
 - Hardware (research, purchase, installation, maintenance, and training)
 - Network system (software, operating systems, and equipment)
 - Create and maintain websites
 - Write and administer various grants
 - Attend training classes and workshops to stay up to date
 - SASI database (updates, maintenance, training, and reporting)
- There are in excess of 850 computers in Appomattox County Public Schools all with Internet connectivity. The High School supports seven computer labs. The middle school hosts three labs. The elementary school has three labs. The primary school has one lab. Each classroom has at least two computers. Currently, all computer labs have Windows XP or Windows 98 operating systems. Classrooms have either Windows 95 or 98 operating systems.
- There are over 2,500 technology users (students, teachers, staff, and administrators)
- In each school, all classrooms, libraries, labs, and offices are wired with an instructional local area network (LAN) which delivers instructional software from a file server at each site. All networked instructional computers use Windows platform workstations.
- All schools have an administrative LAN featuring SASIxp administrative software.
- All schools have an e-mail system (GroupWise) which links the administrative and instructional networks. There are over 250 users (teachers, administrators, and support staff).
- The division has a wide area network (WAN) featuring one T1 line connected for Internet use while an 11 megabyte wireless network connects each school facility.
- Internet access, provided by Net.Work.Virginia., is available in every classroom, library, lab, and office.
- Internet access is filtered using Secure Computings N2H2 Bess content filtering software running in combination with Microsoft ISA Server and a CISCO PIX Firewall
- The ACPS School Board has approved an Acceptable Use Policy for all users.
- All libraries are automated using the Follett library automation system.
- Training for teachers and administrators is provided by the ACPS part-time Instructional Technologists (Technology Coordinators). Training includes summer technology

workshops and in-services offered throughout the school year. Teacher training is focused on the Technology Standards for Instructional Personnel (TSIP's) and integration of technology into the curriculum.

- Technology use is guided by the district and individual school technology plans.
- The county web site was updated in the Spring of 2003. With a growing need for communication with community, parents, students, and staff, this method allows for quick turn around of information. We will continue to update the web site to meet the needs of our school system.

Duration

The goals/objectives/strategies section (page 14) of this technology plan covers both the duration and the implementation responsibility areas for defining purposes. Because we cannot accurately identify specific action items for years 4-6, we will adjust these sections each year as we complete or continue our projects. The “projected” dates are stated and an annual evaluation of each project will create an “actual” date’s column. In each “end date” an “annually” may be typed. This means that the project will be analyzed and evaluated on an annual basis to make sure it is the most current.

Implementation Responsibility

The job of our staff members is much more demanding today than it was five years ago. Most adults need time to experiment with and become comfortable with the new technology strategies and instructional techniques. Although most applications require instant knowledge for change, on-going training and development is necessary to assure these applications are being utilized to optimum potential for the good of administration, data, and student learning. An outline of the responsibilities by job title follows.

Currently, ACPS employs:

- One Director of Technology (with varied other responsibilities to Career and Technical Education, Adult and Family Literacy, etc...)
- One Network Administrator/Technician (full-time position)
- One SASI Coordinator (with varied other responsibilities to Federal Grants) – also clerical staff at each school are responsible for data input.
- Four Instructional Technologists (all part-time positions due to full-time responsibilities as teachers and media specialists)
- Four Webmasters for schools (all voluntary positions)
- One Director of Testing (part-time position)

Recommended needs:

- One Director of Technology (full-time with limited other duties)
- One Network Administrator/Technician (full-time)
- One Computer Technician (full-time)
- One Instructional Technologist Coordinator (full-time) for the district and eventually for each school
- One Webmaster (full-time) to maintain all websites
- One Director of Testing (full-time)
- One SASI Coordinator (full-time)

Collaboration and Partners

Appomattox County Public Schools has several areas of collaboration relative to technology:

- ACPS is an active participant in the Southside Virginia Regional Technology Consortium (SVRTC), made up of school division representatives from 22 school divisions who share technology information in monthly meetings.
- ACPS participates with the Blue Ridge RSCPS group in Roanoke – WBRA/PBS.
- The ACPS Technology Committee provides formative evaluative feedback about technology.
- ACPS cooperates with the University of Virginia and Longwood University in offering graduate level, educational technology courses on-site with software and hardware requirements for these classes are personalized for the ACPS networks.
- ACPS participates in the Blue Ridge East Consortium group with the DOE competitive grant process. This group meets monthly and concentrates on integrating technology into the curriculum and staff development activities to assist with this process.
- ACPS actively participates in Region 2000 Tech Prep programs and events in coordination with Central Virginia Community College (CVCC).

Goals/Objectives/Strategies

The five essential components of a comprehensive educational technology program are integration, professional development and support programs, connectivity, educational applications, and accountability. Each components overall goals and targets are listed below. A complete analysis of each component is included in Appendix C.

Pillar One: Integration – refers to the appropriate use of specific technologies as highly effective tools in facilitating learning across all levels of cognitive inquiry and development.

Goals:

- Improve teaching and learning through the appropriate use of technology.
- Improve equity in the implementation of technology-enhanced teaching and learning.

Targets:

- a) By July each year, all school administration will report 100% of teachers have met TSIP's.
- b) By July 2004, at least three technology integration partnerships will be established among educational technology stakeholders.
- c) By July 2005, all school administration will create a written vision and plan for the school use and integration of technology.
- d) By July 2005, the district and schools will provide instructional technologists personnel to provide instruction on the integration of technology.
- e) By July 2005, all school administration will create a written evaluation tool for effective instructional uses of technology and evaluate classrooms.
- f) By July 2005, all school administration will create a plan on how collaboration time can be implemented to improve and enrich instruction using technology.
- g) By July 2005, employ personnel to assist teachers in effectively integrating technology.
- h) By July 2005, all school administration will communicate the AUP to 100% of their staff so they can understand and model the acceptable use of technology in teaching and learning.
- i) By July 2006, 100% of school administration will set expectations for the incorporation of the computer/technology standards of learning into teachers and learning activities.
- j) By July 2006, a district plan for hardware and software updates will be in place based on 100 % of state granted money. By July 2009, 100% of the special needs students will have access to assistive technologies when needed.
- k) By July 2006, all schools will report 100% of their teachers who use technology-based intervention strategies to close student achievement gaps.
- l) By July 2006, school administration will report 100% of their teachers who have attended training in the use and curriculum integration of advanced technologies.
- m) By July 2006, all school administration will report at least 70% of their students who are routinely engaged in technology – facilitated learning activities that incorporate one or more of the following characteristics: self-directed learning, multidisciplinary activities, peer collaboration and interaction, and higher-order thinking skills to solve real problems.

- n) By July 2007, all school administration will report at least 50% of their students routinely use technology in a variety of learning activities across the curriculum and the other 50% occasionally use the technology.
- o) By July 2007, employ a full-time instructional technologist to coordinate activities.
- p) By July 2009, all school administration will report at least 90% of their students passed an assessment rubric designed to measure information literacy skills among students.
- q) By July 2009, all school administration will report that 100% of observations and/or teacher's lesson plans show computer/technology standards of learning are being significantly integrated into all curriculum areas.

Pillar Two: Connectivity – includes such concerns as the development of state and school division electronic infrastructures and the supporting software and hardware that would allow all users to have equitable technical access to local, state, and worldwide educational resources.

Goals:

- Ensure that our school division has access to integrated instructional and administrative services across interoperable high-speed networks.
- Ensure sufficient support for ongoing, reliable network operations.
- Provide leadership and resources to promote efficient procurement of infrastructure, including the identification and procurement of emerging technologies.
- Ensure that school divisions have in place network security, filtering, and disaster recovery plans.

Targets:

- a. By July 2004, the division will operate under at least a 10 megabyte wireless Internet connection with higher bandwidth than currently possess.
- b. By July 2004, the school division will utilize both firewall and virus protection software with daily, taped backups and security procedures for staff, students, and administrators.
- c. By July 2004, our local Acceptable Use Policy (AUP) will be reviewed, updated, and accepted as policy. This review will be made annually.
- d. By July 2004, the division will operate under at least a 10 megabyte wireless Internet connection with higher bandwidth than currently possess.
- e. By July 2005, all schools will be using the established protocol for reporting and identifying technical problems.
- f. By July 2005, our division will develop a plan of policies and systems for appropriate and effective network and data security.
- g. By July 2005, each school will report the use of standards-based technology for instruction and administration.
- h. By July 2005, the division will operate under a 54 megabyte wireless LAN for internal connections.
- i. By July 2005, the division will establish a purchase schedule for upgrade, replacement, and purchase of new equipment. This purchase schedule will include a total cost of ownership (TCO) study.

- j. By July 2005, technology procurement guidelines will be reviewed, adopted, and used for all hardware and software purchases and consulting services.
- k. By August 2005, the school division will conduct annual workshops to inform the staff of emerging technologies.
- l. By July 2006, the division will employ additional support personnel, with the necessary skills and training, to operate and support the infrastructure, network, and repair servicing.

Pillar Three: Professional Development – covers both pre-service and in-service training with a specific focus on the Virginia Technology Standards for Instructional Personnel (TSIP’s).

Goals:

- Establish partnerships for identifying and delivering effective technology training to assist our staff as they help students achieve high academic standards.
- Administer grant programs and financial assistance initiatives that support implementation of educational technology integration.
- Establish and maintain instructional technologists in our school division.

Targets:

- By July 2004, the division will have at least 95% of its personnel updated on the Technology Standards for Instructional Personnel (TSIP’S).
- By July 2005, the division will require all administrative staff and leadership personnel to attend at least one technology leadership conference or workshop annually.
- By July 2005, the division will participate in two grant programs annually that support educational technology.
- By July 2006, the division will coordinate 2 new workshops a year, offered by various entities and provided in a variety of topics and delivery methods.
- By July 2007, the division will offer at least 10 educator training programs a year available to 100% of the staff to reflect pre-service coursework and experiences that include effective approaches to integrating technology into K-12 education.
- By July 2009, the division should employ full time, qualified instructional technologists’ position to assist in developing, communicating, and implementing instructional technology.

Pillar Four: Accountability – addresses the broad assessment of information technology and its specific value to teaching and learning environment, data management, and decision support functions related to K-12 schools.

Goals:

- Assess the value that information technology (IT) adds to teaching and learning environments.
- Provide appropriate decision support capabilities for all stakeholders.
- Assess information technology (IT) literacy.
- Ensure that our local technology plan is consistent with the state technology plan.

Targets:

- By July of each year, the division will evaluate and update the progress and effectiveness of the technology plan.
- By July 2004, the division will have a technology plan consistent with components of the state technology plan.
- By July 2006, each school will develop an evaluation tool, including specific elements of technology integration, to use in staff evaluation.
- By July 2006, at least 80% of students tested in Computer/Technology SOL assessment will pass.
- By July 2006, each school will have a technology plan consistent with components of the division technology plan.
- By July 2006, each school will develop a school-site technology readiness profile based on the DOE created rubric.
- By July 2007, every school will analyze and assess 100% of their classrooms to determine the level of technology integration implementation.
- By July 2007, the school division will host a data warehousing system for student data to track student learning progress and correlate to technology-rich environments.
- By July 2007, the school division will determine how to assess the decision-support value of Information Technology in the school division.
- By July 2009, at least four correlation studies will be conducted to research how technology-rich environments and effective technology-based instructional strategies support higher student achievement.
- By July 2009, annual evaluation of instructional staff will show 100% to be technology literate.
- By July 2009, annual evaluation of paraprofessionals and support staff will show 100% to be technology literate.
- By July 2009, 100% of students/classrooms will utilize technology as a learning tool within the context of their subject and grade level.

Pillar Five: Educational Applications – relate to the instructional and administrative applications that will run over the infrastructure “highway” referenced in the Connectivity element.

Goals:

- Improve teaching and learning through the appropriate use of network-accessible educational applications.
- Promote and develop web-based applications, services, and resources
- Offer digital learning opportunities for our division.

Targets:

- By July 2006, the division will operate its SASI student data base in correlation with the DOE system and establish a common set of data definitions for student information systems.
- By July 2007, the division will identify at least four learning resources that effectively support the Virginia Standards of Learning (SOL’s).
- By July 2007, all schools will be “Certified” to participate in the web-based SOL Technology Initiative.

- By July 2008, all schools library media centers will be up-to-date with the following characteristics: automated card catalog, automated circulation system, and access to an electronic reference system and the Internet.
- By July 2009, the division will utilize a web-based data warehousing system for collection and reporting.
- By July 2009, the division will host a web-based program to provide community access to school-based technology, data, and applications.
- By July 2009, all schools will have teleconferencing and/or distance learning capabilities.
- By July 2009, the division will develop a plan for the utilization of public television digital broadcast informational and programming services.

See Appendix C for a detailed outline of all Goals, Targets/objectives, and Strategies for our school division.

Fiscal Analysis

- Based on VPSA Grant Funds of ~180,000.00 a year from DOE (including local contribution) – all estimations
- Based on minimal replacement and maintenance need – does not include extra activities/programs

VPSA

Local Effort

04-05

2 Wireless labs (AMS/AES) - ~80,000
 Infrastructure (servers, radios, switch) ~50,000
 55 Teachers/Computers – (~900 each) ~50,000
 (Need ~40 AES, 30 APS, 35 AMS, 35 ACHS) = 140

140 – 55 = 85 computers = ~77,000
 Lab 224 – ACHS (rotation)

05-06

ACHS 224 ~25,000
 AMS 512 ~25,000
 Update Earthwalk wireless ~40,000
 AES 206 ~25,000
 AMS labs – updated for SOL on-line testing

AMS labs updated for on-line testing

06-07

APS lab ~25,000
 AMS 206 and 107 ~25,000
 AES 201 and 204 ~25,000

07-08

ACHS 314 ~25,000
 6 servers (~4000.00 each) ~25,000
 ACHS 226 and 224 ~50,000
 ACHS 302 and 301 ~50,000
 Update ACER wireless ~40,000

Labs updated

08-09

AMS – Business lab ~25,000
 ACHS 304 and 305 ~50,000
 AMS and AES wireless ~80,000

09-10

Wireless Radios ~30,000
 140 teacher computers ~140,000

Teacher computers updated

**Additional funds are available for professional development activities from the Ed. Tech Formula grant (~11,000.00 a year) and the Ed. Tech Competitive grant (workshops, equipment, and stipend monies through Martinsville as fiscal agent). We estimate (based on figures from our 2003 Annual School Report) that we spend almost \$800,000.00 per year in the category of

technology – for hardware, software, professional development, etc... Our school division projects that we will spend an additional 5% each year for the next six years on technology.

Review of Accomplishments

2002-2003

- Maintained SOL on-line testing certification for High School – obtained January 2001
- Replaced lab workstations with Pentium IV computers and Windows XP operating system in Lab 301, 302, 226, 314.
- Replaced servers at each school and district (5 purchased)
- Built a more up-to-date, informative website
- Provided teacher training relative to the Technology Standards for Instructional Personnel as needed
- Purchased a wireless lab for the High School
- Continued purchase of software and teacher training to support teaching the Standards of Learning
- Hired a computer technician for summer, temporary assistance
- Continued to purchase classroom workstations, AV computers, scanners, digitizing cameras, LCD systems, video projection systems, video microscopes, and laser video disk systems.
- Continued to provide building level technology in-service
- Updated media centers with Follett software
- Updated Drafting lab with AutoCad 2004
- Installed Deep Freeze software in labs 302 and 305 at ACHS
- Purchased Administrative Personal Data Assistants (PDA's) – handhelds for security use with SASI
- Purchased Tablets for administrative and training purposes (seven total purchased)
- Purchased four whiteboards for use in training at each school
- Built and updated a new division web site.

2003-2004

- Updated SASIxp and Classxp to Version 5.5 and provided training
- Established a schedule for Technology Tuesday training for staff development
- Upgraded wide area network with new radio connections at 11 megabytes
- Established wireless internet connection (Compusec) at 10 megabytes or higher
- Purchased new computers and software modules for middle school technology lab.
- Replaced Windows Server and built website server
- Purchased four laptops, four projectors, and several printers for each school.
- Replaced lab Business 207 at Middle School
- Installed Deep Freeze on ACHS labs 224, 226, 301, 314, and 304 – and on AMS labs 107, 206, 207, and 512
- Updated Technology Lab at AMS
- Purchased three Quizdom learning units for each grade level at AMS
- Scheduled Technology Tuesday training to include MarcoPolo, ANGEL, Videostreaming, etc...
- Purchased and implemented alternative reading program for students with disabilities called Failure Free Reading

Horizons

In planning for the purposeful use of new and emerging technologies, a stable infrastructure, quality professional development, and the resources to support them, we must remember how difficult it is to predict the future. No one person or group of people can weigh which technologies will ultimately take root in education or how these applications will evolve, but each possibility must be considered.

- Deploy a streaming content server
- **Set up a Voice over IP system**
- Maintain a web-based data warehouse
- Identify a better web-based communication system for parents – to include grades, test scores, and daily activities – to ensure standards for NCLB
- Expand video conferencing capabilities for professional development and student learning at each school site
- Set up a distance learning lab with at least the following:
 - T-1 line or higher wireless bandwidth
 - Computers
 - Television/monitors
 - Cameras
 - Elmo camera
 - Fax/copier
 - Server cabinet
 - Microphones
 - Speakers
 - White board
- **Set up a wireless electronic school board**
- Set up wireless environments in our school systems to include:
 - Access points in each school
 - Individual laptops/notebooks for faculty and students
 - E-books access – textbooks in .pdf format
- Expand assistive technology to include digital voice recognition and other useful tools – text readers and augmentative communication
- Digital Video Media on Demand system set-up
- Elementary report cards

Local Technology Policies and Guidelines

File: IIBEA

ACCEPTABLE COMPUTER SYSTEM USE

The School Board provides a computer system, including the internet, to promote educational excellence by facilitating resource sharing, innovation and communication. The term computer system includes hardware, software, data, communication lines and devices, terminals, printers, CD-ROM devices, tape drives, servers, mainframe and personal computers, the internet and other internal or external networks.

All use of the Division's computer system must be (1) in support of education and/or research, or (2) for legitimate school business. Use of the computer system is a privilege, not a right. Any communication or material used on the computer system, including electronic mail or other files deleted from a user's account may be monitored or read by school officials.

The use of non-school owned technology equipment to connect to the school division Internet connection is strictly prohibited without the written permission of the Director of Career and Technology Education.

The Division Superintendent shall establish administrative procedures, for the School Board's approval, containing the appropriate uses, ethics and protocol for the computer system. The procedures shall include:

- I. a prohibition against 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. provisions, including the selection and operation of a technology protection measure for the division's computers having Internet access to filter or block Internet access through such computers, that seek to prevent access to
 - child pornography as set out in *Va. Code* § 18.2-374.1:1 or as defined in 18 *U.S.C.* § 2256;
 - obscenity as defined by *Va. Code* § 18.2-372 or 18 *U.S.C.* § 1460; and
 - material that the school division deems to be harmful to juveniles as defined in *Va. Code* § 18.2-390, material that is harmful to minors as defined in 47 *U.S.C.* § 254(h)(7)(G), and material that is otherwise inappropriate for minors;
- III. provisions establishing that the technology protection measure is enforced during any use of the Division's computers by minors;
- IV. provisions establishing that the online activities of minors will be monitored;
- V. provisions designed to protect the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications;
- VI. provisions designed to prevent unauthorized online access by minors, including "hacking" and other unlawful activities by minors online; and
- VII. provisions prohibiting the unauthorized disclosure, use, and dissemination of personal information regarding minors.

Use of the School Division's computer system shall be consistent with the educational or instructional mission or administrative function of the Division as well as the varied instructional needs, learning styles, abilities and developmental levels of students. The Division's computer system is not a public forum.

File: IIBEA
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Each teacher, administrator, student and parent/guardian of each student shall sign the Acceptable Computer System Use Agreement, IIBEA-E2, before using the Division's computer system. The failure of any student, teacher or administrator to follow the terms of the Agreement, this policy or accompanying regulation may result in loss of computer system privileges, disciplinary action, and/or appropriate legal action.

The School Board is not responsible for any information that may be lost, damaged or unavailable when using the computer system or for any information retrieved via the Internet. Furthermore, the School Board will not be responsible for any unauthorized charges or fees resulting from access to the computer system.

The Division Superintendent shall submit to the Virginia Department of Education this policy and accompanying regulation biennially.

Adopted: February 19, 1998
Revised: September 17, 1998
Revised: December 13, 2001
Revised: January 17, 2002
Revised: May 15, 2003

Legal Refs: Code of Virginia, 1950, as amended, §§ 18.2-372, 18.2-374.1:1, 18.2-390, 22.1-70.2, and 22.1-78.

18 *U.S.C.* §§ 1460, 2256.

47 *U.S.C.* § 254.

Appendix A

Needs Assessments:

- **Student Group**
- **Parent Group**
- **Teacher/Support Staff**
- **Administration**

Survey results – On-line assessment tool:

A needs assessment was conducted in spring 2004 for teachers/support staff and administrators:

- teacher/support staff assessment (completed by 121 teachers & support staff) = 121/194 = 62% response rate
- administrator assessment (completed by 12 personnel) = **12/14 = 86% response rate**
- Plans are being made to conduct a student and parent survey for fall 2005.

Teachers reported that:

- 19% feel they need additional training in TSIP #1 – basic computer functions
- 58% need additional training in TSIP #2 – technology terminology
- 53% need additional training in TSIP #3 – productivity tools for professional use
- 27% need additional training in TSIP #4 – electronic access and exchange of information
- 41% need additional training in TSIP #5 – use technology-based resources
- 59% need additional training in TSIP #6 – use technology for data collection and analysis
- 29% need additional training in TSIP #7 – plan and implement integrated lessons
- 4% need additional training in TSIP #8 – demonstrate ethical and legal knowledge of technology
- 35% of teachers are at least “somewhat interested” in teaching an online or interactive TV course.
- 4% of our staff do not have computers at home
- 35% have two or more computers at home
- 62% have internet access at home
- 68% of our staff use the county web site occasionally and 7% never use it
- 88% report they have been adequately trained in computer technology
- 54% of staff feel the number of the computers in the class are about right to plentiful
- 82% report that the number of the computers in the labs are about right to plentiful
- 67% of staff feel the age/speed of computers is adequate to new/speedy
- 92% report that the computer skills students learn in their school is about right for age

Administrators reported that:

- 8% need additional training in TSIP #1 – see above descriptions
- 33% need additional training in TSIP #2
- 75% need additional training in TSIP #3
- 0% need additional training in TSIP #4
- 25% need additional training in TSIP #5
- 67% need additional training in TSIP #6
- 58% need additional training in TSIP #7
- 0% need additional training in TSIP #8
- 42% of administrators are at least “somewhat interested” in teaching an online or interactive TV course.
- 100% of the staff surveyed have computers at home
- 67% have two or more computers at home
- 75% have internet access at home
- 83% of our staff use the county web site occasionally
- 67% report they have been adequately trained in computer technology

- 83% of staff feel the number of the computers in the class are about right to plentiful
- 75% report that the number of the computers in the labs are about right to plentiful
- 67% of staff feel the age/speed of computers is adequate to new/speedy
- 100% report that the computer skills students learn in their school is about right for age

Appendix B

Network and E-rate Update

E-Rate Responsibilities

This section of our educational technology plan documents the library service strategy of school improvement purpose of requested telecommunications services and Internet access under the Universal Service Program. We understand that for a technology plan to qualify as an approved plan for a universal service discount, the plan must meet the following criteria:

- Establish clear goals for using telecommunications to improve education
- Include a professional development strategy
- Include assessment needed to improve education
- Provide for a sufficient budget
- Include an evaluation process

We are confident our educational technology plan meets all necessary criteria, however, for the purpose of planning; our division has the following needs under the three specified areas covered by e-rate.

Telecommunications

- Local and toll services
- Long distance service
- Cellular service
- Paging service
- T-1 services

Internet Access

- Wireless Internet access
- Dial-up Internet access
- T-1 service
- Wireless WAN service
- Email service

Internal Connections

- Maintenance for switches for wireless network
- Local area network (LAN) connection
- Gigabit switches, ports, hardware, installation and maintenance

E-Rate Policies

Children's Internet Protection Act Requirements

Overview of CIPA

The Children's Internet Protection Act (CIPA) was signed into law on December 21, 2000. Under CIPA, no school or library may receive discounts unless it certifies that it is enforcing a policy of Internet safety that includes the use of filtering or blocking technology. This Internet Safety Policy must protect against access, through computers with Internet access, to visual depictions that are obscene, child pornography, or (in the case of use by minors) harmful to minors. The school or library must also certify that it is enforcing the operation of such filtering or blocking technology during any use of such computers by minors. The law is effective for Funding Year 2001 (07/01/2001 to 06/30/2002) and for all future years. Schools and libraries receiving only Telecommunications Services are excluded from the requirements of CIPA. In general, local communities are responsible for determining what constitutes prohibited material and appropriate actions by schools and libraries.

The following requirements have been fulfilled:

- Technology Protection Measure is established – current content filtering software and anti-spam software is updated annually.
- Internet Safety Policy is established – annually our district Acceptable User Policy (AUP) is updated and signed by all staff and students.
- Public Notice and Hearing held – via our school board meetings, our policies and procedures are adopted and the public is informed.

Elements of ACPS Network Security

1. Anti-virus software

Each computer and server is protected by Symantec/Norton Antivirus software.

2. Firewall protection/content filtering

We currently utilize a Pix Firewall hardware and N2H2- Bess content filtering software solution.

3. Data backup

Each server completes a back up weekly. Each backup tape is taken off campus with Network Administrator weekly.

MBGUI backed up each night to tape. Daily backups to CD, one CD off site with Clerk.

4. E-mail/SPAM

Gee Whiz software product is used to control unnecessary mail. GroupWise 6.5 is the current version of email utilized by all staff.

5. Passwords

Network passwords are maintained by the Network Administrator. This record of passwords is held at Central Office by the School Board Clerk. This record is updated annually by August 1 of each year. Each school maintains a secure record of passwords for their staff and the Director of Careers and Technology maintains a record of passwords for district administration and support staff.

MBGUI – each user has unique user ID as well as password. The Director of Business has a copy of each password. Limited access to this program.

6. Operating Systems

Novell 6.0 on all servers

- SBO – Dell Poweredge – purchased on 11/03
- ISA Server 200 software kit – purchased on 11/03
- MBGUI – Linux 7.3 (SuSe) – Dell Poweredge 1400SC – purchased 7/02

Windows XP on most labs and administrative computers

Windows 98 on most classroom computers and some lab computers

Windows 95 on some classroom computers

Created July 2003
Modified May 2004

Technology Support Plans/Needs

Item	Type	Vendor
Novell 6.0	Operating System	Package: Novell, GroupWise, and Zenworks
Cisco	Equipment - owned	Pix Firewall Router 3550 – AMS 3508 – APS 3508 – AES 3750 – spring 2004 - ACHS
Janus School Internet Dial-up	Internet	CentralVA.net
Janus Filtering	Software- desktop	8e6 software
Verizon	Phone System	Centrex trunk system Key system for each facility
Pagers (2)		Wireless Solutions
Content Filtering	Software – hosted on Windows 2000 server	N2H2 – Bess
Anti-virus	Software	Symantec/Norton

Email filtering - spam	Software	Gee Whiz
Firewall	Equipment	Pix Firewall
Administrative	Software	Ghost
		Deep Freeze
		Power Chute Business 6.22 ed. – 25 nodes
		Solarwinds.net
	Microsoft Office suite products and operating systems	Microsoft Licenses and software assurance packages Old = Dell New = PCI Mall
SASI	Student Data Base	Version 5.5 in Fall 2003
SASI	VA User Group	Annual meeting and training
SASI	Technical Support	Weidenhammer
MBGUI – Linux OS	Accounting package	RDA Systems - Canton, GA
ALI	Platinum agreement support services	Support service

Item	Type	Vendor
AES/AMS	Software	Compass Learning/Jostens
AES	Software	Compass Learning
AES	Software	Renaissance Learning/Accelerated Reader
ACHS	Software	Filemaker Pro/ Verified Credits
All Schools	Software	World Book on-line
ACHS	Software	NetOp
Special Ed.	Software	Failure Free
Special Ed.	Software	Kurzweil 3000
FARMA Café Term	Free and Reduced Meals	Data Business, VA Beach
Café Term	Point of Service software	Data Business, VA Beach
All schools	Software support	Follett systems – media centers

Appendix C

Pillar Tables of: Goals Targets/Objectives Strategies

Appendix D

Terminology

Terminology

ACHS.....	Appomattox County High School
ACPS.....	Appomattox County Public Schools
AES.....	Appomattox Elementary School
AMS.....	Appomattox Middle School
ANGEL.....	A New Global Environment for Learning
APS.....	Appomattox Primary School
CVCC.....	Central Virginia Community College
DOE.....	Department of Education
Jostens/Compass.....	Software company – used at AES and AMS
LAN.....	Local Area Network
NCLB.....	No Child Left Behind
NTTI.....	National Teacher Training Institute
RSCPS.....	Regional partnerships with PBS TV stations and education
SASI.....	Student Information System Database
SOL.....	Standards of Learning
SVRTC.....	Southside Virginia Regional Technology Consortium
TCO.....	Total Cost of Ownership
TSIP's.....	Technology Standards of Instructional Personnel
VPSA Grant.....	Virginia Public School Authority
WAN.....	Wide Area Network