

# *Bath County Public Schools*

## **Technology Plan**

**June 2004**



# Bath County Schools Technology Plan

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VES 3<sup>rd</sup> graders using the new & improved CCC lab  
-3/22/04

# **Bath County Schools Technology Plan**

## **Mission Statement**

With the use and establishment of school-wide technology infrastructure and networks, instructional multimedia, telecommunications, online access to libraries and schools, teacher training, integration of Virginia's Computer/Technology Standards into content areas, and well-equipped and maintained hardware and software, the Bath County Public School Division will enhance teaching and learning to prepare students for the 21<sup>st</sup> century.



## **Philosophy**

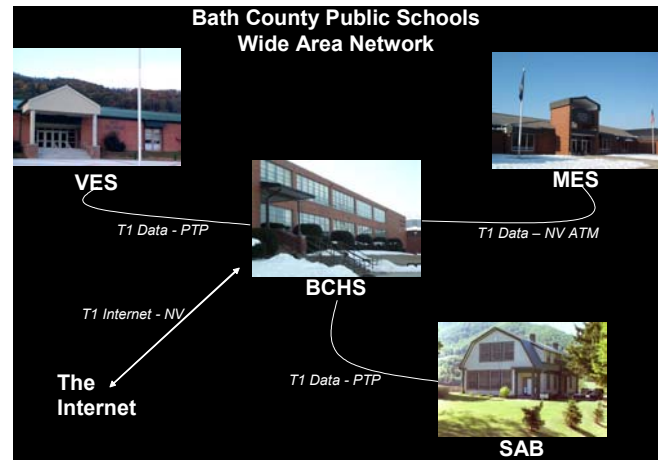
Bath County Public Schools believes all children and youth should have access to technology with integration into content areas. Availability of and access to appropriate technology is essential to developing the total child and preparing a student for lifelong learning. Students with adept skills in using computers and multimedia electronic resources in combination with good problem-solving skills are on a pathway to success. Bath County Public Schools will continue to provide a classroom environment in which relevant and meaningful learning will occur. The integration of technology skills into all curricular areas and successful completion of state Standards of Learning will ensure a more appropriate educational experience for all students, K-12.

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## Current Status of Technology

Bath County Public Schools includes two elementary schools and one high school situated in a rural community in the west central highlands of Virginia, with a mountain separating one elementary school from the other sites. Total school division enrollment is approximately 800 students.

The school division has established a wide area network between the three schools and the school administration building, with the high school as the network center. All buildings are connected via T1 data lines. T1 internet connection is provided via Network Virginia. Email, web hosting, content filtering, virus protection and intranet services are provided with division technology resources. While switches serve the primary network traffic distribution role in all buildings, there are a couple of network hubs still in use at the elementary schools.



The local school board has had in place an Acceptable Use Policy since 1996 to help guide appropriate computer/internet use of students and staff. Students are only allowed to access school technology if an Acceptable Use Policy form is signed by both the student and a parent/guardian and on file at the school. All division staff who use computers are also required to sign the Acceptable Use Policy.

Bath County Public Schools has nearly 400 network/internet connected computers in classrooms, computer labs and offices. Each building has a primary server, while specific task servers are located at the high school. Division-wide, the primary hardware goal for the 2003-04 school year was to purchase enough new workstations so that only Pentium II and newer machines were in classrooms and other more demanding service locations. Older Pentium I computers are still in use, though limited to roles where less computer power is necessary, such as school writing labs. The typical lifespan of computers in the school division is 8 to 10 years.

A major emphasis in the past year has been to improve security procedures and virus protection. While much progress has been made, the continued worldwide threat continues to increase as well, making system security a continued need.

The only major department of the school division that is not currently supported with computer technology is Pupil Transportation. Plans are underway to provide technology resources and support to the transportation supervisor in the fall of 2004.

## Bath County Schools Technology Plan

Although the Virginia Department of Education no longer formally evaluates student technology competencies within the standardized assessment program, teachers and staff continue to provide students with varied technological experiences to ensure competency with state standards. Students in Bath County Public Schools use technology in multiple ways throughout the school day, including:

- research through internet, media center database and software resources
- use of productivity tools such as word processing, spreadsheet, desktop publishing and presentation software for classroom projects
- direct instruction in the integrated learning system labs and high school business/technology labs
- reinforcement of skills with drill & practice and simulation software programs
- assessment with the Accelerated Reader program
- participation in the online standards of learning assessment program
- development of web pages for the school

Teachers and staff participate in staff development activities, including college coursework, workshops, conferences and self-paced independent study. While much of the recent effort has been concentrated to ensure mastery of technology standards for instructional personnel, other staff members have received staff development in more specific areas of study. Teachers and staff use computer technology in multiple ways, including:

- communication with parents and staff through email
- attendance, gradebook and other recordkeeping functions
- research through internet, media center database and software resources
- use of productivity tools such as word processing, spreadsheet, desktop publishing and presentation software
- access to a structured web development resource for classroom information & assignments
- access to intranet resources/information, including fillable forms in Acrobat Reader format
- development of web pages for the school

Continued staff development activities related to the technology standards for instructional personnel is necessary to ensure that teachers go beyond basic skills to a more complete integration of technology into the curriculum. Through the divisionwide goals-setting process in the 03-04 school year, staff members indicated a need for continued emphasis in this area.



A layered network of technology support services has been established through the years, providing a cost-effective means for problem-solving. Unlike the early days of school computing, much of the support needs of users is now



## Bath County Schools Technology Plan

software/application based. In addition, while computer use ten years ago was limited to specific tasks, computer applications have now found their way into much of what ALL staff members do each day. As a result, experienced teachers and staff provide valuable support for their colleagues each day. When additional assistance is necessary, the division has secured specialized telephone support for a number of mission-critical systems such as student records, school activity funds, media center applications, food service, payroll and accounts payable. Building level computer coordinators are the next line of assistance. These employees have full time responsibilities in other areas, so are paid for additional time worked on technology support. Other building level support is provided by paid student technology assistants who complete work orders assigned by building coordinators and principals. This valuable support takes advantage of the wealth of knowledge and problem-solving skills that these responsible students possess. Additional staff and student technology assistant resources have been developed in the Spring of 2004, in response to increased need for assistance. The division technology director provides training and support to the building level technology support personnel, as well as assistance to individual users when necessary. The most complex installation/setup/support tasks are performed by network engineers and other specialists under contract with the division on an as-needed basis.

Presently, *Millboro Elementary School*, a school of nearly 200 students in grades K-7, has in place a school wide infrastructure—voice, video, and data lines to each classroom. All classrooms have network/internet connected multimedia computers for student and staff use (see computer network diagram on page 9). In addition, an integrated learning computer lab staffed by a computer lab manager receives students daily for reading/language arts and mathematics instruction & drill. This lab received a major software upgrade in Spring 2004. Library resources are cataloged on an electronic database accessible through workstations in the library, as well as classrooms and administrative offices. These lab workstations also have internet access for student work/research. Two mobile computer lab carts are each equipped with fourteen notebook computers that have access to the internet and network resources, and are used for student research, word processing, multimedia projects, web development and faculty inservice. The school web site is developed and maintained by an enthusiastic group of students that meets after school with the building computer coordinator. Administrative staff and the school



counselor have network access to the electronic student records system (currently used for demographic information management and attendance). Classroom teachers have access to an electronic gradebook program to assist with management of student grade information. Special education staff utilize a network database system for developing and reporting student data. A comprehensive food service software management system was introduced in the Fall of 2004.

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**Valley Elementary School**, grades K-7, has an enrollment of just over 300 students and recently completed a major expansion and renovation of the physical plant. The project included school-wide wiring for voice, video and data, and a technology lab room. All classrooms have network/internet connected multimedia computers for student and staff use (see computer network diagram on page 10). In addition, an integrated learning computer lab staffed by a computer lab manager receives students daily for reading/language arts and mathematics instruction & drill. This lab received a

major software upgrade in Spring 2004. Library resources are cataloged on an electronic database accessible through workstations in the library, as well as classrooms and administrative offices. These workstations also have internet access for student work/research. Two mobile computer lab carts are each equipped with fourteen notebook computers that have access to the internet and network resources, and are used for student research, word processing, multimedia projects and faculty inservice. An after-school student group has begun to develop the school website. Administrative staff and the school counselor have network access to the electronic student records system (currently used for demographic information management and attendance). Special education staff utilize a network database system for developing and reporting student data. A comprehensive food service software management system was introduced in the Fall of 2004.



**Bath County High School and Mertz Career & Technical Center** provide services for all county students in grades 8-12 with an enrollment of nearly 300. All classrooms and offices have multimedia computers with network/internet access (see computer network diagram on page 11). There is in place a school-wide technology infrastructure—voice, video, and data lines to each classroom. All classrooms have network/internet connected multimedia computers for student and staff use. The school provides a resource computer lab with network/internet connected multimedia computers for various instructional uses of individual students or small classes/groups. Three business/technology computer labs provide excellent



resources for student instruction, with three labs of 16 network/internet connected multimedia computers. Two mobile computer lab carts are each equipped with fourteen notebook computers that have access to the internet and network resources, and are used for student research, word processing, multimedia projects, and faculty inservice. The high school home page is

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maintained by students in one or more technology classes, while certain faculty members are beginning to develop a web presence for their content areas. All school staff have network access to the electronic student records system (currently used for demographic information management, attendance, scheduling, and grade reporting). All teachers use an electronic gradebook program that is used to manage grades and provide interim progress reports to parents. Special education staff utilize a network database system for developing and reporting student data. A comprehensive food service software management system was introduced in the Fall of 2004.

Students in need of alternative education services participate in a home or school-based program that provides individualized instruction via the internet. Project Return has provided a number of multimedia computers and software licenses over the past several years.

Great emphasis has been placed on a successful transition to online End-of-Course Standards of Learning tests. All BCHS/MCTC computer labs were used in Spring 2004 as the online testing program became fully operational. The program has been well-received by both students, and staff.

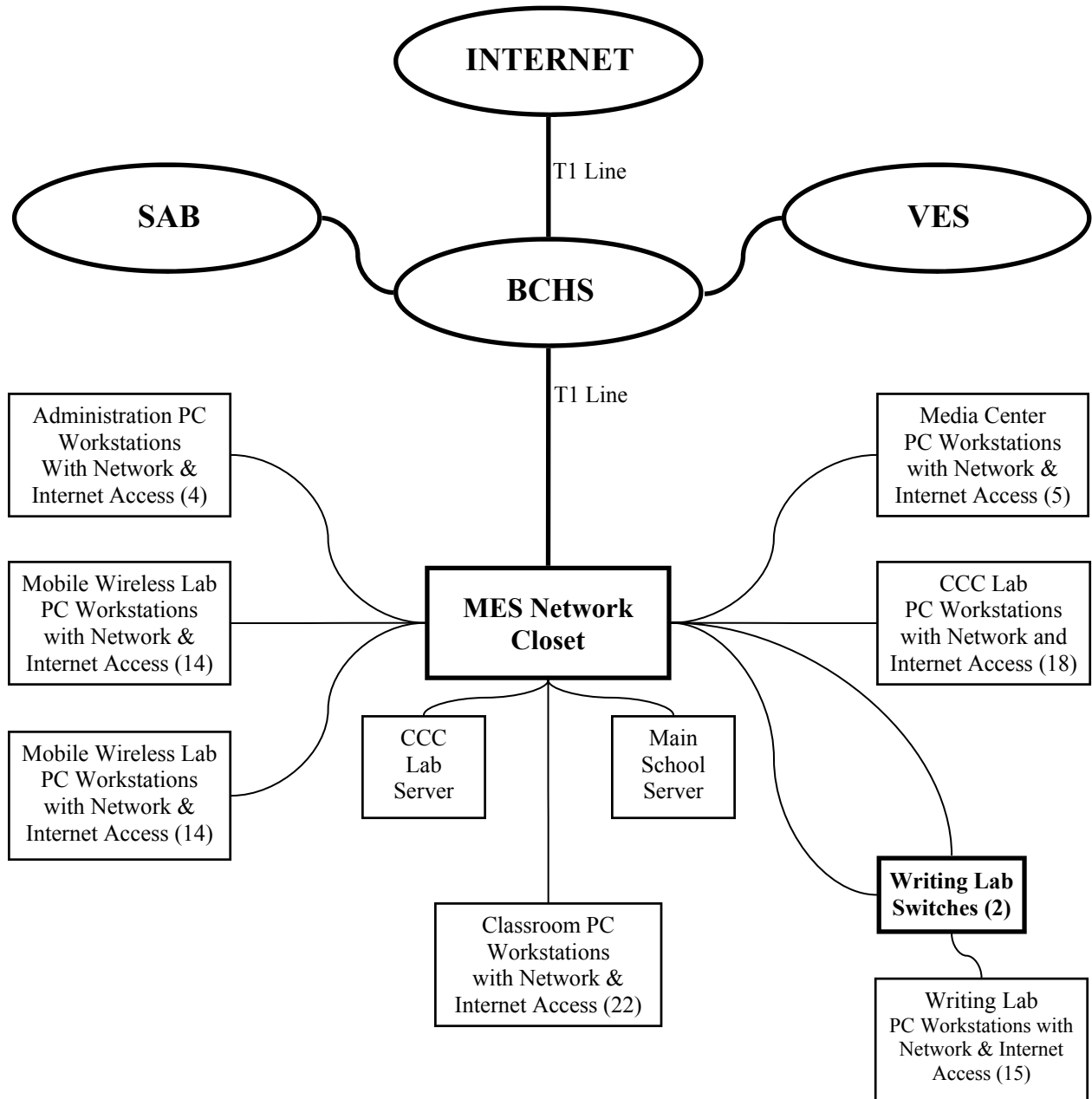


The high school has successfully implemented a compressed video distance learning program since 2002. Presently, four dual enrollment classes are provided by the local community college to BCHS juniors and seniors. The core component of the current VTEL (ATM-.321) compressed video equipment is aging. Plans are underway to upgrade to a new system (IP-.323) in the Fall of 2004. Much of the existing equipment should continue to provide good service for several years.

All offices in the **School Administration Building** have multimedia computers with network/internet access (see computer network diagram on page 12). A comprehensive payroll and accounts payable computer software system is in place. Central office personnel have implemented web-based reporting systems for much of the data/reporting requirements from the department of education, including new reporting requirements of the No Child Left Behind Act. Web development is increasingly distributed among several staff members with responsibility in that particular content area (e.g. personnel: job opportunities, central office secretary: division monthly calendar & school menus). The technology director provides training and support to these new 'webmasters,' while also continuing to develop other web and intranet resources. Personnel office staff continue to work toward development of an online school board policy manual.

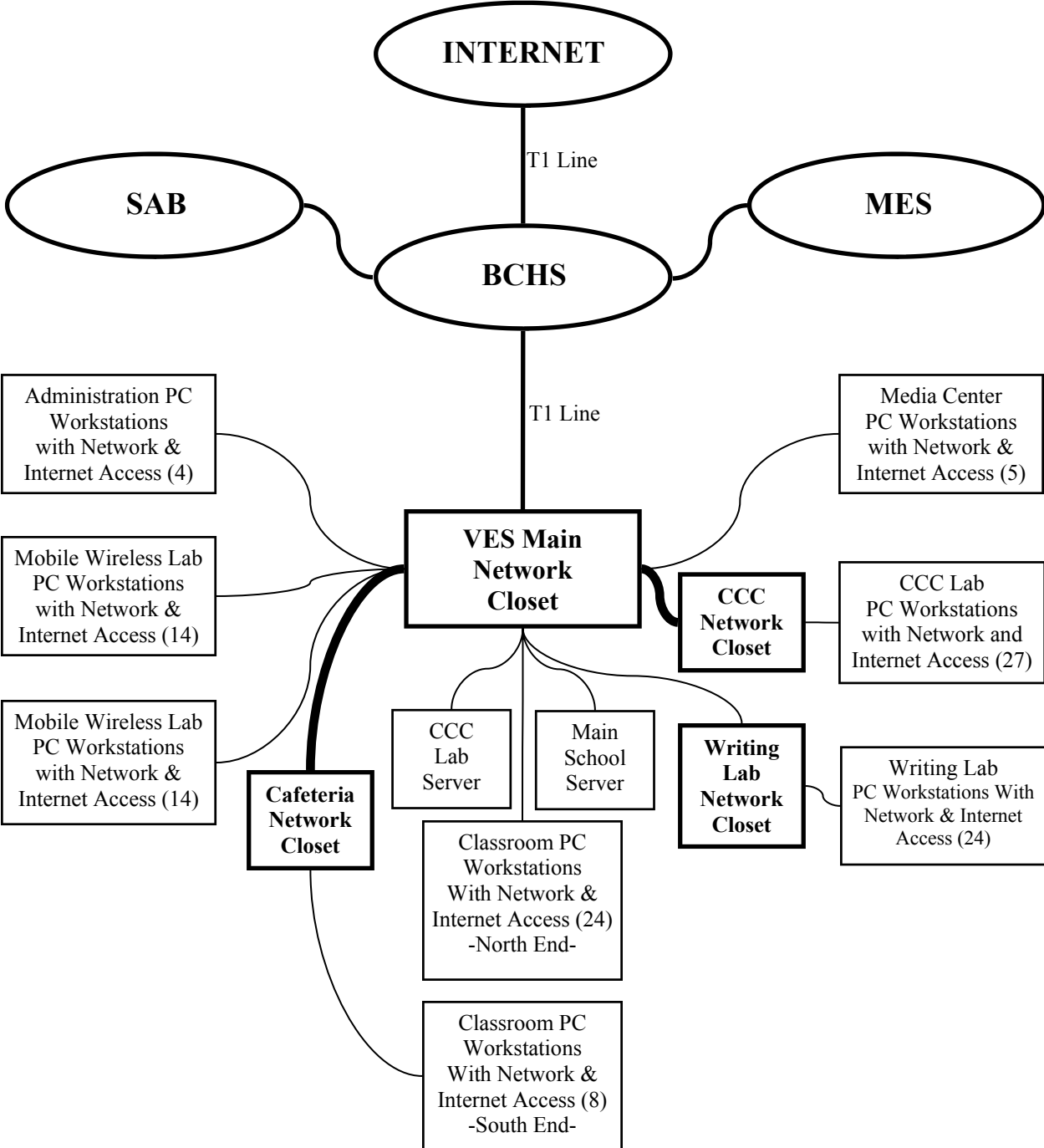


# Millboro Elementary School Computer Network June 2004

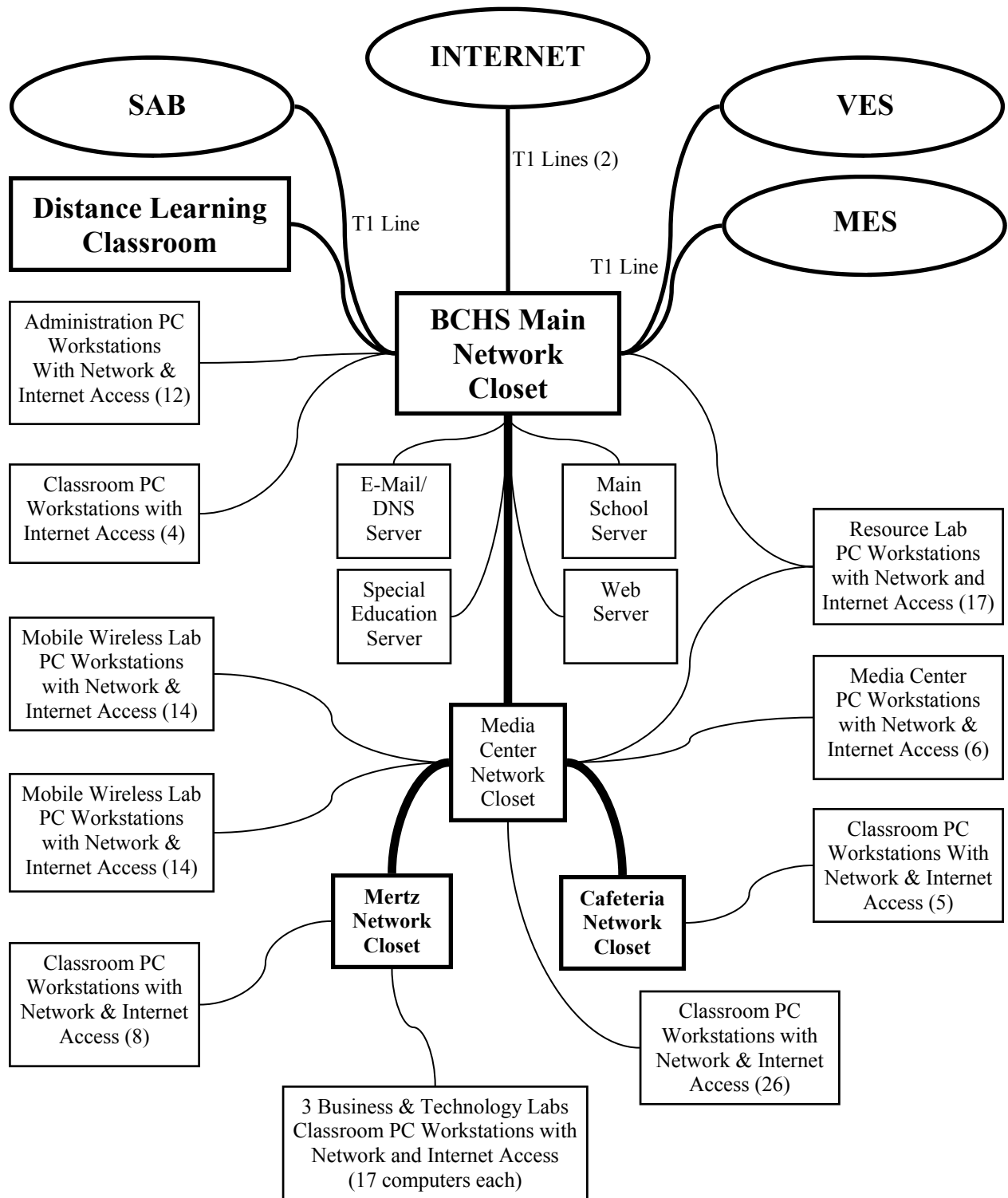


# Valley Elementary School Computer Network

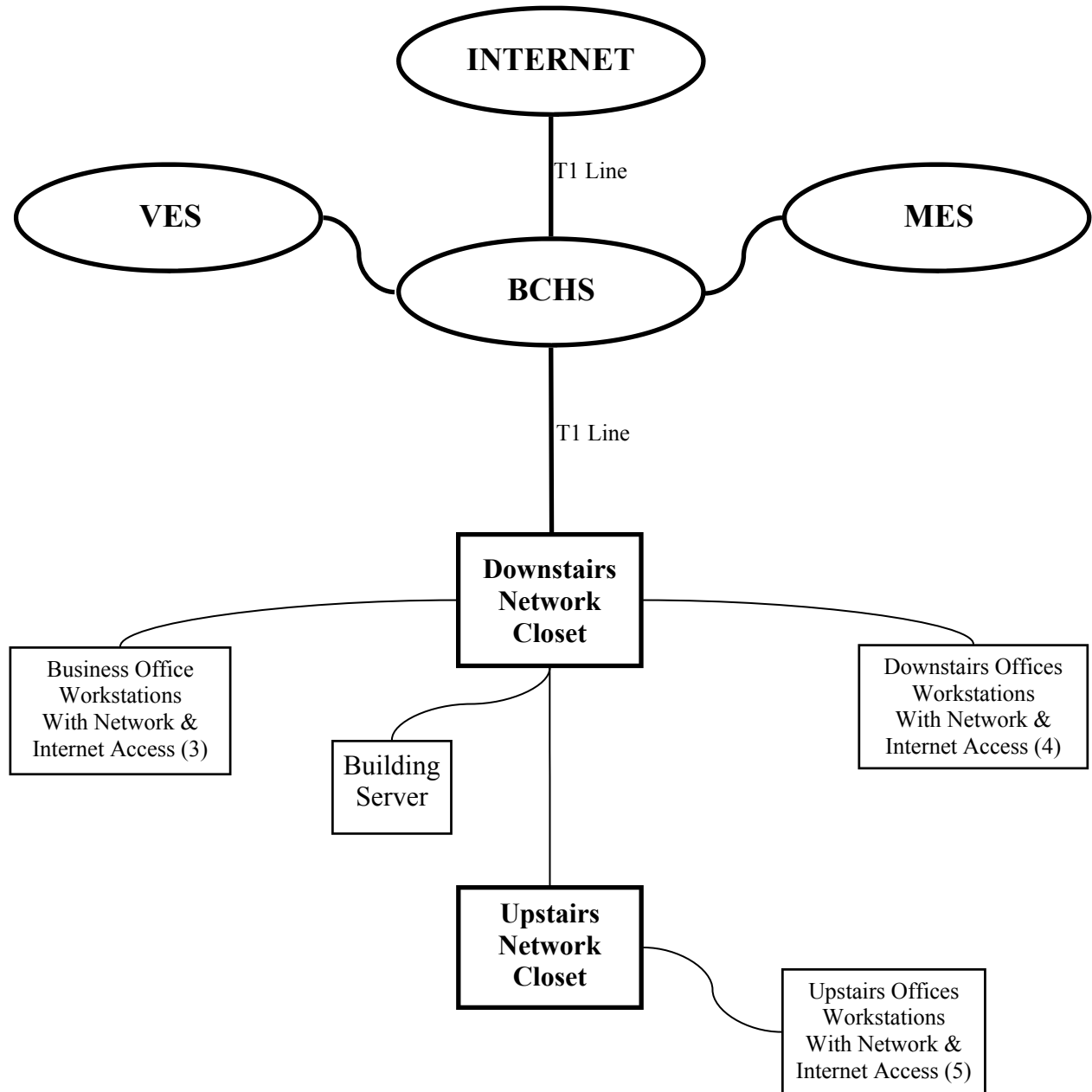
## June 2004



# Bath County High School Computer Network June 2004



# School Administration Building Computer Network June 2004





# Bath County Schools Technology Plan

## Major Projects

Each school year has its own special challenges and opportunities in educational technology. Much in the world changes with time; a large proportion of that change is due to developments with technology. K-12 educational institutions must keep pace with this change if they are to be successful in preparing students for postsecondary education, careers and even daily life tasks that continue to integrate technology. While there are new projects, initiatives and opportunities that come about each year, other technology services are carried over from year to year as we become increasingly dependent upon technology to succeed.

Major technology projects for the 2003-04 school year included:

- Classroom workstation replacements for machines operating below the Pentium II level.
- Additional portable computers for high school and middle school students.
- Staff Development regarding the Technology Standards for Instructional Personnel.
- Revision of the division Technology Standards Assessment process and test .
- Technology Standards Certification of all licensed staff members whose renewal was due in 2004.
- Classroom web page structure & development opportunity for teachers.
- Support for new online ParaPro Assessment program.
- Planning and initial development of an online school board policy manual.
- Development of security group policies for network workstations.
- Implementation of web-based data collections for state and federal reporting, including that required by the No Child Left Behind Act.
- Initial development of intranet resources for division staff.
- Initial development of test history resources within the SASIxp student records system.
- Full implementation of online standards of learning assessment at BCHS.
- CCC Replacement Software & Hardware upgrades at elementary schools.
- Development of writing/resource lab at VES.
- Development of student/staff web development groups at BCHS and VES.
- Continued participation in Project RETURN, providing hardware and web-based instruction for students in need of alternative education.
- Development of regional distance learning consortium to increase classroom alternatives for BCHS students.
- Planning for distance learning hardware/software upgrade to newer standard (IP -.323).
- Implementation of food service management system in all schools and central office.
- Continuation of technology infrastructure maintenance and support
  - Network operating system access/maintenance
  - Internet Access with Filtering Software
  - Email
  - Virus Protection/Response
  - Web Hosting
  - Web Development
  - Distance Learning classroom at BCHS
  - Application & Specialty Software Maintenance & Support
  - Hardware & Multimedia Support

## Bath County Schools Technology Plan

Major technology projects for the 2004-05 school year include:

- Continued revision of the division technology plan to align with the new state technology plan.
- Classroom workstation replacements division-wide for machines operating below the Pentium III level.
- Division-wide staff development regarding the Technology Standards for Instructional Personnel.
- Completion of Technology Certification process for all licensed instructional staff.
- Network upgrades at all schools.
- Online data collection development.
- Central Office Data Integration.
- Distance Learning Hardware/Software upgrade.
- Continued participation in regional distance learning consortium and other initiatives to increase classroom alternatives for BCHS students.
- Technology support for transportation supervisor.
- Continued participation in the E-SOL assessment program at BCHS.
- Continued development of test history resources within the SASIxp student records system.
- Continued participation in Project RETURN, providing additional hardware and web-based instruction for students in need of alternative education.
- Completion of online school board policy manual project, with structure for continued revision.
- Development of intranet-based online forms resource for school staff.
- Continuation of technology infrastructure maintenance and support.
  - Network operating system access/maintenance
  - Internet Access with Filtering Software
  - Email
  - Virus Protection/Response
  - Web Hosting
  - Web/Intranet Development
  - Distance Learning classroom at BCHS
  - Application & Specialty Software Maintenance & Support
  - Hardware & Multimedia Support

Major technology projects for the 2005-06 school year include:

- Classroom workstation replacements division-wide for machines operating below the Pentium III level, and all classroom workstations will be using Windows XP or higher operating system.
- Continued staff development opportunities to enhance integration of technology into classroom instruction
- Ensure continued completion of Technology Certification process for all licensed instructional staff.
- Continued online data collection development.
- Continued Central Office Data Integration.

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- Continued participation in regional distance learning consortium and other initiatives to increase classroom alternatives for BCHS students.
- Continued participation in the E-SOL assessment program at BCHS.
- Participation in middle school E-SOL assessment program.
- Continued participation in Project RETURN, providing additional hardware and web-based instruction for students in need of alternative education.
- Continuation of technology infrastructure maintenance and support.
  - Network operating system access/maintenance
  - Internet Access with Filtering Software
  - Email
  - Virus Protection/Response
  - Web Hosting
  - Web/Intranet Development
  - Distance Learning classroom at BCHS
  - Application & Specialty Software Maintenance & Support
  - Hardware & Multimedia Support

Major technology projects for the 2006-07 school year include:

- Office and lab computer workstations replacements division-wide for machines operating below the Pentium III level, with all workstations using Windows XP or higher operating system.
- Continued staff development opportunities to enhance integration of technology into classroom instruction
- Ensure continued completion of Technology Certification process for all licensed instructional staff.
- Continued participation in regional distance learning consortium and other initiatives to increase classroom alternatives for BCHS students.
- Continued participation in the E-SOL assessment program at BCHS.
- Continued participation in middle school E-SOL assessment program.
- Continued participation in Project RETURN, providing additional hardware and web-based instruction for students in need of alternative education.
- Continuation of technology infrastructure maintenance and support.
  - Network operating system access/maintenance
  - Internet Access with Filtering Software
  - Email
  - Virus Protection/Response
  - Web Hosting
  - Web/Intranet Development
  - Online Data Collections
  - Distance Learning classroom at BCHS
  - Application & Specialty Software Maintenance & Support
  - Hardware & Multimedia Support

# Bath County Public Schools Technology Plan

**Goals**    Targets    Action Plan

**Begin Date    End Date    Continued to  
Future Years**

## Integration

### Goal 1: Improve teaching and learning through the appropriate use of technology.

Administrators have a vision and plan for technology use and integration.

|  |        |        |     |
|--|--------|--------|-----|
| <i>School Leaders will participate in revision of the BCPS technology plan.</i>  | Jun-04 | Nov-04 | Yes |
| <i>School leaders will attend the annual Technology Leadership Conference sponsored by the Virginia Department of Education and/or other technology conferences and training events.</i> | Sep-04 | Jun-05 | Yes |
| <i>The BCPS Technology plan will continue to be posted on the division website to ensure easy access by administrators and other staff.</i>  | Sep-04 | Sep-04 | Yes |

School leaders provide support for integration of technology into instruction

|  |        |        |     |
|--|--------|--------|-----|
| <i>School Leaders will participate in revision of the BCPS technology plan.</i>  | Jun-04 | Nov-04 | Yes |
| <i>School leaders will attend the annual Technology Leadership Conference sponsored by the Virginia Department of Education and/or other technology conferences and training events.</i> | Sep-04 | Jun-05 | Yes |
| <i>School leaders will initiate, sponsor or provide inservice to teachers and other staff during the year to support technology integration activities.</i>                              | Sep-04 | Jun-05 | Yes |
| <i>Teachers and staff will receive tuition/workshop reimbursement when available for participation in technology inservice.</i>  | Sep-04 | Jun-05 | Yes |
| <i>BCPS will provide additional multimedia hardware &amp; software to support technology integration activities.</i>   | Jul-04 | Jun-05 | Yes |

School leaders can effectively evaluate instructional uses of educational technology.

|   |        |        |     |
|---|--------|--------|-----|
| <i>School leaders will receive inservice to evaluate instructional uses of educational technology.</i>  | Oct-04 | Oct-04 |     |
| <i>School principals will observe/evaluate instructional uses of educational technology by teachers</i> | Nov-04 | Jun-05 | Yes |

Technology integration partnerships are established among educational technology stakeholders.

|  |        |        |     |
|--|--------|--------|-----|
| <i>BCPS will continue to participate in the WBRA consortium</i>  | Sep-04 | Jun-05 | Yes |
| <i>School leaders will attend the annual Technology Leadership Conference sponsored by the Virginia Department of Education and/or other technology conferences and training events.</i> | Sep-04 | Jun-05 | Yes |
| <i>BCPS will continue to partner with Dabney Lancaster Community College for coursework in Educational Technology</i>  | Sep-04 | Jun-05 | Yes |
| <i>BCPS will continue to partner with other local school divisions to plan joint activities related to technology</i>  | Jul-04 | Jun-05 | Yes |



# Bath County Public Schools Technology Plan

**Goals**    **Targets**    *Action Plan*

|   | <b>Begin Date</b> | <b>End Date</b> | <b>Continued to Future Years</b> |
|---|-------------------|-----------------|----------------------------------|
| <p>Teachers effectively integrate instructional technology.<br/> <i>School principals will observe/evaluate instructional uses of educational technology in classrooms</i></p>  | Nov-04            | Jun-05          | Yes                              |
| <p>Teachers collaborate to improve and enrich instruction using technology.<br/> <i>School leaders will initiate, sponsor or provide inservice to teachers and other staff during the year to support technology integration activities.</i><br/> <i>Teachers and staff will receive tuition/workshop reimbursement when available for participation in technology inservice.</i></p>   | Sep-04            | Jun-05          | Yes                              |
| <p>Teachers use technology-based intervention strategies to improve student achievement.<br/> <i>Elementary schools will effectively utilize SuccessMaker software in computer labs.</i><br/> <i>Elementary schools will continue to use assessment programs such as Accelerated Reading and Math.</i><br/> <i>High school students with need for alternative education will continue to utilize web-based instructional resources available through Project RETURN, including NovaNet software.</i><br/> <i>Students will use tools such as ePAT to help prepare for SOL tests</i></p> | Sep-04            | Jun-05          | Yes                              |
|   | Sep-04            | Jun-05          | Yes                              |
|   | Sep-04            | Jun-05          | Yes                              |
|   | Jan-05            | Jun-05          | Yes                              |
| <p>Teachers understand and model the acceptable use of technology in teaching and learning<br/> <i>Teachers will review and sign the Acceptable Use of Computer Technology policy each year.</i><br/> <i>School principals will consider teacher performance regarding the AUP (and other school board policy) in their annual evaluation of teachers.</i></p>  | Sep-04            | Sep-04          | Yes                              |
|   | Sep-04            | Jun-05          | Yes                              |
| <p>Students routinely use technology in a variety of learning activities across the curriculum.<br/> <i>BCPS will continue to provide appropriate technologies for students in all classroom settings.</i><br/> <i>Teachers will encourage use of technology in the completion of assignments /projects by students.</i></p>  | Aug-04            | Jun-05          | Yes                              |
|   | Aug-04            | Jun-05          | Yes                              |
| <p>Students will have information literacy skills.<br/> <i>BCPS will continue to teach technology literacy skills outlined in the standards of learning.</i></p>  | Aug-04            | Jun-05          | Yes                              |
| <p>Student learning and achievement will be enhanced through the effective integration of technology.<br/> <i>School principals will observe/evaluate instructional uses of educational technology by teachers.</i></p>   | Nov-04            | Jun-05          | Yes                              |
| <p>Computer/Technology Standards of Learning are fully integrated across all curriculum areas<br/> <i>School principals will observe/evaluate instructional uses of educational technology by teachers.</i></p>   | Nov-04            | Jun-05          | Yes                              |

## Bath County Public Schools Technology Plan

**Goals**    Targets    Action Plan

|   | Begin Date | End Date | Continued to Future Years |
|---|------------|----------|---------------------------|
| Instructional personnel meet Technology Standards for Instructional Personnel                                   |            |          |                           |
| <i>School leaders will provide inservice to assist licensed instructional personnel with TSIP requirements.</i> | Aug-04     | Jun-05   | Yes                       |
| <i>School leaders will evaluate licensed instructional personnel on TSIP requirements.</i>                      | Nov-04     | Jun-05   | Yes                       |
| <i>All licensed instructional personnel will complete TSIP requirements prior to their next renewal date.</i>   | Aug-04     | Jun-05   | Yes                       |
| Students meet Computer/Technology Standard of Learning  |            |          |                           |
| <i>BCPS will acquire/develop an assessment measure of the Computer/Technology Standards of Learning.</i>        | Jan-05     | Jun-05   |                           |

# Professional Development and Support Programs

## Goal 1: Establish partnerships for identifying and delivering effective technology training to assist educators as they help students achieve high academic standards.

A variety of classes, training, and resources pertaining to integrating technology effectively are available for staff development.

|  |        |        |     |
|--|--------|--------|-----|
| <i>School leaders will attend the annual Technology Leadership Conference sponsored by the Virginia Department of Education and/or other technology conferences.</i> | Sep-04 | Jun-05 | Yes |
| <i>School leaders will initiate, sponsor or provide inservice to teachers and other staff during the year to support technology integration activities.</i>          | Sep-04 | Jun-05 | Yes |
| <i>BCPS will continue to partner with Dabney Lancaster Community College for coursework in Educational Technology.</i>   | Sep-04 | Jun-05 | Yes |
| <i>BCPS will continue to partner with other local school divisions to plan joint activities related to technology.</i>   | Jul-04 | Jun-05 | Yes |
| Technology-related staff development offered by various entities is provided in a variety of topics and delivery methods.  |        |        |     |
| <i>School leaders will attend the annual Technology Leadership Conference sponsored by the Virginia Department of Education and/or other technology conferences.</i> | Sep-04 | Jun-05 | Yes |
| <i>School leaders will initiate, sponsor or provide inservice to teachers and other staff during the year to support technology integration activities.</i>          | Sep-04 | Jun-05 | Yes |
| <i>BCPS will continue to partner with Dabney Lancaster Community College for coursework in Educational Technology.</i>   | Sep-04 | Jun-05 | Yes |
| <i>BCPS will continue to partner with other local school divisions to plan joint activities related to technology.</i>   | Jul-04 | Jun-05 | Yes |

## Bath County Public Schools Technology Plan

**Goals**    Targets    Action Plan

|  | Begin Date | End Date | Continued to Future Years |
|--|------------|----------|---------------------------|
| Technology leadership activities are provided to K-12 educational technology stakeholders.<br><i>School leaders will attend the annual Technology Leadership Conference sponsored by the Virginia Department of Education and/or other technology conferences.</i> | Sep-04     | Jun-05   | Yes                       |
| <i>School leaders will initiate, sponsor or provide inservice to teachers and other staff during the year to support technology integration activities.</i>  | Sep-04     | Jun-05   | Yes                       |
| <i>BCPS will continue to partner with Dabney Lancaster Communtiy College for coursework in Educational Technology.</i>   | Sep-04     | Jun-05   | Yes                       |
| <i>BCPS will continue to partner with other local school divisions to plan joint activities related to technology.</i>   | Jul-04     | Jun-05   | Yes                       |
| <br><b>Goal 2: Administer grant programs and financial assistance initiatives that support implementation of educational technology integration.</b>   |            |          |                           |
| Grant programs and alternative sources of funding that support educational technology are administered.  |            |          |                           |
| <i>BCPS will continue to participate in the web-based technology initiative that provides state funding for technology.</i>  | Jul-04     | Jun-05   | Yes                       |
| <i>BCPS will explore other funding sources for technology in the schools.</i>  | Sep-04     | Jun-05   | Yes                       |
| Grant programs and alternative sources of funding that support educational technology are administered.  |            |          |                           |
| <i>BCPS will continue to participate in the web-based technology initiative that provides state funding for technology.</i>  | Jul-04     | Jun-05   | Yes                       |
| <i>BCPS will explore other funding sources for technology in the schools.</i>  | Sep-04     | Jun-05   | Yes                       |
| Teacher education institutions, businesses, organizations and private entities become partners in the implementation of technology-related grants focusing on technology integration.  |            |          |                           |
| <i>BCPS will continue to seek donations of funds and/or appropriate equipment from regional businesses and agencies.</i>   | Jul-04     | Jun-05   | Yes                       |
| <i>BCPS will continue to work with DSLCC to develop opportunities for technology integration.</i>  | Jul-04     | Jun-05   | Yes                       |
| <i>BCPS will continue to work with other local school divisions to acquire alternate sources of funding for technology projects.</i>   | Jul-04     | Jun-05   | Yes                       |

## Bath County Public Schools Technology Plan

**Goals**    Targets    Action Plan

**Begin Date    End Date    Continued to  
Future Years**

### Goal 3: Establish and maintain instructional technologists (including site-based technology resource teachers in school divisions).

Site-based instructional technologists are available to all students.

*As the Virginia General Assembly has not funded these positions, BCPS will seek funding from local resources to employ site-based instructional technologists.*

*Jul-04    Jun-05    Yes*

*BCPS will continue to provide technology assistance for division staff with existing personnel.*

*Jul-04    Jun-05    Yes*

Staff development models and activities that are designed for site-based instructional technologists are available for all K-12 schools.

*BCPS will continue to provide appropriate training for technology personnel.*

*Jul-04    Jun-05    Yes*

*School leaders will attend the annual Technology Leadership Conference sponsored by the Virginia Department of Education and/or other technology conferences.*

*Sep-04    Jun-05    Yes*

*School leaders will initiate, sponsor or provide inservice to teachers and other staff during the year to support technology integration activities.*

*Sep-04    Jun-05    Yes*

## Connectivity

### Goal 1: Ensure that all public schools have access to integrated instructional and administrative services across interoperable high-speed networks.

Every instructional and administrative area in every school has a sufficient number of network connections to support the high bandwidth requirements of current and future instructional and administrative applications.

*All future wiring upgrades will provide at least three network drops per classroom.*

*Jul-04    Jun-05    Yes*

*Computer workstations will be replaced as necessary to ensure appropriate function for required tasks.*

*Jul-04    Jun-05    Yes*

*Network hubs will be replaced by switches in wiring closets.*

*Jul-04    Jun-05    Yes*

*Fiber optic cable will be used to connect wiring closets in future wiring projects.*

*Jul-04    Jun-05    Yes*

Each school division connects all school facilities through a wide area network with sufficient bandwidth to accommodate instructional and administrative needs.

*BCPS will monitor the bandwidth needs of facilities to ensure that they remain appropriate to needs.*

*Jul-04    Jun-05    Yes*



# Bath County Public Schools Technology Plan

**Goals**    Targets    Action Plan

|   | Begin Date | End Date | Continued to Future Years |
|---|------------|----------|---------------------------|
| <p>Each school local area network has reliable high-speed access to the Internet capable of supporting instructional and administrative applications and initiatives.<br/> <i>BCPS will monitor the bandwidth needs of facilities to ensure that they remain appropriate to needs.</i></p>  | Jul-04     | Jun-05   | Yes                       |
| <p>An integrate suite of instructional and administrative applications supported by a standards-based enterprise architecture for K-12 schools is in place.<br/> <i>BCPS will continue to purchase and upgrade instructional and administrative applications such as Internet Explorer, Office, SAXIxp, Integrate Pro, Gradequick, Accelerated Reader &amp; Math, SuccessMaker.</i><br/> <i>BCPS will continue to utilize standards-based enterprise architecture throughout our local area networks.</i></p>                                 | Jul-04     | Jun-05   | Yes                       |
| <p><b>Goal 2: Ensure sufficient support for ongoing, reliable network operations.</b></p>   |            |          |                           |
| <p>Adequate support personnel are in place to operate and support the K-12 school technology infrastructure.<br/> <i>BCPS will continue to develop additional technology support for technology operations, including teacher-level support staff and student technology assistants.</i><br/> <i>As the Virginia General Assembly has not funded these positions, BCPS will seek funding from local resources to employ site-based instructional technologists.</i></p>   | Jul-04     | Jun-05   | Yes                       |
| <p>Support personnel for K-12 school infrastructure have appropriate technical skills.<br/> <i>Support personnel will continue to develop their skills through self-study, workshops, conferences coursework, and other local training.</i><br/> <i>BCPS will continue to require that all support personnel complete multiple Brainbench certifications related to technology.</i></p>   | Jul-04     | Jun-05   | Yes                       |
| <p>School systems have customer support systems in place to address technical problems in a timely and efficient manner.<br/> <i>BCPS will continue to develop additional technology support for technology operations, including teacher-level support staff and student technology assistants.</i><br/> <i>Technology staff will continue to develop additional "How To" procedures available through division internet and intranet resources.</i><br/> <i>Technology staff will continue to develop a web-based reporting system.</i></p> | Jul-04     | Jun-05   | Yes                       |
|   | Jul-04     | Jun-05   | Yes                       |
|   | Jul-04     | Dec-04   | Yes                       |

## Bath County Public Schools Technology Plan

**Goals**    Targets    Action Plan

|  | Begin Date | End Date | Continued to Future Years |
|--|------------|----------|---------------------------|
| School divisions plan for the total cost of ownership associated with K-12 technology.<br><i>BCPS will continue to standardize hardware and software purchases to maximize interoperability and functionality, and to minimize training needs.</i>                             | Jul-04     | Jun-05   | Yes                       |
| <i>Less powerful hardware and software will continue to be utilized in less demanding roles to ensure maximum life performance.</i>  | Jul-04     | Jun-05   | Yes                       |
| <br><b>Goal 3: Provide leadership and resources to promote efficient procurement of infrastructure, including the identification and procurement of emerging technologies.</b>   |            |          |                           |
| The K-12 school technology procurement process is efficient and cost effective.<br><i>Technology staff will continue to use state contracts whenever possible for technology purchases.</i>  | Jul-04     | Jun-05   | Yes                       |
| <i>Technology staff will solicit quotes from a variety of reputable vendors for technology purchases.</i>  | Jul-04     | Jun-05   | Yes                       |
| School divisions are regularly informed about emerging technologies for instruction and administration<br><i>School leaders will attend the annual Technology Leadership Conference sponsored by the Virginia Department of Education and/or other technology conferences.</i> | Sep-04     | Jun-05   | Yes                       |
| <i>Technology staff will subscribe to email and web-based technology news services.</i>  |            |          |                           |
| <br><b>Goal 4: Ensure that school divisions have in place network security, filtering, and disaster recovery plans.</b>  |            |          |                           |
| Policies, procedures, and technologies are in place to ensure that computing resources are secure and recoverable.<br><i>Division staff are instructed to make regular backups of important data.</i>  | Jul-04     | Jun-05   | Yes                       |
| <i>BCPS will continue to deploy a secure firewall.</i>   | Jul-04     | Jun-05   | Yes                       |
| <i>BCPS will continue to deploy enterprise-level virus protection.</i>   | Jul-04     | Jun-05   | Yes                       |
| <i>BCPS will continue to make unattended backups of important data.</i>  | Jul-04     | Jun-05   | Yes                       |
| School divisions maintain an up-to-date Acceptable Use Policy (AUP) and effectively use network filtering solutions.<br><i>BCPS will continue to utilize the VSBA policy updates regarding AUP.</i>  | Jul-04     | Jun-05   | Yes                       |
| <i>BCPS will continue to deploy a quality internet filter.</i>   | Jul-04     | Jun-05   | Yes                       |

# Bath County Public Schools Technology Plan

**Goals**    Targets    *Action Plan*

**Begin Date**    **End Date**    **Continued to  
Future Years**

School divisions have appropriate and effective network and data security policies and systems.

|  |               |               |     |
|--|---------------|---------------|-----|
| <i>BCPS will continue to utilize the VSBA policy updates regarding AUP--network security.</i>              | <i>Jul-04</i> | <i>Jun-05</i> | Yes |
| <i>BCPS will continue to utilize login/password and group security policies to protect network access.</i> | <i>Jul-04</i> | <i>Jun-05</i> | Yes |

## Educational Applications

### Goal 1: Improve teaching and learning through the appropriate use of network-accessible educational applications.

Teaching and learning resources that effectively support the Virginia Standards of Learning (SOL) have been identified, communicated, and developed.

|  |               |               |     |
|--|---------------|---------------|-----|
| <i>Elementary schools will effectively utilize SuccessMaker software in computer labs.</i>               | <i>Sep-04</i> | <i>Jun-05</i> | Yes |
| <i>Elementary schools will continue to use assessment programs such as Accelerated Reading and Math.</i> | <i>Sep-04</i> | <i>Jun-05</i> | Yes |
| <i>Students will use tools such as ePAT to help prepare for SOL tests.</i>                               | <i>Jan-05</i> | <i>Jun-05</i> | Yes |

### Goal 2: Promote and develop Web-based applications, services, and resources.

All schools are participating successfully in the Virginia Web-based SOL Technology Initiative.

|   |               |               |     |
|---|---------------|---------------|-----|
| <i>BCHS will continue to fully participate in the online SOL assessment system.</i> | <i>Sep-04</i> | <i>Jun-05</i> | Yes |
| <i>Elementary schools will work toward Stage 2 certification.</i>                   | <i>Jan-05</i> | <i>Jun-05</i> | Yes |

School divisions use Web-based applications for state data collection, warehousing, and reporting.

|  |               |               |     |
|--|---------------|---------------|-----|
| <i>BCPS will continue to use web-based applications for state data collection and reporting.</i> | <i>Sep-04</i> | <i>Jun-05</i> | Yes |
| <i>BCPS will explore web-based applications for data warehousing.</i>                            | <i>Dec-04</i> | <i>Jun-05</i> | Yes |

Use of a common set of data definitions allows standard communication and interpretation of student information.

|  |               |               |     |
|--|---------------|---------------|-----|
| <i>BCPS will continue to utilize a common set of data definitions in SASIxp to facilitate communication and interpretation of student information.</i> | <i>Aug-04</i> | <i>Jun-05</i> | Yes |
|--|---------------|---------------|-----|

## Bath County Public Schools Technology Plan

**Goals**    **Targets**    *Action Plan*

|  | <b>Begin Date</b> | <b>End Date</b> | <b>Continued to Future Years</b> |
|--|-------------------|-----------------|----------------------------------|
| <p>Every school has an efficient, automated library media center connected to the Internet and networked to appropriate learning areas.</p> <p><i>All library media centers have internet access and utilize an up-to-date Follett system which is available to appropriate learning areas.</i></p>  | Aug-04            | Jun-05          | Yes                              |
| <p>School divisions have strategies for providing community access to school-based technology and applications.</p> <p><i>BCPS will continue to encourage the use of the BCHS distance learning classroom for adult education opportunities.</i></p> <p><i>BCPS will continue to provide technology-related adult education opportunities for the general public.</i></p>  | Sep-04            | Jun-05          | Yes                              |
| <b>Goal 3: Offer digital learning opportunities at state and local levels.</b>   |                   |                 |                                  |
| <p>Web-based courses and staff development activities are provided.</p> <p><i>Web-based staff development courses will continue to be encouraged, as opportunities become known.</i></p> <p><i>BCPS will examine web-based learning opportunities such as those described in Governor Warner's Virtual Advanced Placement School.</i></p> <p><i>BCPS will continue to develop student coursework suitable for distance learning in the compressed video classroom.</i></p> | Sep-04            | Jun-05          | Yes                              |
|  | Sep-04            | Jun-05          | Yes                              |
|  | Jul-04            | Jun-05          | Yes                              |
| <p>Schools are able to receive digital television broadcast signals and effectively utilize the enhanced capabilities.</p> <p><i>BCPS will explore the use of digital television broadcast signals within the instructional setting.</i></p>   | Sep-04            | Jun-05          | Yes                              |

# Accountability

## Goal 1: Assess the value that information technology (IT) adds to teaching and learning environments.

|   |        |        |     |
|---|--------|--------|-----|
| <p>Identify elements of technology integration that benefit the teaching and learning environment.</p> <p><i>BCPS will continue to purchase multimedia workstations, LCD projectors and appropriate software that will facilitate the integration of technology into the classroom.</i></p> <p><i>BCPS will continue to provide staff development opportunities for teachers to ensure competency with multimedia applications.</i></p> | Sep-04 | Jun-05 | Yes |
|   | Sep-04 | Jun-05 | Yes |



# Bath County Public Schools Technology Plan

**Goals**    **Targets**    *Action Plan*

|  | <b>Begin Date</b> | <b>End Date</b> | <b>Continued to Future Years</b> |
|--|-------------------|-----------------|----------------------------------|
| <p>Readiness to integrate technology into teaching and learning has been assessed for each school.<br/> <i>BCPS will identify each school's technology integration readiness through evaluation of staff competencies, and hardware/software status level.</i></p>                           | Nov-04            | Jun-05          | Yes                              |
| <p>Instructional technology integration has been assessed in schools and classrooms.<br/> <i>School principals will observe/evaluate instructional uses of educational technology by teachers.</i></p>   | Nov-04            | Jun-05          | Yes                              |
| <p>Technology-rich environments and effective technology-based instructional strategies support student learning.<br/> <i>BCPS will continue to evaluate student progress on the state SOL tests, and determine what technology resources may be applied to assist student learning.</i></p> | Sep-04            | Jun-05          | Yes                              |
| <p><i>Elementary schools will effectively utilize SuccessMaker software in computer labs.</i></p>  | Sep-04            | Jun-05          | Yes                              |
| <p><i>Elementary schools will continue to use assessment programs such as Accelerated Reading and Math.</i></p>  | Sep-04            | Jun-05          | Yes                              |
| <p><i>High school students with need for alternative education will continue to utilize web-based instructional resources available through Project RETURN, including NovaNet software.</i></p>  | Sep-04            | Jun-05          | Yes                              |
| <p><i>Students will use tools such as ePAT to help prepare for SOL tests.</i></p>  | Jan-05            | Jun-05          | Yes                              |
| <p><b>Goal 2: Provide appropriate decision support capabilities for all stakeholders.</b></p>  |                   |                 |                                  |
| <p>Information systems provide comprehensive information about student learning progress.<br/> <i>BCPS will continue to utilize the SASIxp student records system to provide information about student learning progress.</i></p>  | Sep-04            | Jun-05          | Yes                              |
| <p><i>BCPS will consider expanded use of programs such as Integrate Pro and GradeQuick to provide information about student learning progress.</i></p>   | Oct-04            | Jun-05          | Yes                              |
| <p>Information systems interface to provide staff members the ability to use appropriate and effective data to make decisions.<br/> <i>BCPS will continue to utilize the SASIxp student records system to provide information about student learning progress.</i></p>                       | Sep-04            | Jun-05          | Yes                              |
| <p><i>BCPS will consider expanded use of programs such as Integrate Pro and GradeQuick to provide information about student learning progress.</i></p>   | Oct-04            | Jun-05          | Yes                              |

# Bath County Public Schools Technology Plan

**Goals**    **Targets**    *Action Plan*

**Begin Date**    **End Date**    **Continued to  
Future Years**

## Goal 3: Assess information technology (IT) literacy.

All students are technology literate.

*BCPS will continue to teach technology literacy skills outlined in the standards of learning.*

*Aug-04*

*Jun-05*

Yes

*Teachers will encourage use of technology in the completion of assignments /projects by students.*

*Aug-04*

*Jun-05*

Yes

*BCPS will acquire/develop an assessment measure of the Computer/Technology Standards of Learning.*

*Jan-05*

*Jun-05*

All instructional personnel are technology literate.

*School leaders will provide inservice to assist licensed instructional personnel with TSIP requirements.*

*Aug-04*

*Jun-05*

Yes

*School leaders will evaluate licensed instructional personnel on TSIP requirements.*

*Nov-04*

*Jun-05*

Yes

*All licensed instructional personnel will complete TSIP requirements prior to their next renewal date.*

*Aug-04*

*Jun-05*

Yes

All paraprofessionals and support staff are technology literate.

*Paraprofessionals and support staff will continue to participate in local staff development activities regarding technology literacy.*

*Aug-04*

*Jun-05*

Yes

*Paraprofessionals and support staff will be given an opportunity to demonstrate technology literacy through successful completion of a technology skills assessment.*

*Nov-04*

*Jun-05*

Yes

Students meet expectations for technology utilization pertaining to their subject and grade level as described by school division technology plans.

*BCPS will continue to teach technology literacy skills outlined in the standards of learning.*

*Aug-04*

*Jun-05*

Yes

*Teachers will encourage use of technology in the completion of assignments /projects by students.*

*Aug-04*

*Jun-05*

Yes

## Goal 4 • Ensure that local technology plans are consistent with the state technology plan.

School divisions will have technology plans that are consistent with the components of the state technology plan. All schools will have technology plans that are consistent with the components of their division technology plan.

*BCPS will continue to modify its technology plan to ensure consistency with the state plan.*

*Aug-04*

*Jun-05*

Yes

*All schools will incorporate appropriate goals from the division technology plan into their school plans*

*Aug-04*

*Jun-05*

Yes

All schools and school divisions will evaluate annually the progress and effectiveness of their technology plans.

*BCPS will annually review its technology plans and align it as necessary with future changes in the state technology plan.*

*Aug-04*

*Jun-05*

Yes

**Bath County Public Schools  
04-05 TECHNOLOGY BUDGET**

| Description  | Comment                                   | 04-05 Budget     |
|--|---|------------------|
| <b>Division-Wide Technology:</b>                       |   |                  |
| Maintenance  | Parts/Labor                               | \$32,000         |
| Maintenance: Supplies                                  | Ink/Toner Cartridges, cables, disks, etc. | \$8,000          |
| Internet/Wide Area Network & E-Mail                    | Division-Wide Network & Internet          | \$34,000         |
| Internet: T-1 Internet Line                            | Distance Learning Classroom & T-1         | \$7,500          |
| Network: Email/DNS Server                              |   | \$7,000          |
| Network: Virus Protection/Internet Filtering           | Computer Servers and Workstations         | \$3,000          |
| Network: Installation of Network Electronics           | All schools                               | \$5,200          |
| Staff Development                                      | Required Match for State Technology Funds | \$6,400          |
| <b>Total Division-Wide Technology</b>                  |   | <b>\$103,100</b> |
| <b>Bath County High School Technology:</b>             |   |                  |
| Maintenance: Library Software Support                  | Telephone Support & Upgrades              | \$500            |
| Maintenance: School Food Software Support              | Telephone Support & Upgrades              | \$500            |
| Maintenance: School Financial Software Support         | Telephone Support & Upgrades              | \$200            |
| Maintenance: Student Record Software Support           | Telephone Support & Upgrades              | \$800            |
| Network: Upgrade                                       | MCTC Switch                               | \$3,500          |
| Hardware: Classroom Computers                          | 23 Classroom Computer Workstations        | \$36,800         |
| Hardware: Network Server                               |   | \$7,000          |
| Peripherals: Replacement Printers                      | Replace 12 Oldest Printers                | \$2,400          |
| <b>Total Bath County High School Technology</b>        |   | <b>\$51,700</b>  |
| <b>Millboro Elementary Technology:</b>                 |   |                  |
| Maintenance: Library Software Support                  | Telephone Support & Upgrades              | \$500            |
| Maintenance: School Food Software Support              | Telephone Support & Upgrades              | \$500            |
| Maintenance: School Financial Software Support         | Telephone Support & Upgrades              | \$200            |
| Maintenance: Student Record Software Support           | Telephone Support & Upgrades              | \$800            |
| Maintenance: CCC Lab Software Support                  | Telephone support                         | \$600            |
| Network: Upgrade                                       | Switches                                  | \$9,000          |
| Hardware: Classroom Computers                          | 3 Classroom Computer Workstations         | \$4,800          |
| Hardware: Classroom Computers                          | Notebook Computer                         | \$2,500          |
| Hardware: Network Server                               |   | \$7,000          |
| Peripherals: Printer Replacements                      | Replace 6 Oldest Printers                 | \$1,200          |
| <b>Total Millboro Elementary Technology</b>            |   | <b>\$27,100</b>  |
| <b>Valley Elementary Technology:</b>                   |   |                  |
| Maintenance: Library Software Support                  | Telephone Support & Upgrades              | \$600            |
| Maintenance: School Food Software Support              | Telephone Support & Upgrades              | \$500            |
| Maintenance: School Financial Software Support         | Telephone Support & Upgrades              | \$200            |
| Maintenance: Student Record Software Support           | Telephone Support & Upgrades              | \$800            |
| Maintenance: CCC Lab Software Support                  | Telephone Support                         | \$600            |
| Network: Upgrade                                       | Switch                                    | \$3,100          |
| Hardware: Classroom Computers                          | 15 Classroom Computer Workstations        | \$24,000         |
| Hardware: Classroom Computers                          | Notebook Computer                         | \$2,500          |
| Hardware: Network Server                               |   | \$7,000          |
| Peripherals: Printer Replacements                      | Replace 12 Oldest Printers                | \$2,400          |
| <b>Total Valley Elementary Technology</b>              |   | <b>\$41,700</b>  |
| <b>School Administration Building Technology:</b>      |   |                  |
| Maintenance: Bookkeeping Software Support              | Telephone support                         | \$1,000          |
| Maintenance: Supplies                                  | Misc. supplies                            | \$2,000          |
| Peripherals: Laser Printer                             | Replace 1 printer                         | \$850            |
| Software   | Software for secretaries/administrators   | \$750            |
| <b>Total School Administration Building Technology</b> |   | <b>\$4,600</b>   |
| <b>TOTAL TECHNOLOGY</b>                                |   | <b>\$228,200</b> |

# **Bath County Public Schools Technology Plan**

## **Appndix A. Executive Summary**

The Bath County Public Schools Technology Plan articulates the path that the division will follow as it seeks to continue a tradition of innovation and performance with instructional and administrative applications as they may be enhanced through the integration of technology. While the division has successfully implemented a number of significant programs in recent years, the rapidly changing technology field demands a vigilant look to the future to anticipate needs as well as meeting current demands. The technology plan is aligned with the Educational Technology Plan for Virginia, and provides for:

- Continued acquisition, installation and support of appropriate computer hardware and technology infrastructure.
- Program development to ensure successful integration of technology that will improve services to students, staff and the community.
- Professional development and support for staff members to enable their full participation with technology integration.

The Bath County Public Schools Technology Plan will help ensure that our students receive a high quality educational experience that prepares them for their role as citizens and lifelong learners in the 21<sup>st</sup> century.

# Bath County Public Schools Technology Plan

## Appdndix B. NEEDS ASSESSMENT

The Bath County Public Schools Technology Plan is a work in progress, and is available for review by students, staff, parents and the community on the division web site. Each year as opportunities, issues or concerns arise in the division, often there are technological possibilities that may help bring forward the desired result. In the 03-04 school year, there were several key events that led to new emphases for 04-05 and beyond:

- Division administrators planning retreat – The division administrative staff identified three areas of need that warrant attention:
  - Communication—Increase use of internet resources to communicate with staff, students and parents.
  - Programs—Increase use of distance learning resources by students, staff and the community.
  - Budget—Increase Technology Support Staff to facilitate program support across administrative and instructional applications.
- A division-wide workshop hosted by the school board and attended by staff from all schools identified technology needs that were incorporated into division goals and objectives.
- Feedback from staff involved in technology-related professional development activities were incorporated into the technology plan to help ensure appropriate topics and timing for 04-05 inservice.
- A review of budget requests from all departments was conducted to determine what implications there were for technology services: selection, purchase and installation of equipment, program development and technical support for new and existing programs. These needs were incorporated into the 04-05 budget document and technology plan.
- The technology advisory committee (parents, school staff, community/business representative, and school board) continues to review progress on existing programs and make recommendations for technology services.

# Bath County Public Schools Technology Plan

## Appendix C. TECHNOLOGY STANDARDS FOR INSTRUCTIONAL PERSONNEL

Statutory Authority: § 22.1-16 of the *Code of Virginia*

Effective Date: March 4, 1998

### 8 VAC 20-25-10. Definitions.

The following words and terms, when used in this regulation, shall have the following meaning unless the context clearly indicates otherwise:

**Demonstrated proficiency** means a demonstrated level of competence of the technology standards as determined by school administrators.

**Electronic technologies** means electronic devices and systems to access and exchange information.

**Instructional personnel** means all school personnel required to hold a license issued by the Virginia Board of Education for instructional purposes.

**Productivity tools** means computer software tools to enhance student learning and job performance.

### 8 VAC 20-25-20. Administration of technology standards.

A. School divisions and institutions of higher education shall incorporate the technology standards for instructional personnel into their division-wide technology plans and approved teacher education programs, respectively, by December 1998.

B. School divisions and institutions of higher education shall develop implementation plans for pre-service and in-service training for instructional personnel. The implementation plan shall provide the requirements for demonstrated proficiency of the technology standards.

C. Waivers shall be considered on a case-by-case basis of the 18-hour professional studies cap placed on teacher preparation programs for institutions requesting additional instruction in educational technology.

D. School divisions shall ensure that newly-hired instructional personnel from out of state demonstrate proficiency in the technology standards during the three-year probation period of employment.

# Bath County Public Schools Technology Plan

## Technology Standards for Instructional Personnel (continued)

E. Course work in technology shall satisfy the content requirement for licensure renewal for license holders who do not have a master's degree.

F. School divisions shall incorporate the technology standards into their local technology plans and develop strategies to implement the standards by December 1998.

G. Institutions of higher education shall incorporate technology standards in their approved program requirements and assess students' demonstrated proficiency of the standards by December 1998.

### **8 VAC 20-25-30. Technology standards.**

A. Instructional personnel shall be able to demonstrate effective use of a computer system and utilize computer software.

B. Instructional personnel shall be able to apply knowledge of terms associated with educational computing and technology.

C. Instructional personnel shall be able to apply computer productivity tools for professional use.

D. Instructional personnel shall be able to use electronic technologies to access and exchange information.

E. Instructional personnel shall be able to identify, locate, evaluate, and use appropriate instructional hardware and software to support Virginia's Standards of Learning and other instructional objectives.

F. Instructional personnel shall be able to use educational technologies for data collection, information management, problem solving, decision making, communication, and presentation within the curriculum.

G. Instructional personnel shall be able to plan and implement lessons and strategies that integrate technology to meet the diverse needs of learners in a variety of educational settings.

H. Instructional personnel shall demonstrate knowledge of ethical and legal issues relating to the use of technology.

# Bath County Public Schools Technology Plan

## Appendix D. Computer/Technology Standards by the End of Grade Five

Computer/Technology skills are essential components of every student's education. In order to maximize opportunities for students to acquire necessary skills for academic success, the teaching of these skills should be the shared responsibility of teachers of all disciplines.

Minimum skills that students should acquire by the end of Grade 5 include the following:

- C/T5.1 The student will demonstrate a basic understanding of computer theory, including bits, bytes, and binary logic.
- C/T5.2 The student will develop basic technology skills.
- \* Develop a basic technology vocabulary that includes cursor, software, memory, disk drive, hard drive, and CD-ROM.
  - \* Select and use technology appropriate to tasks.
  - \* Develop basic keyboarding skills.
  - \* Operate peripheral devices.
  - \* Apply technologies to strategies for problem solving and critical thinking.
- C/T5.3 The student will process, store, retrieve, and transmit electronic information.
- \* Use search strategies to retrieve electronic information using databases, CD-ROMs, videodiscs, and telecommunications.
  - \* Use electronic encyclopedias, almanacs, indexes, and catalogs.
  - \* Use local and wide-area networks and modem-delivered services to access information from electronic databases.
  - \* Describe advantages and disadvantages of various computer processing, storage, retrieval, and transmission techniques.
- C/T5.4 The student will communicate through application software.
- \* Create a 1-2 page document using word processing skills, writing process steps, and publishing programs.
  - \* Use simple computer graphics and integrate graphics into word-processed documents.
  - \* Create simple databases and spreadsheets to manage information and create reports.
  - \* Use local and worldwide network communication systems.



# Bath County Public Schools Technology Plan

## Appendix E. Computer/Technology Standards by the End of Grade Eight

Computer/Technology skills are essential components of every student's education. In order to maximize opportunities for students to acquire necessary skills for academic success, the teaching of these skills should be the shared responsibility of teachers of all disciplines.

Minimum skills that students should acquire by the end of Grade 8 include the following:

C/T8.1 The student will communicate through application software.

- \* Compose and edit a multipage document at the keyboard, using word processing skills and the writing process steps.
- \* Communicate spreadsheets by entering data and setting up formulas, analyzing data, and creating graphs or charts to visually represent data.
- \* Communicate with databases by defining fields and entering data, sorting, and producing reports in various forms.
- \* Use advanced publishing software, graphics programs, and scanners to produce page layouts.
- \* Integrate databases, graphics, and spreadsheets into word-processed documents.

C/T8.2 The student will communicate through networks and telecommunication.

- \* Use local and worldwide network communication systems.
- \* Develop hypermedia \_home page\_ documents that can be accessed by worldwide networks.

C/T8.3 The student will have a basic understanding of computer processing, storing, retrieval, and transmission technologies and a practical appreciation of the relevant advantages and disadvantages of various processing, storage, retrieval, and transmission technologies.

C/T8.4 The student will process, store, retrieve, and transmit electronic information.

- \* Use search strategies to retrieve electronic information.
- \* Use electronic encyclopedias, almanacs, indexes, and catalogs to retrieve and select relevant information.
- \* Use laser discs with a computer in an interactive mode.
- \* Use local and wide-area networks and modem-delivered services to access and retrieve information from electronic databases.
- \* Use databases to perform research.

# Bath County Public Schools Technology Plan

## Appendix F. Computer/Technology Standards by the End of Grade Twelve

The Computer/Technology Standards by the End of Grades Five and Eight identify technology skills for improving student learning through the integration of technology across the curriculum. Mastery of these skills results in students who are both computer literate and competent in the application of technology tools to support their learning needs.

In grades nine through twelve, technology continues to be integrated across the curriculum. The goal is that students in these grades achieve a higher level of mastery in the application of technology in their learning. The following standards identify essential skills for the student's appropriate use of existing and emerging technology tools for communication, productivity, management, research, problem-solving, and decision making.

### **C/T12.1 The Student will demonstrate a basic understanding of fundamental computer operations and concepts.**

- Successfully operate a multimedia computer system with related peripheral devices.
- Demonstrate touch-typing skills in computer use.
- Use terminology related to computers and technology appropriately in written and oral communications.
- Describe how imaging devices may be used with computer systems.
- Describe how computers may be connected to form a telecommunication network.
- Analyze and solve simple hardware and software problems
- Identify new and emerging technologies.

### **C/T12.2 The student will use application software to accomplish a variety of learning tasks.**

- Use advanced features of word processing, desktop publishing, graphics programs, and utilities in learning activities.
- Use spreadsheets for analyzing, organizing and displaying numeric data graphically.
- Design and manipulate databases and generate customized reports.
- Use features of applications that integrate word processing, database, spreadsheet, telecommunication, and graphics.
- Identify, select, and integrate video and digital images in varying formats for creating multi-media presentations, publications and/or other products.

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- Select, evaluate, and use appropriate technology for research and data collection.
- Apply specific-purpose electronic devices (such as, a graphing calculator, scientific probeware, or multi-function keyboards) in appropriate content areas.

### **C/T12.3 The student will develop skills in the use of telecommunications networks.**

Use local, wide area and worldwide network communication systems to access, analyze, interpret, and synthesize information.

- Compare and contrast the use of local area networks, wide area networks and worldwide networks.
- Access and use telecommunications tools and resources for information sharing, remote information access and retrieval, and multi-media/hypermedia publishing.
- Demonstrate an understanding of the concepts of broadcast instruction, audio/video conferencing, and other distance learning applications.
- Explain legal, personal safety, network etiquette, and ethical behaviors regarding the use of technology and information.

### **C/T12.4 The student will demonstrate skill in the selection and use of appropriate technologies to gather, process and analyze data and to report information related to an investigation.**

- Design and use a wide range of effective search strategies to acquire information.
- Use a wide variety of electronic media and databases to search for and retrieve information.
- Evaluate the usefulness, appropriateness, currency, and reliability of acquired information.
- Select appropriate technology for communicating information for an intended purpose and audience.
- Utilize a variety of media and resources in collaboration with peers, experts, and other to design a learning activity and/or presentation.
- Appropriately cite electronic resources in gathering information.
- Apply Copyright and Fair Use Guidelines in reporting information.

## Bath County Public Schools Technology Plan

### Appendix G: 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 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:

- (1) 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;
- (2) 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
  - (a) child pornography as set out in *Va. Code* § 18.2-374.1:1 or as defined in 18 *U.S.C.* § 2256;
  - (b) obscenity as defined by *Va. Code* § 18.2-372 or 18 *U.S.C.* § 1460; and
  - (c) 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;
- (3) provisions establishing that the technology protection measure is enforced during any use of the Division's computers by minors;
- (4) provisions establishing that the online activities of minors will be monitored;
- (5) provisions designed to protect the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications;
- (6) provisions designed to prevent unauthorized online access by minors, including "hacking" and other unlawful activities by minors online; and
- (7) 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.

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File: IIBEA

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: October 16, 2001

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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.

ACCEPTABLE COMPUTER SYSTEM USE

All use of the Bath County School Division's computer system shall be consistent with the School Board's goal of promoting 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 any other internal or external network.

**Computer System Use-Terms and Conditions:**

1. **Acceptable Use.** Access to the Division's computer system shall be (1) for the purposes of education or research and be consistent with the educational objectives of the Division or (2) for legitimate school business.

2. **Privilege.** The use of the Division's computer system is a privilege, not a right.

3. **Unacceptable Use.** Each user is responsible for his or her actions on the computer system. Prohibited conduct includes:

- using the network for any illegal activity, including violation of copyright or other contracts, or transmitting any material in violation of any federal, state or local law.
- sending, receiving, viewing or downloading illegal material via the computer system.
- unauthorized downloading of software.
- downloading copyrighted material for unauthorized use.
- using the computer system for private financial or commercial gain.
- wastefully using resources, such as file space.
- gaining unauthorized access to resources or entities.
- posting material authorized or created by another without his or her consent.
- using the computer system for commercial or private advertising.
- submitting, posting, publishing or displaying any obscene, profane, threatening, illegal or other inappropriate material.
- using the computer system while access privileges are suspended or revoked.
- vandalizing the computer system, including destroying data by creating or spreading viruses or by other means.

4. **Network Etiquette.** Each user is expected to abide by generally accepted rules of etiquette, including the following:

- Be polite.
- Users shall not forge, intercept or interfere with electronic mail messages.
- Use appropriate language. The use of obscene, lewd, profane, threatening or disrespectful language is prohibited.
- Users shall not post personal contact information, including names, home, school or work addresses, telephone numbers, or photographs, about themselves or others.
- Users shall respect the computer system's resource limits.
- Users shall not post chain letters or download large files.
- Users shall not use the computer system to disrupt others.
- Users shall not read, modify or delete data owned by others.

5. **Liability.** The School Board makes no warranties for the computer system it provides. The School Board shall not be responsible for any damages to the user from use of the computer system, including loss of data, non-delivery or missed delivery of information, or service interruptions. The School Division denies any responsibility for the accuracy or quality of information obtained through the computer system. The user agrees to indemnify the School Board for any losses, costs or damages incurred by the School Board relating to or arising out of any violation of these procedures.

6. **Security.** Computer system security is a high priority for the school division. If any user identifies a security problem, the user shall notify the building principal or system administrator immediately. All users shall keep their passwords confidential and shall follow computer virus protection procedures.

7. **Vandalism.** Intentional destruction of any part of the computer system through creating or downloading computer viruses or by any other means is prohibited.

8. **Charges.** The School Division assumes no responsibility for any unauthorized charges or fees as a result of using the computer system, including telephone or long-distance charges.

9. **Electronic Mail.** The School Division's electronic mail system is owned and controlled by the School Division. The School Division may provide electronic mail to aid students and staff in fulfilling their duties and as an education tool. Electronic mail is not private. Students' electronic mail will be monitored. The electronic mail of staff may be monitored and accessed by the School Division. Unauthorized access to an electronic mail account by any student or employee is prohibited. Users shall be held personally liable for the content of any electronic message they create. Downloading any file attached to an electronic message is prohibited unless the user is certain of that message's authenticity and the nature of the file.

**10. Enforcement.** Software will be installed on the division's computers having Internet access to filter or block internet access through such computers to child pornography and obscenity. The online activities of minors may also be monitored manually. **Any violation of these regulations shall result in loss of computer system privileges and may also result in appropriate disciplinary action, as determined by School Board policy, or legal action.**

Adopted: October 16, 2001

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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.

Cross Refs: JFC Student Conduct  
JFC-R Standards of Student Conduct



SAMPLE LETTER TO PARENTS:  
ACCEPTABLE COMPUTER SYSTEM USE

Dear Parent/Guardian:

The Bath County School Board offers your student the use of electronic communications through the Bath County School Division's computer system. Your student will be able to communicate with other schools, colleges, organizations and individuals around the world through the internet and other electronic information systems/networks.

Part of the School Division's responsibility in preparing students for the 21st century is to provide them access to the tools they will be using as adults. The internet will likely be one of these tools. Through the Division's computer system your student will have access to databases, libraries and computer services from all over the world. We accept the responsibility of teaching your student about his/her role as a "network" citizen and the code of ethics involved with this new community.

With this educational opportunity also comes responsibility on the part of your student. It is important that you and your student read the enclosed division policy, administrative regulation and agreement form and discuss these requirements. The Division takes precautions to prevent access to inappropriate material. However, it is impossible to control access to all material and a user may access inappropriate material.

In order for your student to take advantage of this educational opportunity, your authorization is needed. Attached to this letter are the Acceptable Computer System Use Policy and Regulation (IIBEA) and the Acceptable Computer System Use Agreement which both you and your student must sign before your child may use the computer system. Please review these materials carefully with your student before signing the required agreement.

Sincerely,

Building Principal

SAMPLE LETTER TO PARENTS OF PRIMARY GRADE STUDENTS:  
ACCEPTABLE COMPUTER SYSTEM USE

Dear Parent/Guardian:

The Bath County School Board offers your student the use of electronic communications through the Bath County School Division's computer system. As early as kindergarten, students have access to a variety of technology, including participation in the CCC integrated learning system lab and other computer software appropriate for young children. Access to internet web sites is limited for primary grade students, and is closely monitored by school staff.

Part of the School Division's responsibility in preparing students for the 21st century is to provide them access to the tools they will be using as adults. The internet will likely be one of these tools. Through the Division's computer system your student will eventually have access to databases, libraries and computer services from all over the world. We accept the responsibility of teaching your student about his/her role as a "network" citizen and the code of ethics involved with this new community.

With this educational opportunity also comes responsibility on the part of your student. It is important that you read with your student the enclosed division policy, administrative regulation and agreement form and discuss these requirements. This is the same form used for all students and staff, though you may want to simplify the language as you discuss the issues with your child. There are three basic premises to the acceptable use policy:

1. **Understand that you are responsible for your actions:** Take care of the equipment that you use in school, and only use it in ways that are approved by your teacher.
2. **Be safe with technology:** When you eventually come to use the internet for your school work, do not give out personal information to others--ask your teacher whenever you're in doubt.
3. **Be nice when you use technology:** Use nice manners, don't copy information that someone else created, and don't mess with someone else's stuff.

The Division takes precautions to prevent access to inappropriate material. However, it is impossible to control access to all material and a user may access inappropriate material.

In order for your student to take advantage of this educational opportunity, your authorization is needed. Attached to this letter are the Acceptable Computer System Use Policy and Regulation (IIBEA) and the Acceptable Computer System Use Agreement which both you and your student must sign before your child may use the computer system. Please review these materials carefully with your student before signing the required agreement.

Sincerely,

Building Principal

ACCEPTABLE COMPUTER SYSTEM USE AGREEMENT

**Each employee must sign this Agreement as a condition for using the School Division's computer system. Each student and his or her parent/guardian must sign this Agreement before being granted use of the School Division's computer system. Read this Agreement carefully before signing.**

Prior to signing this Agreement, read Policy and Regulation IIBEA, Acceptable Computer System Use. If you have any questions about this policy or regulation, contact your supervisor or your student's principal.

I understand and agree to abide by the School Division's Acceptable Computer System Use Policy and Regulation. I understand that the School Division may access and monitor my use of the computer system, including my use of the internet, e-mail and downloaded material, without prior notice to me. I further understand that should I violate the Acceptable Use Policy or Regulation, my computer system privileges may be revoked and disciplinary action and/or legal action may be taken against me.

Student/Employee Signature \_\_\_\_\_ Date \_\_\_\_\_

I have read this Agreement and Policy and Regulation IIBEA. I understand that access to the computer system is intended for educational purposes and the Bath County School Division has taken precautions to eliminate inappropriate material. I also recognize, however, that it is impossible for the School Division to restrict access to all inappropriate material and I will not hold the School Division responsible for information acquired on the computer system. I have discussed the terms of this agreement, policy and regulation with my student.

I grant permission for my student to use the computer system and for the School Division to issue an account for my student.

Parent/Guardian Signature \_\_\_\_\_ Date \_\_\_\_\_

Parent/Guardian Name \_\_\_\_\_  
(Please Print)