

Charting a Course to Excellence

**A
Framework
For
Technology**

WORK IN PROGRESS

**St. Mary's County Public Schools
Revised June 2008**

”... educating ALL with rigor, relevance, respect, and positive relationships.”

Requires investment in technology

"Charting a Course to Excellence" is the vision of St. Mary's County Public Schools. To achieve that vision, all teachers, administrators, and support staff know that they must keep sight of their mission:

Know the learner and the learning, expecting excellence in both. Accept no excuses, educating ALL with rigor, relevance, respect, and positive relationships.

All planning and program implementation must be done with the mission and goals in mind.

All technology is aligned to the

SUPERINTENDENT'S FIFTEEN POINT PLAN OF PRIORITIES

1. Produce improved student achievement for ALL students. Work to eliminate the achievement gap for all identified groups of students. Ensure that all subgroups meet Annual Measurable Objectives (AMO).
2. Ensure that all learning environments are safe, orderly, nurturing and healthy.
3. Teach EVERY child to read, on-grade level, at the beginning of grade 3.
4. Frequently monitor student progress (weekly, monthly, quarterly) in READING and MATH.
5. Develop and utilize local assessments that align with state standards and exams.
6. Align Curriculum > Instruction > Assessment with the Voluntary State Curriculum with an emphasis on teaching for learning with high expectations for ALL students.
7. Increase student performance and participation on SATs. Focus on HSA's and increase participation in Advanced Placement (AP) courses with a score of 3 or higher on the AP exams.
8. Promote, recruit, and retain a quality and diverse workforce. Build leadership capacity of entire workforce.
9. Strengthen partnerships with the community, businesses, and local colleges.
10. Expand the use of technology to increase student learning and to analyze our student data with the full implementation of a data warehouse.

11. Ensure that all students graduate and ensure that all students attend school every day.
12. Ensure that early childhood and after school programs are of high quality.
13. Develop intervention plans for students not meeting state standard and not performing on grade level in reading and math and ensure that no schools are placed in school improvement status as defined by the State of Maryland.
14. Develop extensive and meaningful parent and community relationships and communicate regularly and often with all stakeholders. Promote a customer service approach.
15. Provide strong instructional leadership that is supported by ongoing professional development with a focus on knowing the curriculum, knowing the pedagogy and knowing the learner. Focus on continuous improvement and job embedded professional development.

Information technology, because it is especially powerful, because it is developing so rapidly, and because it potentially represents a major financial investment, merits special attention. Careful planning and phased implementation of information technology will ensure that we seamlessly integrate existing and emerging technologies into the fabric of instruction and student support, enhancing all other efforts to achieve our mission.

Our instructional system is undergoing systematic reform that focuses on actively engaging students in complex, authentic tasks. Technology is key to enhancing these efforts. It is a tool, which, when used wisely, will leverage the efforts of every student, teacher, staff member and parent to achieve the vision of "Charting a Course to Excellence" and will help schools educate students to live, work and compete successfully in an information-rich global society.

Purpose and Focus of the SMCPS Framework

The purpose of this framework is to provide the plan for technology integration in order to improve student learning. The framework specifies the phased implementation of information technology needed to accomplish the system vision of “Charting a Course to Excellence”.

The focus of this framework is a systematic approach to providing technology at all schools and to all students equitably, integrating current capabilities and emerging technologies to connect people to the learning environment, and providing access to multiple sources of information. It is intended to be a guide for the use of technology in St. Mary's County Public Schools for the years 2009-2012. This framework builds upon the planned and completed activities of 2001 to 2008. It reflects input from School Improvement Teams' Plans. Annual update and distribution of this framework provides feedback to those stakeholders for their review and comment.

No plan can anticipate all the changes of the future, particularly in such a rapidly developing field as technology. Though intended as a framework for the next three years, this plan will need to be examined on a yearly basis and revised to reflect the results of continuous evaluation and new developments and possibilities.

Many of the technologies and uses described in this framework are already in place and are used regularly by students, teachers, and other staff members. Other technologies are being implemented by a small number of students and teachers because of hardware and staff development limitations. Still other technologies and uses are emerging but are not yet available in schools. Some of the technologies tied to high-speed communication are only economically available in large cities. The challenge is to provide increasing equity and consistency in implementation throughout the school system in an economic environment where funding is an increasing challenge.

GOALS, OBJECTIVES, PROGRESS, TARGETS AND RECOMMENDED ACTIONS

St. Mary's County Public Schools has established clear and measurable goals in the areas of achievement, partnerships, safe and orderly school environment, and effective and efficient use of resources. Our goals dovetail with the states goal: *To improve student learning in core content areas and in the technology knowledge and skills critical to our students' ability to contribute in today's information technology society.* The technology use envisioned in this document will support the accomplishment of these goals. The Content Standards, which incorporate the Voluntary State Curriculum (VSC), Core Learning Goals (CLG's), and “Skills for Success,” are what ultimately guide the educational components of this framework. Again, technology is not the end in itself – rather technology will serve as an enabling tool for improved learning. The State's Content Standards define, at a minimum, what we expect all students to “know and be able to do

OBJECTIVE 1: IMPROVED STUDENT LEARNING THROUGH THE INTEGRATION OF THE MOST APPROPRIATE AND EFFECTIVE TECHNOLOGY AND DIGITAL CONTENT

RATIONALE:

Research shows that the effectiveness of educational technology in improving student achievement depends on the dovetailing of the goals of instruction, the characteristics of learners, the design of the software, the technology, and the implementation decisions made by teachers (Sivin-Kachala & Bialo, 1996). Progress has been made in the past 10 years in integrating technology-based activities into subject matter teaching, but in most cases, this is not an everyday occurrence in academic classes (Becker, 2000a). Maryland's most recent report *Where Do We Stand in 2005?* suggests that this is also true in Maryland classrooms, especially for tasks requiring higher levels of thinking and performance, and for students in poverty. Becker recommends that all students have opportunities to use technology at higher levels. Without changes in curriculum development and teacher training, the most complex and powerful uses of technology will not be implemented on a regular basis. Likewise, technology should be used in assessment, so that the methods of assessment accurately reflect the tools employed in instruction. "Technology can have the greatest impact when integrated into the curriculum to achieve clear, measurable educational objectives" (CEO Forum, 2001).

PROGRESS TO DATE

- Percent of schools reporting use of technology to:

	Daily	Monthly	Yearly	Never
1. Gather information/data from a variety of sources (e.g. via Internet, World Wide Web, Online services, CD-ROM-based reference software)	64%	36%	0%	0%
2. Organize and store information (e.g. creating databases or spreadsheet files)	24%	56%	20%	0%
3. Perform measurements and collect data in investigations or lab experiments (e.g. using probes and sensors)	8%	36%	44%	12%
4. Manipulate/analyze/interpret information or data to discover relationships, generate questions, and/or reach conclusions (e.g. sorting databases or spreadsheet files, using electronic graphic organizers)	12%	44%	44%	0%
5. Communicate/report information, conclusions, or results of investigations (e.g. in word processing documents, e-mail, online discussion areas, multimedia presentations, or on a web site)	36%	56%	8%	0%
6. Display data/information (e.g. using charts, graphs, maps)	8%	76%	16%	0%
7. Communicate/interact with others in the classroom/school/outside of school (e.g. using e-mail, bulletin boards, discussion areas)	32%	32%	36%	0%
8. Plan, draft, proofread, revise and publish written text	52%	44%	4%	0%
9. Create graphics or visuals (e.g. diagrams, pictures, figures)	20%	60%	20%	0%
10. Plan, refine, produce multimedia presentations	12%	40%	48%	0%

11. Generate original pieces of visual art and/or musical composition	4%	8%	80%	8%
12. Perform calculations (e.g. graphing calculators or spreadsheets)	32%	20%	44%	4%
13. Develop a more complete understanding of complex material or abstract concepts (e.g. through visual models, animations, simulations)	12%	36%	44%	8%
14. Connect auditory language to the written word and/or graphic representations (for the emerging reader)	36%	44%	20%	0%
15. Design and produce a product (Computer-aided manufacturing)	8%	16%	44%	32%
16. Control other devices (robotics)	0%	8%	16%	76%
17. Support individualized learning or tutoring (e.g. using computer or Web-based modules or courses)	52%	36%	12%	0%
18. Remediate for basic skills (e.g. using drill and practice or tutorial software) Irregular basic tool use and drill and practice, integrated learning labs	56%	36%	8%	0%
19. Accommodate for a disability or limitation (e.g. using assistive technology devices or software)	68%	16%	16%	0%

- State Content Standards include technology-related indicators for student learning (See Appendix A); however, these are not currently assessed in the State or local testing programs. MSDE is currently (2008) reviewing the process for Technology Standards assessment
- Web-based Learning Project is underway to make online courses available to students and educators throughout Maryland (See www.mdk12online.org).

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
Technology tools will be used regularly in instructional activities aligned to the State Content Standards, MD Technology Literacy Standards for Students, 21 ST Century Work Skills, MD Teacher Technology Standards, and the MD School Administrator Standards in order to enhance student achievement for all students*. *All students reflects all subgroups as targeted by MSDE.	<p>2008-Ongoing Professional Development for teachers and staff on technology integration and skills development.</p> <p>PD for teachers and administrators in the integration of the data warehouse for use of data in data driven decision making.</p> <p>School Improvement Planning: Develop strategies for ensuring that all school improvement plans address the use of technology to support teaching, learning, instructional management, and administrative processes.</p>	<p>Online Technology Inventory (annually) Survey of Maryland Teachers (2007)</p> <p>Observational Teacher Self Assessment</p> <p><i>21st Century Skills: Literacy in the Digital Age</i></p> <p>MDK12 Digital</p> <p>Ongoing SMCPS A & S and PD evaluations</p>

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
<p>Digital content will be integrated into all instruction and will be available at all feasible times and locations to support student learning.</p> <p>Departments responsible: DOI PD</p>	<p>2008-ongoing</p> <p>Curriculum Integration: Content area supervisors will integrate the technology-related knowledge and skills into all grade levels and content areas in the SMCPS curriculum.</p> <p>Use the revised alignment between the current technology-related knowledge and skills in the Maryland State Content Standards and recommendations published through nationally respected groups, such as the International Society for Technology in Education (ISTE) and the CEO Forum to further develop curriculum with aligned/integrated technology features.</p> <p>Provide online access to technology-infused lesson plans, classroom examples, and other digital resources aligned to State Content Standards through the SMCPS and state web sites, such as mdk12.org and other websites, to increase educators' understanding of how to incorporate technology most appropriately and effectively into instruction.</p> <p>Participate in combined purchases of digital learning resources for use by local school systems, especially online databases and Web-based courses, at the State level for cost savings and efficiency.</p> <p>School Improvement Planning: Develop strategies for ensuring that all school improvement plans address the use of technology to support teaching, learning, instructional management, and administrative processes</p>	<p><i>MD Technology Literacy Standards for Students</i> MD Teacher Technology Standards MD Technology Standards for School Administrators</p> <p><i>Information and Communications Technology Literacy maps (Partnership for the 21st Century Skills)</i></p> <p>Partnership with the MDK12 Consortium</p> <p>SMCPS PD evaluations</p>

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
<p>All students will demonstrate mastery level technology related knowledge and skills specified in the State Content Standards.</p> <p>Departments responsible: DOI PD</p>	<p>2008-ongoing Continue to provide the SMCPS Middle School Information Technology Class as an elective.</p> <p>Ensure that students have a range of choices, including increased numbers of computer science courses that allow them to develop the technology-related knowledge and expertise expected by employers and post-secondary institutions.</p> <p>Provide professional development to staff in all content areas that integrates technology in order to build student technology skills competence.</p>	<p><i>MD Technology Literacy Standards for Students</i></p> <p>CTE program data</p> <p>Scheduling data from eSchoolPlus</p> <p>SMCPS Professional Development class offerings data</p> <p>STEM program data</p>
<p>Students and staff will have expanded access to challenging curricula related to State and National Standards through Web based courses and support materials.</p> <p>Departments responsible: DOI HR PD</p>	<p>2008-ongoing Create a committee to determine SMCPS capabilities to deliver online courses and distance learning programs.</p> <p>2008 Explore cost-effective access to online courses for students. A committee will determine the process for determining curriculum correlation, cost effectiveness, management issues, and distance learning.</p> <p>Explore opportunities for staff to be reimbursed for online courses in collaboration with the SMCPS Human Resource Department and MSDE.</p>	<p>MD Virtual Learning Opportunities</p>
<p>All students and staff will be trained in the appropriate use of cyber resources and etiquette.</p>	<p>2008 and ongoing Library media and technology contacts will be responsible for providing instruction in C³ cybersecurity, cybersafety, and cyberethics.</p>	<p>SMCPS library media curriculum scope and sequence</p> <p>CLICKS and I-Safe materials</p> <p>School PD logs</p>

***All students reflects all subgroups as targeted by MSDE.**

OBJECTIVE 2: PROFESSIONAL DEVELOPMENT TO IMPROVE STAFF'S KNOWLEDGE AND SKILLS TO INTEGRATE TECHNOLOGY INTO INSTRUCTION

RATIONALE:

For technology to be effective in schools, all educators must be proficient with a variety of technologies that improve learning, and understand how to integrate their knowledge into the classroom. Research indicates that appropriate technology training (at both the pre-service and in-service levels) must be ongoing (Bensen, 1997; Rodriguez & Knuth, 2000), is most effective when instructors model the use of technology in their training (Handler, 1992), and when teachers are supported with continual colleague and staff developer interaction (Oliver, 1994; Office of Technology Assessment, 1995; Ringstaff & Yocam, 1995). In addition, educators must have access after training to practice and use what they have learned (Standish, 1996). More extensive training of teachers in the use of technology was related to positive student mathematics achievement as measured in a study by Wenglinsky (1998). Riel and Becker (2000) find that the greater the professional development of the teacher, the more likely he or she is to use computers and the Web in the classroom and a constructivist (i.e., hands-on research, interaction, and student-directed learning) approach to instruction. On-going technology-related instructional support that is immediately accessible within the school is also an important component of on-going professional development (Ronnkvist et. al, 2000; Li, & Achilles, 1999-2000).

PROGRESS TO DATE

- % of teachers able to
 - 100% Communicating with staff members and other colleagues (e.g. via e-mail or discussion areas)
 - 100% Communicating with parents/guardians of students (e.g. via e-mail, telephone homework hotline).
 - 92% Posting/viewing/accessing school/district announcements or information (e.g. via Web site or electronic bulletin boards)
 - 84% Participating in on-line discussion groups or collaborative projects
 - 96% Diagnosing and placing students (e.g. via a student information system, a curriculum management system, or a computer-based test)
 - 92% Maintaining attendance and/or grades
 - 100% Generating and administering tests
 - 100% Calculating grades and generating progress reports
 - 100% Maintaining data on students (e.g. via a student information system, computer-based test or instructional or curriculum management system)
 - 92% Analyzing and/or reporting students/school improvement data (e.g. using instructional and curriculum management systems)
 - 100% Creating instructional materials/visuals/presentations
 - 100% Accessing curriculum/school improvement material from the Internet or school system Intranet
 - 100% Researching educational topics of interest (e.g. via the Web, list servers, or e-mail)
 - 92% Handling inventory, field trips
 - 40% Use a course management system (such as Blackboard, ecollege, WebCT) or collaboration tool
- Cooperating teachers (who work with preservice educators from St. Mary's College of Maryland) are becoming familiar with the Teacher Technology Standards because of their impending impact on certification. PT3 funds are being used to develop and pilot

- performance assessments being used for pre-service teacher education programs.
- Professional development offered in all content areas attempts to integrate technology as aligned with the MD Teacher Technology Standards and the MD Technology Literacy Standards for Students.
- Inclusion facilitators have been providing professional development and technical assistance for the assistive and adaptive technology in use throughout the county
- Training and professional development related to specific software (ILS, PowerPoint, Word, Excel, and Access) occurs but has not been regularly scheduled or mandated.
- All principals and administrators are required to use Pathwise computer software for Framework–driven evaluation process.
- MD Technology Standards for School Administrators have been reviewed with Administrators

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
<p>100% of teachers and library media specialists, and teacher candidates will meet state-established standards for technology related knowledge and skills.</p> <p>Departments responsible: DOI PD</p>	<p>2008 – ongoing</p> <p>Continue to utilize Technology Committees that are sub-committees of the School Improvement Teams to determine teacher technology needs. Use the Maryland Teacher Technology Standards that identify desired technology-related knowledge and skills as a primary component of our professional development programs at the county and school levels.</p> <p>Incorporate the Technology Standards as appropriate into all grant proposals as we currently do with the National Staff Development Council (NSDC) Standards. In particular, focus on professional development strategies that are personalized, flexible, appropriate, and varied in formats and delivery methods.</p> <p>Incorporate the use of the Electronic Learning Community (ELC) in all aspects of professional development for teachers and administrators.</p>	<p>Online Technology</p> <p>MD Online Teacher Technology Inventory of each school (annually).Standards</p> <p>SMCPS Self-Assessment Survey of Technology Skills</p> <p>School professional development feedback for technology capacity building activities</p> <p>JHU ELC usage data</p> <p><i>eschool TAC</i> usage data</p> <p>PD digital resources</p>

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
<p>100% of teachers and library media specialists, and teacher candidates will meet state-established standards for technology related knowledge and skills.</p> <p>Departments responsible: DOI PD</p>	<p>Develop curriculum and professional development experiences intended to incorporate the use of technology into all areas of the SMCPS curriculum, grades K-12.</p> <p>Provide ongoing training (face-to-face and digital resources) for <i>eschool</i> student information system.</p> <p>Provide Library Media Specialists and Instructional Resource Teachers with adequate training to provide basic technology support to the school staff.</p> <p>If available, pilot the MD Online Technology Assessment tool with summer professional development.</p> <p>Increase levels and access to technology especially in Title I schools and Schools in Improvement.</p> <p>Increase levels and access to technology in the STEM programs.</p> <p>2008 - ongoing Implement MSDE recommendations for demonstration of proficiency in MD Teacher Technology Standards as part of the certification and recertification process.</p>	<p>Online Technology</p> <p>MD Online Teacher Technology Inventory of each school (annually).Standards</p> <p>SMCPS Self-Assessment Survey of Technology Skills</p> <p>School professional development feedback for technology capacity building activities</p> <p>JHU ELC usage data</p> <p><i>eschool</i> TAC usage data</p> <p>PD digital resources</p>
<p>All students and staff will be trained in the appropriate use of cyber resources and etiquette.</p>	<p>2008 and ongoing Library media and technology contacts will be responsible for providing instruction in C³ cybersecurity, cybersafety, and cyberethics.</p>	<p>SMCPS library media curriculum scope and sequence</p> <p>CLICKS and I-Safe materials</p> <p>School Professional Development logs</p>

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
<p>All SMCPS schools will have a well-trained technology infusion specialist to assist teachers and students.</p>	<p>2008-ongoing Pending budget approval, SMCPS will provide a technology integrator for shared schools until each school has an infusion specialist.</p>	<p>SMCPS budget document</p> <p>IT Department staff.</p>
<p>100% of administrators at all levels (school, district, and State) will meet State established standards for technology-related knowledge and skills.</p> <p>Departments responsible: DOI PD</p>		<p><i>MD Technology Standards for School Administrators</i></p> <p><i>SMCPS Administrative and Supervisory Performance System 2005</i></p> <p><i>Instructional Technology Observation Look Form (BCPS 2003)</i></p> <p>SMCPS professional development evaluation/feedback forms</p> <p><i>MD Instructional Leadership Framework</i></p> <p><i>eschool access data</i></p> <p>Pathwise Teacher Performance Assessment System realignment and distribution across all networks.</p>
<p>One instructional technology support person will be available for every 100 instructional and administrative staff members to assist with professional development and curriculum integration.</p> <p>Departments responsible: DOI</p>	<p>2008-ongoing Add support staff to local budget request to reach targets.</p> <p>Share models of effective implementation.</p>	<p>MD Technology Inventory Report of each school (annually)</p> <p>District Coordinator survey (annually)</p>

OBJECTIVE 3: USE OF TECHNOLOGY FOR ADMINISTRATIVE PRODUCTIVITY AND EFFICIENCY

RATIONALE:

Technology can help to improve the efficiency and productivity of teachers, and the people who manage and administer schools and classrooms. Time-consuming processes, such as procurement and record-keeping, can be performed electronically to save time and prevent error. Technology can also improve the handling of data about instructional planning and student achievement. School systems across the country, such as the Memphis City Schools, are using integrated student information and instructional management systems to assess student performance and provide feedback throughout the school year. This helps teachers to better manage their own instructional strategies (CEO Forum, 2001). When administrative technology projects succeed in reducing resource expenditures, resources are made available for other strategic objectives.

Key to increased use is that information systems be interoperable in order to share information (e.g. student information systems with transportation system and food system); between school systems (e.g. transfer of student transcripts and other pertinent information); and between the State and school systems (e.g. submission of student data to MSDE). Standards are being developed by the software industry to promote this interoperability, e.g. Schools Interoperability Framework (SIF).

The security and confidentiality of student, human resources, and financial information that travels over networks must be guaranteed.

PROGRESS TO DATE

- % of SMCPS Schools reporting regular use of technology for:
 - 100% Communicating with staff members and other colleagues (e.g. via e-mail or discussion areas)
 - 100% Communicating with parents/guardians of students (e.g. via e-mail, telephone homework hotline)
 - 100% Posting/viewing/accessing school/district announcements or information (e.g. via Web site or electronic bulletin boards)
 - 92% Participating in on-line discussion groups or collaborative projects
 - 100% Maintaining data on students, Diagnosing and placing students (e.g. via a student information system or computer-based test)
 - 100% Analyzing attendance, tests, grades and progress reports
 - 100% Analyzing and/or reporting students/school improvement data (e.g. using the mdk12.org Web site)
 - 100% Creating instructional materials/visuals/presentations
 - 100% Accessing curriculum/school improvement material from the Internet or school system Intranet
 - 100% Researching educational topics of interest (e.g. via the Web, list servers, or e-mail)
- School performance data is available for analysis (See www.msp.msde.state.md.us and www.mdk12.org).
- Upgraded student information system to WEB based system that has student, parent, teacher and administrator components that is fully integrated.

Targets for 2012	Recommended Actions & Timeline	As Measured By
<p>All educators will use electronic information and communication tools to improve management and operational efficiency</p> <p>Departments responsible: DOI</p>	<p>2008-ongoing</p> <p>Establish partnerships with schools, communities, higher education, and businesses to enhance the effectiveness of technology-related initiatives and to identify effective practices.</p> <p>Provide ongoing training (face-to-face and digital resources) for <i>eschool</i> student information system.</p> <p>Provide training for the data warehouse in order to build teacher capacity for data driven decision making.</p> <p>Include expectations for job-related technology knowledge and skills in the evaluation of all educational employees. Provide specific guidelines to assist in this evaluation.</p>	<p>Online Technology Inventory (annually)</p> <p><i>MD Teacher Technology Standards</i></p> <p><i>MD Technology Standards for School Administrators</i></p> <p><i>eschool system usage, TAC, HAC data</i></p> <p>SMCPS PD evaluations</p>
<p>Integrated student information systems and instructional management systems will be used by educators for accessing student records of achievement, monitoring student progress, planning for differentiated instruction, and assigning and supporting the delivery of instructional activities and materials.</p> <p>Departments responsible: DOI IT Pupil Services</p>	<p>2008</p> <p>Provide access to the data warehouse in order for staff to use technology to monitor student performance on assessed State Content Standards.</p> <p>Develop and publish effective practices in security design and management to ensure the confidentiality, privacy, and integrity of student and staff data, as well as protected school system data.</p>	<p>Online Technology Inventory (annually)</p> <p>Survey of Maryland Teachers (2005)</p> <p>Data Warehouse usage statistics</p> <p>SMCPS Student handbooks IT maintenance logs</p>

<p>A State Internet portal will provide one central statewide information and service resource—as well as a statewide learning community—for students, educators, parents and the community.</p> <p>Departments responsible: DOI</p>	<p>2008-ongoing</p> <p>Distribute information to students, staff, and community about the MSDE Internet portal when available.</p>	
<p>Student, school, and district data gathered and maintained by the State will be available to local school systems for analysis and decision-making to improve schools and student learning.</p> <p>Departments responsible: DOI PD</p>	<p>2008</p> <p>Provide access to and professional development in the use of MD online data resources: <i>School Improvement in Maryland</i> (http://www.mdk12.org/) and the MD Report Card (http://mdreportcard.org/)</p>	<p>Online Technology Inventory (annually)</p> <p>SMCPS Ongoing Professional Development Activities</p>

OBJECTIVE 4: *EQUITABLE access to TECHNOLOGIES among all stakeholders*

Rationale:

Research reaffirms the seemingly obvious idea that successful use of technology requires a strong technology infrastructure. (Anderson and Ronnkvist, 1999; Tierney, 1996) Such an infrastructure includes:

- Equipment, such as computers, printers, probe ware, handheld devices, projection devices, and digital cameras;
- High-bandwidth connectivity and a network configuration (wiring, data lines, servers, hubs and routers) that provide easy and efficient access to high-quality information and communications resources.
- Digital learning material, including educational software, online databases, and web pages.
- Readily available technical support to keep all equipment and systems working.

When the technology infrastructure includes the capacity to be accessible for students with diverse learning needs and supports how teachers meet individual learning needs, more students have the opportunity to be successful (Hasselbring & Glaser, 2000).

In addition, equipment in a school should be located to effectively support instructional needs. Although computer labs are necessary for some instructional activities involving many students, aggregating all computers into computer labs may adversely impact how they are used. "...placing a resource outside of the normal working space of teachers and students means that it will be more difficult to integrate computer activities with the other instructional and learning activities going on in the classroom." (Becker 1998, as cited in Anderson and Ronnkvist, 1999) Safe, secure, and responsible use of the technology must be addressed.

PROGRESS TO DATE

- 3.2:1 student to high-capability computer ratio
- All public schools wired or funded to be wired for data, voice and video systems that meet the MSDE *Standards for Telecommunications Distribution Systems*.
- 100% of classrooms in permanent buildings connected to the Internet
- 100% of secondary schools have high capacity fiber connections to buildings.
- 100% of elementary schools have connections at medium-capacity (T-1) or higher.
- 100% of classrooms with at least one computer available for teacher use.
- 5.3 average number of projection devices per school.
- 100% of St. Mary's County Public Schools report teachers for students with disabilities use assistive technology.

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
<p>Equipment and Connections ITS Department</p> <ul style="list-style-type: none"> • One computer per educator for administrative and instructional use. • 3:1 student to computer ratio • One computer projection device or display unit per instructional area. • Connection to a LAN/WAN from every instructional and administrative area. • Connection of WAN to Maryland State Education Network • Internet connection (broadband speed) from every computer that can support the use of high-quality digital learning resources. 	<p>2008</p> <p>Require local school systems' technology and consolidated plans to include strategies for procurement, maintenance and upgrade of equipment, networks and software, based on instructional and program needs.</p> <p>Support Request to Governor and State Legislature to continue categorical funding for technology to ensure that all schools meet State targets.</p> <p>Participate in the work group of representatives from K-12, higher education, and State and local government to develop strategies for cost savings and increased efficiency in procuring hardware, software, network services, assistive technology, and online resources.</p> <p>Continue to develop guidelines for installation of equipment and configuration of networks for maximum efficiency and effectiveness.</p> <p>Assess long-term connectivity and bandwidth needs and develop strategies for meeting them.</p> <p>Maintain an Acceptable Use and Internet Safety policy that complies with federal requirements.</p> <p>Integration of BOARD DOCS into the SMCPS Board of Education Meetings in order to ensure access for all community stakeholders.</p>	<p>Online Technology Inventory of each school (annually)</p> <p>Survey of Maryland Teachers (2005)</p> <p>IT department</p>

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
<p>Support Staff ITS Department and Finance Office</p> <ul style="list-style-type: none"> • At least one full time technical support person for every 300 computers • At least one full time LAN administrator per 40 servers • At least one full time WAN administrator per 25 sites. 	<p>2009 Add additional personnel to meet technology needs</p>	<p>Inventory of each school (annually)</p>
<p>ACCESSIBILITY ITS Department</p> <ul style="list-style-type: none"> • Technology-based products will offer equivalent accessibility for students with disabilities. • Assistive technology is available for 100 % of the students who have identified it in their Individual Education Plans and 504 plans. 	<p>2008 Implement and monitor regulation that requires requests for bids, requests for proposals, and guidelines for the selection and evaluation of technology-based instructional products used by students include the consideration of equivalent access by students with disabilities.</p> <p>2008 Publish “effective practices” in implementing technology that accommodates diverse learning needs, including those of students with disabilities and those in programs for English for Speakers of Other Languages (ESOL).</p>	<p>Monitoring of school systems for compliance with new accessibility regulation (annually)</p> <p>Online Technology Inventory of each school (annually)</p>
<p>AVAILABILITY ITS Department</p> <ul style="list-style-type: none"> • Equipment is located in all instructional areas as needed to support instructional purpose. • Information and communications resources are available after school hours. 	<p>2008 Monitor state publications that promote effective practices in use of new and emerging technologies, including bandwidth; computers; wireless networks; and devices to extend the flexibility, accessibility, usefulness and cost-effectiveness of infrastructure.</p> <p>Support the use by children outside of school by allowing access to equipment and networks after school hours for students, parents, and communities, especially in areas where technology is not available in homes</p>	<p>Online Technology Inventory of each school (annually)</p> <p>Survey of Maryland Teachers</p>

OBJECTIVE 5: IMPROVEMENT OF INSTRUCTIONAL USES OF TECHNOLOGY THROUGH EVALUATION AND RESEARCH

RATIONALE

Maryland needs to measure success both in reaching the Technology Plan targets and, ultimately, in achieving the vision of the plan for learners to be competent and creative thinkers as well as effective communicators and problem-solvers. Researchers have measured student progress in technology in a number of ways, including by generally increased computer usage and by engagement in specific learning tasks (Becker et. al., 1999; Becker, 2000b; Means, 1995). These studies also indicate that there is a need for further analysis of the explicit effects of technology resources on student achievement, creative thinking and communication. To gauge such progress, multiple measures must be used, including standardized State and local school system assessments, targeted research studies, school and classroom-based evaluations, and State and local surveys and inventories. Technology should be used, as appropriate, to facilitate the analysis and communication of results.

PROGRESS TO DATE

- Progress toward targets in the State Technology Plan are currently tracked, analyzed, and documented in three ways:
 - Annual Technology Inventory of every SMCPS public school assesses technology capacity and use. Digital Divide data charts are also available. (See <http://msde.aws.com>)
 - Statewide survey of District Technology Coordinators gathers data on a variety of topics, including local funding levels, technical and instructional support available for technology, professional development activities, and local evaluation efforts.
 - Database for collecting “effective practices” in technology use, all nominated by local school systems and schools, can be found at <http://www.mbrt.org/effprac-tech-faq.htm>
- Use of technology for research, assessment, and evaluation purposes:
 - Equal access
 - Teacher and staff quality:
 - SMCPS teacher certification
 - Beginning creation of professional development data base that monitors participation in county professional development
 - SMCPS parallel progress:
 - Creation of data base for monitoring para-educators professional development
 - Create a system to grant then monitor continuing education units (CEUs) for classified employees (as per our contract)
 - Pathwise
 - Accelerated Reader and Accelerated Math
 - Scholastic Reading Inventory (SRI)
 - SAT software
 - Realignment of ILS Math (in process)
 - Added “variable” to enhance data analysis on CTBS, e.g., FARMs, double-disaggregating

Targets for 2012:	Recommended Actions & Timeline	As Measured By...
<p>Data related to all targets in SMCPS Objectives 1 through 4 will be tracked, analyzed and reported to the State</p> <p>Departments responsible: DOI & ITS</p>	<p>2008 Review annual online Technology Inventory and reporting process and refine as needed.</p> <p>Utilize Teacher and Administrator Self Assessment instrument and online survey system.</p> <p>Use MSDE developed observational protocols and checklists that can be used in grant monitoring process, research, and school visitations to assess levels of technology implementation.</p>	<p>Online Technology Inventory (annually)</p>
<p>Expand rework of the School Improvement Plan (SIP) Process to include needs assessment and strategies and activities related to technology integration into: Instructional practice Professional development New program and content implementation</p> <p>Departments responsible: DOI & ITS</p>	<p>2008 Encourage SMCPS to partner with a third-party evaluator, such as, higher education and/or evaluation organizations to conduct the research.</p> <p>Use 3% of technology funding for evaluation/research of project or initiative in grants.</p> <p>2008-ongoing Disseminate results of research through administrative and professional development channels.</p>	<p>On-site observational protocols Ethnographic research Teacher/student portfolios Teacher and student interviews Action research Other research Protocols</p>
<p>Renew the SMCPS Technology Plan based on evaluation and research results</p> <p>Departments responsible: DOI & ITS</p>	<p>2008 Charge SMCPS Technology Department along with DOI with responsibility for monitoring and carrying out the Evaluation Plan.</p>	<p>Data-driven updated plan in 2008</p>

Principles to guide the use of technology

Skilled teachers have always been and will remain the key to high quality education.

- Effective use of technology by teachers creates a powerful force for improved learning.
- Teacher development and training are prerequisites to the successful use of technology.
- Advanced technology will improve the nature of present teaching practices.

Students' educational and life experiences will be enriched through access to multiple learning opportunities.

- All students deserve equitable access to technology and information.
- Special needs students can demonstrate increased achievement through use of adapted technology.
- Assessment using technology provides efficient data collection, measurement and analysis.
- The different forms of technology enhance achievement of outcomes by meeting the diverse learning styles of students.
- Individualized instruction and continual feedback are enhanced by technology.

The instructional uses of technology originate from the curriculum.

- Effective, efficient uses of technology require the integration of instructional and student support systems.

The system benefits, in the area of technology, by partnerships and connectivity with parents and community members.

Effective use of technology is fundamental to economic success.

Effective use of technology enables students to develop their intellectual and personal potential for a lifetime of learning and for responsible, productive participation in our diverse and changing world.

Annual examination of the three-year plan is essential to its successful implementation.

- The technology plan is shared and reviewed for comment and feedback at the beginning of each school year with the school based technology committees.
- Technology needs are assessed, reviewed and planned for by the School Improvement Teams each year.
- Technology is addressed by the Superintendent in his School House Forums at least once a year.
- Technology Plan is posted on the SMCPS website.

Assessment of framework and impact of technology

This framework builds upon the planned and accomplished activities of 2002 to 2005. It reflects input from School Improvement Teams' Plans (the stakeholders). Annual update and distribution of this framework provides feedback to those stakeholders for review and comment. Each year a survey will be conducted to assess the current infrastructure and training of the county school system results for current year are reported in the *Maryland Business Roundtable Report*. The impact on student learning will be reflected in the *Maryland School Performance Program Report*, shows the current status, and trends in test scores.

Appendix A: Minimum targets for school technology configuration

Appendix B: Data Wiring Status

Appendix C: Computer Work Request Priorities

Appendix D: Video Access

Appendix E: School Profile

Appendix F: Communication to Stakeholders

Appendix G: SMCPS Network Usage Standards

Appendix H: Internet Site Filtering and Monitoring

Appendix I: Web Page Content Standards Statement

Appendix J: Three-Year Projections for Infrastructure and Equipment

Appendix K: Estimated Funding Source

Appendix L: Partnership Agreement For Volunteers Assisting With Computer Repair

Appendix M: Computer Software Evaluation Form

Appendix N: MD *Technology Standards*

[MD Technology Literacy Standards for Students](#)

[MD Teacher Technology Standards](#)

[MD Technology Standards for School Administrators](#)

Appendix A

Minimum targets for school technology configuration

- 6 drops of category-5 wire per classroom
- 2 drops of category-5 wire per office
- 1 digital projector per 500 students
- 1 networked computer lab per 300 students with appropriate software
- 1 networked printer per 30 networked computers
- Overall ratio of 1 networked computer per 3 students with appropriate software
- Cable TV in every classroom
- Capability of High speed access to WAN from any networked machine in the LAN
- Each school to have local Web Page(s)
- Software for PCs will be the productivity office suite as defined by county standards
- Every teacher to have access to a networked computer in their classroom
- All networked PCs in elementary and middle schools will have capability to access the ILS
- Software for high schools will be curriculum based software
- All networked PCs will have the capability to access the Internet
- One Hardware/Software Technician for each 300 computer workstations
- Hardware/Software Technician on site at least 1 day a week
- One LAN/WAN administrator for each 1,250 computers
- Every library media center will have access to the Internet
- Every library media center will have common automated library collection management system operating on a common platform.

Appendix B

Data Wiring Status													
	Offices			Percent of Classrooms wired			Computer Labs			Media Center			
	Internet	LAN	WAN	Internet	LAN	WAN	Internet	LAN	WAN	Internet	LAN	WAN	TV
Elementary													
Banneker	√	√	√	100	100	100	1	1	1	√	√	√	√
Carver	√	√	√	100	100	100	1	1	1	√	√	√	√
Dent	√	√	√	100	100	100	1	1	1	√	√	√	√
Dynard	√	√	√	100	100	100	1	1	1	√	√	√	√
Green Holly	√	√	√	100	100	100	2	2	2	√	√	√	√
Greenview Knolls	√	√	√	100	100	100	2	2	2	√	√	√	√
Hollywood	√	√	√	100	100	100	1	1	1	√	√	√	√
Leon. Elem.	√	√	√	100	100	100	1	1	1	√	√	√	√
Lexington Park	√	√	√	100	100	100	1	2	1	√	√	√	√
Mechanicsville	√	√	√	100	100	100	1	2	1	√	√	√	√
Oakville	√	√	√	100	100	100	1	1	1	√	√	√	√
Park Hall	√	√	√	100	100	100	1	2	1	√	√	√	√
Piney Point	√	√	√	100	100	100	1	1	1	√	√	√	√
Ridge	√	√	√	100	100	100	1	1	1	√	√	√	√
Town Creek	√	√	√	100	100	100	1	1	1	√	√	√	√
White Marsh	√	√	√	100	100	100	1	1	1	√	√	√	√
Middle													
Esperanza	√	√	√	100	100	100	2	2	2	√	√	√	√
Leon. Mid.	√	√	√	100	100	100	1	1	1	√	√	√	√
Margaret Brent	√	√	√	9	9	9	1	1	1	√	√	√	√
Spring Ridge	√	√	√	100	100	100	2	2	2	√	√	√	√
High													
Alt. Learning Center	√	√	√	100	100	100	1	1	1	-	-	-	-
Chopticon	√	√	√	100	100	100	13	13	13	√	√	√	√
Great Mills	√	√	√	100	100	100	4	10	4	√	√	√	√
Leon. High	√	√	√	100	100	100	2	7	2	√	√	√	√
Tech. Center	√	√	√	100	100	100	1	1	1	-	-	-	-

Appendix C

COMPUTER WORK REQUEST PRIORITIES

PRIORITY 0 - Issues addressed by the Help Desk – Immediate Response

- Passwords - e-mail, application, server
 - Printing problems
 - Software configuration problems
 - E-mail problems
 - Phone configuration/billing problems
- These typically do not require a visit and can be handled through the network or over the phone.

PRIORITY 1 - Will respond as soon as we can to problem. Target: within 24 hrs

- Payroll problems
- Entire phone systems down
- Entire PA systems down
- Entire servers down
- Entire networks down
- Entire labs down
- Entire In-house Cable TV down

PRIORITY 2 - Will respond within 5 working days

- Main printer in building down but backup is working.
- Machine on desk that is essential to person's job but other similar machines in the building are capable of doing the work.
- Single phone at site is not working but is essential for person to complete their work.
- PA in one room is not working at site.

PRIORITY 3 - Will respond within 2-3 weeks

- First 2 pc's in a lab or classroom.
- Phone not mission critical.
- PC down and not mission critical.
- Software not quite right but functional.
- TV in one room not working at site.

PRIORITY 4 - Will respond when in building for regular scheduled service.

- Broken equipment like televisions, overhead projectors, tape players, record players
(Use other available equipment at site)
- Scheduled items –
YOU ARE REQUESTED TO SCHEDULE THE FOLLOWING WITH AS MUCH ADVANCE NOTICE AS POSSIBLE. These will then be scheduled, with some impact possible due to previous higher priority interruptions.
 - New installs or re-configuration of existing technology (hardware and software; includes SMARTCO and volunteer activity)
 - Configuration issues.
 - Office re-locations
 - Special setup requests for presentations (in most cases, building staff should handle, unless it involves bringing equipment from another site)

Note: **Response time** does not necessarily mean the time it takes to fix the item.

Appendix D

Video Access			
	Cable TV	School Closed Circuit	Digital Projector
Elementary			
Banneker	√	√	√
Carver	√	√	√
Dent	√	√	√
Dynard	√	√	√
Green Holly School	√	√	√
Greenview Knolls	√	√	√
Hollywood	√	√	√
Leonardtown Elem.	√	√	√
Lexington Park	√	√	√
Mechanicsville	√	√	√
Oakville	√	√	√
Park Hall	√	√	√
Piney Point	√	√	√
Ridge	√	√	√
Town Creek	√	√	√
White Marsh	√	√	√
Middle			
Esperanza	√	√	√
Leonardtown Middle	√	√	√
Margaret Brent	√	√	√
Spring Ridge	√	√	√
High			
Fair Leads Academy	√	√	√
Chopticon	√	√	√
Great Mills	√	√	√
Leonardtown High	√	√	√
Dr. James Forrest Career & tech	√	√	√

Note: Information taken from the Technology Survey 2008

Appendix E

School Profile							
	FTE	# Computers	FTE:Computers	# Clrm	# Teachers	# Computer Lab	access method
Elementary							
Benjamin Banneker	415	131	3.3:1	37	36	1	Fiber
George W. Carver	247	106	3.1:1	18	21	1	Fiber
Lettie M. Dent	533	127	3.9:1	25	35	1	Cable Modem
Dynard	400	104	3.7:1	20	37	1	Cable Modem
Green Holly	552	186	3.8:1	43	52	2	Cable Modem
Greenview Knolls	537	126	4.6:1	29	45	2	Cable Modem
Hollywood	615	201	4.2:1	27	27	1	Cable Modem
Leon. Elem.	497	94	6.2:1	27	32	1	Cable Modem
Lexington Park	296	65	3:1	17	17	2	Cable Modem
Mechanicsville	286	124	2.8:1	20	21	2	Cable Modem
Oakville	428	87	5.1:1	21	26	1	Cable Modem
Park Hall	470	113	4.3:1	25	34	2	Cable Modem
Piney Point	479	150	5.1:1	22	36	1	Cable Modem
Ridge	223	87	3.6:1	12	21	1	Cable Modem
Town Creek	248	63	7.5:1	14	19	1	Cable Modem
White Marsh	207	70	2.8:1	11	20	1	T1
Middle							
Esperanza	878	327	2.5:1	45	48	1	Fiber
Leon. Middle	903	186	4.2:1	48	62	1	Fiber
Margaret Brent	883	148	4:1	44	54	1	Fiber
Spring Ridge	789	175	2.8:1	49	56	2	Fiber
High							
Alt. Learning Center	58	23	2.6:1	11	11	1	Fiber
Chopticon	1,518	533	3.5:1	77	92	13	Fiber
Great Mills	1,565	424	4:1	80	93	10	Fiber
Leon. High	1,385	232	4:1	66	73	7	Fiber
Dr. James Forrest Career & tech	23	145	N/A	26	26	1	Fiber

Note: Information taken from the Technology Survey 2008

Appendix F

Communication to Stakeholders

The framework is reviewed each year based on curriculum changes, School Improvement Teams (SIT) input and changes in the world of technology. This framework is funded by the budget process, which is very extensive and involves every stakeholder possible. Copies of the current technology plan are sent to each principal at the start of the school year so that they can review with the SIT (parents, teachers, staff, students) and can make recommendations. The final technology framework, after workshops with the Board of Education and executive team, is presented at a public board meeting.

Report to stakeholders on projects already completed

- Established School Technology Committees to recommend software purchases for instructional applications at all school levels.
- Established connection to the WAN and Internet.
- Wired and connected Local Area Networks in all schools and offices; currently have over 3,500,000 feet of Category 5 wiring installed.
- Continued to upgrade SMCPS student support system (software/hardware and personnel).
- Continued to upgrade SMCPS financial and student management software.
- Continue web-content filtering using the Smartfilter product in conjunction with our proxy server.
- Continue an online catalog system at all school libraries.
- Provided an online catalog system to all secondary schools which is web based.
- Continue utilizing configuration management committee, for the student information system, that consists of department heads, and school-based personal.
- Implement and support the Cognitive Tutor Algebra program for all ninth grade Algebra students.
- Continue to provide support for the use of Kurweil text readers for students with disabilities.
- Purchased and implemented data warehousing product.
- Purchased and support the use of streaming video in all content areas.
- Purchase and support online resources (SIRS Knowledge Source, SIRS Discoverer, and WorldBook).
- Purchase and implement the Parent Notification System-Parent Link.
- Installed online applicant tracking in the Human Resource Department.
- Installed online access for Parents (HAC) and Teachers(TAC) to student information
- Implement the K-12 Education channel.

Appendix G

SMCPS NETWORK USAGE STANDARDS

- All use of the network must be in support of education and research and consistent with the purposes of SMCPS.
- Any use of the network to facilitate illegal activity is prohibited, including copyright violations.
- Any use of the network for commercial or for-profit purposes is prohibited.
- Users shall not intentionally seek information (i.e. passwords, files, settings) about other users, or misrepresent other users on the network.
- All communications and information accessible via the network should be assumed to be private property.
- No use of the network shall serve to disrupt the use of the network by others; hardware or software shall not be destroyed, modified, or abused in any way.
- Malicious use of the network to develop programs that harass other users, or to infiltrate a computer or computer system is prohibited.
- Hate mail, harassment, discriminatory remarks, and other antisocial behaviors are prohibited.
- The illegal installation of copyrighted software for use on school computers is prohibited.
- Use of the network to access obscene or pornographic material is prohibited.

**DISREGARD OF THE SMCPS NETWORK USAGE STANDARDS WILL BE
SUBJECT TO JUDICIAL PROCEDURES**

Appendix H

Internet Site Filtering and Monitoring

All of the computers at each location also have to use our proxy server to obtain access to the Internet. The proxy server allows us to cache websites that are visited by our clients. This allows for faster access to those websites in the future, since the proxy uses its cached site first, instead of going out the internet for the pages, and it also allows us to block access to websites that do not support the goals, or purposes of SMCPS. The site-filtering package that we use is Smartfilter by Secure Computing.

Website filtering was first implemented through our proxy in January 1998. At that time we were the only school system in the state of Maryland that was doing this type of filtering, and possibly one of the very few in the nation as well. The advantages of doing proxy filtering is that it cannot be turned off at the remote location, and a single update to our control list, affects every client computer that goes through the proxy for internet access. Currently our control list is updated weekly via an automatic download. ITS staff also maintains site list for sites that may or may not be on the control list. We use this list to block sites that may not have made the control list yet, and to unblock sites that are on the control list. To this end, there is a feedback form on our web site that staff can use to make suggestions (both additions and deletions) to the control list.

The website usage is monitored weekly through the use of a report that is run automatically on Saturday nights at midnight. This report is reviewed on Monday morning by ITS staff to determine if any changes need to be made to our site list.

Finally ITS staff has added a firewall to our network. This device allows us to conduct packet filtering to both outgoing and incoming data to our network, based on specific rules (or chains) that we apply to the packets.

Appendix I

Web Page Content Standards Statement

INTRODUCTION

The availability of Internet access in St. Mary's County Public Schools (SMCPS) provides an opportunity for students and staff to contribute to the school system's presence on the World Wide Web. The SMCPS Web site provides information to the world about school curriculum, instruction, school-authorized activities, and other general information relating to our schools and our school system's mission. The Office of Information Technology provides Internet access for the creation of Web pages, at the Bethune Educational Center. Creators of Web pages need to familiarize themselves with and adhere to the following policies. Failure to follow these policies may result in the loss of authoring privileges and/or other more stringent disciplinary measures.

CONTENT STANDARDS

Site administrators, with input from their staff, will approve all Web pages created for their site and/or department. The site administrator must approve the design and content before the page can be published. Site administrators will designate an individual to be responsible for the creation and maintenance of the Web page. The maintenance of Web pages is the responsibility of the site administrator or designee(s) and the Web master of SMCPS or designee(s).

SUBJECT MATTER

All subject matter on Web pages should relate to curriculum, instruction, school-authorized activities, and general information that is appropriate and of interest to others, or it should relate to the school system, or the schools within the system. Therefore, neither staff nor students may publish personal home pages as part of the system Web sites, or home pages for other individuals or organizations not directly affiliated with the school system. Staff or student work may be published only as it relates to a class project, course, or other school-related activity. The solicitation of personal Web pages to keep parents and students informed of news and events in a school or department will not be tolerated.

QUALITY

All Web page work must be free of spelling and grammatical errors. Documents may not contain objectionable material or point (link) to objectionable material. Objectionable material is defined as material that does not meet the standards for instructional resources specified in system policies. The decisions of the SMCPS Web master will be final when questions arise related to the quality or propriety of Web page material, appearance, or content.

OWNERSHIP AND RETENTION

1. All Web pages on the SMCPS Web server are property of the school system and will be considered official Web pages for SMCPS. All text and graphics in the St. Mary's County Web site are owned

and copyrighted by SMCPS except where otherwise noted. SMCPS has no control over the content of or the copyright of pages we link to outside of our domain.

2. System policies on copyright will govern the use of material accessed through the school system. Because the extent of copyright protection of certain works found on the Internet is unclear, employees will make a standard practice of requesting permission from the holder of the work if their use of the material has the potential of being considered an infringement. Teachers will instruct students to respect copyright and to request permission when appropriate.

STUDENT SAFEGUARDS

1. Web page documents may include only the first name and the initial of the student's last name.
2. Documents may not include a student's phone number, address, names of other family members, or names of friends.
3. Published e-mail addresses are restricted to staff members or to a general group e-mail address where arriving e-mail is forwarded to a staff member. The staff member will prescreen e-mail that is arriving in a group e-mail address before students are permitted to read it.
4. Decisions on publishing student pictures (video or still) and audio clips are based on a site administrator's judgment. If student pictures are needed, a parents signed release form must be on file at that building.
5. Web page documents may not include any information, which indicates the physical location of a student at a given time, other than attendance at a particular school, or participation in activities.

SCHOOL BOARD POLICIES AND REGULATIONS

All documents on the SMCPS server(s) must conform to policies and regulations as well as to established system/school guidelines. Persons developing or maintaining web documents are responsible for complying with these and other relevant policies. Copies of these policies may be found in the site administrator's office.

SMCPS WEB PAGE REGULATIONS

1. Documents created for the Web and linked to SMCPS Web Pages will meet the criteria for use as an instructional resource.
2. Any links to SMCPS pages that are not specifically curriculum-related will meet the following criteria:
 - Information about other youth activities, agencies, or organizations, which are known to be non-

- sectarian.
 - Exclusively devoted to community interests or child welfare, are non-profit, and non-discriminatory.
 - Web page links may not include entities whose primary purpose is commercial or political advertising.
3. All communications via the system Web pages will comply with the SMCPS NETWORK USAGE STANDARDS and the system Code of Conduct Policy. Offensive behavior that is expressly prohibited by this standard includes religious, racial, and sexual harassment and/or violence.
 4. Any student information communicated via the system Web pages will comply with current policies on Data Privacy and Public Use of School Records.
 5. Any deliberate tampering with or misuse of system network services or equipment will be considered vandalism and will be handled in accordance with the SMCPS NETWORK USAGE STANDARDS, the system Code of Conduct, and other related policies.

TECHNICAL STANDARDS

Consistency

Each Web page added to the SMCPS must contain certain elements, which will provide general consistency for SMCPS.

1. At the bottom of the Web page, there must be an indication of the date of the last update to that page and the name or initials of the person(s) responsible for the page or update. It shall be that person's responsibility to keep the Web page current.
2. At the bottom of the Web page, there must be a link that returns the user to the appropriate point(s) in the system Web pages. The Web master of the SMCPS will provide the code for this link. The Web master may be contacted by e-mail. The address is webmaster@mail.smcps.k12.md.us.
3. All Web pages must be submitted to the site administrator or designee for approval before they will be placed on the SMCPS server. Proof of approval must be given before the Web pages will be published.
4. No computers other than the SMCPS Web server shall be used as Web/FTP servers for official school system and/or building pages.
5. We caution you against creating Web pages with extensive tiled backgrounds, large graphics, sound and animated files. Such files require extensive download time, are frustrating for modem users, and slow down the file servers. As a general rule, a Web page should not take longer than one minute to download over a 14.4K modem connection. Graphics files shall be under 60K in size unless a special situation exists that requires a larger graphic. You are warned that the Office of Information Technology may direct you to revise such Web pages if it should become a system operational problem.
6. The authorized agent who is publishing the final Web page(s) for a site, will edit and test the page(s) for accuracy of links, and check for conformance with standards outlined in this policy.

7. Web pages may not contain links to other Web pages not yet completed. If additional pages are anticipated, but not yet developed, the text that will provide such a link should be included. However, the actual link to said page(s) should not be made until the final page is actually in place on the SMCPS server.
8. All Web pages must be given names, which clearly identify them. The name of the first page of a building's Web site will be the initials of the building followed by index. The names of all documents shall be in lowercase and will end with .htm. For example the first page of George Washington Carver Elementary School would be gwcesindex.htm.
9. Any graphics, sounds, or video used on Web pages must conform to the format currently used or approved by the SMCPS Web master.
10. Counters or any other code that requires a CGI or Perl Script will be prohibited at this time due to the possibility of compromising security on SMCPS Servers, unless that code was developed by the Web master or his designee(s).
11. Java Script code may be used on Web pages with care due to the increase of download time involved with the use of those routines.
12. Web pages may not contain any student e-mail address links, any survey-response links, or any other type of direct-response links.
13. Decisions regarding Web pages for building sites will rest with the site administrator, with input from staff. The SMCPS Web master will make all final decisions concerning a Web page.
14. Additional consistency standards may be developed by the system as the need arises.

Posting

1. Before posting a building web page(s), documentation must be provided to the Web master of SMCPS showing the page has met with the approval of the site administrator or his designee.
2. Web pages may be e-mailed as attachments to a letter to webmaster@smcps.org.
3. Web pages may be sent as files on floppy disk to the Bethune Educational Center.
4. Special accounts can be setup for staff that are technically certified by the Web master.
5. All efforts will be made by the Web master of SMCPS to post the files within one week of receiving them.

OTHER

1. Materials on Web pages sometimes reflect an individual's thoughts, interests, and activities. Such Web pages do not, in any way, represent individual schools or SMCPS, nor are they endorsed or sanctioned by the individual school or the SMCPS. Concerns about the content of any page(s) created by students or staff should be directed to the site administrator or designee.

2. Given the rapid change in technology, some of the technical standards outlined in this policy may require change throughout the year. The Supervisor of Information Technology will make such changes with approval of the Superintendent. This Web Page Policy will be updated on an annual basis, or more frequently if needed.
3. System policies on plagiarism will govern use of material accessed through the system. Teachers will instruct students in appropriate research and citation practices.

Appendix J

Three-Year Projections for Infrastructure, Software and Equipment

Item	Current Year	Fy2007	Fy2008
Cat 5 wiring (Million feet)	Three Goal achieved All spaces wired to standards	Wire any new spaces constructed to standards	Wire any new spaces constructed to standards
# Pentium Computers networked with Web access and appropriate software	Increase by 1 CPU for 3 new FTE	Increase by 1 CPU for 3 new FTE	Increase by 1 CPU for 3 new FTE
Total Data bandwidth (megabits) between buildings	900	900	900
# Of Telephones	Add one phone to building for each new classroom added	Add one phone to building for each new classroom added	Add one phone to building for each new classroom added
# Of schools with cable TV	Connect all new construction	Connect all new construction	Connect all new construction

Appendix K

Estimated Source of funding FY 2008

	Base Local Budget	Non-Reoccurring funds	
		Other Grants	CIP
Hardware:	135,000	100,000	120,000
Training:	17,000	27,000	
Life Cycle Replacement:	229,000		
Software:	351,000	50,000	
Personnel:	1,291,000		
Wiring:	4,000		100,000
Communication:	310,000		
Repair	62,000		

Estimated Source of funding FY 2009

	Increase in base Local Budget	Non-Reoccurring funds	
		Other Grants	CIP
Hardware:	0		120,000
Training:	0	27,000	
Life Cycle Replacement:	200,000		
Software:		30,000	
Personnel:	100,000		
Wiring:			100,000

Estimated Source of funding FY 2010

	Increase in base Local Budget	Non-Reoccurring funds	
		Other Grants	CIP
Hardware:	0		
Training:	0	27,000	
Life Cycle Replacement:	200,000		
Software:	0	30,000	
Personnel:	100,000		

Appendix L:

INFORMATION TECHNOLOGY SERVICES
22975 Colton Point Road
Bushwood, MD 20618
Voice (301) 769-4600

Fax (301) 769-4602

PARTNERSHIP AGREEMENT FOR VOLUNTEERS ASSISTING WITH COMPUTER REPAIR

This agreement is to provide for non-school employees to work on school system owned computer hardware and software. The school system recognizes that we have many very qualified and talented individuals that are capable of helping schools with their technology needs. In order for those volunteers to be effective in the school system, hardware and software configurations must be consistent with county standards.

Information Technology Services (ITS) will provide the configurations, passwords and parts to the volunteers that attend training provided by ITS, agree to keep the records maintained for any work done and keep the integrity of any passwords provided.

I agree to work within the guidelines established by the school system.

Signed Volunteer

Site Administrator

Director of Technology

Appendix M

DEPARTMENT OF CURRICULUM AND INSTRUCTION
St. Mary's County Public Schools
Computer Software Evaluation

PART I: Software Information

Software Title: _____
Publisher (original producer): _____ Vendor _____ Copyright _____
Price: Individual _____ Lab pack _____ Site _____ District _____
Grade(s) _____ (List range of use)
Intended use: _____ Classroom _____ Computer Lab _____ Other, please explain: _____
Platform: _____ WIN 95 _____ WIN 98 _____ WIN 2000 _____ MAC _____
Hardware requirements: Disk space: _____ CD-ROM: _____ Memory: _____
Where are your targeted machine(s) located: _____

PART II: Alignment with SMCPS Essential Curriculum (MLO, CLG, Content Standards)

Has the software been previewed? Yes _____ No _____

Software should be reviewed by three staff members BEFORE it is requested for purchase:

Evaluator's Signature: _____ Date: _____
School: _____ Position: _____

Evaluator's Signature: _____ Date: _____
School: _____ Position: _____

Evaluator's Signature: _____ Date: _____
School: _____ Position: _____

PART III: COMAR 508 COMPLIANCE FORM (on back of this form)

(PREVIEW COPY SHOULD BE SENT TO SUPERVISOR THEN TO BETHUNE)

PART IV: SUPERVISOR VERIFICATION

Required review by Supervisor of Instruction for content appropriateness. Software approval: _____ Yes _____ No
Date: _____ Supervisor's Signature: _____

PART V: BETHUNE INSTRUCTIONAL TECHNOLOGY VERIFICATION

Able to run on the SMCPS network? Yes _____ No _____
Able to run on the systems without interfering with existing software? Yes _____ No _____

Verified by: _____ Date verified: _____

This sheet must accompany the purchase order.

Meets Criteria	Does Not Meet Criteria	Requires Instructional Alternative	Not Applicable	COMAR 508 COMPLIANCE
				Able to execute functions from keyboard (keyboard shortcuts)
				Application shall not disable activated features of other products (e.g., the application cannot disrupt the display color scheme which assists people with low vision showing a visual prompt when an error tone is sounded to assist hard of hearing users, or providing "sticky keys" that allow a user to press key combinations)
				Has well-defined on-screen indications that the current focus moves among interactive interface elements as the input focus changes (e.g., a screen enlargement program magnifies a section of the screen, the program must be able to follow the focus as the focus changes)
				Has user interface element including the identity, operation, and state of the element (e.g., button associated with a hand for getting help must have a text label that indicates help)
				Bitmap images used to identify controls, status indicators must have consistent meaning assigned to application
				Applications shall not override user selected contrast and color selections or other display attributes (e.g., a program must have a section in the software that tells the program not to use its own setting, but to use whatever settings are already in place)
				Animation information must be displayable in at least one non-animated presentation mode at the option of the user (e.g., simulations are exception)
				Color coding is not used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element (e.g., "green" start button must have text label combined with the use of color)
				Product has variety of color and contrast settings
				Product shall not have flashing or blinking text, objects, etc. with a frequency greater than 1 Hz and lower than 55 Hz
				Product contains electronic forms that allow assistive technology to access the information, field elements, and functionality