

Attachment 9



Title II, Part D, Subpart 1
Formula Funding
Educational Technology
States Grants Program
(Ed Tech)

**ATTACHMENT 9 TITLE II, PART D, SUBPART 1 -- FORMULA FUNDING
EDUCATIONAL TECHNOLOGY STATES GRANTS PROGRAM**

Local School System: <u>St. Mary's County Public Schools</u> Fiscal Year <u>2005</u>
Title II-D Technology Coordinator: <u>Paula R. Juhl</u>
Telephone: <u>301-475-5511, ext. 117</u> E-mail: <u>pjuhl@smcps.org</u>

A. ALLOWABLE ACTIVITIES [Section 2416]. For all allowable activities that will be implemented, (a) provide a brief description of services, (b) timelines or target dates, (c) the specific goals, objectives, and/or strategies detailed in the 5-year comprehensive Bridge to Excellence Master Plan, and (d) the amount of funding for services to public and nonpublic students and teachers. *Use separate pages as necessary for descriptions.*

1. Strategies and Activities to Provide Ongoing, Sustained, and Intensive High-Quality Professional Development. Note: Each Ed Tech recipient must use at least 25% of its funds to provide ongoing, sustained, and intensive high-quality professional development OR, through an Ed Flex waiver request to MSDE, satisfactorily demonstrate that it already provides, to all teachers in core academic subjects, such professional development, which is based on a review of relevant research.			
Allowable Activities	Brief Description of Specific Services, Timelines or Target Dates, and Specific Goals, Objectives, and Strategies Detailed in the 5-year Comprehensive Bridge to Excellence Master Plan, and Any Revisions to the Plan As Part of This Annual Update, Including Page Numbers	Public School Costs	Nonpublic Costs
1.1 Providing professional development in the integration of advanced technologies, including emerging technologies, into curricula and instruction and in using those technologies to create new learning environments, such as professional development in the use of technology to: a) access data and resources to develop curricula and instructional materials, b) enable teachers to use the Internet and other technology to communicate with parents, other teachers, principals, and administrators and to retrieve Internet-based learning resources, and c) lead to improvements in classroom instruction in the core academic subjects [section 2416(a)(1)].	We will continue the process of building integrated curriculum and technology units and providing professional development to teachers on how to effectively implement the units in their classrooms. 1.20.1.8	\$16,666	\$4,167
2. Strategies and Activities to Integrate Technology into the Educational Process			
2.1 Developing and adapting or expanding applications of technology to enable teachers to increase student academic achievement, including technology literacy, through teaching practices that are based on the review of relevant research and through use of innovative distance learning strategies [section 2416(b)(2)].			
2.2 Acquiring proven and effective courses and curricula that include integrated technology and are designed to help students meet challenging state academic content and student achievement standards [section 2416(b)(3)].			

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A. ALLOWABLE ACTIVITIES [Section 2416], Continued.

Allowable Activities	Brief Description of Specific Services, Timelines or Target Dates, and Specific Goals, Objectives, and Strategies Detailed in the 5-year Comprehensive Bridge to Excellence Master Plan, and Any Revisions to the Plan As Part of This Annual Update, Including Page Numbers	Public School Costs	Nonpublic Costs
2. Strategies and Activities to Integrate Technology into the Educational Process			
2.3 Utilizing technology to develop or expand efforts to connect schools and teachers with parents and students to promote meaningful parental involvement, to foster increased communication about curricula, assignments, and assessments between students, parents, and teachers, and to assist parents to understand the technology being applied in their child's education, so that parents are able to reinforce at home the instruction their child receives at school [section 2416(b)(4)].			
2.4 Preparing one or more teachers in schools as technology leaders who will assist other teachers, and providing bonus payments to the technology leaders [section 2416(b)(5)].			
3. Strategies and Activities to Improve Access to Technology			
3.1 Establishing or expanding initiatives, particularly initiatives involving public-private partnerships, designed to increase awareness to technology for students and teachers, with special emphasis on the access of high-need schools to technology [section 2416(b)(1)].			
3.2 Acquiring, adapting, expanding, implementing, repairing, and maintaining existing and new applications of technology to support the school reform effort and to improve student academic achievement, including technology literacy [section 2416(b)(6)].			

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A. ALLOWABLE ACTIVITIES [Section 2416], Continued.

Allowable Activities	Brief Description of Specific Services, Timelines or Target Dates, and Specific Goals, Objectives, and Strategies Detailed in the 5-year Comprehensive Bridge to Excellence Master Plan, and Any Revisions to the Plan As Part of This Annual Update, Including Page Numbers	Public School Costs	Nonpublic Costs
3. Strategies and Activities to Improve Access to Technology			
3.3 Acquiring connectivity linkages, resources, and services (including the acquisition of hardware and software and other electronically delivered learning materials) for use by teachers, students, academic counselors, and school library media centers, in order to improve student academic achievement [section 2416(b)(7)].	Purchase software and hardware linked to the integrated units produced and aimed at improving student achievement in mathematics, science, and reading/language arts. 1.20.1	\$20,599	\$5,150
3.4 Developing, enhancing, or implementing information technology courses [section 2416(b)(10)].			
4. Strategies and Activities to Assess/Evaluate Effectiveness of Technology (At least 3 percent of Ed tech funds must be used to assess/evaluate effectiveness of technology)			
4.1 Using technology to collect, manage, and analyze data to inform and enhance teaching and school improvement efforts [section 2416(b)(8)].			
4.2 Implementing performance measurement systems to determine the effectiveness of education technology programs funded under Title II-D Ed Tech, particularly in determining the extent to which Ed Tech activities are effective in integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to meet challenging State academic content and student academic achievement standards [section 2416(b)(9)].	Contract with an external evaluator to evaluate the effectiveness of our activities. Evaluation will look at how well technology is being integrated into the curriculum, how effectively we are helping teachers acquire proficiency with the technology, and what impact, if any, these efforts have on student achievement. 1.20.1	\$5,102	\$1,276
TOTAL TITLE II-D ED TECH FUNDING AMOUNTS		\$41,358	\$10,341
Fixed Cost		\$1254	
Indirect Cost		\$1470	

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Fiscal Year 2005

B. ANNUAL CERTIFICATION OF EQUITABLE SERVICES TO STUDENTS IN PRIVATE (NONPUBLIC) SCHOOLS [ESEA, Section 9501].

1. Participating Private Schools and Services: **See Attachment 6A**
2. Describe the school system's process for providing equitable participation to students in private schools:

Each year a written invitation is extended to representatives from the non-public schools to attend a meeting of all non-public schools interested in participating in the services and programs provided by Title II, Part D grant. During this meeting an overview of the proposed program is provided so that participants may confirm their involvement. Furthermore, requests for additional support are discussed in response to identified needs. Details of these programs are also then provided to the non-public schools through written communication and additionally through e-mail communication. Equitable participation is provided on the expressed need of the individual schools. No differences exist in the services provided the non-public schools except in circumstances when the non-public schools chose not to participate in programs developed by the public schools system or when regulation prevents equity such as in the reimbursement of substitute teacher pay to enable teachers to attend county in-services.

C. ACCESSIBILITY COMPLIANCE

On December 4, 2001 the Maryland State Board of Education approved a regulation (COMAR 13A.05.02.13H) concerning accessible technology-based instructional products. This regulation requires that accessibility standards be incorporated into the evaluation, selection, and purchasing policies and procedures of public agencies. Subsequently, Education Article § 7-910: Equivalent Access for Students with Disabilities was passed during the 2002 General Assembly session and further requires that all teacher-made instructional materials be accessible also. MSDE is charged with monitoring local school systems' compliance with the regulation and the law. For more information on the regulation and the law, visit the following web sites:

<http://cte.jhu.edu/accessibility/Regulations.cfm>;

<http://198.187.128.12/maryland/lpext.dll?f=templates&fn=fs-main.htm&2.0>

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Please use the chart on the following page to address the items below related to accessibility compliance.

1. Process:

- a) Describe your policy and/or procedures for addressing the requirement that invitations to bids, requests for proposals, procurement contracts, grants, or modifications to contracts or grants shall include the notice of equivalent access requirements consistent with Subpart B Technical Standards, Section 508 of the Rehabilitation Act of 1973, as amended.
- b) Describe your policy and/or procedures for addressing the requirement that the equivalent access standards (Subpart B Technical Standards, Section 508 of the Rehabilitation Act of 1973, as amended) are included in guidelines for design specifications and guidelines for the selection and evaluation of technology-based instructional products.
- c) Describe how you are addressing the requirement that any teacher-developed materials (web sites, etc.) are accessible.

2. Implementation:

- a) Describe how you are ensuring that all educators are being provided information and training about Education Article 7-910 of the Public Schools - Technology for Education Act (Equivalent Access for Students with Disabilities). Include who, to date, has received information and/or training (e.g. all teachers, teachers at select schools, special education teachers only, building level administrators, etc.) and any future plans for full compliance.

3. Monitoring:

- a) Describe how you are monitoring the results of the evaluation and selection of technology-based instructional products set forth in COMAR 13A.05.02.13.H, including a description of the accessible and non-accessible features and possible applicable alternative methods of instruction correlated with the non-accessible features.
- b) Describe how you are ensuring that teachers and administrators have a full understanding of the regulation and law and how you are monitoring their adherence to the process and/or procedures governing accessibility.

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PROCESS	IMPLEMENTATION	MONITORING
<p>1.a. SMCPS will require all vendors to submit letters to show to what degree they comply with COMAR 508 in all RFPs and bids.</p> <p>1.b. SMCPS has developed a software evaluation form which includes a 508 compliance section as well as connections to the Maryland content standards. Staff requests of technology-based instructional products are evaluated and any shortfalls in the product are made known to the staff so that alternate instructional activities can be provided. No technology-based instructional products can be purchased without a 508 compliance form on file.</p> <p>1.c. SMCPS is working to redesign the SMCPS web site so that it meets 508 compliance standards. At this point, SMCPS does not use the web site for students to access instructional materials. It is used for informational purposes only.</p>	<p>2.a. SMCPS in March 2002 notified all media specialists and technology contacts about COMAR 13A.05.02.03. New employees are presented with 508 information as a part of New Teacher Orientation. SMCPS again instructed all media specialists about 508 compliance again on May 6, 2004. MARTEC (Temple University) presented a half day session. Library Media Specialists/Technology Contacts are expected to present the 508 information to their staff. Evaluation of the products is overseen by the Library Media Specialists or Technology Contacts.</p>	<p>3.a. Administrators and Supervisors will be presented with the regulation at a Fall Administrators and Supervisors' Meeting. Library Media Specialists present the 508 information to their staff yearly. Evaluation of the products will be overseen by the Library Media Specialists.</p> <p>Beginning in the Fall of 2004, all professional development related to the use of technology will include a review of the regulation as set forth by COMAR 13A.05.02.03.</p>

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D. Children's Internet Protection Act (CIPA) Certification Form

Any Local Education Agency seeking Ed Tech funds must certify to its State Education Agency that schools have adopted and are enforcing Internet safety policies. It is the intent of the legislation that any school (or district) using federal money (ESEA or E-rate) to pay for computers that access the Internet or to pay for Internet access directly should be in compliance with CIPA and should certify to that compliance EITHER through E-rate or the Ed Tech program. Please check one of the following:

- Our local school system is certified compliant, through the E-rate program, with the Children's Internet Protection Act requirements.
- Every school in our local school system benefiting from Ed Tech funds has complied with the CIPA requirements in subpart 4 of Part D of Title II of the ESEA.
- The CIPA requirements in the ESEA do not apply because no funds made available under the program are being used to purchase computers to access the Internet, or to pay for direct costs associated with accessing the Internet.
- Not all schools have yet complied with the requirements in subpart 4 of Part D of Title II of the ESEA. However, our local school system has received a one-year waiver from the U.S. Secretary of Education under section 2441(b)(2)(C) of the ESEA for those applicable schools not yet in compliance.

St. Mary's County Public Schools
School System

Will Clark
Authorizing Signature

8/5/04
Date

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E. BUDGET INFORMATION AND NARRATIVE

**Title II, Part D
Budget Narrative
2004-2005**

We will continue the process of building integrated curriculum and technology units and providing professional development to teachers on how to effectively implement the units in their classrooms. The plan is to have 59 participants writing science, mathematics, and reading/language arts units (\$7,388). The Supervisor of Staff Development will work with the content supervisors and the grant administrator to implement this strategy throughout the year. We will provide for 30 substitutes for 5 days to participant in training (\$9,000). We also plan to send 10 participants to the MAG conference (\$1,550), 20 participants to MICCA (\$1,800), and 1 participant to NEEC (\$1,095). Each participant will be expected to bring back information to share. The grant administrator will coordinate these workshops/conferences as they occur.

We will purchase software and hardware linked to the integrated units produced and aimed at improving student achievement in mathematics, science, and reading/language arts. Approximately \$20,599 will be spent on the 23 public schools and \$5,150 on the participating nonpublic schools. The grant administrator and the technology specialist will coordinate with school based personnel to determine the needs for the school system. The purchasing will begin in September so that the materials can be used throughout the school year.

We will contract with an external evaluator(s) to evaluate the effectiveness of our activities. Evaluation will look at how well technology is being integrated into the curriculum, how effectively we are helping teachers acquire proficiency with the technology, and what impact, if any, these efforts have on student achievement. We have budgeted \$1,000 for a consultant to teach an assistive and adaptive course to a group of teachers (this will be done during the school year) and \$5,378 for a consultant to spend two days reviewing and discussing the units written (this will be coordinated by the Supervisor of Staff Development and the grant administrator when units have been completed).

Title II, Part D FY 2005 Budget Narrative Worksheet

Category/Object	Line Item	Calculation	Amount	In-Kind	Total
1.1 Instructional Staff Development Salaries & Wages <input type="checkbox"/> Local <input checked="" type="checkbox"/> Grant <u>Title II, Part D</u>	Stipends for professional development to develop technology integrated lesson plans making VSC connections 1.20.1.3	59 participants X \$125.22	\$7,388.00		\$7,388.00
		subs \$60X30 participants X 5 days	\$9,000.00		\$9,000.00
1.1 Professional Development <input type="checkbox"/> Local <input checked="" type="checkbox"/> Grant <u>Title II, Part D</u>	Conferences/work shops 1.20.1.8	10 participants X \$155 (MAG)	\$1,550.00		\$1,550.00
		20 participants X \$90 (MICCA)	\$1,800.00		\$1,800.00
		1 participant X \$1,095 (NECC)	\$1,095.00		\$1,095.00
Fixed Charges <input type="checkbox"/> Local <input checked="" type="checkbox"/> Grant <u>Title II, Part D</u>	FICA	7.65% x \$16,388	\$1,254.00		\$1,254.00
Total for Activity 1.1			\$22,087.00		\$22,087.00
4.2 Instructional Staff Development Contracted Services <input type="checkbox"/> Local <input checked="" type="checkbox"/> Grant <u>Title II, Part D</u>	Consultants to provide professional development training 1.3.1	1 day X \$1,000	\$1,000.00		\$1,000.00
		2 days X \$2689	\$5,378.00		\$5,378.00
Total for Activity 4.2			\$6,378.00		\$6,378.00
3.3 Instructional Staff Development Supplies <input type="checkbox"/> Local <input checked="" type="checkbox"/> Grant <u>Title II, Part D</u>	Software and hardware to support VSC connection	33 schools X \$780.27	\$25,749.00		\$25,749.00
Total for Activity 3.3			\$25,749.00		\$25,749.00
Administration Business Support Services/Transfers <input type="checkbox"/> Local <input checked="" type="checkbox"/> Grant <u>Title II, Part D</u>	Indirect Costs	2.81% x direct costs	\$1,523.00		\$1,523.00
TOTAL			\$55,737.00		\$55,737.00

**CURRICULAR PROGRAMS
PROPOSED BUDGET
Instruction
STATE/FEDERAL**

Recipient Agency Name	St. Mary's County PS
Revenue Source Name	Title II Part D

Grant Period	7/01/04-6/30/06
Fund Source Code	

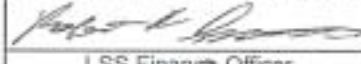
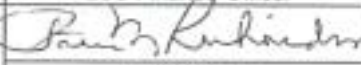
See "Financial Reporting Manual for Maryland Public Schools" for account descriptions

Check and complete a page for each funding source & TOTAL

X	STATE/FEDERAL
	LOCAL/MATCH
X	TOTAL

Category/Program/Activity	Object							Budget by Category
	1-Salaries & Wages	2-Contracted Services	3-Supplies & Materials	4-Other Charges	5-Equipment	8-Transfers*		
201 Administration								
Program 21 General Support								
Program 22 Business Support						1,523.00	1,523.00	
Program 23 Centralized Support								
202 Mid-level Administration								
Program 15 Office of the Principal								
Prog 16 Inst. Admin. & Superv.								
203-205 Instructional categories								
Program 01 Regular Programs							0.00	
Program 02 Special Programs							0.00	
Program 03 Career & Tech Prog.							0.00	
Program 08 School Library Prog.							0.00	
Program 09 Instructional Staff Dev.	16,388.00	6,378.00	25,749.00	4,445.00			52,960.00	
Program 10 Guidance Services							0.00	
Program 11 Psychological Serv.								
Program 12 Adult Education								
206 Special Education								
Program 04 Public Sch Inst. Prog								
Program 09 Instructional Staff Dev.							0.00	
Program 15 Office of the Principal								
Program 16 Inst. Admin. & Superv.								
207 Student Personnel Serv.								
208 Health Services								
209 Student Transportation								
210 Operation of Plant								
Program 30 Warehousing & Distr.								
Program 31 Operating Services								
211 Maintenance of Plant								
212 Fixed Charges				1,254.00			1,254.00	
214 Community Services							0.00	
215 Capital Outlay								
Program 34 Land & Improvements								
Program 35 Buildings & Additions								
Program 36 Remodeling								
TOTAL EXPENDITURES BY OBJECT	16,388.00	6,378.00	25,749.00	5,699.00	0.00	1,523.00	55,737.00	

*Includes the following: Payments to another LEA, nonpublic school, or state institution; and Indirect Cost Recovery

Budget Approved By:		Grant Number		Grant Name (MSDE USE ONLY)		
Budget Approved By:		301-475-5511	301-475-4270	5/6/04		
	LSS Official	Phone #	Fax #	Date	MSDE Official	Date

*Fulfilling the Promise in
Every Child*

A Framework for Technology

The St. Mary's County Public Schools' A Framework for Technology has been modeled after the Maryland Plan for Technology in Education. SMCPS incorporated the research rationale, cost analysis and teachers standards from the MSDE technology plan into our framework.

**St. Mary's County Public Schools
Revised June 2002
Approved by MSDE July 2002**

VISION

"Fulfilling the Promise in Every Child" . . . Requires investment in technology

"Fulfilling the Promise in Every Child" 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:

"To enable students to develop their intellectual and personal potential for a lifetime of learning and for responsible, productive participation in our diverse and changing world."

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

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 "Fulfilling the Promise" and will help schools educate students to live, work and compete successfully in an information-rich global society.

The purpose and focus of this framework

The purpose of this framework is to provide the plan for technology use in order to improve student learning. The framework specifies the phased implementation of information technology needed to accomplish the system vision of "Fulfilling the Promise in Every Child."

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 2002-2006. This framework builds upon the planned and completed activities of 1995 to 2001. 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 five 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.

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 state's 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 (Appendix L), which incorporate the Maryland Learning Outcomes (MLO's), 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: Access to high performance technology will be universal.

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, probeware, 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

- 3.8:1 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.*
- 87% of classrooms connected to the Internet
- 91% of Internet connections at medium-capacity (T-1, DSL) or higher.
- 88% of classrooms with at least one computer available for teacher use.
- Computers distributed throughout the school building:

- 49% in classrooms
- 34% in computer labs
- 7% in offices
- 10% in library media centers
- 1:375 average ratio of technical support persons to computer workstations.
- 3.29 average number of projection devices per school.
- 100% of St. Mary's County Public Schools report teachers for students with disabilities use assistive technology.

References in the Recommended Actions & Timeline:

(DAS)=Dept. of Academic Support

(DCI)=Dept. of Curriculum and Instruction

(ITS)=Bethune Technology Dept.

(Tech)=Technology Team ^w/members from all depts.

(DSE)=Dept. of Special Education

(TEC)=Teacher Evaluation Committee

(HR)=Human Resource

(BOE)=Board of Education

(DPS)=Dept. of Pupil Services

(FIN)=Dept. of Budget and Finance

(MSDE)= Maryland State Department of Education

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
<p>Equipment and Connections</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. Appendix B, E • 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 • Minimum targets for school technology configurations (Appendix A) 	<p>Online Technology Inventory of each school (annually)</p> <p>Survey of Maryland Teachers (2002)</p>	<p>2002</p> <p>Develop plans to include strategies for procurement, maintenance and upgrade of equipment, networks and software, based on instructional and program needs. (ITS,FIN)</p> <p>Support request to Governor and State Legislature to continue categorical funding for technology to ensure that all schools meet State targets.(BOE)</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. (ITS,DCI)</p> <p>Continue to develop guidelines for installation of equipment and configuration of networks for maximum efficiency and effectiveness. (ITS)</p> <p>Assess long-term connectivity and bandwidth needs and develop strategies for meeting them. (ITS) Appendix O</p> <p>Maintain an Acceptable Use and Internet Safety policy that complies with federal requirements. (ITS) Appendix I,J,K</p> <p>2003</p> <p>Provide laptops to all school principals</p> <p>Connect all schools to Maryland State Education Network. (ITS)</p>

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
<p style="text-align: center;">Accessibility</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>Monitoring of school systems for compliance with new accessibility regulation (annually)</p> <p>Online Technology Inventory of each school (annually)</p>	<p>2002</p> <p><i>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. (ITS) Appendix P</i></p> <p style="text-align: center;">2003</p> <p><i>Review “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/DPS)</i></p>
<p style="text-align: center;">Availability</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>Online Technology Inventory of each school (annually)</p> <p>Survey of Maryland Teachers (2002)</p>	<p>2003</p> <p>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. (ITS)</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. One such example is our partnership with the Department of Recreation & Parks. (DPS)</p>
<p style="text-align: center;">Support</p> <ul style="list-style-type: none"> • Responses for requests for technical support are provided within 24 hours. • Technical support itself is provided using a differentiated response system based on established prioritization of service requests. • At least one technical support person for every 300 computer work stations. • At least one LAN/WAN administrator per 1,250 computers. 	<p>Online Technology Inventory of each school (annually)</p> <p>District Coordinator survey (annually)</p>	<p>2003</p> <p>Review and update priority response tables each year. (ITS) Appendix C</p> <p>Review published “effective practices” for implementing efficient and effective technical support in local school systems, including programs for students to support technology in schools. (ITS)</p> <p>2004</p> <p>Request additional support personnel through budget process. (ITS,FIN)</p>

OBJECTIVE 2: ALL EDUCATORS WILL BE HIGHLY KNOWLEDGEABLE AND SKILLED, CAPABLE OF EFFECTIVELY USING TECHNOLOGY TOOLS AND DIGITAL CONTENT.

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 (Ronkvist et. al, 2000; Li, & Achilles, 1999-2000).

The primary strategy we will use to achieve our goals is to infuse and embed the technology professional development into our existing professional development activities. Most of these activities are self-selected participation. Some are site-based. Generally, however, limited numbers of teachers can participate. For the majority of our proposed actions, then, it will be the individual teacher who decides to participate.

There are, however, two important exceptions within this objective. First, in the table that follows, actions that reference instructional resource teachers (IRTs) will be mandatory professional development activities for the “lead” teachers in our schools and for all of our inclusion facilitators. This set of mandatory professional growth sessions will help us disseminate our technology integration work to school sites relatively rapidly and effectively. Second, the module regarding MTTs #1-3 that we plan to develop, then coach and instruct media specialists to present to school-based staff members, will be used at all sites. All sites will also administer a follow-up assessment several months after teachers and administrators have worked through the module. We expect to have good data about countywide understanding of MTTs #1-3 by the end of 2002-2003. This will help us judge the effectiveness of such “global” efforts to infuse professional development about technology into our county schools. If we are successful with this module, we may examine other possible technology professional development that could be offered this way.

Progress to Date

- % of teachers able to
 - Independently operate a computer and to perform basic computer functions: 94%
 - Browse the Web and to use email: 91%
 - Integrate technology applications into some classroom activities and to help students use technology: 79%
- % of schools that have school-based instructional support for technology (e.g., professional development and lesson planning) provided by:
 - Part-time Technology Coordinator: 8%
 - Library Media Specialist: 92%
- 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 for pre-service teacher education programs.

- Two years of professional development through the Maryland Technology Academy Satellite Program, St. Mary's County is building some site-based capacity. Thirty participants each year have learned about technology and developed curriculum that integrates technology.
- Inclusion facilitators have been providing professional development and technical assistance for the assistive and adaptive technology in use throughout the county. In addition, they have offered coursework with technology components and are developing a 2-credit MSDE course specifically devoted to assistive technology to be offered in 2002-2003.
- 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.
- No state or county technology standards exist for administrators.

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
<ul style="list-style-type: none"> 100% of teachers and library media specialists and teacher candidates will meet state-established standards for technology related knowledge and skills. 	<p>Online Technology Inventory of each school (annually)</p> <p>Survey of Maryland Teachers (2002)</p> <p>Review of grant proposals</p> <p>Number of applicants to Maryland Technology Academy Leadership Program</p> <p>Results from follow up assessments</p> <p>CPD forms</p> <p>Review of informational materials, materials</p>	<p>2003</p> <p>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. (DAS/DCI)</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. (DAS/DCI)</p> <p>Seek out and use models of successful professional development that address the Teacher Technology Standards and meet the NSDC Standards. (DAS/DCI)</p> <p>Encourage more local applicants to participate in statewide professional development programs, such as the Maryland Technology Academy Leadership Program. (DCI)</p> <p>Maintain our Maryland Technology Academy Satellite Program and expand the collaboration with Charles County Public Schools (CCPS), a key part of the Maryland Technology Academy Satellite Program. (DAS/DCI)</p> <p>Develop and pilot a module and follow-up assessment that will prepare all county teachers to meet the Maryland Teacher Technology Standards (MTTS) #1-3. (DAS/DCI) Offer a two-credit course in assistive technology aimed at developing teacher competence to achieve MTTS #6. (DAS/DSE)</p> <p>Develop curriculum and professional development experiences intended to incorporate the use of technology into the social studies curriculum, grades K-12. Pilot implementation with the instructional resource teachers. This is our first system wide effort to address MTTS #5. (DAS/DCI)</p> <p>Begin pilot implementation with instructional resource teachers and summer professional development with selected classroom teachers and make modifications as necessary to strengthen materials and instruction. (DCI)</p> <p>Involve knowledgeable and skilled educators, higher education institutions, professional associations (e.g. Maryland Instructional Computer Coordinators Association), parents and community members, students, businesses, and volunteer organizations in the design of professional development to build comfort and competence with technology. (DAS)</p> <p>Offer technology skill courses and inservices, e.g. Word, PowerPoint, Excel. (DCI/ITS)</p> <p>Incorporate relevant technology literature into the recommended list for existing study groups, K-8. Currently</p>

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
	<p>selected and action plans created</p> <p>Course evaluations</p> <p>Evaluation forms</p> <p>Appearance of technology in all SIT plans, assessment of quality by technology specialist</p> <p>Teacher Self Assessment (beginning 2004)</p> <p>Teacher Evaluation Committee data collection</p>	<p>19 of 20 elementary and middle schools have study groups and focus on one text per year. (DAS)</p> <p>Incorporate technology into the Action Research component of the study groups currently under development. (DAS)</p> <p>Ensure there is a technology module in MSDE courses (on performance tasks and action research) that are in development for use in 2002-2003. (DAS)</p> <p>Provide a technology component in a daylong curriculum development planned for instructional resource teachers in the 2002-2003 school year. (This is tentatively scheduled for February, March, April and May.) (DAS/DCI)</p> <p>Add a requirement that professional development in technology and teaching for student technology competence be incorporated into School Improvement Team (SIT) goals. This is our first step to address MTTTS #4. (DAS)</p> <p>2004</p> <p>Utilize the state-developed online tool to assess the knowledge and skills of instructional staff related to the Teacher Technology Standards and to assist schools and instructional staff in developing professional development plans for meeting the Standards by the Year 2005. (DAS)</p> <p>Utilize the state-developed evaluation criteria and tools based on the Teacher Technology Standards to review how principals, supervisors, or other local school system personnel can evaluate an instructional staff member's competency related to the Standards. (DAS)</p> <p>Begin pilot implementation with instructional resource teachers and summer professional development with selected classroom teachers and make modifications as necessary to strengthen materials and instruction. (DCI)</p> <p>Develop curriculum and professional development experiences intended to incorporate the use of technology into the mathematics and science curriculum, grades K-12. Pilot implementation with the instructional resource teachers. (Continue building capacity for MTTTS #5.) (DAS/DCI)</p> <p>Modify SMCPS Teacher Performance Assessment System as necessary to reflect the technology standards. (TEC)</p> <p>Ensure that a technology component is included in all staff development offered by the county where appropriate. (This includes continuing all initiatives described for 2003 that were successful and reviewing and revising those that were not as productive as anticipated.) (DAS)</p> <p>Develop and offer a 3-credit MSDE course to build capacity for teachers to meet MTTTS #4 at the classroom level. (DAS)</p> <p>Develop and pilot a module for use in merging MTTTS #7 (professional growth) into the current professional</p>

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
	Evaluation forms	<p>development we provide to build knowledge of and comfort with our teacher evaluation system. There is a strong focus on personal and professional growth in SMCPS. (DAS/TEC)</p> <p>Develop collegial friends study group support materials to strengthen the integration of technology into the curriculum. This too will link the formative assessment component of our evaluation system to the MTTTS #5 and # 7. (DAS/TEC)</p> <p>2005 Implement MSDE recommendations for demonstration of proficiency in MD Teacher Technology Standards as part of the certification and recertification process. Create a matrix that links our efforts in 2003 and 2004 to the recommendations. Seek technical assistance, as needed to strengthen less than fully successful efforts. (DAS/DCI)</p> <p>Develop curriculum and professional development experiences intended to incorporate the use of technology into the reading/language arts curriculum, grades K-12. Pilot implementation with the instructional resource teachers. (Continue building capacity for MTTTS #5) (DAS/DCI)</p> <p>Continue to infuse technology, as appropriate, into all professional development. (DAS)</p>
<ul style="list-style-type: none"> 100% of administrators at all levels (school, district, and State) will meet State established standards for technology-related knowledge and skills. 	<p>Enrollment and attendance at trainings</p> <p>Review of observations submitted</p> <p>Administrator Self Assessment (beginning 2004)</p>	<p>2002 Monthly training for all administrators on the use of Pathwise® software. (TEC) Piloting Pathwise® software for use in teacher evaluation process. (DAS/DCI/HR)</p> <p>2003 Research existing standards for administrators that identify required technology-related knowledge and skills based on the new standards from the Collaborative for Technology Standards for School Administrators, ISTE, and ISLAC. Incorporate technology-related professional development programs for administrators into leadership seminars and other professional development for using State-adopted administrator technology standards. (DAS/HR)</p> <p>Develop and pilot professional development focused on MTTTS 4: <i>Using technology to analyze problems and develop data-driven solutions for instructional and school improvement.</i> This should focus on both school improvement and on supporting teachers to use technology to analyze instructional issues and “problem solve.” (DAS)</p> <p>2004 Utilize MSDE-developed online tool to assess administrators’ current knowledge and skills related to the State administrator technology standards and to assist administrators in creating a professional development plan for meeting State administrator technology standards by the year 2005. (DAS)</p> <p>Utilize evaluation criteria developed by MSDE to help</p>

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
		<p>principals and other supervisors evaluate effective use of technology in schools. (DAS/DCI)</p> <p>Retrain principals on the SMCPs Teacher Performance Assessment System as modified by the new technology standards. (TEC/ITS)</p> <p>Require that SMCPs professional development initiatives at school sites and other school-based initiatives be aligned with the Maryland Teacher Technology Standards. (DAS)</p> <p>2005 Adopt and implement recommendations for demonstration of proficiency in State administrator technology standards for administrative certification. (BOE/DAS)</p>
<ul style="list-style-type: none"> One instructional technology support person will be available for every 400 instructional and administrative staff members to assist with professional development and curriculum integration. 	<p>Online Technology Inventory of each school (annually)</p> <p><i>District Coordinator survey (annually)</i></p>	<p>2002-ongoing Add support staff to local budget request to reach targets. (ITS) Request amount of at least 30% of equipment funds for staff development.</p> <p>Share models of effective implementation. (DCI)</p>

OBJECTIVE 3: TECHNOLOGY TOOLS AND DIGITAL CONTENT THAT ENGAGE STUDENTS WILL BE SEAMLESSLY INTEGRATED INTO ALL CLASSROOMS ON A REGULAR BASIS

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 2002?, 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 (CEO Forum, 2001). Work on rubric development, Understanding by Design, and performance task creation at the county level is building awareness of, and some capacity to, address this final point.

The infusion strategy discussed in Objective 2 will also be the primary approach to technology professional development for Objective 3. Most of the professional development in the county is self-selected/enrolled.

Again, there are two exceptions to this general rule. First, activities undertaken with the media specialists and instructional resource teachers can be relatively rapidly disseminated to teachers at all school sites. Second, requirements that are added to the school improvement planning process move relatively quickly to all sites as well. However, in these cases the “agent” of change is usually the principal and/or assistant principal so professional development must occur at Administrative and Supervisory meetings and lots of follow-up through the Department of Academic Support will be needed to strengthen and reinforce the message. (In general, our principals are less technology-savvy than our teacher leaders.)

Progress to Date

- Percent of schools reporting use of technology regularly to:

	Low Poverty	High Poverty
○ Draft, revise, and publish writing:		67% 50%
○ Gather information from the Internet:	67%	50%
○ Communicate or report information:	33%	50%
○ Premeditate for basic skills:	33%	100%
○ Manipulate, analyze or interpret data:	33%	50%

- State Content Standards include technology-related indicators for student learning (See Appendix L); however, these are not currently assessed in the State or local testing programs. We have begun sharing these technology-related indicators for student learning with administrators.
- Web-based Learning Project is underway to make online courses available to students and educators throughout Maryland (See www.mdk12online.org). We have been building our knowledge of this project.

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
<ul style="list-style-type: none"> Technology tools and digital learning resources will be used regularly in instructional activities aligned to the State Content Standards and 21st Century Work Skills. 	<p>Online Technology Inventory (annually) Survey of Maryland Teachers (2002)</p> <p>Observational Teacher Self Assessment (beginning 2003)</p> <p>Administrator Self Assessment (beginning 2003)</p> <p>Student Survey (2004) Protocol (beginning 2002)</p>	<p>2002 Provide library media specialists with focused professional development related to emerging curricular and instructional initiatives (e.g., MarcoPolo, <i>Understanding by Design</i>, <i>Using the Internet to Strengthen Curriculum and Instruction</i>, Larry Lewin). (DCI)</p> <p>2003 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. (DCI)</p> <p><i>Begin to integrate technology-related knowledge and skills into all grade levels and content areas in the SMCPs curriculum; work in 2003 will focus on social studies. (DCI)</i></p> <p>Require technology-related knowledge and skills for students to be included, as appropriate, in SMCPs professional development activities, especially in core content areas. (DAS/DCI)</p> <p>Provide online access to technology-infused lesson plans, classroom examples, and other digital resources aligned to State Content Standards through 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. (DCI/ITS))</p> <p>Incorporate assistance from State and local curriculum specialists in using technology to support student achievement. (DAS/DCI)</p> <p>Increase opportunities for library media specialists to collaborate with teachers to provide authentic learning experiences that develop proficiency in information literacy, communication, and technology skills. (DCI)</p> <p>Identify and promote instructional delivery models that take advantage of current and emerging technologies to support student learning, e.g. differentiation of instruction, primary talent development and <i>Understanding by Design</i>. (DAS/DCI)</p> <p>Utilize MSDE evaluation criteria and tools that will help principals and other supervisors evaluate effective use of technology in school programs. (DAS/DCI)</p>

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
		<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. (Tech)</p> <p>Develop strategies for ensuring that all school improvement plans address the use of technology to support teaching, learning, instructional management, and administrative processes. (DAS)</p> <p>2004 Begin to integrate technology-related knowledge and skills into all grade levels and content areas in the SMCPS curriculum; work in 2004 will focus on mathematics and science. (DCI)</p> <p>Refine and extend the strategies used to ensure that all school improvement plans effectively address technology for instructional purposes and student knowledge of and skill at using technology. (DAS)</p> <p>Support the conversion of resources (e.g., text, data, video, audio, imagery) into electronic form. (DCI/Tech)</p> <p>2005 Begin to integrate technology-related knowledge and skills into all grade levels and content areas in the SMCPS curriculum; work in 2005 will focus on reading/language arts. (DCI)</p> <p>Review curriculum/technology integration and update as needed. Request technical assistance from MSDE as needed. (DAS/DCI)</p>
<ul style="list-style-type: none"> All students will demonstrate mastery technology-related knowledge and skills specified in State Content Standards. 	<p>Student Survey (2004)</p>	<p>2003 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. (DCI)</p> <p>Convene instructional resource teacher and assistant principal work groups to create a set of expanded opportunities for students to build their technology-related knowledge and skills. (DAS/DCI)</p> <p>2004 Create exemplary assessment items and tasks that can be used to measure technology-related knowledge and skills specified in State Content Standards. Model these on State-developed items and tasks. (DCI)</p> <p>2005 Implement recommendations for and examples of items and tasks that may be incorporated in the end-of-</p>

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
		course and other county-level assessments in order to measure technology-related knowledge and skills specified in the State Content Standards. (DCI)
<ul style="list-style-type: none"> Students and staff will have expanded access to challenging curricula related to State and national standards through distance learning technologies, such as Web based courses and support materials and interactive video. 	Number of Maryland students enrolled in online courses (beginning 2002)	<p>2004 Pilot online courses for students and educators. (DAS/DCI)</p> <p>2005 Provide cost-effective access to online courses for students and educators. (DAS/DCI)</p>

OBJECTIVE 4: TECHNOLOGY WILL BE USED EFFECTIVELY TO IMPROVE SCHOOL ADMINISTRATIVE FUNCTIONS AND OPERATIONAL PROCESSES.

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 reporting regular use of technology for:
 - Communicating with staff members and other colleagues: 75%
 - Communicating with parents or guardians of students: 50%
 - Posting, viewing or downloading school or district announcements or information: 54%
 - Participating in online discussion groups or collaborative projects: 12%
 - Diagnosing and placing students: 50%
 - Maintaining attendance and/or grades: 83%
 - Generating and administering tests: 62%
 - Calculating grades and generating progress reports: 54%
 - Maintaining data on students: 88%
 - Analyzing and/or reporting student or school improvement data: 54%
 - Creating instructional materials, visuals or presentations: 71%
 - Accessing curriculum or school improvement material from the Internet: 62%
 - Researching educational topics of interest: 75%
 - Handling inventory: 79%

- SMCPS web sites exist and are linked to the Maryland State Department of Education main web site (See www.msde.state.md.us).

- SMCPS has one central data warehouse so data only needs to enter one time. Data is extracted using electric tools and provided to all schools to meet their needs.

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
All educators will use electronic information and communication tools to	Online Technology Inventory (annually)	2002 Establish partnerships with schools, communities, higher education, and businesses to enhance the effectiveness of

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
improve management and operational efficiency.	Number of volunteer hours	<p>technology-related initiatives and to identify effective practices.</p> <p>2003 Include expectations for job-related technology knowledge and skills in the evaluation of all educational employees. Provide specific guidelines to assist in this evaluation. (HRS)</p>
Integrated student information systems and instructional management systems are 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>Online Technology Inventory (annually)</p> <p>Survey of Maryland Teachers (2002)</p> <p>Teacher Self Assessment (beginning 2003)</p> <p>Administrator Self Assessment (beginning 2003)</p>	<p>2002 Use the intranet as a vehicle for providing forms and documentation to all schools and offices. Gather and share data on the various information systems and integration methods used by schools, including student, instructional, and administrative. Provide downloads of student information from central databases for electric exchange to other systems like: Automated Library System, Our Integrated Learning System. (ITS)</p> <p>2003 Provide a computerized teacher evaluation system (Pathwise) for all staff. Integrate Subfinder with Payroll. Establish pilot projects to demonstrate the effective implementation of interoperable information systems. (ITS, HRS)</p> <p>Review 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. (ITS)</p> <p>2004 Provide scanning of applications directly into our Human Resources System. (ITS, HRS)</p> <p>2005 Archive all back personnel records utilizing state of the art technology. (ITS, HRS)</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.	Promote usage of Portal (2004)	<p>2002 Monitor the State Steering Committee to guide the development of a State education portal that will link K- 12-related web sites and services. (ITS, DPS)</p> <p>2004 Monitor effectiveness of Portal (ITS)</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>Online Technology Inventory (annually)</p> <p>Teacher Self Assessment (Beginning 2003)</p> <p>Administrator Self Assessment (beginning 2003)</p> <p>Usage statistics on databases (beginning 2003)</p>	<p>2002 Develop online data collection and analysis tools related to how technology can improve student achievement, work efficiency, and communication. Enable educators and researchers to upload their findings and to research the findings of others. Establish incentives, such as funding, for identifying effective practices and for publishing results, especially on the mdk12.org web site. (MSDE)</p> <p>2003 Develop tools and systems that will allow local school systems to gain access to and analyze aggregated local school system data collected and maintained by the State. (MSDE, ITS)</p>

OBJECTIVE 5: EFFECTIVE RESEARCH, ASSESSMENT, AND EVALUATION WILL RESULT IN ACCOUNTABILITY AND CONTINUOUS IMPROVEMENT IN THE IMPLEMENTATION AND USE OF TECHNOLOGY.

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.

To ensure that the work outlined for Objective 5 is accomplished, SMCPs will convene a “Tech Team” consisting of one or two representatives from each department –DAS, DCI, Department of Pupil Services, DSE and ITS. The committee will make certain that the appropriate teacher and/or administrators will be included in data collection. For example, all cooperating teachers for SMCPs must participate in the LoTi survey, but all cooperating teachers for any of our higher education programs should be encouraged to participate. The Tech Team will also help protect against precious evaluation/research resources being used on narrowly or inappropriately defined projects by allowing all relevant departments to have input into research design and execution.

When teachers and administrators are going to be involved in task or assessment development that will incorporate technology, every effort will be made to select/invite people who possess strong curriculum and assessment backgrounds and moderate to advanced technology experience.

Progress to Date

- Progress toward targets in the State Technology Plan are currently tracked, analyzed, and documented in four ways:
 - We conduct an Annual Technology Inventory of every SMCPs, which assesses technology capacity and use. Digital Divide data charts are also available. (See <http://msde.aws.com>)
 - We administer pre/post teacher surveys in schools that receive State technology funding through the Technology in Maryland Schools program. Results are disseminated to us on CD by MSDE annually.
 - We participate in the statewide survey of District Technology Coordinators, which 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.
 - We have accessed the State database for collecting “effective practices” in technology use, all nominated by local school systems and schools at <http://www.mbrt.org/effprac-tech-faq.htm>
- During the 2001-2002 academic year, we have been piloting a new technology-driven student data assessment tool with two schools -- Greenview Knolls Elementary School and Park Hall Elementary School. Both of these schools are Title I schools and are in “school improvement.” They have been

Targets for 2005	As Measured By	Recommended Action, Timeline & Responsible Office
<p>technological means as well as through presentations and statewide research/study groups.</p>		<p>Share data at Administrative and Supervisory meetings. (DAS/TechT)</p> <p>Undertake studies outlined earlier. Seek dissemination sites to share preliminary and more conclusive findings. (DCI)</p> <p>2004 Access statewide clearinghouse of effective evaluation tools and processes. (DCI)</p> <p>Participate in statewide clearing house and related meetings. (DCI)</p> <p>2005 Utilize State online data collection and analysis tool for evaluation results. (DCI/TechT)</p>
<ul style="list-style-type: none"> Renew the SMCPS Technology Plan based on evaluation and research results. 	<p>Data-driven updated plan in 2006</p>	<p>2002 Annual review by SMCPS Technology Department to monitor the implementation of the Framework. (TechT/ITS) Report to stakeholders. Appendix G</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 five-year plan is essential to its successful implementation.

Appendixes

- Appendix A - Minimum targets for school technology configuration
- Appendix B - Category 5 Wiring Status
- Appendix C - Computer Work Request Priorities
- Appendix D - Video Access
- Appendix E - School Profile and Computer Counts
- Appendix F - Teacher Knowledge and Skills
- Appendix G – Communication to Stakeholders
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- Appendix I - SMCPS Network Usage Standards
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- Appendix M - New staff survey
- Appendix N - All staff survey
- Appendix O - Five-Year Projection for Infrastructure and Equipment
- Appendix P - COMAR 508 Compliance forms

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

Category 5 Wiring													
	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													
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, alpha, server
- Printing problems
- Software configuration problems
- E-mail problems
- Phone configuration/billing problems
- Bell or ATT equipment 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 hours

- 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 a 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 in a lab or classroom
- Phone not mission critical
- PC down and not mission critical
- Software not quite right but functional
- PC 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			
Chopticon	√	√	√
Great Mills	√	√	√
Leonardtown High	√	√	√
Dr. James Forrest Career & Tech	√	√	√

Note: Information taken from the Technology Survey

Appendix E							
School Profile							
	FTE	# Computers	FTE:Computers	# Clrm	# Teachers	# Computer Lab	Frame access speed
Elementary							
Benjamin Banneker	415	131	3:1	37	36	1	T1
George W. Carver	247	106	2:1	18	21	1	56K
Lettie M. Dent	533	127	4:1	25	35	1	56K
Dynard	400	104	4:1	20	37	1	56K
Green Holly	552	186	3:1	43	52	2	56K
Greenview Knolls	537	126	4:1	29	45	2	56K
Hollywood	615	201	3:1	27	27	1	56K
Leon. Elem.	497	94	5:1	27	32	1	56K
Lexington Park	296	65	5:1	17	17	2	56K
Mechanicsville	286	124	2:1	20	21	2	56K
Oakville	428	87	5:1	21	26	1	56K
Park Hall	470	113	4:1	25	34	2	56K
Piney Point	479	150	3:1	22	36	1	56K
Ridge	223	87	3:1	12	21	1	56K
Town Creek	248	63	4:1	14	19	1	56K
White Marsh	207	70	3:1	11	20	1	56K
Middle							
Esperanza	878	327	3:1	45	48	1	T1
Leon. Middle	903	186	5:1	48	62	1	T1
Margaret Brent	883	148	6:1	44	54	1	T1
Spring Ridge	789	175	5:1	49	56	2	T1
High							
Chopticon	1,518	533	3:1	77	92	13	T1
Great Mills	1,565	424	4:1	80	93	10	T1
Leon. High	1,385	232	6:1	66	73	7	T1
Dr. James Forrest Career & Tech	23	145	N/A	26	26	1	T1

Note: Information taken from the Technology Survey

Appendix F Teacher Knowledge and Skills

6.1 Personal Computer Use - Please estimate the percentage of teachers with the following levels of expertise.

Novice Users: Cannot operate computers independently

Intermediate Users: Can operate computers independently and perform basic functions

Advanced Users: Can connect peripherals, troubleshoot equipment and perform multiple tasks

6.2 Internet Use - Please estimate the percentage of teachers with the following levels of expertise.

Novice Users: Cannot access the internet independently

Intermediate Users: Can browse web and use e-mail independently

Advanced Users: Can perform a variety of search strategies, transfer/attach files, and assist others.

6.3 Integration of Technology into the Curriculum and Instruction - Please estimate the percentage of teachers with the following levels of expertise.

Novice Users: Not yet comfortable using technology as part of classroom activities

Intermediate Users: Integrating applications in some activities, can help students use technology

Advanced Users: Routinely consider uses of technology when planning lessons, experiment with new approaches, select software and applications purposefully

	Personal Computer			Internet use			Integration		
	Nov	Inter	Adv	Nov	Inter	Adv	Nov	Inter	Adv
Elementary									
Benjamin Banneker	0%	95%	5%	0%	95%	5%	0%	95%	5%
George W. Carver	0%	86%	14%	0%	86%	14%	0%	86%	14%
Lettie M. Dent	0%	97%	3%	2%	97%	1%	2%	96%	2%
Dynard	25%	65%	10%	35%	40%	25%	65%	30%	5%
Green Holly	0%	100%	0%	0%	100%	0%	0%	100%	0%
Greenview Knolls	7%	72%	21%	10%	70%	20%	27%	63%	10%
Hollywood	0%	98%	2%	0%	80%	20%	0%	80%	20%
Leon. Elem.	10%	70%	20%	10%	70%	20%	10%	70%	20%
Lexington Park	20%	40%	40%	15%	50%	35%	20%	40%	40%
Mechanicsville	2%	88%	10%	25%	65%	10%	10%	80%	10%
Oakville	5%	90%	5%	17%	69%	14%	56%	42%	2%
Park Hall	5%	88%	7%	6%	89%	5%	25%	73%	2%
Piney Point	6%	88%	6%	6%	88%	6%	6%	88%	6%
Ridge	9%	81%	10%	10%	62%	28%	10%	76%	14%
Town Creek	0%	80%	20%	0%	80%	20%	0%	80%	20%
White Marsh	0%	100%	0%	0%	100%	0%	0%	100%	0%
Middle									
Esperanza	10%	80%	10%	10%	80%	10%	10%	80%	10%
Leon. Middle	10%	80%	10%	12%	70%	18%	35%	52%	13%
Margaret Brent	13%	86%	1%	13%	86%	1%	13%	86%	1%
Spring Ridge	0%	75%	25%	25%	50%	25%	40%	40%	20%
High									
Chopticon	3%	92%	5%	3%	62%	35%	3%	47%	50%
Great Mills	0%	80%	20%	0%	70%	30%	0%	75%	25%
Leon. High	5%	80%	15%	5%	60%	35%	30%	50%	20%
Dr. James Forrest Career & Tech	1%	98%	1%	2%	96%	2%	50%	45%	5%

Note: Information taken from self-evaluation on the Technology Survey 2002

Appendix G

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

- Installed at least one computer lab in every school.
- Established a committee to recommend software purchases for instructional applications at all school levels.
- Established connection to the WAN and Internet.
- Acquired equipment and software to ensure full labs or mini labs in all schools in order to create a common ground in the area of instruction.
- Acquired equipment to bring all school offices to a common ground in the area of student support, including basic e-mail (PC, Phone Line, Modem, Printer and FAX).
- Wired and connected Local Area Networks in all schools and offices; currently have over 3,500,000 feet of Category 5 wiring installed.
- Defined, planned and implemented an acquisition process for the overall Wide Area Networks.
- Connected media centers to the WAN.
- Defined, planned and implemented an acquisition process for the student support system (software/hardware and personnel).
- Defined, acquired, implemented financial and student management software.
- Installed an Integrated Learning System at all elementary and middle schools.
- Initiated web-content filtering using the Smartfilter product in conjunction with our proxy server.
- Installed an online catalog system at all school libraries.
- Mini-labs have been installed at all elementary school media centers.
- All four high schools, all four middle schools and four of our elementary schools' phone systems and departmental offices have been replaced with a "state of the art" key system.
- Established a configuration management committee for the student information system that consists of department heads, and school-based personnel.
- Implemented automated downloads of student information for school-based personnel to help them manage their student information database more efficiently.
- Point of Sale installed at all schools.

Appendix H

Based on cost analysis of \$225 per student, as presented in the State technology plan, the following budget, if funded, will provide the funding necessary to support our technology framework.

Estimated Source of Funding FY 2002

Base Local Budget		Non-Reoccurring funds			
		E-rate	Other Grants	CIP	TIMS
New Hardware:	82,000		80,000	120,000	42,000
Training/staff development:	30,000		50,000		8,000
Life Cycle Replacement:	42,000				
Software/online content:	55,000				
Personnel:	780,000				
Wiring:	4,000			100,000	12,000
Communication:	265,000	90,000			
Repair	60,000				

Estimated Source of Funding FY 2003

Increase in base Local Budget		Non-Reoccurring funds		
		E-rate	Other Grants	CIP
New Hardware:	119,000		75,000	100,000
Training/staff development:	40,000		30,000	
Life Cycle Replacement:	50,000			
Software/online content:	150,000			
Personnel:	100,000		130,000	
Wiring:				50,000
Communication:	5,000	90,000		

Estimated Source of Funding FY 2004

Increase in base Local Budget		Non-Reoccurring funds		
		E-rate	Other Grants	CIP
New Hardware:	5,000			
Training/staff development:			30,000	
Life Cycle Replacement:	50,000			
Software/online content:	5,000			
Personnel:	165,000			
Communication:		90,000		

Estimated Source of Funding FY 2005

Increase in base Local Budget		Non-Reoccurring funds		
		E-rate	Other Grants	CIP
New Hardware:	5,000			80,000
Training/staff development:			30,000	
Life Cycle Replacement:	50,000			
Software/online content:	10,000			
Personnel:	100,000		50,000	
Communication:		90,000		

Estimated Source of Funding FY 2006

Increase in base Local Budget		Non-Reoccurring funds		
		E-rate	Other Grants	CIP
New Hardware:				120,000
Training/staff development:	30,000		30,000	
Life Cycle Replacement:	50,000			
Software/online content:	5,000			
Personnel:	100,000			
Communication:	5,000	90,000		
Contractual Services :	50,000			

Appendix I

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 J

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. This server is a SUN-Sparc E 250 running Solaris 6 and the Netscape Proxy server 2.6 software. 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 of 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 lists 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 website 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 K

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 Public Schools 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.

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@mail.smcps.k12.md.us.
3. Web pages may be sent as files on a floppy disk to the Bethune Educational Center.
4. Special accounts can be set up 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 I

Maryland Content Standards Related to Technology

(For a list of all the State Content Standards, visit www.mdk12.org/mspp/standards/index.html)

Science: Skills & Processes

Grade 3

- Collect and record data using developmentally appropriate instruments (e.g. calculators, computers and their accessories).
- Interpret and communicate findings (i.e., speaking, writing, and drawing) in a form suited to the purpose and audience, using developmentally appropriate methods including technology tools and telecommunications.

Grade 5

- Use appropriate instruments (e.g. calculators, spreadsheets, databases, and graphing programs) to collect, organize, and display on charts, tables, graphs, or with drawings.
- Interpret and communicate findings (i.e., speaking, writing, and drawing) in a form suited to the purpose and audience, using developmentally appropriate methods including technology tools and telecommunications.

Grade 8

- Collect, organize, and display data in ways others can verify (i.e., numbers, statistics, tables, graphs, drawings, charts, diagrams) using appropriate instruments (e.g., calculators, spreadsheets, databases, and graphing programs).
- Interpret and communicate findings (i.e., speaking, writing, and drawing) in a form suited to the purpose and audience, using developmentally appropriate methods including technology tools and telecommunications.

Grade 12

- Collect, organize, and display data in multiple ways that fit the context, using appropriate instruments to effectively convey the information (e.g., calculators, spreadsheets, and databases and graphing programs). The student will develop and demonstrate skills in using lab and field equipment to perform investigative techniques. The student will use computers and/or graphing calculators to produce tables, graphs, and spreadsheet calculations.
- Interpret and communicate findings through speaking, writing, and drawing in a form suited to the purpose and audience, using developmentally appropriate methods including technology tools and telecommunications. The student will use tables, charts, and graphs to display data in making arguments and claims in both oral and written presentations. The student will use computers and/or graphing calculators to produce the visual materials (tables, graphs, and spreadsheets) that will be used for communicating results.
- *Create and/or interpret graphics (scale drawings, photographs, digital images, etc.).*

- Use mathematical processes (measuring, calculating, etc.) when conducting investigations, analyzing information, and/or displaying information. The student will use computers and/or graphing calculators to perform calculations for tables, graphs, or spreadsheets.
- Design, construct, and use models (e.g., math, computer, physical) to make predictions about actual events. The student will use models and computer simulations to extend his/her understanding of scientific concepts.

Science: Earth/Space Science

Grade 12

- Describe current efforts and technologies used to study the atmosphere, land, and oceans of Earth (remote sensing from space, undersea exploration, seismology, weather data collection).
- Describe current efforts and technologies used to study the universe (optical telescopes, radio telescopes, spectroscopes, satellites, space probes, manned missions).

Science: Chemistry

Grade 12

- Select and use appropriate devices to measure directly or indirectly the length, mass, volume, or temperature of a substance (centigram balances, graduated cylinders & pipettes, metric rulers, thermometers and temperature probes).
- Gather and interpret data related to physical and chemical properties of matter such as density and percent composition (constructing data tables, graphing linear relationship, appropriate technology to analyze data).

Science: Physics

Grade 12

- Use analytical techniques appropriate to the study of physics (symbolically representing vector quantities, using signs to represent directions, selecting and using appropriate equipment for measuring and investigating, using appropriate units and applying dimensional analysis, manipulating equations).

English Language Arts: Writing

Grade 3

- Prepare writing for publication by purposefully using drawings, legible handwriting (cursive or manuscript), labeling and graphics (electronic or traditional).

Grade 5

- Self-edit writing using knowledge of standard English conventions of language (e.g., punctuation, sentence structure, usage, spelling) and appropriate print and non-print resources (e.g., dictionary, thesaurus, spell-check software).
- Prepare writing for publication by purposefully using electronic resources and graphics (e.g., drawings, charts, illustrations) to enhance the final product.

Grade 5

- Self-edit writing using knowledge of standard English conventions of language (e.g., punctuation, sentence structure, usage, spelling) and appropriate print and non-print resources (e.g., dictionary, thesaurus, spell-check software).
- Prepare writing for publication using electronic resources (e.g., word processing, database, spreadsheet software) to adopt an appropriate format and principles of design (e.g., headings, margins, spacing, columns, page orientation) that enhance the final product.

Grade 12

- Self-edit writing using knowledge of standard English conventions of language (e.g., punctuation, sentence structure, usage, spelling) and appropriate print and non-print resources (e.g., dictionary, thesaurus, spell-check software).
- Prepare writing for publication by integrating illuminating graphics and format and appropriate traditional and electronic resources to enhance the final product and create an easily read product.
- Design and use multi-page documents using publishing software and graphics programs.

English Language Arts: Writing

Research: Grade 3

- Understand and use the organizational features of research resources such as encyclopedias, computerized card catalogs, almanacs, and periodicals to locate relevant information.

Research: Grade 8

- Use organizational features of electronic information and library and interlibrary computerized catalogs to research information for specific purposes.

Research: Grade 12

- USE CLEAR RESEARCH QUESTIONS AND COHERENT RESEARCH METHODOLOGY TO ELICIT AND PRESENT EVIDENCE FROM PRIMARY AND SECONDARY SOURCES USING AVAILABLE LIBRARY, ELECTRONIC, AND HUMAN RESOURCES.

English Language Arts: Speaking

Oral Presentations: Grade 5

- **SELECT AUDIO OR VISUAL AIDS AND TECHNOLOGY (E.G., PROPS, COMPUTER GRAPHICS, LIGHTING) TO SUPPORT PRESENTATIONS.**

Oral Presentations: Grade 8

- Create visual aids, using technology when appropriate, to support presentations.

Oral Presentations: Grade 12

- Incorporate props, visual aids, and technology to enhance presentations.

Mathematics: Geometry

Grade 3

- Construct or draw geometric figures using tools and technology sketch squares, rectangles, triangles and circles.

Grade 5

- Construct or draw geometric figures using tools and technology draw, label, describe, and identify: points, lines, line segments, and rays draw circles, squares, triangles, and rectangles given their dimensions.

Grade 8

- Construct or draw geometric figures using tools and technology. Use a compass and straightedge to construct angles, rectangles, circles and other geometric figures. Draw and analyze geometric figures on a coordinate plane.

Grade 12

- Analyze the properties of geometric figures and/or will construct or draw geometric figures using technology and tools (CLG 2.1.1).
- Determine parallel, perpendicular, intersecting and skew lines and apply properties of parallelism and perpendicularity to problem situations.
- Describe line/segment/plane relationships including parallel, perpendicular, intersecting, bisecting, midpoint, median, altitude.
- Describe point relationships (collinear and coplanar).
- Describe angles and angle relationships including vertical, adjacent, complimentary, supplementary, interior, exterior.
- Describe geometric solids including cones, cylinders, spheres, prisms, and pyramids.
- Describe circle/sphere relationships including tangent, radius, diameter, chord, secant, central angle, inscribed angle, angles formed by secants and tangents and circumscribed and inscribed polygons.
- Construct or draw geometric figures using tools and technology.
- Validate properties of geometric figures using appropriate tools and technology (CLG 2.1.4).
- Construct a line segment congruent to a given line; and an angle congruent to a given angle.
- Construct the bisector of a line segment and the bisector of an angle.
- Construct a perpendicular to a given line from a point on the line and a point not on the line.
- Identify and/or verify properties of geometric figures using the coordinate plane and concepts from algebra.

Social Studies: Social Studies Skills

Grade 8

- Pose and answer questions about geographic distributions and patterns shown on maps, graphs, charts, models, and databases to explain historical migration of people, expansion and disintegration of empires, and growth of economic systems.

Grade 12

- Use case studies and geographic information from a variety of sources such as data bases, field interviews, media services, and questionnaires to identify contemporary geographic problems and issues and consider the advantages and disadvantages of various solutions.

Social Studies: Economics

Grade 3

- Identify improvements in technology (factories, machinery, transportation, communication) over time.

Grade 5

- Explain how changes in technology (factories, machinery, transportation, communication, new technology) impact Maryland's economy.

Grade 8

- Analyze the impact of technological change (factories, machinery, transportation, communication, new technology) and resource use in promoting economic growth.

Social Studies: Geography

Grade 5

- Construct and interpret graphs, charts, databases, and thematic maps using map elements including a title, symbols, cardinal and intermediate directions, compass rose, border, longitude and latitude, legends/key and scale.

Grade 8

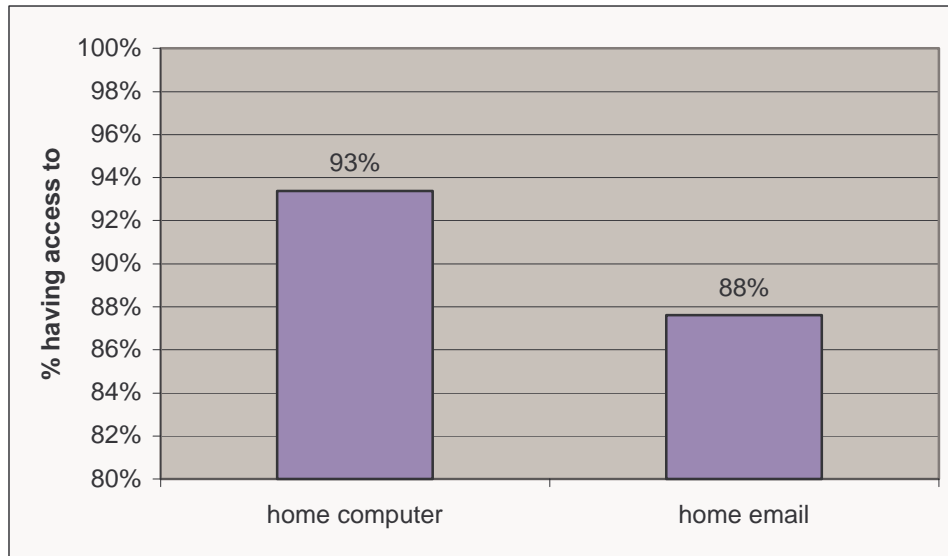
- Construct and interpret graphs, charts, databases, and thematic maps using map elements including a title, symbols, cardinal and intermediate directions, compass rose, border, longitude and latitude, legends/key and scale.

Grade 12

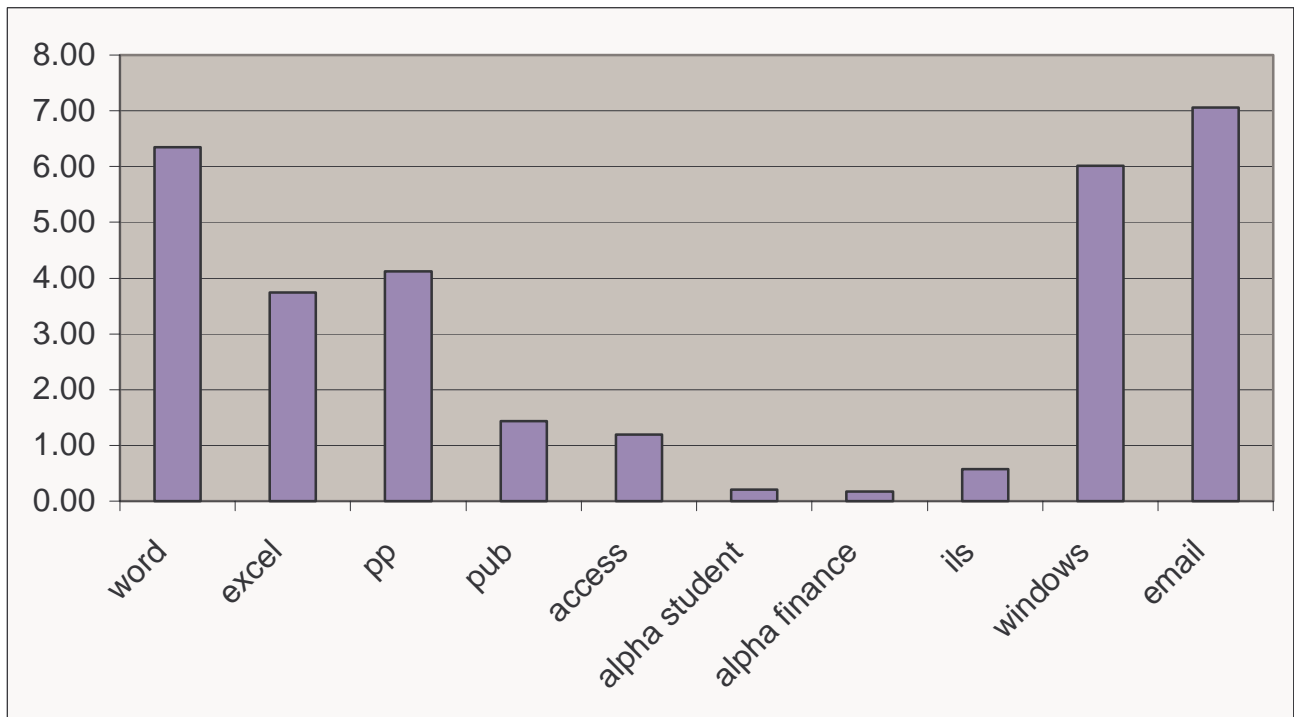
- Construct and interpret thematic maps, graphs, charts, and databases to answer geographic questions and infer geographic relationships explain the possible global effects of human modification of the natural environment including how technology has expanded human capacity to modify and adapt to the physical environment.
- Use case studies and geographic information from a variety of sources such as data bases, field interviews, media services, and questionnaires to identify contemporary geographic problems and issues and consider the advantages and disadvantages of various solutions.

Appendix M

New staff survey results



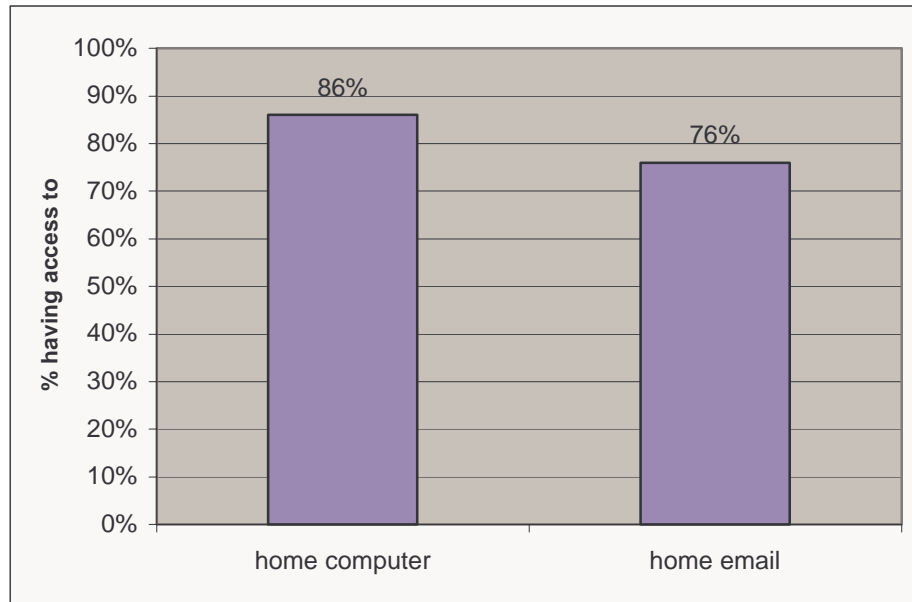
Access to technology at home



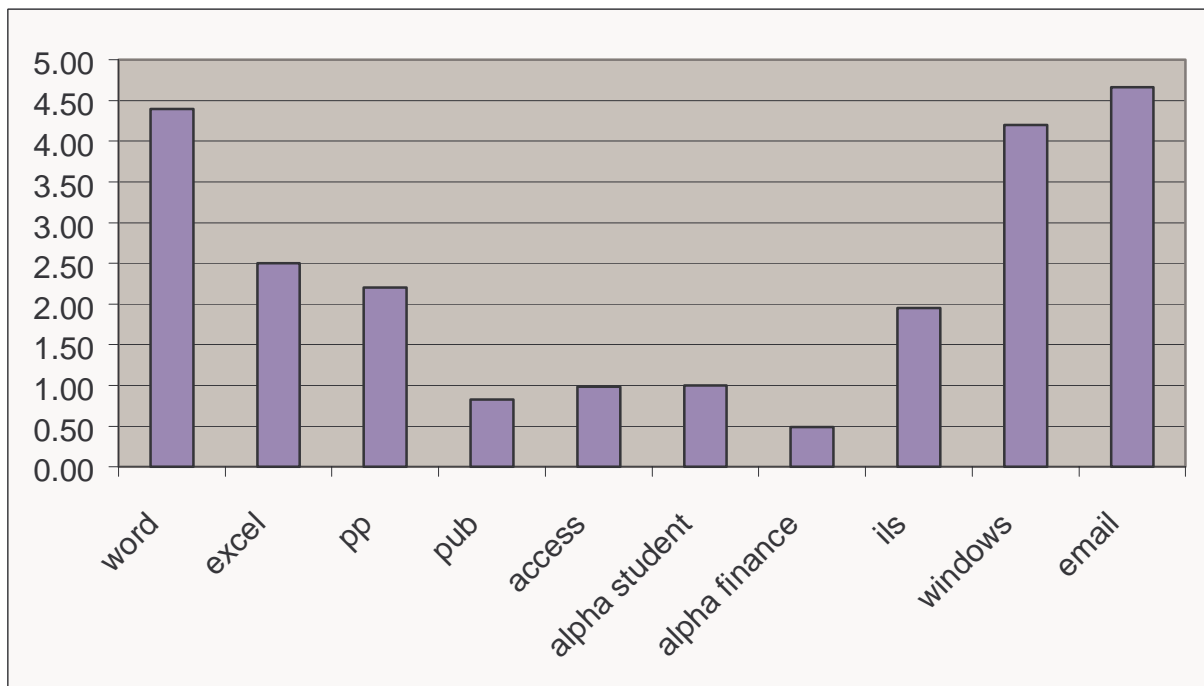
Skill level with applications (0 = none, 9 = expert)

Appendix N

All staff survey results



Access to technology at home



Skill level with applications (0 = none, 9 = expert)

Appendix O

Five-Year Projections for Infrastructure, Software and Equipment

Item	Current Year	FY2002	FY2003	FY2004	FY2005	FY2006
Cat 5 wiring (feet)	2 Million	2.2 Million	2.4 Million	3. Million 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	4,000	4,600	5,000- Goal achieved of 1:3 ratio	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	25.2	65 Start migration to 11mb – 45mb wireless	100	200	330	400
# Of Telephones	574	706	794	816 – Goal achieved of at least same # phones in building as # classrooms	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	23	24 – Goal achieved	Connect all new construction	Connect all new construction	Connect all new construction	Connect all new construction

Appendix P

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 reviewed? 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.RG/O/01

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