

## Cross-Cutting Themes

### Educational Technology

In addition to including technology strategies across the Master Plan to outline specifically how your district will use all sources of funding in meeting No Child Left Behind Statutory Goals, please respond to the prompts below. Include targets from the *Maryland Educational Technology Plan for the New Millennium, 2007-2012*, district technology and school system strategic plans, data from the Maryland Technology Inventory and technology literacy measurements, and data from any other relevant sources as appropriate. If these items were discussed elsewhere in the Master Plan Update, you can reference the sections and page numbers in your responses below instead of repeating information.

**1. Identify the major technology goals that were addressed by the school system during 2010-2011**

**Evidence of progress toward meeting educational technology goals**

**a. Staff and student knowledge and skills in the integration of technology and the Maryland Technology Standards increased in 2010-2011.**

- All professional staff are required to pass SCPS's Level I Technology Skills Assessment within 2 years of their being hired. By the end of the school year, 100% of the professional staff had taken the assessment and 98% earned their Level I Certification by passing. There were 14 staff members who did not successfully complete the entire assessment. Five of the eleven schools (this includes the central office), had 100% of their staff pass the assessment.
- The summer of 2011 was the sixth summer the Level II Tech Academy was offered as part of the Technology Certification Program. There have been 185 completers as of the end of August 2011. Although some of those teachers no longer work in Somerset County, 181 of them will be returning to Somerset County classrooms this year. This represents about 66% of the professional staff.
- Staff that have completed the Tech Academy are then eligible to participate in the 12 hour Integration Seminars. There have been 94 teachers who have completed these seminars and are working on the final part of their Level II Certification. This represents 54% of the teachers who are eligible to participate.

- Level III Certification has only been available for 3 years. A pilot program was offered in 2007-08 in which 5 teachers participated. Last year it was opened up to all teachers who have completed their Level II Certification. In 2008-09 eighteen teachers signed up to participate in this two year program. All have completed the requirements of year one and 13 have earned Level III Certification in 2010-2011.
- In the summer of 2011 two Professional Development opportunities were offered for teachers. A four day Promethean Academy was offered for teachers who have used Promethean Boards for at least one year. There were 16 teachers who participated in this training. They learned new skills using the latest version of the ActivInspire software and produced a product to use with students. We also offered a Web 2.0 Academy which was open to all staff. There were 34 teachers who participated in the 4 day workshop. Teachers were introduced to 40 different Web 2.0 Tools during these sessions.
- Another initiative in 2010-11 was to prepare the 8th & 9th grade teachers for the expansion of our 1-1 laptop program into the high schools in the fall of 2010. There were many informal meetings to plan and prepare for the new initiative. Teachers did participate in 2 formal professional development activities sponsored by the *Anytime, Anywhere Learning Foundation*. The first was an online course called “We Got Laptops, Now What?” that teachers and some administrators participated in. The second was a 2 day workshop on Teaching in a 1-1 environment which was presented by a consultant from the foundation. In addition, teachers were allowed 12 hours of paid collaborative planning time during the summer to meet in like content area groups and develop lesson plans for use with the laptops.

**b. Equitable access to appropriate resources improved for both students and staff.**

- The 2007 Maryland Technology Inventory indicates that Somerset schools exceeded or met the state targets for technology with a student to computer ratio of 3.1:1 and 100% of classrooms with high speed Internet access. Our local inventory shows an increase of 750 student laptops which will improve the ratio when the 2011 Maryland Technology Inventory data is released.
- In 2009-10 local funds were budgeted to improve the infrastructure in order to improve available bandwidth for our staff and students. Those improvements were implemented in 2010-11. Internal Point- to- Point T-1 lines replaced the old shared lines, and 6 bonded T-1 lines replaced the 2 external lines increasing the overall bandwidth from 3 to 9 MBs.

- Somerset County technicians are responsible for installing and maintaining all of the existing and new Promethean Boards in the school system. Local funds were used to bring in a consultant from Promethean to conduct week long training for our technicians and several maintenance men in order for them to become “Certified” Promethean Installers in 2010. In 2010-11 an additional technician was added using local funds and all were re-certified.
- The largest initiative in 2010-11 was the expansion of the 1-1 student laptop program into the high schools. Each of the 191 eighth grade students were issued a laptop in the fall of 2010 and the over 200 ninth grade students received laptops in January 2011. Students began the year by picking up their laptops in the morning and returning them at the end of the day. However by second semester they were taking them home in order to complete assignments.
- Somerset County was able to continue the 5 year replacement cycle for desktop computers. Approximately 145 computers and 2 servers were replaced in 2010-11 as scheduled.
- The students and staff in Somerset County have access to many digital tools and resources. All teachers have access to Discovery Education which provides video content based on the student standards. Students and staff also have access from both home and school to several online databases provided by the school system. They include: SIRS Discoverer, SIRS Researcher, and Culture Grams. In 2009-10 Edline was added as our web hosting vendor providing every teacher with class web pages for parents and students to access. In 2010-11 the Interactive Classroom component of Edline was added for the high schools to facilitate use with the 1-1 laptop program.

**Programs, Practices, Strategies, or Initiatives that were implemented related to the goals to which progress is attributed.**

**a. Technology Certification Program**

Somerset County Public Schools implemented a three level Technology Certification program in 2005 and expanded the offerings in 2007. The program is designed to move all teachers from the basic level of knowing how to use the technology available in their building to seamlessly integrating technology into instruction. Level I is a certification in technology competency which is earned by successfully completing a performance based assessment designed to assess skills in File Management, Word, PowerPoint, Excel, Front Page, Email and Using the Internet. Level II is certification in technology integration. This certification is earned through a series of required activities designed to increase teachers’ understanding of

technology integration. The first step is to attend a five (5) day technology academy that teaches skills necessary to produce a multimedia project. The next step in Level II Certification is to attend 12 hours of Integration Seminars which concentrate on developing lesson plans that integrate technology into the curriculum. Upon completion, teachers are required to be observed teaching three lessons using technology with their students. The final level of Certification, which became available to all teachers in 2008-09, is designed to move teachers into a role of a technology master teacher role by working with the Maryland Teacher Technology Standards, mentoring a new teacher and completing a school or system level technology project.

**b. Local Support for Technology**

The support of the State, the Board of Education and the Somerset County Commissioners in the form of funding for technology is clearly responsible for the progress made by the school system. In 2010-11 funding was included in the local budget to support the following initiatives:

- The 1-1 laptop initiative
- High School Teacher Laptops
- Infrastructure Upgrades
- Technology Certification Program
- 5 year Replacement Cycle
- Professional Development

Grants through MSDE provided funds to support the following:

- Technology Academy
- Promethean Academy
- Web 2.0 Academy
- Mobile laptop cart at one High School
- STEM equipment for 4 classrooms

CATEGORY	STRATEGY, PROGRAM, OR PRACTICE & PD	FUNDING SOURCE, AMOUNT AND TIMELINE
Professional Development	Level I Tech Assessment	Source: Restricted Title II, Part D Ed Tech Formula Grant- Cost: \$ 980  Monthly 2010-11
Professional Development	Tech Academy	Source: Unrestricted Cost: \$3,520 Source: Restricted Ed Tech Grant Cost: \$31,200

CATEGORY	STRATEGY, PROGRAM, OR PRACTICE & PD	FUNDING SOURCE, AMOUNT AND TIMELINE
		June 2011
Professional Development	Promethean Academy	Source: Restricted Ed Tech Grant Cost: \$ 5,040 Source: Restricted Title I Cost: \$ 3,720  June 2011
Professional Development	Web 2.0 Academy	Source: Restricted Ed Tech Grant Cost: \$ 3,240 Source: Restricted Title I Cost: \$4,560 Source: Restricted SFSF 84.394 Cost: \$8,820  June 2011
Professional Development	2 day Workshop on Teaching in a 1-1 Environment : <i>Anytime Anywhere Learning Foundation</i>	Source: Restricted Ed Tech Grant Cost: \$4,320 Source: Restricted SFSF 84.394 Cost: \$ 1080  August 2011
Professional Development	Training for Technicians to become Certified Installer	Source: Staff Time Cost: \$ 0  June 2011
Equipment	Infrastructure Upgrade	Source: Unrestricted Cost: \$ 69,890 2010-2011
Equipment	Mobile Cart for CHS	Source: Restricted GEAR UP Cost: \$ 50,000  Fall 2010
Equipment	5 year replacement cycle	Source: Unrestricted Cost: \$63,000 2010-2011
Resources Online	United Streaming, SIRS	Source: Unrestricted

CATEGORY	STRATEGY, PROGRAM, OR PRACTICE & PD	FUNDING SOURCE, AMOUNT AND TIMELINE
	databases, Edline Web-hosting	Cost: \$27,888 2010-2011
Staffing	Addition of one technician	Source: Unrestricted Cost: \$ 33,000 2010-2011

## 2. Evidence of Challenges in Meeting Educational Technology Goals

### a. Implementation of the Student Technology Standards resulted in only 68% of the 7<sup>th</sup> grade students meeting proficiency on the *Maryland Measure of Student Technology Literacy* in 2009. Informal survey of schools shows no changes were implemented in 2010-11.

- Overall results for Somerset County 7<sup>th</sup> graders showed that 68% of the students met proficiency.
- Breaking out the results by skill module shows that Databases had the lowest percent proficient at 46% for the second year in a row. The Databases and Social & Ethical Skill modules were also the only ones that were below the state average.

### b. Expansion of the 1-1 student laptop program into the high schools increases the need for technology integration skills in secondary teachers.

- Only 84% of high school teachers were proficient on the *Maryland Teacher Technology Inventory* in 2009.
- Only 78% of all teachers scored proficient in the Integrating Technology into the Curriculum category on the *Maryland Teacher Technology Inventory*. This represents a drop from 90% the previous year.
- High school teachers only answered 56% of the questions related to Integrating Technology into the Curriculum category on the *Maryland Teacher Technology Inventory*.

## 3. Changes and adjustments to address the challenges in meeting Educational Technology goals.

### STUDENT TECHNOLOGY PROFICIENCY

- a. **CHANGE: Shift the responsibility of supervision of the Computer Lab Teachers from the building principals to the Supervisor of Elementary Education and the Director of Technology in order to provide more appropriate feedback on lessons taught in the labs.**

ADJUSTMENT and TIMELINE	RESOURCE	CATEGORY
Revise job description for the Supervisor of Elementary Education to include the observation and evaluation of the Computer Lab teachers.  Timeline: September 2011	HR Department	Source: Staff Time Cost: \$ 0
Notify the Computer Lab teachers of the change in supervision.  Timeline: September 2011	Director of Technology	Source: Staff Time Cost: \$ 0
Develop and implement a schedule of formal and informal observations by the Supervisor of Elementary Education and the Director of Technology.  Timeline: 2011-12	Director of Technology	Source: Staff Time Cost: \$ 0

- b. **ADJUSTMENT: Revise scope and sequence for computer classes, grades K-5, in order to ensure the *Maryland Student Technology Standards* are being covered.**

ADJUSTMENT and TIMELINE	RESOURCE	CATEGORY
Meet with computer lab teachers to match the current scope and sequence to the standards.  Timeline: 2011-12	Director of Technology	Source: Unrestricted Cost: \$1200
Implement a method of tracking the mastery of standards for individual students.  Timeline: September 2011	Director of Technology	Source: Unrestricted Cost: \$ 200

- c. **ADJUSTMENT: Develop lesson plans to be used by the Computer Lab teachers to cover the Maryland Student Technology Standards with special emphasis on Using Databases.**

ADJUSTMENT and TIMELINE	RESOURCE	CATEGORY
Meet with computer lab teachers to develop Lesson Plans  Timeline: 2010-11	Director of Technology	Source: Unrestricted Cost: \$1200
Implement a method of tracking the use of the approved Lesson Plans  Timeline: September 2011	Director of Technology	Source: Staff Time Cost: \$ 0

**TECHNOLOGY INTEGRATION SKILLS OF HIGH SCHOOL TEACHERS**

- a. **CHANGE: Hire an Instructional Technology Facilitator for each High School to support teachers with the integration of technology.**

ADJUSTMENT and TIMELINE	RESOURCE	CATEGORY
Create a job description for the high school Instructional Technology Facilitator  Timeline: July 2011	HR Department	Source: Staff Time Cost: \$ 0
Review the new responsibilities with the current 2 Facilitators.  Timeline: August 2011	Director of Technology Principals	Source: Staff Time Cost: \$ 0
Interview and hire a Technology Facilitator that will work at both high schools.  Timeline: September 2011	HR Department	Source: Restricted RTTT 84.395 Cost: \$ 85,507

- b. **ADJUSTMENT: Increase the available technology resources in the high school setting for teachers and students.**

<b>ADJUSTMENT and TIMELINE</b>	<b>RESOURCE</b>	<b>CATEGORY</b>
Lease an additional 200 student laptops to be distributed to incoming 8 <sup>th</sup> grade students.  Timeline: September 2011	Director of Technology	Source: Unrestricted Cost: \$ 51,253
Purchase and install hardware to create a wireless environment throughout both high schools.  Timeline: September 2011	Director of Technology	Source: Unrestricted Cost: \$ 11,220
Move the mobile laptop carts to the 11 <sup>th</sup> grade teams to share.  Timeline: September 2011	Director of Technology	Source: Staff Time Cost: \$ 0
Provide 11 <sup>th</sup> & 12 <sup>th</sup> grade core content teachers laptops in order to prepare them for next year's student laptop project.  Timeline: October 2011	Director of Technology	Source: Unrestricted Cost: \$ 11,595

c. **ADJUSTMENT: Provide professional development for high school teachers on technology integration and teaching in the 1-1 laptop environment.**

<b>ADJUSTMENT and TIMELINE</b>	<b>RESOURCE</b>	<b>CATEGORY</b>
Provide a 2 day workshop conducted by a consultant from the <i>Anytime Anywhere Learning Foundation</i> for 9 <sup>th</sup> & 10 <sup>th</sup> grade teachers on Using Laptops to engage Students in your classroom Timeline: August 2011	Director of Technology	Source: Restricted SFSF 84.394 Cost: \$4293
Provide 6 day of consulting and 4 days of PD by the <i>Anytime Anywhere Learning Foundation</i> on Coaching in a 1-1 Laptop Environment. Timeline: Sept. 2011- Feb. 2010	Director of Technology	Source: Restricted SFSF Cost: \$ 25,554
Offer the Level II Tech Academy and invite high school teachers who have not completed it to participate. Timeline: Summer 2011	Director of Technology	Source: Restricted Ed Tech Cost: \$ 14,800

ADJUSTMENT and TIMELINE	RESOURCE	CATEGORY
Offer the Intel Education Project Based Learning Course and invite high school teachers to participate. Timeline: Winter 2011-12	Director of Technology	Source: Unrestricted Cost: \$ 4,000

d. **ADJUSTMENT: Provide collaborative planning time for high school teachers to develop and share lesson plans using technology in the 1- 1 environment.**

ADJUSTMENT and TIMELINE	RESOURCE	CATEGORY
Offer 12 hours of collaborative planning time prior to the start of school to 8 <sup>th</sup> – 10 <sup>th</sup> grade teachers to prepare lessons to be used with students & laptops.  Timeline: August 2011	Director of Technology	Source: Unrestricted Cost: \$3520
Provide collaborative planning time once per month during weekly APD sessions (70 minutes) for all high school teachers to share and plan lessons for the 1-1 program.  Timeline: September 2011-June 2012	Principals	Source: Unrestricted Cost: \$ 272,033
Designate a Team Meeting every other week to be used to share and plan for the use of student laptops.  Timeline: September 2011-June 2012	Principals	Source: Staff time Cost: \$ 0

3. **Describe how the local school system is incorporating research-based instructional methods and the Maryland technology literacy standards for students, teachers, and school administrators into professional development to support teaching, learning, and technology leadership.**

Technology related professional development occurs in the following formats in Somerset County:

- **Seminars:** Professional development scheduled in 2-6 hour blocks of time which often meet for several sessions (i.e. 3 two hour sessions). These

seminars involve direct instruction, collaboration and follow up activities between sessions. Participants are usually enrolled in some type of online community for continued support. Examples: Level II Technology Certification- Integration Seminars, Teaching in a 1-1 Laptop Environment conducted by consultants from the *Anywhere Anytime Learning Foundation (AALF)*, Skill based seminars on specific applications.

- **Academies:** Full day professional development activities scheduled for several consecutive days (i.e. 5 day in the summer). The academies involve a limited amount of skill based direct instruction, small group collaborative work, follow up work in the classroom and continued support from the professional learning community associated with the academy. All of the academies require participants to produce a product as a result of the learning. Examples: Tech Academy, Promethean Academy, Web 2.0 Academy.
- **Collaborative Meetings:** Professional development meetings that are scheduled in 1-2 hour blocks of time. Collaborative planning time and /or meetings can take place during the school day (teacher prep time) or during Afterschool Professional Development (APD). Teams of teachers work on common goals related to technology (developing lesson plans, analyzing data, developing student Challenges, etc). Sessions are usually structured to include time to learn, time to share and time to plan for follow-up. Examples: Weekly APD sessions at all secondary schools, Team data meetings, Collaborative Planning time.
- **Online Courses:** Professional development activities conducted either partially online or completely online. Participants usually complete online course work outside of the regular school day. Examples: *Anytime, Anywhere Learning Foundation (AALF)* courses, Level III Technology Certification course, HSA Online courses being developed, TLC online modules being developed.
- **Coaching:** Professional development provided by Instructional Facilitators/Coaches, Tech Leaders, and Administrators which takes place in the teacher's classroom. This can take the form of modeling lessons, co-teaching or observations with real-time feedback. Coaching is done most often by: Administrators, Facilitators, fellow content teachers, consultants from AALF.

**4. Describe how the local school system is ensuring the effective integration of technology into curriculum and instruction to support student achievement, technology/information literacy, and the elimination of the digital divide.**

It has always been important to provide Somerset students with the opportunity to use technology. Many students do not have access to computers at home and rely on the school system to both provide access and instruction on the proper use. Therefore, the effective integration of technology has been a priority for several ongoing initiatives.

- Technology Certification Program – A three level certification program all teachers can participate in. They can earn certification in Technology Competency, Technology Integration and become a Master Technology Teacher by completing requirements of each level.
- Technology Support in the Classroom – Tech Leaders in each building support teachers with technology integration and provide building level professional development. Instructional Facilitators in each building have a responsibility for supporting technology integration into the curriculum by observing teachers and providing direct feedback on lessons.
- Elementary Computer Classes – Students in grades K-5 have Computer Class once per week for an hour. The curriculum is aligned with the *Maryland Technology Literacy Standards for Students*. Students learn skills as well as application of those skills to their classroom work.
- 1-1 Laptop Initiative – Students in grades 7, 8, 9 & 10 will all be issued laptops by September 2011. The 1-1 program started in 2009-10 both increases the need for effective technology integration but also is working to reduce the digital divide in our county. The initiative will be expanded in the future to the remaining high school grades.

**5. Discuss how the local school system is using technology to support low-performing schools.**

The high schools in Somerset County are the lowest performing schools in the system. In September 2011 the 1-1 student laptop program will be extended through the 10<sup>th</sup> grade after a successful start with the 8<sup>th</sup> & 9<sup>th</sup> grades last year. In addition to the 1-1 program there are mobile laptop carts in each high school for the upper grades to share while waiting for the continued expansion of the 1-1 program in subsequent years. Professional development is being provided for all teachers that is specific to teaching in the 1-1 environment through a one year contract with the *Anytime, Anywhere Learning Foundation*. Question 2 above describes the initiative to increase the technology integration skills of the high school teachers. The administration, both at the district and building level, are making technology integration and student engagement a priority for the high schools in 2011-12.

**6. Please update the district's Children's Internet Protection Act (CIPA) Certification Form. If there are no changes, check the first box. The form only needs to be signed if there are any changes. Access the district's completed form from last year at: <http://docushare.msde.state.md.us/docushare/dsweb/View/Collection-20709>**

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

**Please review the information submitted with the October 2010 Annual Update and use the chart on the following page to address additional progress on or changes to the items below related to accessibility compliance. If you choose to use last year's chart with this Update, please bold or underline any changes. Note: to review your system's 2010 master plan update, go to: <http://docushare.msde.state.md.us/docushare/dsweb/View/Collection-20709>**

PROCESS	IMPLEMENTATION	MONITORING
<p>a) SCPS procedures for invitations to bid, requests for proposals, procurement contracts and grants include a notice of equivalent access requirements consistent with SubPart B Technical Standards, Section 508 of the Rehabilitation Act of 1973.</p> <p>b) SCPS procedures for design specifications guidelines and selection of technology based product guidelines requires a statement included about the equivalent access standards (SubPart B Technical Standards, Section 508 of the Rehabilitation Act of 1973).</p> <p>c) Somerset County began using <i>Edlin.net</i> to host school and teacher webpages in 2009. These sites are built using templates which are 508 compliant. Teachers who create other original materials must have them approved by the Director of Technology.</p>	<p>The following Implementation Plan was put in place during the 2004-05 school year and continues to be used.</p> <ul style="list-style-type: none"> <li>- The regulations will be explained and a detailed implementation plan will be presented to the Board of Education at the regular August meeting.</li> <li>- The regulations will be explained to the Supervisors &amp; Principals at the beginning of the year A&amp;S meeting in August</li> <li>- The regulations will be explained to all special education teachers at their opening meeting in August.</li> <li>- The regulations will be explained to the Tech Leaders from each school at the regular beginning of the year meeting in August.</li> <li>- Tech Leaders will present the regulation requirements to their building staff during an opening faculty meeting in September.</li> </ul>	<p>a) The specific technical provisions are required to be included in RFP's as stated under process. We are then required to follow our standard procurement regulations. The evaluation process must contain a component to determine if the product meets the technical standards or if an exception applies. Any exceptions will be documented. Recommendations to the board of education for purchase must include a statement addressing the technical standards status.</p> <p>b) All teachers will be aware of the regulations as a result of the implementation plan that has been put into place. Their understanding will be monitored through the process of approving purchase orders at the central office level.</p>

## CHILDREN'S INTERNET PROTECTION ACT (CIPA) CERTIFICATION FORM

**NOTE: Complete only if there have been changes to your last certification submitted to MSDE.**

**Check here if there are no changes to your CIPA certification status.**

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.**

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School System