

CROSS-CUTTING THEMES

(Educational Technology, Education That Is Multicultural, Fine Arts)

In responses to the previous questions, districts may have addressed the following cross-cutting themes. Use this space to report on progress toward outcomes and timelines established in the Master Plan and further elaborate on any revisions or adjustments pertinent to these cross-cutting themes that the school system has made to the Master Plan.

Educational Technology

The Bridge to Excellence legislation requires that the updated plan “shall include goals, objectives, and strategies” for addressing how technology will be integrated into curriculum, instruction, and high quality professional development in alignment with the objectives of the Maryland Plan for Technology in Education and local technology plans. The five main objectives of the State plan are as follows:

- Objective 1: Access to high performance technology and its rich resources is universal;
- Objective 2: All educators will be highly knowledgeable and skilled, capable of effectively using technology tools and digital content;
- Objective 3: Technology tools and digital content that engage our students will be seamlessly integrated into all classrooms on a regular basis;
- Objective 4: Technology will be used effectively to improve school administrative functions and operational processes; and
- Objective 5: Effective research, evaluation and assessment will result in accountability and continuous improvement in the implementation and use of technology.

In addition to including technology strategies across the Master Plan aligned to State and local technology plans, the local school system Master Plan and/or Master Plan Update should outline specifically how it will use all sources of funding in meeting *No Child Left Behind* Statutory Goals:

- Improve student academic achievement through the use of technology in elementary schools and secondary schools.
- To assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student’s race, ethnicity, gender, family income, geographic location, or disability.
- To encourage the effective integration of technology resources and systems with teacher training and curriculum development to establish research-based instructional methods that can be widely implemented as best practices by State educational agencies and local educational agencies.

Educational Technology

1. PROGRESS MADE IN 2005-2006 TOWARD MEETING EDUCATIONAL TECHNOLOGY GOALS:

A. Somerset County Public Schools students and staff have universal access to high performance technology.

Educational technology is infused throughout all six key goals in the Master Plan. All of the strategies associated with the purchase, replacement or upgrade of technology and the infrastructure have been successfully completed. As a result, 20% of the system servers were replaced, 20 % of the classroom and administrative computers were replaced and the total number of computers in the school system was increased by 10%. Other initiatives added laptops, LCD projectors, video and digital cameras, and student palm handhelds to the inventory,

The 2005 Maryland Technology Inventory indicates that Somerset schools have exceeded or met the state targets for technology with a student to computer ratio of 3.2:1 and 100% of classrooms with internet access. In addition it shows a 3% increase in the number of computers and a 40% increase in the number of projection devices in the school system. In addition to the increase in numbers, a local inventory indicates that 30% of the computers existing in 2004 were replaced with new machines.

B. Somerset County Public Schools staff has opportunities to become highly knowledgeable and capable of effectively using technology tools and digital content.

A new three level technology certification program was implemented in 2005 to allow all staff to work toward being highly knowledgeable in the use and integration of the available technology to improve student achievement and instruction.

There were 35 different Level I workshops provided to teach or review skills in Microsoft Word, PowerPoint, Excel, Front Page, File Management, Internet Skills and Using Email. Over 100 different staff members participated in one or more of the workshops, totaling 247 seats occupied. Nearly 40% of the staff completed the Level I certification program in 2005. 70% were secondary staff members, 29% were elementary, and 1% were district office administrators.

The Level II certification program was offered this summer to teachers who successfully completed Level I. 34% of the eligible staff members participated in the 2 week long Technology Academy sessions. These teachers are prepared to continue to complete the requirements of the Level II certification during the Fall of 2006.

C. Technology tools and digital content that will engage our students is available for all staff and students to use on a regular basis.

The students and staff in Somerset County schools have access to many tools and resources that can be used as a regular part of instruction. Every teacher has access to a LCD projector, Digital Cameras, and Video Cameras for use with students in their classrooms. All Somerset County teachers also have access to *United Streaming* for video content to incorporate into their instruction. Students and staff have access from both school and home to several online databases; SIRS Discoverer, SIRS Researcher; Culture Grams; ProQuest Learning Literature; Grolier's New Book of Knowledge, and Thompson Gale's Science Resource Center. All schools have high speed internet access for teachers and students as well as access to software such as Microsoft Office, Microsoft Publisher, and Inspirations or Kidspirations.

2. IDENTIFY PROGRAMS, PRACTICES AND STRATEGIES RELATED TO THE PROGRESS:

A. Local Support for Technology

The support of the Board of Education in the form of funding the local technology budget requests is clearly responsible for the success of these strategies. In 2005, the local budget included \$746,000 for technology. Funds were included for the purchase of new hardware (20%), replacement of older technology (20%), instructional software purchases (16%), subscriptions to web-based products (1%), maintenance contracts (7%) and salaries (31%). The implementation of regular replacement cycles for all hardware has also attributed to the success of this initiative.

Specific Implemented Master Plan Action Steps in this area were:

- 1.6.1 Elementary Computer Labs were updated with new computers
- 1.6.1 20% of administrative computers were replaced with new machines
- 1.6.1 10% of classroom computers were replaced with new machines
- 1.6.2 Servers scheduled for replacement were upgraded
- 1.6.4 100% of the local area networks were upgraded to the windows environment
- 1.6.4 95% of all computers on the network have been upgraded to windows XP
- 1.6.8 The student handheld project was expanded with the purchase of new handhelds, keyboards and charging stations

B. Technology Certification Program

Somerset County Public Schools implemented a three level Technology Certification program this year. 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 in order to improve student achievement. Level I is a certification in technology competency which is earned by passing a

performance based assessment designed to assess skills in file management, Word, PowerPoint, Excel, Front Page, Using the Internet and email. Eighty six teachers (about 35%) have already earned this level of certification. Level II is certification in technology integration. This certification is earned through a series of activities designed to increase teachers understanding of technology integration. The first step to attend a 5 day technology academy that teaches skills necessary to produce multimedia projects, models the use of backward mapping to plan your instruction and gives the participants the experience of learning through the use of technology. Thirty teachers have completed the Technology Academy this summer. These teachers will next attend 12 hours of training in how to integrate technology into their curriculum. Each teacher will then develop a plan with their principal on using technology in the classroom which will include both formal and informal observations. The final level of certification will be designed to move the teachers into a technology master teacher role by working with the Maryland Teacher Technology Standards and the National Technology Standards. These teachers will work with and mentor other teachers in our school system.

Specific Implemented Master Plan Action Steps in this area were:

- 1.6.11 Expand the role of the Tech Leader to include planning and implementation of professional development.
- 3.6.3 Implement to concept of “Tech Day” training for teachers at the intermediate school.
- 3.6.12 Provide technology related professional development at the site level to prepare teachers
- 3.6.13 Provide technology related professional development at the county level to prepare teachers for certification on integration.
- 3.6.20 A three level Technology Certification program was implemented to allow teachers to earn certification in technology competency, technology integration and as a technology master teacher

3. CHALLENGES IN MEETING THE EDUCATIONAL TECHNOLOGY GOALS:

A. The majority of classroom teachers are satisfied with their command of basic technology skills and are not seeking the skills to seamlessly integrate technology into their instruction in order to maximize student engagement and learning.

The focus of technology professional development has shifted from teachers being able to use technology to teachers knowing how to integrate technology into their curriculum as a result of the new Technology Certification program. Level I has been fully implemented; however, Level II which begins the integration phase of this program didn't begin until June 2006 and Level III is still in the planning phase. Progress with the integration phase cannot happen until teachers begin to move through all three levels of the program. As teachers begin to integrate technology into their instruction they will expect students to have the skills necessary to use the

technology. The need to implement the Maryland Student Technology Standards is evident by the lack of progress in students having all of the necessary skills to use the technology.

1. We are challenged to have all teachers complete the three levels of technology certification.

B. The elementary computer curriculum must be revised to include a structured keyboarding program and to incorporate the Maryland Student Technology Standards.

Elementary students in Somerset County attend special subject classes every week to give them the exposure to music, art, physical education and computers. All classes are scheduled into the computer lab for 30-50 minutes once per week to learn computer skills, practice keyboarding and do activities related to classroom instruction. Currently lab assistants are using the *Easy Tech* curriculum by Learning.com to teach the skills and find related activities for students to do. Keyboarding is taught using various software packages during this computer time. It is difficult to teach keyboarding skills during a class that only meets once per week. A schedule of consecutive days in the lab will need to be developed to reinforce keyboarding skills if elementary students are going to be successful in this activity. Students are expected to have certain skills when they leave the elementary grades and enter the secondary level. Teachers in grades 6 and 7 have expressed concerns over the students' lack of skills in some areas, such as using Word, Excel and PowerPoint. The curriculum in the elementary school needs to be revised in order to make sure every student leaves 5th grade with the required skills. A method for tracking the mastery of skills must also be implemented. Finally, the skills must be matched to the Maryland Student Technology Standards.

1. We are challenged to implement a structured keyboarding program at the elementary level.
2. We are challenged to revise the elementary technology curriculum to match the Maryland Student Technology Standards.

4. CHANGES OR ADJUSTMENTS TO ENSURE MEETING THE EDUCATIONAL TECHNOLOGY GOALS:

Challenge 3A1: To have all teachers complete the three level technology certification program.

In order to meet this challenge the school system will continue to support the technology certification program and to encourage teachers to participate.

ACTIONS & RESOURCES TO MEET CHALLENGE 3A1	
Staffing	
<ul style="list-style-type: none"> Hire three (3) instructors for the two (2) Technology Academy sessions. 	Amount Budgeted: \$ 9,000 Source: Ed Tech Competitive Grant Timeline: Summer 2006
<ul style="list-style-type: none"> Hire two (2) instructors for the Integration Seminars. 	Amount Budgeted: \$ 1,080 Source: Ed Tech Competitive Grant Timeline: Fall 2006
<ul style="list-style-type: none"> Hire an instructor for the Level III online course. 	Amount Budgeted: \$ 2,700 Source: UMES MHEC Grant Timeline: Spring 2007
Professional Development	
<ul style="list-style-type: none"> Offer the 5 day Technology Academy during the summer of 2006. Participants are paid a stipend upon completion. 	Amount Budgeted: \$ 27,000 Source: Ed Tech Competitive Grant Timeline: Summer 2006
<ul style="list-style-type: none"> Offer the technology Integration Seminars. Teachers are paid a stipend to participate. 	Amount Budgeted: \$ 8,100 Source: Ed Tech Competitive Grant Timeline: Fall 2006
<ul style="list-style-type: none"> Offer the Level III online course to teachers that have completed level II. Teachers are paid a stipend upon completion. 	Amount Budgeted: \$ 2,700 Source: Ed Tech Competitive Grant Timeline: Spring 2007
Core Program & Intervention	
<ul style="list-style-type: none"> Continue to investigate the possibility of a salary increase associated with the completion of level III 	Amount Budgeted: None Source: Superintendent' s Time Timeline: 2006-2007
Equipment	
<ul style="list-style-type: none"> Purchase laptops for teachers who complete Level III online course. 	Amount Budgeted: \$ 15,000 Source: Local Timeline: 2006-2007
Materials & Supplies	
<ul style="list-style-type: none"> Purchase Data Sticks for teachers participating in the Technology Academy. 	Amount Budgeted: \$ 1,800 Source: Local Timeline: Summer 2006
<ul style="list-style-type: none"> Purchase materials for the Technology Academy 	Amount Budgeted: \$ 225 Source: Local Timeline: Summer 2006
<ul style="list-style-type: none"> Purchase material for the Level III online course 	Amount Budgeted: \$ 150 Source: Local Timeline: Spring 2007

Challenge 3B1: To implement a structured keyboarding program at the elementary level.

ACTIONS & RESOURCES TO MEET CHALLENGE 3B1	
Staffing	
<ul style="list-style-type: none"> Assign elementary instructional technology responsibilities to the <i>Reading First</i> and Elementary Program Coordinator. 	Amount Budgeted: \$ 15,800 Source: Local Timeline: Fall 2006
<ul style="list-style-type: none"> Meet with Technology Leaders from elementary schools twice per month to research and plan the implementation. 	Amount Budgeted: \$ 4,000 Source: Title II, Part D, ESEA Grant Timeline: 2006-2007
Professional Development	
<ul style="list-style-type: none"> Provide training for the elementary lab assistants on the use of the new keyboarding software. 	Amount Budgeted: None Source: Staff Time Timeline: Winter 2007
Core Program & Intervention	
<ul style="list-style-type: none"> Purchase a standard keyboarding program for all elementary schools. 	Amount Budgeted: \$ 6,000 Source: Local Timeline: Fall 2006

Challenge 3B2: To revise the elementary technology curriculum to match the Maryland Student Technology Standards.

ACTIONS & RESOURCES TO MEET CHALLENGE 3B2	
Staffing	
<ul style="list-style-type: none"> Assign elementary instructional technology responsibilities to the <i>Reading First</i> and Elementary Program Coordinator. 	Amount Budgeted: \$ 15,800* Source: Local Timeline: Fall 2006 <i>*Duplicated Reference</i>
<ul style="list-style-type: none"> Meet with Technology Leaders from elementary schools twice per month to research and plan the revisions. Match <i>Easy Tech</i> lessons to the Maryland Student Technology Standards and develop a scope and sequence. 	Amount Budgeted: \$ 4,000* Source: Title II, Part D, ESEA Grant Timeline: 2006-2007 <i>*Duplicated Reference</i>
Professional Development	
<ul style="list-style-type: none"> Provide training for the elementary lab assistants in the use of the <i>Easy Tech</i> curriculum. 	Amount Budgeted: None Source: Staff Time Timeline: Fall 2006

ACTIONS & RESOURCES TO MEET CHALLENGE 3B2

<ul style="list-style-type: none">• Provide training for elementary lab assistants on how to track and record student mastery of skills.	Amount Budgeted: None Source: Staff Time Timeline: Spring 2007
Core Program & Intervention	
<ul style="list-style-type: none">• Purchase licenses for every elementary student for the <i>Easy Tech</i> curriculum to be used in the computer labs.	Amount Budgeted: \$ 6,000 Source: TL8 Consortium Grant Timeline: 2006-2007