



Preparing Students for Tomorrow . . . Today

Technology & Learning Implementation Plan

2007-2010

Dr. Bobby G. Webb
Superintendent

Shelby County Schools
160 South Hollywood
Memphis, TN 38112
901.321.2500
www.scsk12.org

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Shelby County Schools Technology Plan

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Shelby County Schools

Technology Plan 2007-2010

The Shelby County School System acknowledges that to work, learn, and function successfully in a technological society, teachers and students must be empowered with the skills to use technology effectively. The District further understands that technology includes more than computers. Technology includes video devices, digital cameras, personal digital assistants, handheld computers, cell phones, and other tools still in development. The district believes that ongoing and sustained staff development is imperative to equip teachers and administrators with the skills needed to challenge technology savvy students and to prepare them for success in a global economy.

The Shelby County School System promotes technology to complement and enhance successful teaching methods. Technology must become an embedded component of a challenging district and state academic curriculum. Administrators and teachers must work to create a technology environment in which students solve problems, accomplish tasks and improve academic achievement.

According to the International Society for Technology in Education, a combination of essential conditions are required to create learning environments conducive to powerful uses of technology, including:

- Vision with support and proactive leadership from the education system
- Educators skilled in the use of technology for learning
- Content standards and curriculum resources
- Student-centered approaches to learning
- Assessment of the effectiveness of technology for learning
- Access to contemporary technologies, software, and telecommunications networks
- Technical assistance for maintaining and using technology resources
- Community partners who provide expertise, support, and real-life interactions
- Ongoing financial support for sustained technology use
- Policies and standards supporting new learning environments

By addressing each of these essential conditions, this technology plan will demonstrate Shelby County's commitment to meeting and exceeding local, state and national expectations for technology in education.

The Technology Plan has been developed to support technology embedded within the goals in the District Strategic Plan. These goals include:

Goal #1: *Student Achievement:* To continue to provide our students with the skills they will need to be successful in the future.

Goal #2: *Effective Communication:* To establish and maintain communication among all Shelby County School staff, students, community leaders, and stakeholders.

- Goal #3: *Safe & Adequate Facilities:* To maintain safe, secure, and adequate school facilities and transportation services in a constantly growing school system.
- Goal #4: *Human Resources:* To recruit and retain high quality employees through competitive salaries and benefits packages while providing a comprehensive support system.
- Goal #5: *Adequate & Equitable Resources:* To identify alternative funding sources and support a long-term funding solution that will meet the needs of a constantly growing student population.
- Goal #6: *Legislation & Advocacy:* To develop and implement a legislative agenda to reflect the needs of the school and the community while preparing students for the future.

See Appendix B for a Timeline of the Technology Plan Key Components with Benchmarks.

See Appendix C for the Overview of Action Steps and Performance Outcomes.

See Appendix D for the Rubric of Essential Technology Conditions.

Vision of Technology in Education

Imagine a home...

...where every parent—regardless of native language or socioeconomic background—can communicate readily with teachers about their children’s progress, keep in touch with classroom and school activities, conference with a guidance counselor or administrator, and improve their parenting skills without leaving home or work.

Imagine a school...

...where every student—regardless of zip code, economic level, age, race, ethnicity, or ability—can be immersed in the sights, sounds, and languages of other countries; visit museums; research diverse and near limitless knowledge webs; or explore the inner workings of living cells from the inside.

Imagine a district...

...where every educator—regardless of subject, experience, or school location, size or wealth—can get hands-on training instantaneously, when or where he or she needs it; interact with a virtual community of professional colleagues; and have access to student data and performance information as well as the analytical tools and skills to use them effectively.

(Adapted from the 2002 Update to the Long-Range Plan for Technology, 1996-2010 by the Texas Education Agency)

In working towards the ideal, Shelby County Schools strives to support an instructional model that empowers students to use technology in ways that deepen their understanding of academic content and prepare them for the complex world in which they live. Furthermore, the District supports the infusion of technology into the overall District culture.

Shelby County Schools Mission Statement

Shelby County Schools preparing students for tomorrow...today.

Shelby County Schools Philosophy

In striving to provide optimum educational opportunities for every student, the Shelby County Schools System believes that each student is a unique person with dignity and worth. We utilize success-oriented learning experiences to maximize intellectual, social, emotional, physical, aesthetic, and moral growth.

Each school will be sensitive and responsive to community needs which affect education. Therefore, each school's professional staff, with assistance from the community and systemwide resources, has the responsibility to develop a stable, individually appropriate curriculum emphasizing proficiency in the basic skills as well as experiences that contribute to a comprehensive, practical education.

Since learning is a continuous process and the school an integral part of the total community, we are dedicated to the development of an individual who will become a valuable, contributing member of society.

Technology Standards for Students

In 2007, the Shelby County Schools Technology Standards Committee adopted the International Society for Technology in Education's (ISTE) National Educational Technology Standards (NETS) for Students. Student technology skills assessments will be based on these standards. The adoption of these standards reinforces SCS commitment to the 2008-2113 Strategic Plan and Tennessee Master Plan for Education.

Technology Foundation Standards for Students

1. Basic operations and concepts
 - Students demonstrate a sound understanding of the nature and operation of technology systems.
 - Students are proficient in the use of technology.
2. Social, ethical, and human issues
 - Students understand the ethical, cultural, and societal issues related to technology.
 - Students practice responsible use of technology systems, information, and software.
 - Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
3. Technology productivity tools
 - Students use technology tools to enhance learning, increase productivity, and promote creativity.
 - Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.
4. Technology communications tools
 - Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
 - Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
5. Technology research tools
 - Students use technology to locate, evaluate, and collect information from a variety of sources.
 - Students use technology tools to process data and report results.
 - Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
6. Technology problem-solving and decision-making tools
 - Students use technology resources for solving problems and making informed decisions.
 - Students employ technology in the development of strategies for solving problems in the real world.

See Appendix E for grade level performance indicators.

Technology in Shelby County Schools Executive Summary

Goal 1: Student, Teacher, and Employee Access

Provide adequate and appropriate equipment for classroom and administrative use.

Instructional

Each instructional area has at least one data access point, one or more computers and access to a networked laser printer. Each certificated employee is assigned a laptop computer by the Technology Department. Student computers are available on a ratio of approximately one computer for every four students. Every school has from three to seven classroom sets of laptop computers on mobile carts to assist with technology integration. Title I programs, the Special Education Department and the Career and Technical Department provide specific hardware to target areas of need.

The Technology in Education Survey System (TESS) of hardware, along with an updated hardware and software inventory for each school, is used to assess the level of classroom resources available to teachers and students. This information is used to plan for technology purchases that will help to achieve adequacy in all schools and equity among schools.

The majority of District-provided student computers are 4 to 5 years old with some library circulation equipment approaching 10 years. Due to the age of this equipment, it is frequently not cost effective to repair the units. In order to provide students' equipment to run current versions of software and to maintain the present student to computer ratio, a yearly commitment to the replacement of student units is vital.

In 2007-2010, Shelby County Schools will continue to strive for a three year replacement cycle for teacher laptops and a three to five year replacement cycle for other computers. The district will continue to move toward mobile computing solutions for teachers and students.

Administrative

In order to operate efficiently, administrative and support personnel need equipment that will run software related to their job function. Every effort is being made to replace equipment on a three to four year replacement cycle.

Various servers are used Districtwide for web-based and school-based applications. In order to maintain these systems at peak performance, it is necessary to replace hardware on a three to four year cycle and to update software and maintenance agreements annually.

Network Devices

Shelby County Schools is committed to providing comparable networking devices in all locations. The system will purchase and install switches and wireless devices as new sites are built. As gigabit fiber is fully implemented, new servers and storage devices will be implemented to provide all teachers and students with adequate access and storage for instructional projects.

Goal 2: Instructional Software and Web Resources

Provide teachers and students access to quality software and web resources for technology integration.

Teachers and students are provided access to quality computer software and web resources. Depending on the grade structure, this software includes: the Microsoft Office suite, the AppleWorks suite, the iWork suite, the iLife software series, TimeLiner, Inspiration graphic organizer, Kidspiration graphic organizer, and KidPix for drawing or painting. Valuable web resources for teachers and students include: the netTrekker d.i. search engine, BrainPop animated instructional content, PowerMediaPlus digital content, Atomic Learning training videos, the ThinkLink testing instrument, the Plato Integrated Learning System, SEAS for Special Education, Rosetta Stone for English Language Learners, i-Station reading assessment software for K-1, SuccessNet reading assessment software for 3-5, and ACT/SAT software for test preparation. Web-based resources allow home access for many of these valuable learning tools.

Shelby County Schools will continue to budget for the necessary upgrades and annual licensing fees required to continue using the instructional resources that prove invaluable. When appropriate, the use of classroom resources will be monitored and evaluated to reveal locations where assistance is needed for more comprehensive implementation.

Teachers use an electronic grade book on their laptop computers to post grades to a web-based parent portal. Through the portal, parents and students access grade reports, attendance data, and assignment information. The grade book is a component of the District student information system. Grade and attendance data flow from the grade book to the centralized student information system for state reporting.

Teachers are encouraged to maintain a web presence beyond basic grade and attendance information as a means to communicate detailed information to parents and students. The iWeb application is provided to all teachers and a concerted effort will continue to transition teachers to use of this application to make web page development easier and more consistent throughout the District.

Goal 3: Infrastructure

Maintain a reliable high-speed network that enables the use of innovative instructional resources and accommodates the daily business of the District.

Education Networks of America (ENA) provides a high-speed network with secure Internet access for over 15,000 Macintosh and PC computers at 53 locations. The District works with ENA to maintain a dependable network that enables the use of innovative instructional resources and accommodates daily business activities. The district network administrator monitors bandwidth usage to evaluate WAN bandwidth requirements. Shelby County Schools replaces Local Area Network devices and servers as needed.

ENA provides the resources for Shelby County Schools to satisfy the CIPA definition of the "technology protection measure" required for E-Rate and other Federal funds. An automated content filter, close supervision by teachers, and the

Student Acceptable Use Policy help to assure a safe Internet experience for students. To further promote Internet safety at school and at home, library media personnel in all Shelby County Schools teach the iSafe curriculum, which is endorsed by the United States Congress.

Shelby County Schools provides adequate telephone lines for each location and conducts an annual review for all locations. Principals request a traffic study for specific schools on an as needed basis. Traffic studies can be run on current lines for a particular time period to count the number of calls and the number of busy or blocked calls. Additional lines and services are added based on the results and recommendations of the traffic study. During the 2006-2007 school year no requests were made for additional lines. Phone lines were added due to school expansion. Phone solutions such as VOIP will be explored to continue to provide a high level of service to all instructional and administrative areas.

To accommodate video over the data network and additional network intensive applications, Shelby County Schools is expanding the network to gigabit fiber to provide reliable, high speed access for students, teachers and administrators. Internet safety will remain a district priority as the *Student Acceptable Use Policy* is updated to accommodate emerging technologies, and as further integration of the iSafe curriculum continues.

Goal 4: Student Information System

Fully implement and maintain a District student information system that fulfills local business requirements, meets state and federal reporting obligations, and addresses user needs.

The Technology Department is working to fully implement the Student Information System. The SIS is a centralized student data base that maintains demographic data, grades, attendance information, discipline data, and test scores. The SIS generates extracts to meet state reporting requirements. The SIS provides a web portal to allow student grades and attendance to be viewed on-line by both parents and students.

In 2007-2008, the District plans to implement scheduling modules and to provide end users with better reporting capabilities. The District will continue to work with the vendor to close functionality gaps in both reports and custom on-line screens. SCS will utilize on-staff personnel to create additional custom screens and end-user reports. The District will transition from using meeting attendance to daily attendance during the 2008-2009 school year. During the 2007-2008 school year, the District will start to use the School Interoperability Framework (SIF) capabilities of the SIS to exchange data with other software packages that are in use.

There are over 3000 in-house users of the Student Information System. This group of users encompasses a wide variety job functions. The SIS team provides support or assumes responsibility in the following areas:

- Teachers in their use of the grade book and teacher portal
- Parents and students in their use of the parent/student portal
- Attendance operators in recording accurate attendance, producing daily and periodic reports, providing accurate data for state reporting, enrolling and withdrawing students, and maintaining accurate student and teacher demographic data
- High school guidance counselors in entering/editing historical data, printing transcripts, tracking graduation progress and class rank of all students, and producing numerous reports and exports
- Administrators in using all aspects of the system
- Selected administrators in producing and maintaining student class enrollments
- Producing required extracts and reports as required by the state
- Storing grades and generating reports for grade reporting
- Performing year-end procedures
- Providing schools with information not easily available to the end-user
- Producing custom extracts and reports
- Monitoring system performance and making adjustments as needed
- Installing upgrades as needed

Goal 5: Business Information Systems

Continue to maintain and expand business information systems that meet the needs of the District.

The Business Information Systems APECS application runs on the Windows Platform utilizing “.Net” technology and Microsoft SQL database. There are two systems in use. One is the “live” site where all the business of Shelby County Schools is transacted and stored and the other is the test site where updates are loaded and tested before being moved to the live site. Each system utilizes two servers. One server houses the APECS application while the other houses the database. It is imperative that these systems be maintained in prime working condition to avoid work disruption or delays in getting vital information out.

Other applications such as the warehouse, accounts receivable and payroll attendance and worksheet applications are housed on two servers similar to the APECS application. One server houses the application while the other houses the database. As with the APECS servers, these servers must be maintained in prime working condition to avoid down time. Since these servers have been in service for three years now, replacement of the servers may be necessary within the next two to three years as well as upgrading the operating system and database applications.

The APECS application has several modules that are not currently used by Shelby County Schools. These include, but are not limited to, Warehouse, Fixed Assets, Position Control, Invoicing and Accounts Receivables. These applications, when phased in over a period of time, will eliminate the use of some third party applications as well as some in-house developed applications. Use of the APECS modules will greatly improve efficiency and accountability.

Support for Business Information Systems applications includes four members of the Business Information Systems Departments staff. These individuals include the Director of the department as well as two systems analysts and one computer operator.

Director - The Director of the department oversees all of the elements of the department and the staff. He coordinates the various projects of the department and assists in maintaining all in-house written applications such as WISSC (Warehouse), PAWSC (Payroll-Attendance) and ARISC (Accounts Receivables).

Systems Analysts - The Systems Analysts are responsible for writing extracts and queries from the business application (Finance, Payroll, Human Resources and the Employee Portal, collectively known as APECS) as well as the student management system. They also maintain the security and user access of the business system and trouble shoot problems end-users may encounter. The Systems Analysts also maintain the APECS test environment. The purpose of the test environment is to assure that new releases of or patches for the APECS system "work as advertised".

Business Analyst - The responsibility of the Business Analyst is to assist the Systems Analyst with testing of new programs and modules related to the business applications (APECS, WISSC, PAWSC and ARISC). As documentation of procedures is very important, it is also the responsibility of the Business Analyst to review documentation for accuracy. The Business Analyst is also responsible for the supplies inventory such as toner, paper, payroll and accounts receivables check stock and direct deposit forms.

Computer Operator - The responsibility of the Computer Operator is to execute and print jobs for the various departments that use APECS, WISSC, PAWSC and ARISC. These include such jobs as accounts payable checks, payroll checks, payroll direct deposit advices and payroll reports. It is the responsibility of the Computer Operator to maintain essential backups of Business Information Systems applications and schedule maintenance on the equipment as needed.

Goal 6: Project Implementation

Support the District technology goals by assisting all departments in evaluating cost effective solutions to meet departmental needs.

The purpose of the Information Technology (IT) Audit and Delivery department is to introduce project management as a discipline to Shelby County Schools. The I.T. Audit and Delivery office will work to ensure that projects are completed on time and within budget, provide consistent project coordination, efficient use of personnel among multiple projects, ensure projects are aligned with business objectives and the Shelby County Schools technology and strategic plans, and provide standard procedures by utilizing the standard's set by the Project Management Institute's Body of Knowledge (PMBOK). The I.T. Audit and Delivery will also ensure that all projects have the proper support from stakeholders before initiation. It will ensure that input is received from affected groups during the requirements gathering phase and that the end-user needs have been met.

With the introduction of the Technology Purchase/Implementation Request Process, the I.T. Audit and Delivery Department will assist with school technology purchases as well as purchasing for special projects.

Goal 7: Funding Sources

Seek community support and funding resources for technology.

The Shelby County School District continues to seek community support and funding resources for technology by pursuing grants, private sector initiatives, partnerships and other external funding sources. In 2001, the Shelby County Schools Education Foundation was formed as a nonprofit organization dedicated to supporting the school system. The SCS Education Foundation raises money from the private sector to help fill in some of the many major funding gaps in Shelby County Schools.

The District enjoys one of the strongest Parent Teacher Association (PTA) organizations in the state. School PTA's work with school administrators to provide technology equipment and resources to address specific school needs.

The District receives Federal Title funding that greatly enhances the purchase of current technology. The Title I program provides additional resources where the educational need is the greatest. Title IIA funds are frequently used for providing continuous, ongoing professional development in the area of technology. Title IID funds have been used to support the local Tech Coach program. Title III is used to enhance the learning of ELL students. All Title funds are used to enhance, not supplant, the regular program.

Funding provided by the Carl D. Perkins Vocational and Technical Education Act of 1998 enables the District to purchase the latest technology for use in Career and Technical classes.

A full-time Grant Writer is on staff to work with Technology to obtain local, state, and national grants to supplement local, state and federal funding.

Goal 8: Technical Support

Ensure that equipment and its associated software are available in good working condition with secure and adequate technical support.

District support for technology includes a variety of distinct component groups to meet the specific needs of users. These groups and their functions are as follows:

Technology Support Services (TSS)

The Technology Support Services team is comprised of 17 technicians. Technicians are grouped into five teams that work in tandem to provide streamlined support and concentrated service. The teams are Administrative Support, Desktop Support, Networking Support, Server Support, and Service Desk.

TSS works with school technology teams to support the maintenance and repair of student and teacher machines. TSS also supports computing equipment for the Central Offices, Nutrition, Bookkeeping, Special Education, and Operations.

During the 2006-2007 school year, TSS embarked upon an initiative to improve overall service. The department was restructured, a new work order system purchased and several additions made to the team. As a continuing effort to improve service delivery, TSS will attain the Apple and Hewlett-Packard Self-Servicing Institution status which allows the department to perform its own warranty repairs and accumulate purchase credits that will offset future repair costs.

School Technology Support Personnel (STS)

In the 2007-2008 school year, approximately twenty-five school technology support personnel have been added to provide school-based hardware and software support for administrators, staff, and students. They perform tier-one services onsite and coordinate tier-two and tier-three repairs with Technology Support Services. In addition they work with the School Technology Committee and the Curriculum Technology Trainers to promote the effective use of instructional and administrative technology. One STS is assigned to support two schools. A District Technology Specialist manages training and program evaluation for school technology support personnel.

Local-Area Network Support

The Local-Area Network (LAN) Administrator maintains the networking devices and servers at all school sites. This person is responsible for planning networks at any new or renovated location.

Wide-Area Network Support

The Wide-Area Network (WAN) Administrator works with the WAN provider to optimize the uptime for network services at all locations. This person also installs and maintains the networking devices at all administrative sites. The WAN Administrator is responsible for district wide servers such as e-mail, web service, student management and database servers as well as general data storage.

Goal 9: Instructional Support

Provide support for the use of technology to enhance the learning process.

Effective integration of technology is achieved when students are able to select technology tools to help them obtain information in a timely manner, analyze and synthesize the information, and present it professionally. The technology should become an integral part of how the classroom functions -- as accessible as all other classroom tools. -- *National Educational Technology Standards for Students, International Society for Technology in Education*

Technology integration is supported by the following groups:

Technology Specialists

Three Technology Specialists coordinate instructional technology efforts for the District. They plan for adequacy in all schools and equity among schools as they review instructional technology purchases and initiatives. They promote and provide opportunities for curriculum integration and technology skill development for students, teachers, and administrators through ongoing sustained staff development. The Specialists plan and conduct monthly *train-the-trainer* type sessions for the school Curriculum Technology Trainers. These sessions prepare the CTT's for their technology integration work with teachers and facilitate the sharing of ideas.

Curriculum Technology Trainers (CTT)

Twenty-five Curriculum Technology Trainers work directly with teachers and students to infuse the curriculum with technology. For over ten years, CTT's have provided technology integration support for teachers. CTT's model ways to incorporate technology into the daily curriculum, mentor teachers as they begin to use technology as a teaching and learning tool and facilitate the sharing of lessons and resources among teachers. One CTT is assigned to support two schools.

Goal 10: Professional Development

Provide sustained, systematic professional development based on research's best practices.

Whether technology should be used in schools is no longer the issue in education. Instead, the current emphasis is ensuring that technology is used effectively to create new opportunities for learning and to promote student achievement. Educational technology is not, and never will be, transformative on its own. It requires the assistance of educators who integrate technology into the curriculum, align it with student learning goals, and use it for engaged learning projects. "Teacher quality is the factor that matters most for student learning," note Darling-Hammond and Berry (1998). Therefore, professional development for teachers becomes the key issue in using technology to improve the quality of learning in the classroom.

In an attempt to make time for professionals to learn, the District provides a flexible staff development day for teachers each year, where teachers can select appropriate sessions at convenient times and locations. Many teachers, counselors, and library media personnel choose district level and school-based technology workshops to meet the flexible professional development requirement.

The District conducts *New Teacher Orientation* before school starts each year. Technology plays a vital role in this event. New teachers are issued a District-provided laptop and learn the basics of using the equipment. A District e-mail account is issued along with discussion of the policy and regulations in using that account. New teachers are also introduced to available resources and support. Yearly workshop evaluations are used to gauge effectiveness and to plan future sessions at the district and school level. School Curriculum Technology Trainers and District Technology Specialists play a vital role in providing ongoing, sustained

professional development opportunities throughout the school year and during the summer months.

In 2007, the STaR chart survey showed 80 percent of Shelby County teachers ranked in the "developing stages" of Capabilities of Educators. In order to target areas of need and to move more teachers toward the "advanced stage" of development, the Technology Department created on-line surveys containing checklists of basic technology skills and technology integration skills for teachers. The International Society for Technology in Education (ISTE) standards for teachers provided a basis for the development of the teacher self-assessment. Schools administer the surveys and use the results to plan appropriate technology staff development sessions for their faculties.

In 2007, 64 percent of school administrators rated themselves in the advanced stage of development on the STaR chart. Recognizing the necessity of strong leadership for technology integration, efforts continue to move all administrators to the target stage. In June of 2007, two leadership seminar sessions entitled "Rethink Educational Leadership Strategies" were offered to school leaders. Additional workshops provided administrators with the skills to use the Student Information System to make data driven decisions about the instructional program. As part of the SCS commitment to sustained and appropriate professional development, Administrators will complete a self-assessment rubric to determine their level of technology expertise. Each administrator will declare an area to improve. Workshops will be offered to assist administrators in needed areas.

Currently, on-line tutorials are available 24/7 to teachers, administrators, staff, and students. Shelby County Schools will continue to explore new and better ways to provide needs driven technology staff development.

Proper use of all Business Information Systems applications is essential for accuracy of the data. It is important that all end-users undergo periodic training in the use of the applications they use. This would include users of the Finance, Payroll and Human Resources modules as well as in-house developed applications such as WISSC (Warehouse), PAWSC (Payroll Attendance Worksheets) and ARISC (Accounts Receivables).

Expertise in business applications is imperative for efficient use of the application and for supporting end-users. In order to provide effective support, attendance at the Annual Users' Group conference is essential. The sharing of ideas and taking advantage of the knowledge of other users of the application is an invaluable resource. In addition, additional training in reporting applications such as SQL and Crystal Reports for staff members is essential.

An important part of staff development is providing training for those who support technology in the schools. School Technology Support personnel and Curriculum Technology Trainers receive training approximately one day per month. For further professional development, they will be provided 24/7 access to web-based training for most of the software applications in use in the school system.

Implementation of the Student Information System involves a large number of personnel with a variety of job functions. The only way to effectively utilize the system for the critical role it plays in the management of the District is to provide

extensive, role-based training and support documents. Training must be ongoing and encompass use of the system as it applies to Shelby County Schools business rules. The SIS staff must also be continually trained to offer customized solutions and support.

Documentation must be readily available and it must address all major functions for each component of the system. A web site has been established to post all documentation as it is developed or updated. This site will continue to grow as more step sheets are produced.

See Appendix G for a list of Technology Workshops offered in the 2006-2007 school year.

See Appendix H for a list of support documents for SIS.

Goal 11: Instructional Integration

Work with teachers to empower students to seamlessly integrate technology into the learning process.

In a document prepared by the International Society for Technology in Education entitled *Establishing National Educational Technology Standards for Teachers*, "The teacher is responsible for establishing the classroom environment and preparing the learning opportunities that facilitate students' use of technology to learn, communicate, and develop knowledge products." ISTE's focus on incorporating new strategies includes: student-centered learning, multimedia, collaboration, information exchange, inquiry-based learning, critical thinking and real-world content.

(http://ali.apple.com/ali_sites/ali/exhibits/1000089/Professional_Development.html)

Creating the type of learning environment which can easily accommodate the infusion of technology often requires a systemic change in the teaching process. A common vision for technology integration must be communicated and job-embedded professional development must reflect the vision. Teachers must be provided technology resources and support for using the resources. Assistance in planning for the incorporation of technology is often needed, as well as techniques in classroom management during the use of technology.

Infusing the curriculum with technology requires sustained efforts to empower teachers and students to seamlessly incorporate technology into the learning process. Curriculum Technology Trainers (CTT's) will continue to model technology integration strategies and assist teachers in planning technology-rich lessons.

Curriculum Technology Trainers will work in schools to implement Technology Integration Projects. Teachers will participate as learners, observers, and helpers. This will provide teachers experience in effectively integrating technology to engage students in authentic tasks.

Emphasis will be placed on meeting student technology standards. To satisfy the No Child Left Behind (NCLB) technology proficiency requirement for 8th grade students, a middle school technology skills checklist will be developed and administered as a self-assessment. Similar checklists will be developed and given for grades 2, 5, and 12. An 8th grade test to demonstrate mastery will also be created and implemented.

Goal 12: Communication

Enhance communication to promote student achievement.

According to recent research, the following benefits can be realized through effective home-school communication:

- Parents and teachers consider communication the number one factor to increase trust (Adams & Christenson, 2000).
- Strong communication can also encourage higher and realistic parental expectations. When teachers and parents are on the "same page," they can engage in more individual and concrete discussion around student progress and develop realistic goals and plans of action that are linked to student achievement (Drake, 2000; James, Jurich & Estes, 2001).
- Parents who receive more consistent information about their children's school performance report a higher degree of commitment to helping children improve (Helling, 1996).
- Communication serves as the first step to other types of parent involvement (Elman, 1999).
- Parents seek good communication skills in their children's teachers, citing it as one of the most desirable characteristics a new teacher could have (Lupi, 2001; McDermott, 2001).

With these benefits as the goal, the District is utilizing technology to increase and facilitate effective communication. Employees in Shelby County Schools communicate electronically via an e-mail account provided by the District. Professional accounts are issued to facilitate communication within the District and to encourage school to home communication. E-mail groups have been created on the e-mail server to streamline communication among interest groups and school groups. In 2008, employees will be able to subscribe to grade level and subject area lists to stimulate the exchange of ideas.

A parent/student portal was implemented in every school in the 2006-2007 school year and will continue to be available. The portal provides current grade, attendance, and assignment information. In addition, teachers are encouraged to provide more detailed information for parents through a web presence to support the learning process. In the 2007-2008 school year, an effort will be made to implement the use of the iWeb application to publish teacher web pages on the school servers.

The District web site and individual school web sites have proved invaluable in communicating vital information to the public. Every effort will continue to be made to ensure that current, accurate information is available on these web sites at all times.

An intranet for SCS employees will be introduced in 2007. This portal will provide employees real-time access to current attendance and other vital information.

Goal 13: Accountability

Review the Shelby County Schools Technology Plan on an annual basis and make adjustments as indicated.

The Shelby County Schools Strategic Planning Committee has established goals and action steps for 2008-2013. The Strategic Planning Committee includes district administrators, school administrators, teachers, parents, and community members.

The Technology Planning and Implementation Committee outlined methods for addressing the key components for each goal, determined a timeline for meeting goals, established benchmarks to measure progress, and built annual budget requests around the goals.

Evaluation is an ongoing process. Each year the Technology Planning and Implementation Committee will meet to evaluate the Technology Plan Overview, to monitor progress toward goals, and to make midcourse corrections in response to new developments and opportunities. This process is crucial for budget development and planning for the following year.

Periodic evaluations are conducted for workshops presented by the Technology Department. These evaluations are used to guide the department in making decisions regarding the workshops presented throughout the District, and to ensure that staff development is results-driven. In a recent Technology Staff Development Survey, "90 percent of teachers reported that they apply the new knowledge gained in standards-based workshops to their classroom instruction."

A 2006 survey also indicated that teachers preferred workshops at or near their school locations. Since research supports technology staff development closely tied to the classroom location, efforts were made to increase the number school-based training opportunities. The survey indicated that approximately 67 percent of the teachers surveyed approved of the move toward more school-based technology workshops and fewer districtwide workshops. While 81 percent of the teachers reported a positive technology training experience in 2005-06, 22 percent requested a larger number of technology workshop offerings on a wider variety of workshop topics. In 2006-2007, **460** technology workshops were offered to teachers and other staff members.

Each school has a School Site Technology Committee which plans for incorporating technology into the curriculum while meeting the goals of their School Improvement Plan. The charge of the committee is to plan for student mastery of the Shelby County Technology Standards and to plan for the use of technology to improve student academic achievement.

The latest STaR Chart results indicate that most schools throughout Shelby County are functioning at the "developing" to "advanced level" of progress. The system technology plan and the school technology plans support continued efforts to move schools toward the "advanced level" of progress, especially in the categories of Teaching and Learning and Preparation and Development. *Technology in Education Survey System* (TESS) surveys will once again be completed in 2008. School and district data will be reviewed to areas of strength and areas to strengthen.

Technology Support Services will establish a *Service Level Agreement* that defines acceptable time frames for support, installation, and repair of all technology applications. This document will be the benchmark for evaluating provided services.

An annual survey will be conducted by the Technology Department to determine how user needs are being met. This survey will play a vital role in providing needed equipment, software, training, support, and organization in implementing technology in the District.

See Appendix I for current Policies and Procedures.

APPENDIX A

Technology Plan Committees

Technology Steering Committee

Dr. Bobby Webb - Superintendent (Chair)
Lois Williams - Assistant Superintendent, Human Resources
Maura Sullivan - Assistant Superintendent, Planning and Student Services
Judy Ostner - Assistant Superintendent, Curriculum and Accountability
Jarvis Harris - Chief Information Officer
Joe Anderson - Interim Chief Financial Officer
Richard Holden - Chief of Operations
Melisa Loutfi - Director, Technology
Abbas Lakenahour - Director, Business Information Systems
Reo Pruitt - Director, Middle and Secondary Education
Susan Pittman - Director, Early Childhood and Elementary Education
John Simi - Technology Specialist
Jan Perkins - Technology Specialist
Ann Erickson - Technology Specialist
Wade Koon - Business Analyst

Technology Writing and Implementation Committee

Ann Erickson - Technology Specialist (Chair)
Guy Respass - SIS Supervisor and Parent (Collierville Elementary)
Jan Perkins - Technology Specialist
Jalona Edwards - Manager, Technology Support Services
Abbas Laknahour - Director - Business Information Systems
Wade Koon - Systems Analyst, Business Information Systems
John Simi - Technology Specialist
Melisa Loutfi - Director, Technology
Otelia Hudson - Manager, IT Projects and Planning
David Bradford - System Support Engineer
Jarvis Harris - Chief Information Officer

Technology Advisory Committee

Ann Erickson - Technology Specialist (Chair)
Cherry Davidson - Principal (Dexter Elementary)
John McDonald - Principal (Shadowlawn Middle)
Regina Payne - Principal (Lucy Elementary) and Parent (Elmore Park Middle)
Melody Thomas - Parent (Germantown High School and Riverdale Elementary)
Guy Respass - SIS Supervisor and Parent (Collierville Elementary)
Karen Woodard - Instructional Specialist
Cheryl Leger - Attendance Operator (Germantown Elementary)
Pam Haney - Curriculum Technology Trainer and Parent (Houston High)
Charla Sparks - President, Shelby County Council Parent Teacher Association
Denita Clark - Teacher (Elmore Park Middle)
Diann Belote - Teacher (Dogwood Elementary)
Laurie Butler - Instructional Specialist, Library and Textbooks
Barbara Gray - President (Shelby County Education Association)

Technology Advisory Committee (cont.)

Jan Perkins - Technology Specialist
Jalona Edwards - Manager, Technology Support Services
Abbas Laknahour - Director, Business Information Systems
Wade Koon - Systems Analyst, Business Information Systems
John Simi - Technology Specialist
Melisa Loutfi - Director, Technology
Otelia Hudson - Manager, IT Projects and Planning
David Bradford - System Support Engineer
Jarvis Harris - Chief Information Officer
Judy Ostner - Assistant Superintendent, Curriculum and Accountability
Rochelle Douglas - AYP Instructional Specialist

Rubric of Essential Conditions Committee

Ann Erickson - Technology Specialist (Chair)
Lisa Higgins - Curriculum Technology Trainer
Guy Respass - SIS Supervisor and Parent (Collierville ES)
Katie Bigus - Parent (Dogwood ES)
Dave Carlisle - Principal (Riverdale ES)
Ted Horrell - Vice Principal (Bartlett HS)
Rochelle Douglas - AYP Instructional Specialist
Donna Gay - Teacher (Appling MS)
Felecia Crutcher - Teacher (Crosswind ES)
Melisa Loutfi - Director, Technology
Otelia Hudson - Manger, IT Audit and Delivery
Wade Koon - Systems Analyst, Business Information Systems
Pyllis Jones - Principal (Dexter MS)
Thomasena Stuckett - Instructional Specialist

Administrators' Rubric

Melisa Loutfi - Director, Technology (Chair)
Kay Williams - Principal (Bon Lin ES)
Cherry Davidson - Principal (Dexter ES)
Michael Lowe - Principal (Millington MS)
Pat Prescott - Principal (Arlington MS)
Mike Parnell - Principal (Bartlett HS)
Tim Setterlund - Principal (Collierville HS)
Reo Pruitt - Director, Middle and Secondary Education
Susan Pittman - Director, Early Childhood and Elementary Education
Patsy Smith - Deputy Superintendent
Judy Ostner - Assistant Superintendent , Curriculum and Accountability

Policies and Procedures

Patsy Smith - Deputy Superintendent (Co-Chair)
John Simi - Technology Specialist (Co-Chair)
Joe Anderson - Director, Purchasing
Herchel Burton - Director, Student Services
Laurie Butler - Instructional Specialist, Library and Textbooks
Louise Claney - Principal (Collierville ES)

Policies and Procedures (cont.)

Jalona Edwards - Manager, Technology Support Services
Ann Erickson - Technology Specialist
Jarvis Harris - Chief Information Officer
Linda Herrle - SCEA Representative and Assistant Principal (Bon Lin ES)
Jacque Higdon - Librarian (Bartlett HS)
Otelia Hudson - Manager, IT Audit & Delivery
Barbara Hunter - Teacher (Schilling Farms MS)
Bob LaBonia - District Webmaster
Melisa Loutfi - Director, Technology
Jeff Mayo - Human Resources Specialist
John McDonald - Principal (Shadowlawn MS)
Vicki Murtha - Curriculum Technology Trainer
Jan Nixon - Teacher (Chimneyrock ES)
Jan Perkins - Technology Specialist
Susan Pittman - Director, Early Childhood and Elementary Education
Rebecca Priddy - PTA Representative
Reo Pruiett - Director, Middle and Secondary Education

Technology Standards Committee

Jan Perkins - Technology Specialist (Chair)
Pat Percoski - Principal (Arlington HS)
Brenda Bailey - Teacher (Arlington HS)
Charlotte Smith - Teacher (Woodstock MS)
Michael Robinson - Teacher - Houston HS
Wendy Wuerful - Teacher (Oak ES)
Diann Belote - Teacher (Dogwood ES)
Pam Haney - Curriculum Technology Trainer
Kitty - Hiltenbrand - Curriculum Technology Trainer
Jennifer Patton - Curriculum Technology Trainer
Nancy Kohne - Teacher (Mt. Pisgah MS)
Mike Morrison - Principal (Houston MS)
Deanna McClendon - Reading Specialist
Ann Erickson - Technology Specialist

APPENDIX B

Timeline for Meeting Technology Goals in the District's Strategic Plan

Goal 1 - Student, Teacher, and Employee Access

Provide adequate and appropriate equipment for classroom and administrative use.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Maintain the teacher laptop program with a 3 year replacement cycle	Teacher laptops replaced every 3 years
2007-2008	2 As teacher laptops replaced, repurpose up to 10% as teacher loaners	Teacher laptops appropriately repurposed
Ongoing	3 Maintain a 4:1 student to computer ratio with a 5 year replacement cycle as funds allow with a minimum of one mobile cart replaced per school every 2 years	Student computers maintained at a 4:1 ratio with at least one mobile cart no older than 2 years
Ongoing	4 Replace Career and Technical equipment as needed to support class offerings including high school computer labs	Appropriate equipment available for Career and Technical classes
Ongoing	5 Provide appropriate equipment for students with special needs	Equipment provided as specified in student IEP's
2007-2009	6 Provide adequate equipment to support reading remediation in the elementary schools	Equipment allocated based on number of students needing remediation
Ongoing	7 Replace school and District servers on a 3 to 4 year cycle as needed and maintain with appropriate software and support licensing to ensure peak performance	Servers maintained and replaced as needed
Ongoing	8 Replace library circulation equipment on a 4 to 5 year cycle as needed	Library circulation equipment over 5 years old replaced
Ongoing	9 Maintain adequate hardware for administrators and support personnel including attendance operators, bookkeepers, and cafeteria operations with a 3 to 4 year replacement cycle	Equipment replaced within appropriate time line
Ongoing	10 Continue to provide additional LCD projectors until all schools have a ratio of two teachers per one projector	LCD projectors approaching ratio of 2 teachers per 1 projector
2007-2008	11 Provide a minimum of one high speed laser printer per school office to facilitate the printing of SIS reports	One printer for each school office purchased
Ongoing	12 Provide additional tools, such as digital cameras, interactive white boards, etc., that enhance the instructional process	Additional tools added as budget allows
Ongoing	13 Provide adequate resources to make necessary repairs to maintain equipment for specified replacement cycles	Repair budget is sufficient to maintain equipment
Ongoing	14 Investigate innovative technology solutions for future implementation	

Goal 2 - Instructional Software and Web Resources

Provide teachers and students access to quality software and web resources for technology integration.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Utilize technology programs to ensure consistency (adequacy and opportunity) and performance in critical NCLB areas (e.g., ThinkLink, iStation, Plato, etc.)	For critical NCLB areas: standardized test scores remain at or above current levels, majority of students receiving online reading remediation show gains, and majority of students attempting credit recovery are successful
Ongoing	2 Provide access to online resources which offer information of greater breadth, depth, currency, and quality than current textbooks	Use of resources increases by school each year and Annual Technology Survey shows 90% of respondents feel resources are valuable
2007-2008 ~ Grade 8 2008-2009 ~ Grades 2,5,&12	3 Provide technology lessons that address content standards and ensure experience in checklist items for grades 2, 5, 8, and 12	Use of technology lessons increases each year

Timeline for Meeting Technology Goals in the District's Strategic Plan

Goal 2 - Instructional Software and Web Resources (cont.)

Provide teachers and students access to quality software and web resources for technology integration.

Timeline	Action Steps:	Benchmarks:
Ongoing	4 Assist schools in migrating applications to web-based solutions as needed to provide enhanced functionality (e.g., Accelerated Reader, Accelerated Math, etc.)	At least 90% of respondents feel adequate migration assistance provided
2008-2009	5 Provide current versions of operating system and application software for instructional and administrative machines with appropriate specifications	All capable machines are upgraded as funds are available
Ongoing	6 Continue to explore effective software and web-based solutions	

Goal 3 - Infrastructure

Maintain a reliable high-speed network that enables the use of innovative instructional resources and accommodates the daily business activities of the District.

Timeline	Action Steps:	Benchmarks:
2007-2008	1 Upgrade network services to gigabit fiber to all locations and upgrade LAN devices as needed	Network speed determined to be at or above 1 GB between locations
Ongoing	2 Provide wireless access in all portable classroom buildings	Wireless access meets District standards; 90% of users indicate maintenance acceptable
Ongoing	3 Provide adequate and reliable telephone services to all locations	Initial response to major telephone outages less than 2 hours; Additional telephone service provided where need dictates
Ongoing	4 Provide and maintain up-to-date centralized servers for business and instructional applications (e.g., Student Management, Finance, Human Resources, Instructional Digital Video, Course Recovery, etc.)	Downtime of centralized servers does not exceed 1% during business hours Speed of servers rated acceptable by a minimum of 90% of users
2007-2008 ~ New School Servers Ongoing ~ Maintenance	5 Provide school servers for local data backup and teacher web sites; Provide timely maintenance on hardware, software and account issues	Downtime of school servers does not exceed 48 hours Server maintenance rated acceptable by a minimum of 90% of users
Ongoing (Replacement schedule?)	6 Maintain security equipment to ensure safe and adequate facilities	Security equipment issues resolved as indicated in Service Level Agreement
2008-2009	7 Research and plan for centralized backup and off-site storage for critical data	Functioning backup plan in place
2008-2009	8 Research and plan for network intrusion detection	Network intrusion detection plan in place
2008-2009	9 Research and plan for disaster recovery	Disaster Recovery plan in place
Ongoing	10 Provide adequate virus protection to ensure network integrity	Network remains virus-free
Ongoing	11 File and monitor appropriate E-Rate documents to obtain Federal discount for infrastructure	Maximum E-Rate funds acquired

Goal 4 - Student Information System

Fully implement and maintain a District student information system that fulfills local business requirements, meets state and federal reporting obligations, and addresses user needs.

Timeline	Action Steps:	Benchmarks:
2008-2009	1 Fully implement scheduling processes for all schools that accommodate their unique scheduling needs and requirements	In 2008-2009, scheduling modules, routines fully established.
2007-2008	2 Evaluate the findings of the Gartner SIS study and implement recommendations as directed by the Superintendent.	In 2007-2008, staff and vendor work to implement recommendations.

Timeline for Meeting Technology Goals in the District's Strategic Plan

Goal 4 - Student Information System (cont.)

Fully implement and maintain a District student information system that fulfills local business requirements, meets state and federal reporting obligations, and addresses user needs.

Timeline	Action Steps:	Benchmarks:
Ongoing	3 Provide a reliable electronic grade book that captures necessary instructional information, is easy to use, and exchanges data properly with the SIS	In 2007-2008, known grade book issues reported to vendor resolved or specific timeline for resolution In 2007-2010, improvements targeted that keep pace with changing instructional requirements
Ongoing	4 Provide parents/guardians with timely, accurate information on student performance	In 2007-2008, all parents/students provided with new access codes In 2007-2010, access to parent/student portal maintained
Ongoing	5 Work with SIS vendor to ensure state reports and extracts fully functional and accurate	In 2007-2010, monitor and work with vendor to provide all required extracts and reports to SDE
Ongoing	6 Customize the SIS application and reports where required to enhance functionality for end users and to close existing gaps between the standard SIS reports and local reporting needs (e.g., annual district statistics)	In 2007-2010, utilize existing staff and vendor provided training to develop requested reports and screens
2008-2009	7 Fully transition to attendance system and process consistent with SCS business requirements	In 2008-2009, transition to daily attendance for school attendance offices
Ongoing	8 Work with SIS vendor to recommend and implement application changes to meet SCS business needs	In 2007-2010, provide the vendor specific application improvement requests necessary to respond to changing SIS requirements for our district
Ongoing	9 Ensure adequate staffing to effectively implement new features of SIS and support users	In 2007-2008, employed additional person to support the use of PowerGrade by all teachers
Ongoing	10 Explore and initiate the use of SIF capabilities to exchange data with other SCS instructional and business systems	In 2007-2010, implement export/import of data from SIS to/from other software packages currently used

Goal 5: Business Information Systems

Continue to maintain and expand business information systems that meet the needs of the District.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Evaluate future needs of each department and work with vendors to meet needs	Business needs documented and 90% of end-users rate needs as being met
Ongoing	2 Evaluate and implement new business modules that meet the current needs of Shelby County Schools without compromising the existing business rules and that integrate with existing systems	Business needs documented and modules shown to meet business requirements Modules integrated with existing systems 90% of end users rate needs as being met
Ongoing	3 Monitor business systems' performance and make adjustments as indicated	Speed and performance of business systems rated as adequate by 90% of end users
Ongoing	4 Provide online employee access to attendance and other vital information	90% of end users rate employee portal as useful

Goal 6: Project Implementation

Support the District technology goals by assisting all departments in evaluating costs effective solutions to meet departmental technology needs.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Utilize the Project Delivery Roadmap to initiate and execute projects	Increased number of projects completed on time; Accurate project schedule and budget information available; 90% of users satisfied with project delivery services

Timeline for Meeting Technology Goals in the District's Strategic Plan

Goal 7: Funding Sources

Seek community support and funding resources for technology.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Pursue grants, private sector initiatives, partnerships and other external funding sources	Funding includes at least two sources outside regular funding
Ongoing	2 Serve as an advocate to secure necessary regular budget funds for technology initiatives	Technology budget reflects essential items

Goal 8: Technical Support

Ensure that equipment and its associated software are available and maintained in good working condition with secure access and adequate technical support.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Install and maintain equipment in a timely manner Install and maintain current versions of software Provide on-site tier 1 assistance	Maintained a 3.5 or better average on a 5 point scale on evaluation
Ongoing	2 Continue to provide in-school technical support at a minimum ratio of 1 School Technology Support person per 2 schools	Maintained STS staffing ratio at 1 STS per 2 schools
Ongoing	3 Provide tier 1 and call-in support for all service-related technology issues	Attained a rate of 50% on first call resolution
Ongoing	4 Provide tier 2 and tier 3 support through requests entered in work order tracking system	Adhered to Service Level Agreement for job resolution
2007-2008 ~ Initial Ongoing ~ Maintenance	5 Attain Self-Servicing Institution classification for Apple and HP Computers	Provided 90% of Apple and HP repair work and service in-house
Ongoing	6 Maintain appropriate validation and security for user logins and passwords	Altered procedure when necessary to maintain secure access
Ongoing	7 Maintain wide area network and local area networks with minimum downtime	Network operational at least 97% of time during business hours

Goal 9: Instructional Support

Provide support for the use of technology to enhance the learning process.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Continue to provide in-school instructional technology support at a minimum ratio of 1 Curriculum Technology Trainer per 2 schools	Maintained CTT staffing at a ration of 1 CTT per 2 schools
Ongoing	2 Deploy Curriculum Technology Trainers to maximize instructional impact	Curriculum Technology Trainer logs and classroom observations reflect the majority of the day spent in instructional activities
2007-2009	3 Align SCS technology lessons/resources to current International Society for Technology in Education (ISTE) National Educational Technology (NETS) Standards for Students	Alignment of resources to ISTE NETS Standards for Students completed
2007-2008 ~ Grade 8 2008-2009 ~ Grades 2,5,& 12	4 Expand District website to share lesson and unit plans that exemplify successful integration practices and address items on Technology Skills	Lesson/Unit plans available that address student check lists
2007-2008 ~ Introduction Ongoing ~ Implementation	5 Facilitate the administration of Technology Self-assessments for students, teachers and administrators	Technology Self-assessments administered according to timeline

Timeline for Meeting Technology Goals in the District's Strategic Plan

Goal 10: Professional Development

Provide sustained, systemic professional development based on research's best practices.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Provide relevant District-wide and school-based sessions for flexible in-service credit for teachers based on needs identified in <i>Technology Self-assessment Rubric for Teachers</i>	Provide training sessions and follow-up classroom visits for a minimum of the two most frequently identified needs at each school with a 90% rating on the training session(s) of satisfactory or better
Spring 2008 ~ Introduction Ongoing ~ Implementation	2 Provide relevant staff development for administrators based on needs identified in <i>Technology Self-assessment Rubric for Administrators</i>	Provide training sessions and follow-up survey for a minimum of two most frequently identified needs for administrators with an 90% rating on the training session(s) of satisfactory or better
Ongoing	3 Provide 24/7 web-based training for just-in-time learning	Show increase in use of web-based training each year
2007-2008 ~ Introduction Ongoing ~ Implementation	4 Promote the creation and maintenance of teacher web presence as a means to build relationships with parents/guardians	Number of teachers with web presence beyond basic grade and attendance information increases from a baseline of 60% each year
Ongoing	5 Provide training for users of business applications to ensure proficient use	90% rating on the training session(s) as satisfactory or better
Ongoing	6 Provide training to administrators to enable them to make data driven decisions on instruction	90% rating on the training session(s) as useful and applicable
Ongoing	7 Continue to explore additional delivery and content options for staff development	

Goal 11: Instructional Integration

Work with teachers to empower students to seamlessly integrate technology into the learning process.

Timeline	Action Steps:	Benchmarks:
Ongoing	1 Model proficient use of technology to solve problems and communicate effectively	CTT logs indicate frequent activities where the proficient use of technology has been demonstrated; Classroom observations indicate positive modeling of use of technology
2007-2009 ~ Identify Resources Ongoing ~ Implementation	2 Link curricular information (content standards, performance indicators) with learning resources and student performance information	CTT logs indicate frequent activities that link curricular information with learning resources and student performance information
2007-2008 ~ Grade 8 2008-2009 ~ Grades 2,5,&12	3 Develop <i>Technology Skills Self-assessment Checklists</i> for grades 2, 5, 8 and 12	<i>Technology Skills Self-assessment Checklists completed for grades 2, 5, 8 and 12</i>
2008-2009	4 Develop <i>Eighth Grade Technology Skills Assessment</i>	<i>Eighth Grade Technology Skills Assessment completed</i>
Ongoing	5 Implement subject area projects that incorporate International Society of Technology in Education (ISTE) standards and checklist items	90% of teachers rate technology projects as having a positive impact on instruction
2007-2008 ~ Grade 8 2008-2009 ~ Grades 2,5,&12	6 Administer <i>Technology Skills Self-assessment Checklists</i> for grades 2, 5, 8 and 12	<i>Technology Skills Self-assessment administered to 85% of students in grades 2, 5, 8, and 12</i>
2008-2009 ~ Introduction Ongoing ~ Implementation	7 Administer <i>Eighth Grade Technology Skills Assessment</i>	<i>Eighth Grade Technology Skills Assessment indicates a base line of 55% achieving mastery (as indicated on the 2006-07 TESS STaR Chart Report) with an increase in mastery each successive year</i>
Ongoing	8 Investigate and promote the use of interactive white board technology and other classroom innovations	

Timeline for Meeting Technology Goals in the District's Strategic Plan

Goal 12: Communication

Enhance communication to promote student achievement.

Timeline	Action Steps:	Benchmarks:
2008-2009	1 Implement system-wide e-mail with special-interest groups and lists	Special interest lists created and active for every grade level/subject area
2008-2009	2 Implement employee e-mail system that can be archived and retrieved to meet Federal guidelines	Archiving of e-mail certified to meet Federal guidelines for retention and access of e-mail
Ongoing	3 Increase parental engagement electronically by providing timely access to assignment, grade, attendance, and related school information via the parent portal and teacher web presence	Parent/Student access of portal increases by 2% per year from a baseline of 50% of student records accessed; Active teacher web presence increases 5% per year from a baseline of 60%
Ongoing	4 Implement and maintain the SCS Intranet to provide employees with essential information	Employee Intranet receives a positive rating from at least 70% of employees
Ongoing	5 Continue to utilize the District and school web sites to provide accurate and timely information to stakeholders	Number of visitors to District and Schools Web Sites increases each year and at least 80% of comments are positive
Ongoing	6 Continue to provide parent/student training on safe use of the Internet (iSafe)	Number of parents and students receiving iSafe training meets or exceeds the previous year

Goal 13: Accountability

Review Shelby County Schools Technology Plan on an annual basis and make adjustments as indicated.

Timeline	Action Steps:	Benchmarks:
2007-2008 ~ Introduction Ongoing ~ Annual Review	1 Review technology policies and procedures to ensure that they adequately protect learners while providing equitable access for learning	Technology Policies and Procedures Committee meets annually to review policies and procedures and changes made as necessary
2007-2008 ~ Introduction Ongoing ~ Annual Review	2 Review Technology Vision/Plan to ensure it aligns with District Strategic Plan and State Department of Education standards	Technology Vision/Plan revised as necessary to meet State and Local requirements
Ongoing	3 Create and implement an audit process to measure technology progress	Produce the <i>Annual Technology Report</i> that will establish a baseline for progress in the various Technology departments and outline the results of the audit

APPENDIX C

SCS Technology Overview 2007-2010

Technology Vision: Shelby County Schools strives to support an instructional model that empowers students to use technology in ways that deepen their understanding of academic content and prepare them for the complex world in which they live. Furthermore, the District supports the infusion of technology into the overall District culture.

	Goals	Action Steps	Evaluation	Performance Outcomes	Responsibility Assignment
Student, Teacher, and Employee Access	<p>Provide adequate and appropriate equipment for classroom and administrative use.</p>	<ol style="list-style-type: none"> 1. Maintain the teacher laptop program with a 3 year replacement cycle 2. As teacher laptops are replaced, repurpose up to 10% as a teacher loaner pool and 90% for student use 3. Maintain a 1:4 computer to student ratio with a 5 year replacement cycle as funds allow with a minimum of one mobile cart replaced per school every 2 years 4. Replace Career and Technical equipment as needed to support class offerings including high school computer labs 5. Provide appropriate equipment for students with special needs 6. Provide adequate equipment to support reading remediation in the elementary schools 7. Replace school and District servers on a 3 to 4 year cycle as needed and maintain with appropriate software and support licensing to ensure peak performance 8. Replace library circulation equipment on a 4 to 5 year cycle as needed 9. Maintain adequate hardware for administrators and support personnel including attendance operators, bookkeepers, and cafeteria operations with a 3 to 4 year replacement cycle 10. Continue to provide additional LCD projectors until all schools have 1:2 ratio of projectors to teachers 11. Provide a minimum of one high speed laser printer per school office to facilitate the printing of SIS reports 12. Provide additional tools, such as digital cameras, interactive white boards, etc., that enhance the instructional process 13. Provide adequate resources to make necessary repairs to maintain equipment for specified replacement cycles 14. Investigate innovative technology solutions for future implementation 	<ol style="list-style-type: none"> 1. Review inventory of teacher laptops 2. Review inventory of teacher loaners and student laptops 3. Analyze age and distribution of student computers 4. Assess equipment needed for Career and Technical courses offered in each school where applicable 5. Review student IEP's and school inventory 6. Assess number of students needing reading remediation and equipment dedicated to program 7. Analyze performance and age of District and school servers 8. Review inventory to determine age and functionality of library circulation equipment 9. Review inventory to determine age and functionality of administrator and support personnel equipment 10. Review inventory to determine number of LCD projectors in each school 11. Review purchases 12. Analyze inventory to determine description, quantity and age of "additional tools" 13. Analyze repair types, frequency, and costs and work done to determine future needs 	<ol style="list-style-type: none"> 1. Teacher laptops replaced every 3 years 2. Replaced teacher laptops repurposed appropriately 3. Student computers maintained at a 1:4 computer to student ratio with at least one mobile cart no older than 2 years 4. Appropriate equipment available for Career and Technical classes 5. Equipment provided as specified in student IEP's 6. Equipment allocated based on number of students needing remediation 7. Servers maintained and replaced as needed 8. Library circulation equipment over 5 years old replaced 9. Equipment replaced within appropriate time line 10. LCD projectors approaching 1:2 ratio of projectors to teachers 11. One printer for each school office purchased 12. Additional tools added as budget allows 13. Repair budget is sufficient to maintain equipment 	<ul style="list-style-type: none"> • CIO (1-14) • District Technology Specialists (1-4, 6, 8, 10, 12, 14) • Business Information Systems (7) • Technology Support Services (13) • Career and Technical Specialist (4) • Library Media Specialist (8) • Special Education Department (5) • WAN and LAN Administrators (7)

SCS Technology Overview 2007-2010

	Goals	Action Steps	Evaluation	Performance Outcomes	Responsibility Assignment
Instructional Software and Web Resources	<p>Provide teachers and students access to quality software and web resources for learning.</p>	<ol style="list-style-type: none"> 1. Utilize technology programs to ensure consistency (adequacy and opportunity) and performance in critical NCLB areas (e.g., ThinkLink, iStation, Plato, etc.) 2. Provide access to online resources which offer information of greater breadth, depth, currency, and quality than current textbooks 3. Provide technology lessons that address content standards and ensure experience in checklist items for grades 2, 5, 8, and 12 4. Assist schools in migrating applications to web-based solutions as needed to provide enhanced functionality (e.g., Accelerated Reader, Accelerated Math, etc.) 5. Provide current versions of operating system and application software for instructional and administrative machines with appropriate specifications 6. Continue to explore effective software and web-based solutions 	<ol style="list-style-type: none"> 1. Analyze standardized test scores, reading gains, and credit recovery in critical NCLB areas 2. Examine usage logs for online resources and results from Annual Technology Survey 3. Analyze Curriculum Technology Trainer logs to determine training in and usage of technology lessons 4. Examine results from Annual Technology Survey to determine if appropriate assistance provided 5. Determine operating system and software versions by examining purchases and inventory records 	<ol style="list-style-type: none"> 1. For critical NCLB areas: standardized test scores remain at or above current levels, majority of students receiving online reading remediation show gains, and majority of students attempting credit recovery are successful 2. Use of resources increases by school each year and Annual Technology Survey shows 90% of respondents feel resources are valuable 3. Use of technology lessons increases each year 4. At least 90% of respondents feel adequate migration assistance provided 5. All capable machines are upgraded as funds are available 	<ul style="list-style-type: none"> • Teachers (1) • School Administrators (1,6) • Technology Specialists (1-6) • Instructional Specialists/Directors (1-2,6) • Curriculum Technology Trainers (1-4) • School Technology Support (1,4-5)

SCS Technology Overview 2007-2010

	Goals	Action Steps	Evaluation	Performance Outcomes	Responsibility Assignment
Infrastructure	<p>Maintain a reliable high-speed network that enables the use of innovative instructional resources and accommodates the daily business activities of the District.</p>	<ol style="list-style-type: none"> 1. Upgrade network services to gigabit fiber to all locations and upgrade LAN devices as needed 2. Provide wireless access in all portable classroom buildings 3. Provide adequate and reliable telephone services to all locations 4. Provide and maintain up-to-date centralized servers for business and instructional applications (e.g., Student Management, Finance, Human Resources, Instructional Digital Video, Course Recovery, etc.) 5. Provide school servers for local data backup and teacher web sites; Provide timely maintenance on hardware, software and account issues 6. Maintain security equipment to ensure safe and adequate facilities 7. Research and plan for centralized backup and off-site storage for critical data 8. Research and plan for network intrusion detection 9. Research and plan for disaster recovery 10. Provide adequate virus protection to ensure network integrity 11. File and monitor appropriate E-Rate documents to obtain Federal discount for infrastructure 	<ol style="list-style-type: none"> 1. Review network monitoring logs to determine data throughput 2. Wireless access provided per District standards and maintained to customer satisfaction as indicated on the <i>Annual Technology Survey</i> 3. Review response time to telephone outages and analyze telephone usage to determine expansion needs 4. Review downtime of all centralized servers; Analyze user satisfaction with delivery speed on <i>Annual Technology Survey</i> 5. Review downtime of all school servers; Analyze user satisfaction with server maintenance on <i>Annual Technology Survey</i> 6. Analyze response time to school security equipment issues 7. Monitor progress in development of backup plan 8. Monitor progress on development of <i>Network Intrusion Detection Plan</i> 9. Monitor progress on development of <i>Disaster Recovery Plan</i> 10. Monitor network for virus intrusion 11. Monitor progress of E-Rate filing process 	<ol style="list-style-type: none"> 1. Network speed determined to be at or above 1 GB between locations 2. Wireless access meets District standards; 90% of users indicate maintenance acceptable 3. Initial response to major telephone outages less than 2 hours; Additional telephone service provided where need dictates 4. Downtime of centralized servers does not exceed 1% during business hours; Speed of servers rated acceptable by a minimum of 90% of users 5. Downtime of school servers does not exceed 48 hours; Server maintenance rated acceptable by a minimum of 90% of users 6. Security equipment issues resolved as indicated in Service Level Agreement 7. Functioning backup plan in place 8. <i>Network Intrusion Detection Plan</i> in place 9. <i>Disaster Recovery Plan</i> in place 10. Network remains virus-free 11. Maximum E-Rate funds acquired 	<ul style="list-style-type: none"> • Director of Technology (1-5, 7-11) • WAN Administrator (1, 4, 7-10) • LAN Administrator (1, 2, 5, 7-10) • Telephone Administrator (3) • Technology Support Services (6, 10)

SCS Technology Overview 2007-2010

	Goals	Action Steps	Evaluation	Performance Outcomes	Responsibility Assignment
Student Information System	<p>Fully implement and maintain a District student information system that fulfills local business requirements, meets state and Federal reporting obligations, and addresses user needs.</p>	<ol style="list-style-type: none"> 1. Fully implement scheduling processes for all schools that accommodate their unique scheduling needs and requirements 2. Review findings of the Gartner SIS study and implement recommendations as directed by the Superintendent 3. Provide a reliable electronic grade book that captures necessary instructional information, is easy to use, and exchanges data properly with the SIS 4. Provide parents/guardians with timely, accurate information on student performance 5. Work with SIS vendor to ensure state reports and extracts fully functional and accurate 6. Customize the SIS application and reports where required to enhance functionality for end users and to close existing gaps between the standard SIS reports and local reporting needs (e.g., annual district statistics) 7. Fully transition to attendance system and process consistent with SCS business requirements 8. Work with SIS vendor to recommend and implement application changes to meet SCS business needs 9. Ensure adequate staffing to effectively implement new features of SIS and support users 10. Explore and initiate the use of SIF capabilities to exchange data with other SCS instructional and business systems 	<ol style="list-style-type: none"> 1. Obtain requirements and feedback from school administrators during pre-schedule and post-schedule phases to identify gaps in scheduling processes or SIS scheduling functionality 2. Assess the findings and recommendations of the study 3. Use a combination of <i>Annual Technology Survey</i> and periodic teacher user group meetings to obtain teacher input regarding grade book functionality, requirements, and improvements 4. Obtain school feedback on content related issues, track usage levels statistically and evaluate system performance with vendor 5. Conduct periodic meetings with vendor to identify and correct functional gaps or issues related to state extracts and reports while maintaining regular contact with State Department of Education and SCS District Administration regarding changes in requirements 6. Establish procedure for SIS improvements/enhancements to be submitted, prioritized, and implemented 7. Plan for probable conversion to Daily Attendance module for school attendance offices by 2008-09, including review of attendance codes and possibility of teachers using meeting attendance 8. Maintain list of prioritized system changes that the SIS vendor should make and follow-up on all open support cases 9. Review support and implementation requirements of the SIS staff 10. Procure hardware and software; Identify systems to evaluate and test 	<ol style="list-style-type: none"> 1. All schools able to schedule in the SIS based on their unique requirements with standard procedures for school scheduling established 2. Recommendations implemented as directed by the Superintendent 3. Use teacher feedback obtained to facilitate grade book changes and improvements. 4. Parent portal provides timely, accurate information at conveniently accessible times for parents/guardians 5. Meet reporting deadlines with state reports and submit extracts that are fully functional, accurate, and current 6. Targeted customizations implemented based on collected user suggestions that improve the end user experience and provide district-required reports 7. School attendance offices and teachers keep timely, accurate attendance per district and school policies 8. Targeted system improvements and changes identified and implemented by the vendor as agreed upon 9. Use support evaluation data collected to maintain proper support levels and ensure SIS users receive timely, effective support and enhancements 10. SIF integration process fully tested and implemented where appropriate 	<p>SIS Staff (1-10) SCS IT Staff (5,10) SCS District Administration (2,6,8,9)</p>

SCS Technology Overview 2007-2010

	Goals	Action Steps	Evaluation	Performance Outcomes	Responsibility Assignment
Business Information Systems	Continue to maintain and expand business information systems that meet the needs of the District.	<ol style="list-style-type: none"> 1. Evaluate future needs of each department and work with vendors to meet needs 2. Evaluate and implement new business modules that meet the current needs of Shelby County Schools without compromising the existing business rules and that integrate with existing systems 3. Monitor business systems' performance and make adjustments as indicated 4. Provide online employee access to attendance and other vital information 	<ol style="list-style-type: none"> 1. Analysis of business needs; <i>Annual Technology Survey</i> 2. Analysis of business needs and implemented modules; <i>Annual Technology Survey</i> 3. Monitor speed and accuracy of business systems; <i>Annual Technology Survey</i> 4. <i>Annual Technology Survey</i> 	<ol style="list-style-type: none"> 1. Business needs documented and 90% of end-users rate needs as "being met" 2. Business needs documented and modules shown to meet business requirements; Modules integrated with existing systems; 90% of end users rate needs as being met 3. Speed and performance of business systems rated as adequate by 90% of end users 4. 90% of end users rate employee portal as useful 	<ul style="list-style-type: none"> • Business Information Systems (1-4) • Designated Personnel from Other Departments (1-2)
Project Implementation	Support the district technology goals by assisting all departments in evaluating cost effective solutions to meet departmental technology needs.	<ol style="list-style-type: none"> 1. Utilize the Project Delivery Roadmap to initiate and execute projects 	<ol style="list-style-type: none"> 1. Review project documentation to determine whether all project controls met; Analyze data from the Post-Project review meetings 	<ol style="list-style-type: none"> 1. Increased number of projects completed on time; Accurate project schedule and budget information available; 90% of users satisfied with project delivery services 	<ul style="list-style-type: none"> • Audit and Delivery Staff (1) • Project Sponsors (1)
Funding Sources	Seek community support and funding resources for technology.	<ol style="list-style-type: none"> 1. Pursue grants, private sector initiatives, partnerships and other external funding sources 2. Serve as an advocate to secure necessary regular budget funds for technology initiatives 	<ol style="list-style-type: none"> 1. Annual review of total funding outside regular sources 2. Review needs versus budget 	<ol style="list-style-type: none"> 1. Funding includes at least two sources outside regular funding 2. Technology budget reflects essential items 	<ul style="list-style-type: none"> • District Grant Writer (1) • Chief Information Officer (1-2)

SCS Technology Overview 2007-2010

	Goals	Action Steps	Evaluation	Performance Outcomes	Responsibility Assignment
Technical Support	<p>Ensure that equipment and its associated software are available and maintained in good working condition with secure access and adequate technical support.</p>	<ol style="list-style-type: none"> 1. Install and maintain equipment in a timely manner; install and maintain current versions of software; provide on-site tier 1 assistance 2. Continue to provide in-school technical support at a minimum ratio of 1 School Technology Support person per 2 schools 3. Provide tier 1 and call-in support for all service-related technology issues 4. Provide tier 2 and tier 3 support through requests entered in work order tracking system 5. Attain Self-Servicing Institution classification for Apple and HP computers 6. Maintain appropriate validation and security for user logins and passwords 7. Maintain wide area network and local area networks with minimum downtime 	<ol style="list-style-type: none"> 1. Review STS Performance Evaluation Summary 2. Analyze current STS staffing numbers 3. Analyze results of logged calls 4. Monitor work order tracking system 5. Tabulate percent of Apple and HP computers repaired in-house 6. Procedure for issuing and maintaining "sensitive" login information reviewed on an annual basis 7. Monitor network downtime 	<ol style="list-style-type: none"> 1. Maintained a 3.5 or better average on a 5 point scale 2. Maintained STS staffing ratio at 1 STS per 2 schools 3. Attained a rate of 50% on first call resolution 4. Adhered to Service Level Agreement for job resolution 5. Provided 90% of Apple and HP repair work and service in-house 6. Procedure altered when necessary to maintain secure access 7. Network operational at least 97% of time during business hours 	<ul style="list-style-type: none"> • Chief Information Officer (2) • School Technology Support (1, 2) • Technology Support Services Service Desk (3) • Technology Support Services (4) • Director of Technology (6) • Director of Business Information Systems (6) • LAN/WAN Administrators (7)
Instructional Support	<p>Provide support for the use of technology to enhance the learning process.</p>	<ol style="list-style-type: none"> 1. Continue to provide in-school instructional technology support at a minimum ratio of 1 Curriculum Technology Trainer per 2 schools 2. Deploy Curriculum Technology Trainers to maximize instructional impact 3. Align SCS technology lessons/resources to current International Society for Technology in Education (ISTE) National Educational Technology (NETS) Standards for Students 4. Expand District website to share lesson and unit plans that exemplify successful integration practices and address items on <i>Technology Skills Self-assessments</i> 5. Facilitate the administration of Technology Self-assessments for students, teachers and administrators 	<ol style="list-style-type: none"> 1. Analyze current CTT staffing numbers 2. Analyze Curriculum Technology Trainer (CTT) logs and conduct classroom observations 3. Analyze alignment of resources to ISTE NETS Standards for Students 4. Review lesson/unit plans available on District Web Site 5. Analyze the Technology Self-assessments administered 	<ol style="list-style-type: none"> 1. Maintained CTT staffing at a ration of 1 CTT per 2 schools 2. Curriculum Technology Trainer logs and classroom observations reflect the majority of the day spent in instructional activities 3. Alignment of resources to ISTE NETS Standards for Students completed 4. Lesson/Unit plans available that address student check lists 5. Technology Self-assessments administered according to timeline 	<ul style="list-style-type: none"> • Chief Information Officer (1) • Technology Specialists (2-5) • School Administrators (2, 5) • Curriculum Technology Trainers (2-5) • District Web Master (4) • Teachers (5)

SCS Technology Overview 2007-2010

	Goals	Action Steps	Evaluation	Performance Outcomes	Responsibility Assignment
Professional Development	<p>Provide sustained, systemic professional development based on research's best practices.</p>	<ol style="list-style-type: none"> 1. Provide relevant District-wide and school-based sessions for flexible in-service credit for teachers based on needs identified on <i>Technology Self-assessment Rubric for Teachers</i> 2. Provide relevant staff development for administrators based on needs identified in <i>Technology Self-assessment Rubric for Administrators</i> 3. Provide 24/7 web-based training for just-in-time learning 4. Promote the creation and maintenance of teacher web presence as a means to build relationships with parents/guardians 5. Provide training for users of business applications to ensure proficient use 6. Provide training to administrators to enable them to make data driven decisions on instruction 7. Continue to explore additional delivery and content options for staff development 	<ol style="list-style-type: none"> 1. Analyze Technology Self-assessment Rubric for Teachers and session evaluations 2. Analyze Technology Self-assessment Rubric for Administrators and session evaluations 3. Review usage statistics of 24/7 web-based training 4. Tabulate number of teachers with a web presence beyond basic grade and attendance information 5. Evaluation of training sessions 6. Evaluation of training sessions 	<ol style="list-style-type: none"> 1. Provide training sessions and follow-up classroom visits for a minimum of the two most frequently identified needs at each school with a 90% rating on the training session(s) of satisfactory or better 2. Provide training sessions and follow-up survey for a minimum of two most frequently identified needs for administrators with an 90% rating on the training session(s) of satisfactory or better 3. Show increase in use of web-based training each year 4. Number of teachers with web presence beyond basic grade and attendance information increases from a baseline of 60% each year 5. 90% rating on the training session as satisfactory or better 6. 90% rating on the training session as useful and applicable 	<ul style="list-style-type: none"> • Information Technology Departments (2-3, 5-7) • Curriculum Technology Trainers (1-4, 7) • School Administrators (2, 4)
Instructional Integration	<p>Work with teachers to empower students to seamlessly integrate technology into the learning process.</p>	<ol style="list-style-type: none"> 1. Model proficient use of technology to solve problems and communicate effectively 2. Link curricular information (content standards, performance indicators) with learning resources and student performance information 3. Develop <i>Technology Skills Self-assessment Checklists</i> for grades 2, 5, 8 and 12 4. Develop <i>Eighth Grade Technology Skills Assessment</i> 5. Implement subject area projects that incorporate International Society of Technology in Education (ISTE) standards and checklist items 6. Administer <i>Technology Skills Self-assessment Checklists</i> for grades 2, 5, 8 and 12 7. Administer <i>Eighth Grade Technology Skills Assessment</i> 8. Investigate and promote the use of interactive white board technology, classroom response systems, and other classroom innovations 	<ol style="list-style-type: none"> 1. Examine Curriculum Technology Trainer logs; Observe technology lessons 2. Analyze CTT logs 3. Analyze <i>Technology Skills Self-assessment Checklists</i> for grades 2, 5, 8 and 12 4. Analyze <i>Eighth Grade Technology Skills Assessment</i> 5. Administer <i>Technology Projects Survey for Teachers</i> 6. Assess total number of students completing self-assessment of technology skills checklists in grades 2, 5, 8, and 12 7. Assess total number of students in grade 8 meeting state benchmarks in TESS as measured by the <i>Eighth Grade Technology Skills Assessment</i> 	<ol style="list-style-type: none"> 1. CTT logs indicate frequent activities where the proficient use of technology has been demonstrated; Classroom observations indicate positive modeling of use of technology 2. CTT logs indicate frequent activities that link curricular information with learning resources and student performance information 3. <i>SCS Technology Skills Self-assessment Checklists</i> completed for grades 2, 5, 8 and 12 4. <i>Eighth Grade Technology Skills Assessment</i> completed 5. 90% of teachers rate technology projects as having a positive impact on instruction 6. <i>Technology Skills Self-assessment</i> administered to 85% of students in grades 2, 5, 8, and 12 7. <i>Eighth Grade Technology Skills Assessment</i> indicates a base line of 55% achieving mastery (as indicated on the 2006-07 TESS STaR Chart Report) with an increase in mastery each successive year 	<ul style="list-style-type: none"> • District Technology Specialists (1-8) • District Technology Skills/Rubric Committee (3-4) • Curriculum Technology Trainers (1-8) • School Administrators (1, 5-8) • Teachers (5-8)

SCS Technology Overview 2007-2010

	Goals	Action Steps	Evaluation	Performance Outcomes	Responsibility Assignment
Communication	<p>Enhance communication to promote student achievement.</p>	<ol style="list-style-type: none"> 1. Implement system-wide e-mail with special-interest groups and lists 2. Implement employee e-mail system that can be archived and retrieved to meet Federal guidelines 3. Increase parental engagement electronically by providing timely access to assignment, grade, attendance, and related school information via the parent portal and teacher web presence 4. Implement and maintain the SCS Intranet to provide employees with essential information 5. Continue to utilize the District, school, and teacher web sites to provide accurate and timely information to stakeholders 6. Continue to provide parent/student training on safe use of the Internet (iSafe) 	<ol style="list-style-type: none"> 1. Monitor grade/subject e-mail lists 2. Analyze e-mail archive retention and retrieval method 3. Review Parent/Student Access Log statistics and count of teachers with a web presence offering additional information 4. Include item on <i>Annual Technology Survey</i> to reflect satisfaction with Employee Intranet 5. Periodic review of number of visitors to the District and Schools Web Sites and an analysis of comments received 6. Compile number of students and parents trained in iSafe curriculum 	<ol style="list-style-type: none"> 1. Special interest lists created and active for every grade level/subject area 2. Archiving of e-mail certified to meet Federal guidelines for retention and access 3. Parent/Student access of portal increases by 2% per year from a baseline of 50% of student records accessed; Active teacher web presence increases 5% per year from a baseline of 60% 4. Employee Intranet receives a positive rating from at least 70% of employees 5. Number of visitors to District and Schools Web Sites increases each year and at least 80% of comments are positive 6. Number of parents and students receiving iSafe training meets or exceeds the previous year 	<ul style="list-style-type: none"> • WAN Administrator (1-2, 5) • LAN Administrator (3) • Student Information System Staff (3) • Technology Specialists (1-3, 5-6) • Instructional Specialists (1) • Curriculum Technology Trainers (1, 3, 5-6) • Teachers (3) • District Web Master (4, 5) • School Web Masters (5) • School Administrators (3, 5, 6) • School Librarians (6) • School Counselors (6)
Accountability	<p>Review Shelby County Schools Technology Plan on an annual basis and make adjustments as indicated.</p>	<ol style="list-style-type: none"> 1. Review Technology Policies and Procedures to ensure that they adequately protect learners while providing equitable access for learning 2. Review Technology Vision/Plan to ensure it aligns with District Strategic Plan and State Department of Education standards 3. Create and implement an audit process to measure technology progress 4. Conduct <i>Annual Technology Survey</i> to ascertain users' satisfaction and future needs 	<ol style="list-style-type: none"> 1. Technology Policies and Procedures Committee report 2. Review of Technology Vision/Plan 3. Review the <i>Performance Outcomes</i> within the Technology Plan 4. Analyze <i>Annual Technology Survey</i> results 	<ol style="list-style-type: none"> 1. Technology Policies and Procedures Committee meets annually to review policies and procedures and changes made as necessary 2. Technology Vision/Plan revised as necessary to meet State and Local requirements 3. Produce the <i>Annual Technology Report</i> that will establish a baseline for progress in the various Technology departments and outline the results of the audit 4. 90% of results on <i>Annual Technology Survey</i> will be positive 	<ul style="list-style-type: none"> • Chief Information Officer (1-4) • Technology Policies and Procedures Committee (1) • Information Technology Departments (1-2) • IT Audit and Delivery Staff (3-4)

APPENDIX D

SCS Rubric for Essential Conditions

Technology Capacity

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Student, Teacher, and Support Personnel Access	<ul style="list-style-type: none"> • Internet access generally not available in all areas of the school • Students have little access to computers • Teachers and support personnel share a limited number of computers • Limited number of networked laser printers available 	<ul style="list-style-type: none"> • Internet access available in all classrooms and office areas • Student computers provided at a ratio of 1 computer to every 10 students in a combination of mobile and stationary labs • Each teacher and all support personnel have access to a desktop computer • Wireless Internet access available in some areas of every school • Other technology available in limited quantities in some schools (i.e., LCD projectors, interactive white boards, digital cameras, digital camcorders, etc.) • Networked laser printers available at a ratio of 1 printer per 10 teaching areas • At least one color networked laser available in each school for general use 	<ul style="list-style-type: none"> • Student computers provided for general use at a ratio of 1 computer for every 4 students in a combination of mobile and stationary labs • Each teacher and administrator has access to a laptop computer on a 3 year refresh cycle • All support personnel have access to a networked desktop computer • Wireless Internet access available in most areas of all schools • Other technology available in small quantities (i.e., interactive white boards, digital cameras, digital camcorders, etc.) • Large screen projection devices available at a ratio of 1 projector for every 4 teachers • Networked laser printers available at a ratio of 1 printer per 8 teaching areas • At least two color networked laser printers available in each school for general use 	<ul style="list-style-type: none"> • Student computers provided at a ratio of 1:1 • Each teacher and administrator has access to a laptop computer on a 3 year refresh cycle • All support personnel have access to a networked desktop computer • Wireless Internet access available in all areas of all schools • Other technology available in sufficient quantities (i.e., interactive white boards, digital cameras, digital camcorders, etc.) • Large screen projection devices available at a ratio of 1 projector to 1 teacher • Networked laser printers available at a ratio of 1 printer per 4 teaching areas • At least one color networked laser available for every 25 teachers in each school

SCS Rubric for Essential Conditions

Technology Capacity

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Instructional Software and Web Resources	<ul style="list-style-type: none"> • Available software limited to basic word processing and spreadsheet applications • Available web resources limited to those provided by the State of Tennessee and through the Internet • Computer operating systems limited to systems included with hardware purchases 	<ul style="list-style-type: none"> • Available software includes word processing, spreadsheet, presentation, and concept mapping applications • Purchased web resources include online databases and educational search engines renewed annually • Computer operating systems are upgraded periodically, primarily for administrative and support personnel machines 	<ul style="list-style-type: none"> • Available software includes word processing, spreadsheet, presentation, concept mapping, multimedia authoring, and video editing applications • Teachers supplied with electronic grade book software • Applications updated periodically • Purchased web resources include online databases, educational search engines, and 24/7 access to web-based training modules available to teachers • Other web-based subscriptions offered that include access to videos for download by teachers • Student assessment and remediation software available in some areas and partially purchased by school funds • Computer operating systems upgraded periodically for teacher machines 	<ul style="list-style-type: none"> • Available software includes all software listed in Stage 3 • Teachers supplied an online grade book which is viewable by parents and students • Applications frequently updated for both teacher and student machines • Purchased web resources include online databases, educational search engines, and 24/7 access to web-based training modules available to teachers and students • Other web-based subscriptions offered that include access to videos for download by teachers and streaming videos available to teachers and students • Student assessment and remediation software available in critical areas • Software applications migrated to web-based versions when available

SCS Rubric for Essential Conditions

Technology Capacity

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Infrastructure	<ul style="list-style-type: none"> • Classroom and administrative computers utilize basic ISDN or dial-up service • Limited bandwidth is available • Servers are available for limited administrative functions • Virus protection available 	<ul style="list-style-type: none"> • All locations served by a T1-based wide area network that supports administrative functions and limited instructional needs • Egress bandwidth limited to 25 MB • Centralized and school-based servers available for administrative functions and teacher document storage • Virus protection available and regularly updated 	<ul style="list-style-type: none"> • All locations served by a fiber-based wide area network that supports administrative functions and instructional needs • Egress bandwidth limited to 50 MB • Centralized and school-based servers available for administrative functions and teacher document storage • Research and planning completed for centralized backup and off-site storage • Research and planning completed for disaster recovery and network intrusion detection • Virus protection available and automatically updated 	<ul style="list-style-type: none"> • All locations served by a 10 GB or higher (as needed) fiber-based wide area network that support administrative functions and instructional needs • Egress bandwidth 150 MB or greater, if needed • Centralized and school-based servers available for administrative functions and for teacher and student document storage • Centralized backup storage available with off-site storage of core application data • <i>Disaster Recovery and Network Intrusion Plans</i> in place • Virus protection available and automatically updated

SCS Rubric for Essential Conditions

Technology Administration

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
<p align="center">Student Information System</p>	<ul style="list-style-type: none"> • Student information system in place that stores core student information: demographics, enrollment, daily attendance, schedules, historical grades, course, class, and teacher information • Basic reporting capability for daily and periodic business obligations - attendance reports, report cards, core state required reports • Minimal automation; heavy reliance on manual record entry 	<ul style="list-style-type: none"> • Includes all components of Stage 1 • Incorporates fully functional scheduling mechanisms for all schools • Provides all state and district required reports, including electronic reporting requirements • Provides means for student grade, conduct, and assignment information to transfer to the student management system via an electronic grade book • Provides access to online reports • Tracks basic Special Education information • Meets all core SIS business obligations of the district 	<ul style="list-style-type: none"> • Includes all components of Stage 2 • Incorporates a parent portal system to communicate attendance, grades, etc; • Provides a fully functional electronic grade book to track individual assignments, conduct, teacher notes, etc. • Provides information necessary for data driven instructional decisions • Integrates with other district software systems for automated exchange of data (i.e., library, lunch, special education) • Provides appropriate level of customization, functionality, and flexibility to respond to evolving district, state, and federal instructional and business requirements • Ensures fully automated system functionality to provide data validation/integrity and accurate information for critical processes 	<ul style="list-style-type: none"> • Includes all components of Stage 3 • Seamlessly integrates curriculum and lesson planning programs/software that correlates and tracks State Performance Indicators (SPI)/Blueprint For Learning (BPL) objectives • Provides one point of data entry that correctly disseminates to other databases/management systems in the district

SCS Rubric for Essential Conditions

Technology Administration

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Business Information Systems	<ul style="list-style-type: none"> • Data Processing Department organized and staff hired • Mainframe-based application for business applications made available to Central Office staff via dumb terminals • All check processing (payroll and accounts payable) performed in Central Office • Centralized student management system brought online for all high schools via dedicated telephone line connection 	<ul style="list-style-type: none"> • Enhancements made to business application • Elementary and Middle Schools brought online to student management system via dial-up modem • In-house student management system written and implemented on mainframe, incorporating state and local business rules • Mainframe student management system converted to web-based application • Business application converted to server application and made available via world wide web • In-house written warehouse system, payroll, attendance reporting, and accounts receivable applications written and made available via world wide web • Student management state reporting module written and implemented • Employee portal implemented 	<p>Includes Stage 2 plus:</p> <ul style="list-style-type: none"> • Business applications regularly reviewed • Significant enhancements to business application made when moved from mainframe to server based application • New modules of the business application tested for possible implementation thereby having all aspects of Finance, HR and Payroll in a central repository • Input from end-users regularly sought to improve business application 	<p>Includes Stage 3 plus:</p> <ul style="list-style-type: none"> • Business system exports teacher demographic information to student management system • Ability for employees to sign up for benefits online • Applicant tracking module added to business application • User defined report capability (ad hoc reporting)

SCS Rubric for Essential Conditions

Technology Administration

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Project Implementation	<ul style="list-style-type: none"> • Project Management procedures and templates created to guide technology projects • Project management procedures adopted by SCS 	<ul style="list-style-type: none"> • SCS staff educated on benefits of project management • Project management office begins to work with departments to coordinate and implement new project management philosophy 	<ul style="list-style-type: none"> • 45% of District uses project management methodology • Project Management "best practices" implemented as needed 	<ul style="list-style-type: none"> • Project Management standards utilized across the district 100% • Technology Project Portfolio produced that includes projects completed District-wide • Project Management "best practices" continuously modified according to industry standards
Budget	<ul style="list-style-type: none"> • Line item budget for limited technology personnel, repair parts, and infrastructure • Hardware/software purchased only with year-end funds 	<ul style="list-style-type: none"> • Line item budget for critical software licensing (i.e., student management and business systems) • Line item budget for limited technology personnel, repair parts, and infrastructure • Limited line item budget for equipment, staff development, and software licenses (i.e., project management and instructional applications) 	<ul style="list-style-type: none"> • Line item budget for critical software licensing (i.e., student management and business systems) • Line item budget for adequate support of teacher laptop project • Line item budget for adequate technology support personnel, repair parts, and infrastructure • Line item budget for adequate equipment for students, software (including instructional applications, ThinkLink, iStation, Project Management, etc.) , and staff development 	<p>Includes all components of Stage 3 plus:</p> <ul style="list-style-type: none"> • Line item budget for school technology consumables
Funding Sources	<ul style="list-style-type: none"> • Funds available from regular local, state and federal allotments only 	<ul style="list-style-type: none"> • Funds available from regular local, state and federal allotments • Funds actively sought from other funding sources (grants, business/community partnerships, etc.) to meet enhanced technology needs 	<ul style="list-style-type: none"> • Includes all components of Stage 2 • Funds from at least one additional source secured 	<ul style="list-style-type: none"> • Funds obtained from multiple sources other those listed in Stage 1

SCS Rubric for Essential Conditions

Technology Support

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Technical Support	<ul style="list-style-type: none"> Limited technical support Tier 1 technical support response time most often greater than 24 hours 	<ul style="list-style-type: none"> Tier 1 technical support provided primarily by classroom teachers Tier 2 and 3 technical repair times greatly exceed District Service Level Agreement 	<ul style="list-style-type: none"> Tier 1 technical support provided more than 2 days per week by on-site personnel Tier 2 and 3 technical repairs approaching Service Level Agreement times Authorized as self-servicing institution for some equipment 	<ul style="list-style-type: none"> Tier 1 technical support provided by full-time, on-site personnel Tier 2 and 3 technical repairs meet Service Level Agreement times Authorized as self-servicing institution for all standard equipment
Instructional Support	<ul style="list-style-type: none"> Centralized instructional technology support only Professional development opportunities available primarily off-site 	<ul style="list-style-type: none"> Instructional technology support provided at a support to school ratio of 1:5 Professional development opportunities available off-site with limited opportunities on-site 	<ul style="list-style-type: none"> Instructional technology support provided at a support to school ratio of 1:2 Professional development opportunities available off-site with many opportunities on-site 	<ul style="list-style-type: none"> Instructional technology support provided at a support to school ratio of 1:1 Professional development opportunities available off-site with numerous opportunities on-site

SCS Rubric for Essential Conditions

Educator Competencies and Professional Development

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Professional Development	<ul style="list-style-type: none"> • No professional development plan for technology in place • Limited staff development opportunities available 	<ul style="list-style-type: none"> • Technology professional development contains some measurable criteria and is correlated to district and state technological standards • Staff development opportunities provided primarily in regional school sites 	<ul style="list-style-type: none"> • Technology professional plan has clear, measurable goals that correlate with district and state standards • Professional development opportunities provided on-site and in regional school sites • Opportunities for evaluation and input provided 	<ul style="list-style-type: none"> • Technology professional development plan has clear, measurable goals that correlate with district and state standards and is evaluated and revised annually at local and District level • Professional development opportunities provided on-site and online that meet the technological needs of the faculty and staff and correlate with district and state standards • Opportunities for evaluation and input provided
Leadership	<p>Administrators:</p> <ul style="list-style-type: none"> • Have no clear vision of benefits of technology in instruction • Have few basic technology skills for personal productivity • Have limited access to electronic data for instructional decisions 	<p>Administrators:</p> <ul style="list-style-type: none"> • Recognize the benefits and support the use of technology in instruction for all students • Expect teachers to use technology for administrative and classroom management tasks • Routinely use technology for daily work • Use some technology for analysis of student instructional data 	<p>Administrators:</p> <ul style="list-style-type: none"> • Expect use of technology in the instruction of all students • Model use of technology in daily work, including communications, presentations, and management tasks • Use available technology for analysis of student instructional data 	<p>Administrators:</p> <ul style="list-style-type: none"> • Ensure integration of appropriate technologies in instruction to maximize learning and teaching • Use technology, where appropriate, in all aspects of daily work • Use technology to make data-driven decisions about instruction • Maintain awareness of emerging technologies

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Educator Proficiency	<ul style="list-style-type: none"> • Standalone electronic grade book software used • Technology not used to review student assessment information • Acquainted with basic technology operations (word processing, e-mail, Internet navigation) • Lesson plans generated using hard copy booklet 	<ul style="list-style-type: none"> • Electronic grade books used with limited connectivity to SIS and parent portal available in some schools • Technology used infrequently to assess students and review student assessment information • Technology primarily used as a teacher tool for management tasks (i.e. grade book, lesson plans, presentation) • Internet used as a research and instructional tool • Lesson plans generated electronically with template 	<ul style="list-style-type: none"> • Electronic grade book used that fully interfaces with SIS with the parent portal available for all schools • Technology frequently used to assess students and review assessment information • Technology used frequently as a management tool and in the teaching and learning process (i.e., implementation of learner-centered technology projects using multiple resources and presentation modes) • Lesson plans that include state standards submitted electronically to administrator • Teacher web presence published with basic class information for parent/student access 	<ul style="list-style-type: none"> • Parent communication features fully utilized in electronic grade book that integrates with SIS and parent portal • Technology regularly used to assess student progress and to review student assessment information which results in needed changes in instruction • Emerging technologies used with curriculum/students (i.e., creation and communication of new technology-supported, student-centered projects) • Integration of technology aligned with all content areas and grade levels • Technology training content supports growth toward national technology standards • Teacher web presence includes weekly agendas and assignments correlated with lesson plans and available for 24/7 parent/student access
Instructional Integration	<ul style="list-style-type: none"> • Collaboration between technology and instruction to align state academic standards with technology goals is limited 	<ul style="list-style-type: none"> • Additional programs introduced that prompt integration of technology and content • Workshops available to demonstrate the effective integration of existing and new technology tools in classroom instruction, as well as data analysis and disaggregation 	<ul style="list-style-type: none"> • Teachers and administrators consistently use technology and data in instruction and student assessment • Frequent collaboration between classroom teachers and instructional technology staff that aligns state standards with appropriate technology resources 	<ul style="list-style-type: none"> • Teachers frequently implement technology-based assignments • The use of more complex technological resources used on a more consistent basis in the classroom • Collaboration between technology and instructional staff continues as both evolve

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Learners and Learning

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Communication	<ul style="list-style-type: none"> • E-mail used occasionally for communication between teachers • System web page exists that contains basic system information, is up to date, and is easy to navigate. • Some schools have school websites with basic information that is occasionally updated • Report cards and phone calls primary source of communicating student progress to parents along with occasional e-mail 	<ul style="list-style-type: none"> • E-mail used for communication between teachers and occasionally by administrators to communicate with teachers • System web page with basic information and special events exists, including grade level specific information updated regularly • All schools have school web sites with basic information that are occasionally updated • Some teachers have web presence containing basic class information and teacher contact information • Some teachers publish grades online that allow parent and student access 	<ul style="list-style-type: none"> • E-mail primary mode of communication among administrators, teachers, and parents • Directory established for sharing e-mail addresses among employees • System web page with extensive, useful information and special events updated regularly • All schools with web pages that include useful information and are updated regularly • Most teachers have professional-looking web presence that is updated frequently • Online Parent Portal allows parents and students access part of the day to student grades, attendance and teacher notes • Employee intranet provides useful and timely SCS information 	<ul style="list-style-type: none"> • E-mail is primary mode of communication among administrators, teachers, and parents • Groups and mailing lists encourage sharing of information among staff • Basic searchable staff directory available • System web page with extensive information updated frequently • School web pages include useful information updated frequently • All teachers have professional-looking web presence updated frequently • Online Parent/Student Portal provides access 24/7 to grades, accurate attendance, and teacher notes • Employee intranet provides useful and timely SCS information • Key system personnel utilize PDA's and other communication devices to facilitate efficient response time

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Accountability

Key Areas	Stage I Beginning	Stage II Progressing	Stage III Significant Progress	Stage IV Advanced
Accountability	<ul style="list-style-type: none"> • Technology vision exists in isolation • Technology policies and procedures not reviewed on a regular basis • Baseline procedures for auditing technology projects created • Framework for Annual Report created • Framework for auditing Technology Strategic Plan created 	<ul style="list-style-type: none"> • Technology vision aligned with District Strategic Plan and state standards • Technology policies and procedures reviewed and updated occasionally • Audit Procedure adopted by Shelby County Schools for technology projects • Annual Report adopted by the SCS Executive Staff and School Board • Framework for auditing the Technology Strategic Plan accepted by Technology Staff and adopted by Executive Staff 	<ul style="list-style-type: none"> • Technology vision aligned with School Improvement Plans as well as state and local plans/standards • Technology policies and procedures reviewed regularly and updated as needed • District Office technology project audits performed quarterly • Annual Report generated and presented to School Board • Areas of the Technology Strategic Plan selected to audit and results analyzed 	<ul style="list-style-type: none"> • Technology vision aligned with School Improvement Plans as well as state and local plans/standards and regularly reviewed • Current technology policies and procedures in place to maximize access and safety for students • Technology audits performed across the district • Previous year's Annual Report compared to current year to show technology progress • All parts of Technology Strategic Plan audited