



Gaston County Schools Strategic Technology Plan

Developed by

Gaston County Schools
Media and Technology Advisory Committee

Approved by
NC Department of Public Instruction
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<http://www.gaston.k12.nc.us/district/techplan/Techplan2009.pdf>

VISION

North Carolina law GS115-102.6 mandates that Local Education Agencies (LEAs) develop an educational plan to enhance teaching and learning within all its schools. Gaston County Schools Strategic Technology Plan, 2009-2013 is aligned to the North Carolina Educational Technology Plan, 2007-2009. The district's Media Technology Advisory Committee (MTAC) collaborated with the Superintendent's Leadership Team to create a technology plan aligned to the district's Strategic Plan. The Gaston County Schools Strategic Technology Plan, as well as the Strategic Plan, reflects North Carolina's Future Ready Schools for the 21st Century. Goals and strategies support and enhance Globally Competitive Students; 21st Century Professionals, Healthy and Responsible Students; Leadership for Innovation; and 21st Century Systems.

Globally Competitive Students

Traditional educational practices no longer provide students with all the necessary skills for economic survival in today's workplace. Students must now apply strategies for solving problems using appropriate tools for learning, researching, collaborating, and communicating (ISTE's *National Educational Technology Standards for Students*). The Gaston County Schools Strategic Technology Plan, 2009-2013, puts into practice strategies that recognize students are changing, society is changing, and our world is changing. The district's local resources and initiatives promote this realization and a variety of technology tools, software, web resources, and programs are planned to prepare learners for future jobs, leadership roles and contributing global citizens. Gaston County Schools will provide 21st Century technology resources, increase access to technology, provide benchmark assessments, implementation of IMPACT, provide virtual learning, such as NCVPS, Learn and Earn Online, and Early College. Such resources will have profound effects on teaching and learning and will transition students from isolation to interconnectedness. Portals, blogging, podcasting, vodcasting, and other Web 2.0 resources, promote creativity, collaboration, and communication. North Carolina Department of Public Instruction offers resources, such as NC WiseOwl and Kaleidoscope, to support higher order skills and digital citizenship. NC WISE utilization, assessment resources, and technology tools are support systems to provide data driven decisions for high student achievement and to prepare students to be globally competitive.

21st Century Professionals

As stated in the *North Carolina Educational Technology Plan, 2007-2009*, because technology increases productivity, brings worldwide experience and expertise into the classroom, and stimulates interest in learning, it is the ultimate tool in professional educators' repertoire. Today's emerging learning landscape provides teachers even more sophisticated challenges and opportunities. Now and in the future, effective teachers of digital-age learners will be challenged to move away from models of teaching and learning as isolated endeavors (National Educational Technology Standards for Teachers, ISTE). To ensure that our educators are 21st century professionals, the district will research a technology literacy assessment to diagnose professional learning needs and strategies. Gaston County Schools has ten instructional technology

facilitators who serve as mentors, coordinators, and technology integration specialists assisting teachers in their efforts to support student learning and professional growth with technology. These instructional technology facilitators provide professional learning opportunities to assist the teachers to facilitate and inspire student learning and creativity. Pinnacle Leaders, teachers who model technology integration, provide just-in-time professional learning at schools and throughout the district. Gaston County Schools is moving to the Professional Learning Community (PLC) concept in order to prepare globally competitive students through improved student achievement. Professional learning may take place through a variety of technology resources such as online courses, PD360, Discovery United Streaming and Web 2.0 tools. Professional learning is also provided through videoconferencing which is archived and streamed through the Internet. Many of the schools are transitioning to the IMPACT model, which is an excellent professional learning collaborative model. Teachers and staff are provided with professional learning opportunities on statewide resources such as NC WISE, HRMS, BUD. Technology also supports data driven decision making for student learning through the use of benchmarks, formative assessments, NC Wise reports, data warehouse reports. These resources allow educators to track student learning and develop skills and strategies to for individual student progress. Educators are trained to use technology in science classrooms, AIMSweb in K-2, and other technology software and hardware resources that are district initiatives supporting Future Ready Goals.

Healthy Responsible Students

A safe learning environment is critical for teaching and learning. The district's technology infrastructure provides integrated and security systems, access to communication devices such as telephones, walkie-talkies, cell phones, warning devices, monitoring cameras, and 911 access points for emergency police access to protect individuals and facilities. Technology provides our students access to information; however it is essential to safeguard them from inappropriate material. Student data is also secure and protected. Resource and devices are in place to protect networks from intruders and protect equipment. Network and Internet users must be responsible and understand Acceptable Use Policies as well as other policies and guidelines. Access to resources is also essential and Gaston County Schools is moving to a portal to allow employees and students access to files and resources at any time though the Internet. The district endorses system-wide projects and programs to ensure equity and equitable access to resources. Flexible schedules are implemented in many school library media centers with flexible hours for students to access technology and resources before and after school hours. The community and family support is a strong component needed in the education of our students and the district has numerous after school activities, family PTO events, and community in school projects. Gaston County Schools is constantly evaluating and working to improve security, communication, and user and network security.

Leadership

Leadership in the 21st century is more difficult and more necessary than ever before. Leaders have to understand that things are changing, how that change is happening, and what is likely to

be the result (Web 2.0-new tools, new schools). Gaston County Schools developed a Strategic Plan that supports the Future Ready Goals. The Gaston County Schools Strategic Technology Plan, 2009-2013 is aligned to the Strategic Plan. Technology is a vehicle for communication to the world. The district's technology infrastructure is continuously evaluated to enable use of technology tools and resources for instructional and administrative purposes. Gaston County Schools has partnered with the state to provide additional bandwidth and connectivity to Internet 2.0 resources. Gaston County Schools is a leader in implementation of distance (videoconferencing) learning where daily classes are archived for review and access at any time. Distance (videoconferencing) learning is also used for professional learning. To move to a paperless district, web-based and technology resources such as QuickPlace for Administrators, online professional registration and evaluation database, web-based inventory, technology purchase approval, electronic spreadsheet where data is filtered in from the AS400, Connect Ed, etc. have been implemented throughout the district. Leadership will continue to explore and provide communication tools and venues, continuous growth opportunities for employees, students, and parents, and increased access to technology. As changes occur, policies and guidelines will be reviewed.

21st Century System

21st century systems are essential to support globally competitive students, 21st century professionals, healthy responsible students, and innovative leadership. The district has a strong infrastructure that supports instructional and educational resources and applications. Online and web management systems and application software allow teachers to make data-driven decisions and focus more on teaching and less on clerical tasks. Gaston County Schools utilizes resources such as NC WISE, TIMS, BUD, CECAS and other district generated databases and resources for reporting and information management. Connectivity to NCREN will also enable additional bandwidth and resources. A web-based technology inventory and technology purchase approval provided data for equitable access and acquisitions. The district encourages lifelong learning through e-learning, streaming video and distance (videoconferencing) learning. Each year a budget is submitted that reflects a Total Cost of Ownership to maintain current initiatives as well as plan for future technology endeavors. Open Source applications for network management and instruction are used to so that funds may be reallocated for increased access and network infrastructure. To obtain Future Ready Goals, technology and technology personnel are critical to support goals and strategies to prepare Globally Competitive Students; 21st Century Professionals, Healthy and Responsible Students; Leadership for Innovation; and 21st Century Systems.

NC Public Schools will produce globally competitive students: Current Situation Narrative

Gaston County Schools adheres to the statement in the *North Carolina Educational Technology Plan, 2007-2009* that according to the enGauge Model (<http://www.metiri.com/features.html>) for 21st Century Skills, in order to enact academic achievement we must address the areas of digital literacy, inventive thinking, effective communication and high productivity. Instruction is the core component of the school system and Gaston County Schools has provided leadership and support for the curriculum and resources for technology integration. This is also evident in the district’s Strategic Plan. School technology plans are incorporated into the school improvement plans and require schools to focus on Future Ready Goals for globally competitive students, 21st Century professionals, healthy responsible students, 21st Century leadership and 21st Century systems. Technology facilitators working in each high school feeder area conduct data-driven staff development initiatives to reach the goals of individual school improvement plans and meeting district-wide initiatives for improvement. Gaston County Schools also empowers its teacher through two initiatives unique to our district: Pinnacle Leaders Network that nurtures classroom teachers to become leaders in technology and in school improvement and TRICKS which provides technology integrated lessons and additional equipment to teacher grades 3-6.

Gaston County Schools works diligently to improve reading and math scores. Charts below provide summaries for reading and math End-of-Grades (EOG) for the 2004-2005, 2005-2006 and 2006-2007. For 2007-2008 math EOGs are only available. Listed below is the summary for the district.

Reading

	2004-2005	2005-2006	2006-2007	2007-2008
	Proficiency	Proficiency	Proficiency	Proficiency
3rd Grade	84.7	85.7	78.5	TBD
4th Grade	83.8	84.6	85.1	TBD
5th Grade	90.5	89.8	91.5	TBD

Math

	2004-2005	2005-2006	2006-2007	2007-2008
	Proficiency	Proficiency	Proficiency	Proficiency
3rd Grade	87.6	69.1	66.9	74.8
4th Grade	94.3	65.1	65.6	70.6
5th Grade	92.7	63.7	67.1	69.6

Reading

	2004-2005	2005-2006	2006-2007	2007-2008
	Proficiency	Proficiency	Proficiency	Proficiency
6th Grade	81.6	82.6	82.2	TBD
7th Grade	85.1	85.7	85.5	TBD
8th Grade	87.1	88.2	87.1	TBD

Math

	2004-2005	2005-2006	2006-2007	2007-2008
	Proficiency	Proficiency	Proficiency	Proficiency
6th Grade	90.5	60.4	61.6	63.7
7th Grade	86	60.3	58.7	62.3
8th Grade	84.4	55.3	59.2	62.8

Results for high school End-of-Course (EOCs) are listed below.

Civics & Economics			English I		
2005-2006	2006-2007	2007-2008	2005-2006	2006-2007	2007-2008
56.2	60.74	63.19	79.18	66.97	68.13

Geometry			Physical Science		
2005-2006	2006-2007	2007-2008	2005-2006	2006-2007	2007-2008
67.4	55.85	60.35	65.08	Not Tested	56.05

Physics			US History		
2005-2006	2006-2007	2007-2008	2005-2006	2006-2007	2007-2008
83.39	Not Tested	78.13	55.67	57.39	66.26

Beginning in 2008-2009, eleventh grade students will begin the process for completing the graduation project. The district collaborated on methods of implementation involving stakeholders and the community. High school teachers, media coordinators, technology facilitators and graduation coaches will work together to ensure that students have resources to successfully complete the project. Technology guidelines have been established to support the process.

As stated in the *North Carolina Technology Plan, 2007-2009*, there is a continuum of technology use and its resources that is ever changing and shifting from basic remediation and assessment software to the use of technology as a tool to foster collaboration and communication. Gaston County Schools embraces emerging technologies and tools that students will need to be successful in a globally competitive environment. Key technology programs in Gaston provide venues for collaboration and communication skills, creativity, and higher order thinking skills. Technology programs and initiatives provide instructional strategies for technology integration. Technology tools and resources are also used to differentiate instruction and enhance student achievement. Gaston County Schools is moving its web environment onto the newest Microsoft platform, SharePoint, in order to provide equal and safe access to website creation tools for teachers which can provide an up-to-date means of publishing collaborative material.

There are a variety of software and resources used in tracking student performance and analyzing data to modify instruction. Specialized software, such as Orchard, Compass Learning, Classworks, Accelerated Reader, Accelerated Math, Star Reading, Star Math, NovaNet, SAS inSchools, SAT Prep Software, SAT Coach, Amitrol, PassKey, and CMS95 provide differentiation and diversity for core academic literacy and individualized instruction. The district is moving to web-based Accelerated Reader and Star Reading which will provide equitable access to age-appropriate materials. Other software, such as Inspiration, Kidspiration, SmartBoard and Promethan Interactive software, Microsoft Office, Adobe, and AutoCad, are used for instruction and production in the teaching and learning environment. Web-based curriculum aligned resources from LEARN NC, Hot Potatoes, and the North Carolina Department of Public Instruction such as NC WiseOwl, Kaleidoscope, and SAS inSchool, are used by teachers and students. Resources such as UnitedStreaming and EasyTech are provided for integration and technology literacy. Administrators and teachers also have access to data utilizing ABCTools, NCWise exports, Eduware, and Tetradata's DASH, in order to make just in time decisions concerning student achievement. The Gaston County Schools' Assistive Technology Demonstration/Loan Center is available to facilitate the selection, implementation, and support of appropriate technology and devices to ensure that all students have the opportunity to be academically successful.

Pinnacle Leaders' Network, certified teachers as technology trainers, model best teaching practices integrating technology and provide technology professional learning integrating technology. Pinnacle Leaders' Network is a sustained project from the Technology Literacy Challenge grant. Teachers apply to become a Pinnacle Leader and when selected receive intensive staff development in the 120-hour train-the-trainer course over a two year period. Pinnacle Leaders learn to work with their peers to prepare them to integrate technology. They model for other teachers in their schools to promote interest and demonstrate the use of technology as an instructional tool. Professional development for the Pinnacle Leaders includes adult learning styles and project-based outcomes. One hundred and thirty teachers in grades K-12 and media specialists impact technology integration. Pinnacle Leaders receive a laptop computer, software, projector, and student response systems. If additional funds are available, Pinnacle Leaders may also receive an airliner and an interactive white board. There is an ongoing evaluation of the program. Surveys completed annually by Pinnacle Leaders indicate students have:

- Improved grades on report cards
- Increased amount of time on learning task
- Increased turn-in rate for homework
- Increased use of technology for learning and projects.
- Increased leadership skills

Pinnacle Leaders address the following challenges and objectives:

- Student discipline—improved in the classrooms where technology is used
- Student improvement—students are interested and have ownership in their learning
- Teacher retention—teachers indicate that they will remain in Gaston County Schools as long as they have a laptop
- Teacher morale—teachers will do a better job because of the investment in them.

All of these aspects impact and improve student learning.

Beginning with the 2002-2003 school year and as a result of Enhancing Education Through Technology (EETT), Gaston County Schools developed a reading and technology program. **T**echnology and **R**eadig **I**gnite **C**omprehension and **K**indle **S**uccess (T.R.I.C.K.S.) is an expansion of the Pinnacle Leaders program and aims to increase student academic achievement in reading comprehension and technology literacy. The program aspires to also improve the technology skills of T.R.I.C.K.S. teachers and T.R.I.C.K.S. trainers. Evaluations indicate that T.R.I.C.K.S. makes a difference in reading and technology literacy in classrooms where it is implemented. Data from the T.R.I.C.K.S. program indicates that T.R.I.C.K.S. teachers and T.R.I.C.K.S. students demonstrated growth in technology skills. Data from the 2006-2007 evaluation indicates an average growth between pre and post technology skills assessments of 27% for third through sixth grade students. End-of-Grade reading data reflects that T.R.I.C.K.S. students outscored non-T.R.I.C.K.S. students. According to the evaluation of 2006-2007 school year, T.R.I.C.K.S. students in third grade had an average growth of 8.25 scale score points compared to an average growth of 7.29 scale score points of non-T.R.I.C.K.S. students. Fourth grade TRICKS and non-T.R.I.C.K.S. students showed an average growth of 3.75 scale score points. Fifth grade T.R.I.C.K.S. students grew an average of 5.01 scale score points and non-T.R.I.C.K.S. student growth averaged 3.54 scale score points. Sixth grade T.R.I.C.K.S. students had an average growth of 2.78 scale score points compared to non-T.R.I.C.K.S. students' average growth of 1.81 scale score points. Gaston County Schools' Technology Support Services is currently funding T.R.I.C.K.S. with local and state dollars.

With a focus on science in the middle schools, the district will place 21st Century learning tools such as SmartBoards, projectors, student response systems, Airliners, and laptops in all 8th grade science classrooms. These resources will be added to 8th grade science classrooms in 2008-2009 and will be added to 7th grade and 6th grade science classrooms in 2009-2010 and 2010-2011.

Administrators continue to use technology to analyze student performance as it applies to the ABCs of Public Education and communicate with stakeholders—teachers, students, and parents. The Department of Accountability provides data for principals along with training in data analysis to ensure data-driven decision making. The data warehouse has been implemented to provide longitudinal studies for the district and schools to determine the focus for resources, diversity, and differentiation of instruction to improve student achievement. The data warehouse also provides data used in applying and acquiring grants to address student needs. The district is also implementing DASH, a component of the district's data warehouse. These tools allow district staff to easily compile, disaggregate, and otherwise manipulate data for planning and instructional purposes. Data from NCWise is transferred into DASH and the data warehouse. Gaston County Schools is in the second full year implementation of NCWise. Administrators are using ABC Tools, a resource supplied by DPI for test audits and district submission of test data to the state. Gaston County is also using the Comprehensive Exceptional Children's Accountability System (CECAS), a web-based program, to generate Individual Education Plans (IEPs) for children with disabilities. As a result, assistive technology programs are in place, such as text reader, Zoom Text, voice recognition software, and various hardware peripherals.

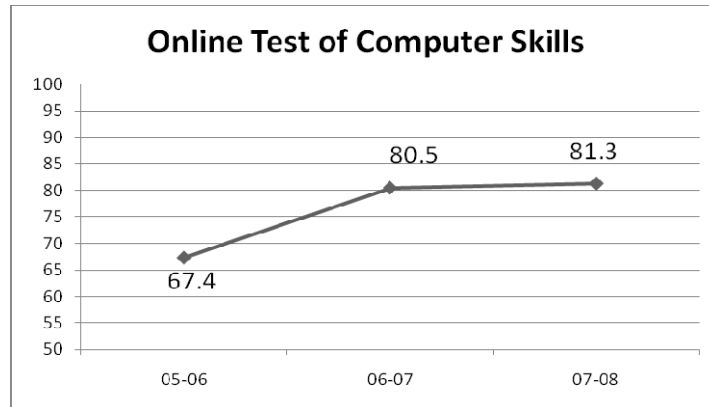
A benchmark program that provides goal summaries for teachers is used to improve student achievement in reading and math. Eduware is currently the software that scans and scores three benchmarks per year for grades 3-12 in EOG and EOC tested areas. Students are provided with paper multiple-choice benchmarks. Benchmarks are scanned and scored and teachers access the results on a website that provides results. Principals and teachers have immediate feedback of goal summaries based on objectives for each student, class, and grade level. A district report may also be generated.

Teachers are also encouraged to assess students using formative assessments. Eduware Wizard, a database containing EOG-type questions and the capability to create assessments as needed, may be used at the elementary level. It is coupled with a student response system which can be used to assess en lieu of a traditional paper benchmark test. Many teachers also use student response systems and interactive white boards to quickly assess students.

Beginning in the 2008-2009 school year, Gaston County Schools' Strategic Plan has a focus on the use of a web-based program, AIMSweb to provide focused intervention for K-2 students. The goal is to have students reading on grade level by third grade. Every first grade classroom will have an instructional assistant in 2008-2009. In subsequent years an instructional assistant will be added to 2nd grade and kindergarten. The instructional assistants will work with students based on feedback from the AIMSweb reporting tool.

Gaston County Schools uses the Technology Literacy Assessment (TLA) from learning.com in 5th and 7th grades to assess computer literacy. The assessment models the NC Online Test of Computer Skills. Pre and post-assessments in 5th and 7th grade provide data on student growth reported by school, class, and student. Reports provide a snapshot for planning and preparing students with 21st Century skills. Beginning in 2008-2009, the TLA will be used to determine if students in 6th and 7th grades are prepared to take and successfully pass the NC Online Test of Computer Skills.

The NC Online Test of Computer Skills is administered to all eighth grade students to assess technology literacy. The NC Test of Computer Skills is a graduation requirement and a component of the ABCs. The North Carolina Computer/Technology Skills Information Skills Curriculums prepare students to be successful on the NC Online Test of Computer Skills administered to eighth grade students. Gaston County Schools' instructional technology facilitators designed a curriculum of content based on the North Carolina Standard Course of Study specifically to assist students in acclimating their technology knowledge to NCDesk using custom online, interactive tutorials and integrated lessons. Integrated lesson plans and professional development for teachers are provided. If the student is not successful, remediation is developed by the instructional technology facilitators in coordination with the 8th grade teachers, administration and testing coordinators and provided until the student passes the test. Gaston County Schools' results are listed below:



High Schools, along with the Career Technical Education (CTE), continue to use Classroom Manager (CMS95). Teachers also use technology in the classroom to keep records, plan, instruct, manage resources, produce materials, communicate, demonstrate, and assess student progress.

As indicated in the *North Carolina Technology Plan, 2007-2009*, 21st Century Learning Skills can best be taught when media and technology professionals collaborate with classroom teachers in the development of project-based units and/or lessons. This model is outlined in *IMPACT: Guidelines for North Carolina Media and Technology Programs* (IMPACT). IMPACT provides standards based on current research to develop quality media and instructional technology programs. The model defines flexible access as “the ability of any student, teacher, or staff member to access the school library media center and the computer lab and their resources when needed.” Flexible scheduling is the ability for teachers to schedule media resources as needed. In Gaston County Schools, all middle and high schools have total flexible access and total flexible scheduling. At present, of the 31 elementary schools in the district, three elementary school meets the IMPACT guidelines for total flexible access and total flexible scheduling. Other media coordinators are tied to a fixed schedule. These media coordinators are part of the school rotation for planning periods for teachers. Within the 28 schools that have fixed schedules, the schools are working towards implementing a flexible schedule. Because of fixed schedules and time constraints, total collaboration between media coordinators and teachers is not achieved at most elementary schools.

Beginning in 2007-2008, Gaston County Schools added a full-time technology facilitator at York Chester Middle School and Southwest Middle School. Funds from the Enhancing Education Through Technology (EETT), Title II, Part D grant allowed for a portion of the technology facilitators’ salary, professional development, and technology resources. The focus for the first year was to improve scores on the NC Test of Computer Skills, complete the School Technology Needs Assessment (STNA), and introduce the IMPACT model. STNA is a survey used to determine how technology is being used in the school. The technology facilitator collaborated with the media specialist to provide integrated units of study. Professional development will continue as well as increasing technology resources.

Based on recommendations for media and technology positions, the following chart compares the state minimum recommendations with existing Gaston County Schools' personnel.
<http://www.ncwiseowl.org/Impact/Research&eval.htm#mediaandtech>

50+ Schools in the System	State Recommended Minimum	Gaston County
Director of Technology	1	1 (Chief Technology Officer)
School Library Media Supervisor	1	1 (Director of Media Services and Special Programs)
Instructional Technology Supervisor	1	1 (Assistant Chief Technology Officer-Instruction)
Media Coordinator	59	57
Media Assistants	46.5	24.5 16 Full-time/17 Half-time
Technology Facilitator	54	10
Technology Assistant	42	0
Technician (I, II, III)	25	7
LAN/WAN	2	2 Assistant Chief Technology Officer—Operations and LAN/WAN Engineer
TOTAL	231.5	103.5

Based on Annual Media Technology Data (AMTR) for 2006-2007, Gaston County Schools ranked 73 out of 115 Local Education Agencies (LEAs) in total number of modern instructional computers. According to the AMTR for 2007-2008, Gaston County Schools has an average of 4.1 computers per classroom. The district has a total of 10,349 computers (laptops and desktops). Of these, 8,546 are instructional machines for teacher and student use. The student to modern instructional computer ratio is 4.02 and the student to Internet connected computer ratio is 4.22. Funding and budget prohibit allocating recurring funds to replace legacy technology. Each budget year Technology Support Services proposes a Total Cost of Ownership.

All of Gaston County Schools' classrooms have access to the Internet via wireless access or CAT6 cabling. Trailers have access through antennas and wireless access points. Based on 2007-2008 AMTR 100% of classrooms have network and Internet access.

Distance learning videoconferencing is available in eight of the nine high schools to afford the opportunity for students in small schools to have access to academic placement courses as well as a variety of other learning opportunities. Community college Huskins courses are also offered in conjunction with videoconferencing. Teachers and students take advantage of third party videoconferencing programs for both classroom and professional learning opportunities both in-district and abroad. Annually, there is an average of seven videoconferencing teachers and 600 videoconferencing students. Distance learning videoconferencing classrooms are equipped with Polycom codecs and Accordent capture stations which provide live and archived content available for students on-demand.

Internet-based courses provided through NC Virtual Public School (NCVPS) and Learn and Earn Online (LEO) programs are available and utilized. Learn and Earn Online (LEO) encompasses both community college courses and the UNCG iSchool.

Access to technology in classrooms, media centers, and instructional labs supports and enhances student achievement. Powerful tools are used to enrich teaching and learning and engage the learner for student achievement. Assistive technology devices are provided for students who have special needs. Automated media centers afford access to resources for all learning experiences and opportunities. Individual schools have available a variety of digital resources:

- Desktop and laptop computers
- Digital still cameras
- Digital video cameras
- Interactive displays
- Scanners
- Digital microscopes
- Microscope probes
- DVD players
- IPack and PocketPC handhelds
- CD/DVD burners
- USB Flash memory drives
- Media management systems
- LCD projectors
- AverKeys
- Global Positioning Devices (GPS)
- Microphones
- Digital audio/video editing
- Graphing calculators
- Interactive white boards
- Student response systems
- Airliners
- Document cameras (ELMOs)

NC Department of Public Instruction resources such as NC WiseOwl, Kaleidoscope, NC Desk are used throughout classrooms in the district. Technology facilitators in the feeder areas train teachers in the use of these resources. Other resources used are United Streaming, EasyTech, SAS in School's Curriculum Pathways and LEARN NC. Blogs and podcasts are also being used

in classrooms and media centers. Technology facilitators and media coordinators model best practices using Web 2.0 tools and provide professional learning for teachers. These resources encourage the use of inquiry-based and active learning. Students create and produce as they learn and are engaged in their work, try out new ideas, and gain understanding by constructing their knowledge. Technology enables our students to work in small and large groups to access information, and create products.

Teachers and students in Gaston County Schools are beginning to use technology for global exchanges and partnerships. Teachers and students use ePals to collaborate within the district, state, nationally, and internationally. Skype is also used to conference and connect with classrooms. These applications promote understanding of global cultures, languages, and economies. One middle school teacher setup a videoconference with an author in Australia so that students could ask questions related to a book study. Web 2.0 tools and resources enable students to publish and collaborate with students around the world. Media coordinators are embracing, supporting, promoting global initiatives and Web 2.0 resources. Instructional technology facilitators promote resources and provide professional learning to encourage the use of global exchange and partnerships.

Gaston County Schools provides Welcome Centers for English as second language learners and their families. Policies and guidelines are translated into 26 various languages to support the non-English population. Resources provided through Learn NC and various other websites help teachers to work with the non-English speaking child. Translations through the Internet engage the foreign language learner. On-line courses such as Latin, Japanese, and Mandarin-Chinese are offered to students in the district through the NCVPS.

Gaston County Schools currently staffs an assistive/adaptive technology resource center through the Department of Exceptional Children. There are currently over 1,000 assistive/adaptive technology resources available to schools and students based on needs. Items available for students include adaptive toys (sensory), writing tools, books, communication devices, and adaptive software and computer access tools. These include but are not limited to: Intellikeys, Big Keys, Braille keyboard, touch screen, joy stick mouse, roller mouse, switch accessible, word predication, on-screen keyboards, screen magnification, text readers, communication systems, adapted reading and math, and keyboarding.

Gaston County Schools partners with Gaston College to offer high school students the opportunity to participate in Early College/Learn and Earn courses. Technology access is provided for students to participate in these courses. Guidance counselors and administrators are provided with information regarding courses. Curriculum guides for students and parents list opportunities for these courses. One high school in the district is working with Gaston College to establish an Early College program beginning in the 2008-2009 school year. An assistant principal oversees the program along with a teacher. Courses are provided online. Students will have access to a laptop computer at school and at home.

**NC public schools will produce globally competitive students.
Strategic Technology Plan**

Include at least one strategy or objective that includes the following:

1. Mathematics/reading scores improvement
2. Classroom use of student resources
3. IMPACT model implementation
4. Computer Skills Test score improvement
5. Computer Skills Curriculum implementation
6. Information Skills Curriculum implementation
7. Technology integration across the curriculum
8. Student distance learning opportunities
9. Assistive technology availability
10. Global Exchange
11. Support for Early College (or similar) program

Strategic Priority 1: NC public schools will produce globally competitive students.*							
Strategic Goal: (Please check.)							
<input checked="" type="checkbox"/> Every student excels in rigorous and relevant core curriculum that reflects what students need to know and demonstrate a global 21st Century environment, including a mastery of languages, an appreciation of the arts, and competencies in the use of technology.							
<input checked="" type="checkbox"/> Every student’s achievement is measured with an assessment system that informs instruction and evaluates knowledge, skills, performance, and dispositions needed in the 21st Century.							
<input type="checkbox"/> Every student will be enrolled in a course of study designed to prepare them to stay ahead of international competition.							
<input type="checkbox"/> Every student uses technology to access and demonstrate new knowledge and skills that will be needed as a life-long learner to be competitive in a constantly changing international environment.							
<input type="checkbox"/> Every student has the opportunity to graduate from high school with an Associates Degree or college transfer credit.							
Objective 1.1: Increase the proficiency scores on the NC Online Test of Computer Skills for students by 2% each year							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
1.1.1 Provide teachers with training in NC Desk software	Instructional Technology Facilitators with knowledge of NC Desk Access to computers and software	CTO Assistant CTO-Instruction, Executive Director of Secondary Schools	\$8,000.00	In-kind	Beginning September 2009 Evaluate each June 2009-2013 Ending June 2013	Number of training sessions	

1.1.2 Collaborate with teachers and media coordinators to use and produce integrated lessons and resources to improve technology literacy	Web-based resources Workshops, Conferences	CTO, Assistant CTO-Instruction Instructional Technology Facilitators	Workshops Conferences \$2,500.00 \$10,000.00 Instructional Technology Facilitators	State In-Kind	Beginning September 2009 Evaluate each January and June 2010-2013 Ending June 2013	Monthly reports from facilitators Computer Skills Test Scores	
1.1.3 Provide Easy Tech in 2-8 grades to improve technology literacy	Easy Tech Professional Learning for Teachers	CTO, Assistant CTO-Instruction, Instructional Technology Facilitators	\$100,000.00 \$5,000.00	State In-Kind	Evaluate each June 2010-2013	Number of Training Sessions, Easy Tech Utilization Log	
1.1.4 Provide Technology Literacy Assessment (TLA) benchmarks in 5 th and 7 th grades to prepare students for NC Online Test of Computer Skills	Technology Literacy Assessment (TLA) Reports	CTO, Assistant CTO-Instruction, Instructional Technology Facilitators	\$35,000.00	State	Evaluate each October and June 2009-2013 Ending June 2013	Reports	
1.1.5 Increase the connectivity in classrooms by adding desktops or wireless carts in middle schools and necessary infrastructure	Computers, Wireless carts, Access points, Infrastructure, Switches, Professional Learning	Deputy Superintendent of Administrative Services, CTO, Assistant CTO- Instruction, Assistant CTO- Operations	\$6,900.00 Access Points \$36,000.00 Switches \$360,000.00 Laptops/Desktops \$34,560.00 Software	State State State State	Beginning September 2009 Evaluate each June 2009-2013 depending on funding from previous year's budget	AMTR	

Strategic Priority 1: NC public schools will produce globally competitive students.*							
Strategic Goal: (Please check.)							
<input checked="" type="checkbox"/> Every student excels in rigorous and relevant core curriculum that reflects what students need to know and demonstrate a global 21st Century environment, including a mastery of languages, an appreciation of the arts, and competencies in the use of technology.							
<input checked="" type="checkbox"/> Every student's achievement is measured with an assessment system that informs instruction and evaluates knowledge, skills, performance, and dispositions needed in the 21st Century.							
<input type="checkbox"/> Every student will be enrolled in a course of study designed to prepare them to stay ahead of international competition.							
<input checked="" type="checkbox"/> Every student uses technology to access and demonstrate new knowledge and skills that will be needed as a life-long learner to be competitive in a constantly changing international environment.							
<input type="checkbox"/> Every student has the opportunity to graduate from high school with an Associates Degree or college transfer credit.							
Objective 1.2 Increase the proficiency on 3 rd and 8 th Math and Reading EOG							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
1.2.1 Support Eduware software for benchmark assessments	Eduware benchmarks, Eduware Web-based goal summary reports	Deputy Superintendent, Executive Director of Elementary, Executive Director of Secondary	N/A	N/A	Quarterly benchmarks	Benchmark reports	
1.2.2 Support use of AIMSweb to inform reading instruction in K-2	Web-based resources Workshops	Deputy Superintendent of Instruction, Executive Director of Elementary	Workshops Conferences	N/A	Beginning September 2009 Ending June 2013	Number of training sessions Running Records	

1.2.3 Plan and Implement TRICKS 2.0 (second phase of technology and reading initiative)	Planning retreat, Technology facilitators, TRICKS trainers	CTO, Assistant CTO-Instruction	\$60,000.00 Trainer Pay \$80,000.00 Projectors \$260,000.00 Student Response System \$13,000.00 Video Cameras \$26,000.00 Teacher Stipends	State State State State State	Beginning September 2009 Evaluate each June 2009-2013 Ending June 2013	TRICKS 2.0 lesson plans TRICKS Summer conference agendas	
1.2.4 Collaborate with teachers and media coordinators to implement integrated technology in reading and math content areas to meet the needs of and engage all learners (differentiation)	Planning time, District resources (Compass, Star Reading and Math, Accelerated Reader and Accelerated Math, Classworks, etc.) Web-based resources: Learn NC, NC in the World, Kaleidoscope, SAS inSchool, eBistro, NC WiseOwl, Web 2.0 tools, Technology facilitators	CTO, Assistant CTO-Instruction, Technology facilitators	N/A	N/A	Beginning September 2009 Evaluate each June 2009-2013 Ending June 2013	Monthly reports from technology facilitators	

1.2.5 Provide schools and students with assistive technologies where appropriate and needed	Appropriate assistive technology resources including adaptive toys, hardware, software, writing and communication tools	Executive Director of Exceptional Children, Assistive Technology staff	N/A	N/A	Beginning September 2009 Evaluate each June 2009-2013	Lists of assistive technologies available and in use	
1.2.6 Implement IMPACT guidelines by including school Media Coordinators and Instructional Technology facilitators in grade-level/department meetings to analyze test data in order to plan for and develop integrated instructional lessons/units that include the computer skills curriculum, information skills curriculum and content areas	Planning time, Media Coordinators, Instructional Technology Facilitators	CTO, Director of Media Services	N/A	N/A	Beginning September 2009 Evaluate each June 2009-2013 Ending June 2013	Monthly reports from technology facilitators Number of media centers implementing IMPACT	
1.2.7 Use Cayen software to manage providers for supplementary services in Title I	Cayen, Title I Schools,	Director of Title I	N/A	N/A	Beginning September 2009 Evaluate each June 2009-2013 Ending June 2013	Report from Cayen	

Strategic Priority 1: NC public schools will produce globally competitive students.*							
Strategic Goal: (Please check.)							
<input checked="" type="checkbox"/> Every student excels in rigorous and relevant core curriculum that reflects what students need to know and demonstrate a global 21st Century environment, including a mastery of languages, an appreciation of the arts, and competencies in the use of technology.							
<input type="checkbox"/> Every student's achievement is measured with an assessment system that informs instruction and evaluates knowledge, skills, performance, and dispositions needed in the 21st Century.							
<input checked="" type="checkbox"/> Every student will be enrolled in a course of study designed to prepare them to stay ahead of international competition.							
<input checked="" type="checkbox"/> Every student uses technology to access and demonstrate new knowledge and skills that will be needed as a life-long learner to be competitive in a constantly changing international environment.							
<input checked="" type="checkbox"/> Every student has the opportunity to graduate from high school with an Associates Degree or college transfer credit.							
Objective 1.3 Increase the number of students enrolled in videoconferencing, NCVPS, LEO courses for both high school and college credit by 2% each year							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
1.3.1 Promote online course offerings from NCVPS and LEO (Learn and Earn Online) including higher level Language courses not typically offered.	Websites, marketing videos, curriculum guide, brochures, Guidance Counselors, NCVPS DLAs	Distance/Online Learning Coordinator, Asst. Superintendent-Secondary Schools, Guidance Counselors, Director of Counseling Services	N/A	N/A	Beginning September 2009 Evaluate each June 2009-2013	Enrollment data	
1.3.2 Provide locally taught videoconferencing courses	Website, curriculum guide, Guidance Counselors, DL facilitators	Distance/Online Learning Coordinator, Asst. Superintendent-Secondary Schools, Guidance Counselors, Director of Counseling Services	N/A	N/A	Beginning September 2009 Evaluate each June 2009-2013	Enrollment data	
1.3.3 Continue to provide access to Huskins courses	Gaston College Classroom space, Video conferencing classroom	Asst. Superintendent-Secondary Schools, Distance/Online Learning Coordinator	N/A	N/A	Beginning September 2009 Evaluate each June 2009-2013	Enrollment data Courses Offered	

Strategic Priority 1: NC public schools will produce globally competitive students.*							
Strategic Goal: (Please check.)							
<input checked="" type="checkbox"/> Every student excels in rigorous and relevant core curriculum that reflects what students need to know and demonstrate a global 21st Century environment, including a mastery of languages, an appreciation of the arts, and competencies in the use of technology.							
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<input checked="" type="checkbox"/> Every student uses technology to access and demonstrate new knowledge and skills that will be needed as a life-long learner to be competitive in a constantly changing international environment.							
<input checked="" type="checkbox"/> Every student has the opportunity to graduate from high school with an Associates Degree or college transfer credit.							
Objective 1.4 Increase technology resources to support 21 st century initiatives							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
1.4.1 Provide 21 st century classroom technology tools for 7 th grade science classrooms	SMART Boards, Projectors, Student Response Systems, Document Camera, Airliners, Laptops, Professional development	CTO, Assistant CTO- Instruction, Instructional Technology Facilitators, Deputy Superintendent of Instruction, Secondary Science Instructional Specialist	\$223,020 interactive white boards, classroom response systems, document cameras, projectors, airliners \$42,000 Laptops \$6,300 Software	Local Local Local	Beginning August 2009 Evaluate June 2010	Purchase orders, Professional development logs	

1.4.2 Provide 21 st century classroom technology tools for 6 th grade science classrooms	SMART Boards, Projectors, Student Response Systems, Document Camera, Airliners, Laptops, Professional development	CTO, Assistant CTO-Instruction, Instructional Technology Facilitators, Deputy Superintendent of Instruction, Secondary Science Instructional Specialist	\$223,020 interactive white boards, classroom response systems, document cameras, projectors, airliners \$42,000 Laptops \$6,300 Software	Local Local Local	Beginning August 2010 Evaluate June 2011 Ending June 2013	Purchase orders, Professional development logs	
1.4.3 Early College-- Continue to support hardware, software, infrastructure for Early College at Bessemer City High School	Hardware, Software, Switches, Wiring Professional development	CTO, Assistant CTO-Operations	\$22,000.00	State	Beginning August 2009 Evaluate each June 2009-2013 Ending June 2013	Work Orders, Purchase Orders	
1.4.4 Continue to provide Web 2.0 resources	Connectivity to NCREN	CTO, Assistant CTO-Operations	N/A	N/A	Beginning August 2009 Evaluate each June 2009-2013 Ending June 2013	Bandwidth	

1.4.5 Research and implement for district-wide web-based media automation	Feasibility study Software, hardware and infrastructure requirements Pilot in 6 new schools	Director of Media and Special Programs	N/A	N/A	Beginning August 2009 Evaluate June 2010-2013 Ending June 2013	Feasibility Study, Purchase Orders	
1.4.6 Increase technology access and resources for students at high schools to support NCVPS, Learn and Earn, Early College, graduation project, online testing, etc. by adding 16 laptops with carts at each school	Wiring, Switches, Laptop Carts	CTO, Assistant CTO-Operations	\$240,000 Laptop carts \$24,000 Switches \$4,600.00 Access Points \$38,400.00 Wiring	State State State State	Beginning September 2009 Evaluate June 2010 Ending June 2010	Inventory, Purchase orders	
1.4.7 Increase student technology access in middle schools to support State and district mandates such as online testing (computers skills, writing, etc.), research projects, science initiatives, Classworks by adding computers or laptops	Computers, Wiring, Wireless Access Points, Switches	CTO, Assistant CTO-Operations	\$360,000.00 Laptop Carts \$36,000.00 Switches \$6,900.00 Access Points \$4,800.00 Wiring	State State State State	Beginning September 2009 Evaluate June 2010 Ending June 2010	Inventory, Purchase Orders	

1.4.8 Provide access to United Streaming resources	Hosting server for access and content	CTO, Assistant CTO-Instruction, Assistant CTO - Operations	\$72,000.00 \$5,000.00 Training	Local In-Kind	Beginning August 2009 Evaluate June 2010-2013 Ending June 2013	Usage reports	
1.4.9 Provide schools with appropriate software and other resources to implement 21 st Century skills.	Software, Web-based resources, other resources	Chief Technology Officer, Assistant Chief Technology Officer, Instructional Services, Principals, Technology Facilitators	\$500,000.00	Local, State, Federal, Grants	Beginning August 2009 Evaluate June 2010-2013 Ending June 2013	Purchase orders, computer images, professional development logs	
1.4.10 Provide schools with appropriate software and other resources to implement 21 st Century skills.	Software, Web-based resources, other resources	Chief Technology Officer, Assistant Chief Technology Officer, Instructional Services, Principals, Technology Facilitators	\$500,000.00	Local, State, Federal, Grants	Beginning in September 2009 Evaluate July 2010-2013 Ending June 2013	Purchase orders, computer images, professional development logs	
1.4.11 Provide classrooms with 21st Century technology tools, such as, printer, projectors, interactive whiteboards, student response systems, handheld devices and any other applicable emerging technology tools	Printers, Projectors, Interactive white boards, student response systems and other emerging technology tools	Chief Technology Officer, Assistant Chief Technology Officer, Instructional Services, Principals, Technology Facilitators	\$1,000,000	Local, State, Federal, Grants	Beginning in September 2009 Evaluate July 2010-2013 Ending June 2013	Purchase orders, inventory, professional development logs	

**NC public schools will be led by 21st Century professionals.
Current Situation Narrative**

Gaston County Schools provides professional learning that highlights resources from DPI such as Kaleidoscope and NCWise Owl, LEARN NC, SAS inSchool, eBistro, Kaleidoscope, Gale InfoBits, Grolier Online, Jr. Reference, and Info Trac through school contacts. The district also supports teachers who attend Intel Teach programs and offers Intel Teach Programs professional learning. These resources are also integrated and introduced at the Teacher Induction Program for Success (TIPS) for first-year teachers and new teachers to the district. Professional learning is provided in curriculum areas through instructional specialists, instructional technology facilitators, literacy coaches, and media coordinators.

Principals and directors are also introduced and reminded of resources at administrative meetings. Instructional technology facilitators plan and deliver appropriate staff development of these resources Pinnacle Leaders, identified in Strategic Priority 1: NC students will be globally competitive, are also trained in the resources. These teachers model the use of resources in the classroom and provide just-in-time training with individuals. Resources provided from the Department of Public Instruction, LEARN NC, SAS in School's Curriculum Pathways, and others are also shared at the district's annual Teaching and Learning Conference.

Gaston County School district is implementing Professional Learning Communities (PLC). Seventeen of the schools have been trained and will begin this professional learning model at the schools. Through the PLC at each school, strategies and resources will be identified that are needed to improve student achievement and prepare teachers to prepare students.

There are eight instructional technology facilitators based at high schools that serve the high school feeder area. There are also two full-time instructional technology facilitators at two at-risk middle schools in the district. The two middle schools are implementing the IMPACT model in the district. Enhancing Education Through Technology funds provide professional learning for the schools to implement the IMPACT model as well as provide technology resources for the school. Instructional technology facilitators provide professional learning for technology and technology integrated initiatives. As indicated in Strategy 1, the technology facilitators focus on 21st Century skills for teachers and students. Each school collaborates with the instructional technology facilitator to provide identified site-based professional learning based on their School Improvement Plan. They will also model best teaching practices integrating technology, as well as train teachers to use and integrate technology. The facilitators are available for group or individualized professional learning.

One major initiative of the instructional technology facilitators is to create and maintain a website of resources to help teachers and students master skills needed for students to

successfully pass the NC Online Test of Computer Skills. Instructional technology facilitators meet with middle school teachers to determine what students need to learn based on the results of the Technology Literacy Assessment (TLA) administered in 7th grade. The instructional technology facilitators also provide professional learning for teachers, model in the classrooms, and design and assist the middle school teacher in implementing preparation and remediation strategies for technology literacy. The professional learning is ongoing for the middle school teachers in order to effectively integrate these resources into their core curriculum

The instructional technology facilitators collaborate with teachers and other instructional staff to develop curriculum materials and specific lesson plans that integrate technology and models the integration of technology in all curriculum areas. The instructional technology facilitators use data-driven decision making to implement best practices related to technology use in the schools. The instructional technology facilitators also provide professional learning for Train-the Trainer initiatives throughout the district such as upgrading to Office 2007 and teacher web pages.

Pinnacle Leaders provide professional learning each year at their schools. Schools that do not have a Pinnacle Leader are encouraged to have teachers apply for the next Pinnacle session. In the meantime, schools without Pinnacle Leaders will have one or more assigned to the school. Pinnacle Leaders also focus professional learning for district-wide technology initiatives such as teacher web pages and Office 2007. System operators, assigned at the school to assist in troubleshooting technical issues, also provide some individualized and school-wide training. T.R.I.C.K.S. trainers, who are also Pinnacle Leaders, provide professional learning for T.R.I.C.K.S. teachers. T.R.I.C.K.S. trainers and teachers participate in surveys to identify areas for professional learning as well as to identify growth in technology skills. The train-the-trainer concept is used for large initiatives with grade or level specific resources such as AIMSweb for K-2 teachers and Classworks for middle and high school teachers.

Gaston County Schools hosts a Teaching and Learning Conference for the district's teachers and staff, charter schools and private schools. The district analyzes test data and objectives in the Strategic Plan, The LEA Improvement Plan, and the Title I Plan to determine needs for professional development. Sessions throughout the two-day period focus on initiatives in the existing plans. State and nationally recognized individuals model and demonstrate best teaching practices to improve teaching and student achievement. Instructional technology facilitators provide professional development to help our teachers improve their 21st Century Skills. Gaston College partners with Gaston County Schools. During the summer of 2008, Gaston College hosted the Teaching and Learning Conference on the college's campus.

Gaston County Schools also relies upon the human resources available at the Department of Public Instruction (DPI). In support of IMPACT at York Chester Middle School and Southwest Middle School, DPI instructional technology specialists have provided week-end training at a retreat and also in-house training at the middle schools. Other consultants provided by DPI provide professional learning activities for schools

throughout the district. NCVPS and Learn and Earn Online representatives, both from Gaston College and the UNCG iSchool, provided training to the district's online facilitators and distance learning teachers and facilitators. The regional DPI instructional technology specialists provide professional learning and also resources to support district initiatives.

Online courses and resources are also available for professional learning opportunities for employees in Gaston County Schools. The district subscribed to PD360 which is a resource that provides strategies for professional learning and resources to administrators to recommend to personnel. Pinnacle Leaders also take LEARN NC online courses to learn how to teach the online course and become experts in the curriculum offered through the course. As a district, the Adolescent Literacy Strategies for Content Areas is offered several times throughout the school year.

Each year, professionals in Gaston County participate in the district's Administrative Summit, Financial Secretaries Conference, and Gaston County Association of Educational Office Professionals (GCAEOP) meetings and conferences. Each conference provides the individuals with skills to efficiently and effectively manage their job. Lateral entry teachers participate in a state required training program (10-Day Training) to prepare for the classroom. Technology Support Services offers "Lunch and Learn" for administrators and administrative assistants. Sessions focus on resources that will improve efficiency of daily operations. The one-hour session, where participants bring their lunch and learn, may show tidbits and tips for word processing, spreadsheets, Lotus Notes databases or e-mail, department website, upgrades to Office 2007.

The Linda Rader Staff Development Center has a lab with 15 computers, two large meeting rooms, and one small room which allows for a variety of professional learning. The Rader Center also houses three wireless carts containing 15 computers each, to be used throughout the building for continuing education. Projectors are mounted in each of the meeting rooms and lab. Each of the rooms is wired for wireless technology. The Rader Center also has distance learning equipment for complete videoconferencing capabilities and archiving professional learning sessions. The archives sessions may be accessed through the district's website for teachers to view and/or review. Schools also have labs that can be used for training. The Technology Support Services department also has a lab of 15 computers in its building. Many of the schools have wireless laptop carts that, when not being used for instruction, may be used for professional learning.

The Gaston County Schools' Board of Education unanimously voted to continue to require teachers in Gaston County to have two continuing education units (CEUs) or twenty hours in technology-specific professional development. The instructional technology initiative is to continue to infuse technology and technology resources into curricular areas.

Administrators and teachers throughout the district use NCWISE on a daily basis to enter and obtain reports related to student data. Administrators use the Human Resource Management System, technology generated work order system, CECAS, e-mail, e-

Procurement, and Schooltime for timesheets. Electronic spreadsheets for each principal and budget manager are used. Data is transmitted to electronic spreadsheets from allotments and purchases from the AS400. An electronic Technology Purchase Approval process is in place to ensure that software and hardware purchases will work and can be supported. A technology web-based inventory and work order system is used. This allows the district and schools to trace acquisitions, provide reports, and provide data for planning and purchases. Zarca, an online survey tool quickly and easily evaluates and gathers data from programs, initiatives, and personnel. Schools and departments are highly encouraged to have a school website to communicate initiatives and events to the school community.

Gaston County Schools also uses an online professional learning database. All staff development scheduling, enrollment, attendance sheets, and evaluations will be managed through a web-based program. The web-based staff development database populates from the HRMS data for registration and course participation. Administrators are able to provide immediate feedback regarding the number of CEUs a teacher has acquired with a list of courses.

ABC Tools is used to gather student data to make decisions for course work and class placement. The data warehouse provides current and longitudinal data which can be readily accessed through the web for planning and decision-making. Teachers have cross-curricular research and interactive websites to enhance instruction. Software for teachers is also available to challenge and remediate students. Teachers also use Excel spreadsheets to track student data provided from the data warehouse. Technology is used by teachers for presentations and engaged learning experiences.

Between 20% and 30% of the annual technology budget received is spent on technology professional development. According to the mandated DPI CTO, of budgeted local and state funds, 18.44% was spent on staff development and an additional \$59,837.75 was in-kind. The total amount for staff development reflected with real dollars and in-kind is 23% of the total amount. The technology budget provides for the professional learning for technology integrated initiatives such as 21st Century classroom tools, distance learning teachers and facilitators for delivery of online and distance courses, development and delivery of online courses, district initiated courses, and school-based courses. Professional learning funds are used to prepare teachers to become Pinnacle Leaders. Technology funds are budgeted to sustain support of TRICKS to train trainers, teachers, and provide continuous professional learning. Professional learning is also provided for technicians and instructional technology facilitators to stay current and/or support technology initiatives in the district. Over 30% of federal EETT money is spent on technology professional learning to move two middle schools to the IMPACT model.

Schools and other departments in the district also expend funds on technology staff development. The Professional Learning Department provides funds for technology integrated initiatives, supports the Teaching and Learning Conference each year where instructional technology facilitators focus on technology tools and integration. PD360, a web-based resource that provides just-in-time professional learning, is also provided to

all administrators. All departments provide professional learning opportunities to their employees based on needs of individual departments. The district enables participants to present at and attend state and national technology conferences which allows for collaboration of ideas.

Teacher and administrators are trained to access and use ABC Tools, Online surveys, SAS EVAAS, Eduware (benchmark assessment), Technology Literacy Assessment (TLA-technology literacy benchmark assessment), Classworks, AIMSweb, the district's data warehouse, DASH and other recourses using the train-the-trainer concept. To provide professional learning for other resources, identified teachers, Pinnacle Leaders, literacy coaches, or administrators have been trained and these individuals will be the key person at the school to train others.

During the past two years in Gaston County Schools, the instructional technology facilitators and media coordinators have focused on the use of Web 2.0 resources such as blogging, podcasting. Vodcasting, and video conferencing. Many of the teachers and students are using ePals to connect to students outside the school walls. Teachers are learning to use the web to write, create, and connect with others around the world. Websites, related to the North Carolina Standard Course of Study, are also provided to teachers and students. Technology Support Services is in the process of connecting with NCREN to provide quick access by increased bandwidth to Web 2.0 tools and resources for teachers and students.

**NC public schools will be led by 21st Century professionals.
Strategic Technology Plan**

Include at least one strategy or objective that includes the following:

1. Teacher/staff skills assessment
2. Diverse training resources (local and online including DPI resources)

3. Follow-up support
4. Local certification and professional development requirements
5. Ethical and professional standards
6. Evaluation of training
7. Readiness of an educator to design, implement, and discuss assessment strategies ("assessment literacy.")
8. ***Global awareness training

Strategic Priority 2: NC public schools will be led by 21st Century professionals.*							
Strategic Goal: (Please check.)							
<input checked="" type="checkbox"/> Every teacher will have the skills to deliver 21st Century content in a 21st Century context with 21st Century tools and technology that guarantees student learning.							
<input type="checkbox"/> Every teacher and administrator will use a 21st Century assessment system to inform instruction and measure 21st Century knowledge, skills, performance, and dispositions.							
<input type="checkbox"/> Every education professional will receive preparation in the interconnectedness of the world with knowledge and skills, including language study.							
<input type="checkbox"/> Every education professional will have 21st Century preparation and access to ongoing high quality professional development aligned with State Board of Education priorities.							
<input type="checkbox"/> Every educational professional uses data to inform decision.							
Objective: 2.1 Assess teacher/staff technology skills							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
2.1.1 Research teacher/staff technology skills assessment tools	Conferences, Regional technology director meetings, ISTE website	CTO, Assistant CTO-Instruction	\$10,000.00	State	Beginning August 2009 Evaluate and ending June 2010	Assessment Tool Selected to recommend to Cabinet and Board	

2.1.2 Pilot teacher/staff technology skills assessment at one school per level and with identified groups such as Pinnacle Leaders, TRICKS Teachers	Assessment tool, Teachers, Principals, Instructional Technology Facilitators	Superintendent, Deputy Superintendent of Instruction, CTO, Asst. CTO-Instruction	\$20,000.00	State	Beginning July 2010 Evaluate June 2011 Ending June 2011	Assessments	
2.1.3 Provide training on assessment tool and ISTE/NC Teacher Technology Standards at pilot sites and with pilot groups	ISTE/NC Standards, Assessment tool, Instructional Technology Facilitators	CTO, Asst. CTO-Instruction	\$5,000.00	In-Kind	Beginning July 2010 Evaluate June 2011 Ending June 2011	Workshop rosters	
2.1.4 Make recommendations to BOE for teacher/staff assessment tool	BOE Agenda and presentation	Deputy Superintendent of Instruction, CTO, Asst. CTO-Instruction, Professional Learning Department	N/A	N/A	Beginning July 2011 Ending September 2011	Board Decision	
2.1.5 Continue to provide technology skill and integration-based professional learning opportunities for teachers to acquire renewal credits mandated by BOE	Professional Learning, Instructional Technology Facilitators, ISTE/NC Teacher Standards, Online workshop registration system, Human Resources Department	CTO, Asst. CTO-Instruction, Professional Learning Department	\$25,000.00	In-kind	Beginning August 2009 Evaluate each June 2009-2013 Ending June 2013	Workshop rosters, Workshop registration list	

Strategic Priority 2: NC public schools will be led by 21st Century professionals.*

Strategic Goal: (Please check.)

- Every teacher will have the skills to deliver 21st Century content in a 21st Century context with 21st Century tools and technology that guarantees student learning.
- Every teacher and administrator will use a 21st Century assessment system to inform instruction and measure 21st Century knowledge, skills, performance, and dispositions.
- Every education professional will receive preparation in the interconnectedness of the world with knowledge and skills, including language study.
- Every education professional will have 21st Century preparation and access to ongoing high quality professional development aligned with State Board of Education priorities.
- Every educational professional uses data to inform decision.

Objective: 2.2 Provide a variety of professional development opportunities focusing on a variety of technology skills

Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
2.2.1 Provide professional learning opportunities at district-level and schools in traditional and online formats	Pinnacle Leaders, Instructional Technology Facilitators, Media Coordinators, Teaching and Learning Conference, PD360, LEARN NC courses, DPI resources-NCWISE Owl, Kaleidoscope, eBistro, etc., Web 2.0 Tools and Resources, Foreign Languages	CTO, Assistant CTO-Instruction, Professional Learning Department, School-based Professional Learning Communities	\$20,000.00 \$10,000.00	In-kind State	Beginning August 2009 Evaluate Each June 2009-2013 Ending June 2013	Course offerings, Course evaluations	
2.2.2 Continue to provide staff development in use of assistive technologies as needed	Assistive technologies, training resources, Trainer	Director of Exceptional Children, Assistive Technology Coordinators	N/A	N/A	August 2009 Evaluate Each June 2009-2013 Ending June 2013	Resources allocated for students	

2.2.3 Continue the Pinnacle Leaders training to maintain and retain quality teachers with 21 st Century skills	21 st Century Classroom Tools (any or all of the following) Interactive white board, projector, laptop, student response system, wireless slate	CTO, Assistant CTO-Instruction	\$10,000.00 Workshop Expenses \$10,000.00 Trainer Pay \$105,000.00 Equipment and Resources	State State State	August 2009 Evaluate Each June 2009-2013 Ending June 2013	Purchase orders, Professional development logs, Evaluations, List of Pinnacle Leaders	
2.2.4 Provide professional learning to middle school science teachers to use 21 st Century classrooms tools	SmartBoard, Student Response Systems, Airliner, Document Camera, Laptop, Projector, Software	Deputy Superintendent of Instruction, Executive Director of Secondary Schools, Professional Learning Department	\$5,000.00	In-kind	August 2009 Evaluate Each June 2009-2010 Ending June 2010	Purchase orders, Professional Learning logs, Evaluations	
2.2.5 Provide technology staff development to Central Office Administrators, Administrative Assistants at monthly lunch and learn sessions	Labs, Trainer, Training Materials	CTO, Assistant CTO-Instruction	\$5,000.00	In-kind	Beginning in September 2009 Evaluate July 2010-2013 Ending June 2013	Feedback from survey, List of professional learning courses	
2.2.6 Continue to evaluate technology professional development offerings	Online professional development evaluation form, Zarca Survey resource	CTO, Assistant CTO-Instruction, Coordinator and Facilitator of Staff Development, Teachers	N/A	N/A	August 2009 Evaluate Each June 2009-2010 Ending June 2010	Evaluation forms	

2.2.7 Archive Professional Learning Sessions offered via Distance Learning	Internet, Distance Learning equipment	Distance On-Line Coordinator	N/A	N/A	August 2009 Evaluate Each June 2009-2013 Ending June 2013	Links to Archive sessions	
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Strategic Priority 2: NC public schools will be led by 21st Century professionals.*

Strategic Goal: (Please check.)

- Every teacher will have the skills to deliver 21st Century content in a 21st Century context with 21st Century tools and technology that guarantees student learning.
- Every teacher and administrator will use a 21st Century assessment system to inform instruction and measure 21st Century knowledge, skills, performance, and dispositions.
- Every education professional will receive preparation in the interconnectedness of the world with knowledge and skills, including language study.
- Every education professional will have 21st Century preparation and access to ongoing high quality professional development aligned with State Board of Education priorities.
- Every educational professional uses data to inform decision.

Objective 2.3 Increase assessment literacy of administrators and teachers

Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
2.3.1 Support and maintain benchmark assessment tools	Trainers, Eduware website, TLA, AIMSweb, benchmark data and reports	CTO, Assistant CTO-Operations	N/A	N/A	August 2009 Evaluate Each June 2009-2013 Ending June 2013	Benchmark assessments	
2.3.2 Provide professional learning in the use of student response systems for formative assessment	Student Response Systems, Desktops and/or Laptops, Questioning strategies, NCSCoS, Instructional Technology Facilitators	CTO, Assistant CTO-Instruction	\$10,000.00	In-kind	August 2009 Evaluate Each June 2009-2013 Ending June 2013	Professional learning logs	
2.3.3 Provide professional learning in data-driven decision making tools	DASH, Data Warehouse, CECAS, SAS EVASS, NCWISE, ABC Tools	Chief Accountability Officer, Director of Testing	N/A	N/A	August 2009 Evaluate Each June 2009-2013 Ending June 2013	Professional Learning logs	

Strategic Priority 2: NC public schools will be led by 21st Century professionals.*

Strategic Goal: (Please check.)

- Every teacher will have the skills to deliver 21st Century content in a 21st Century context with 21st Century tools and technology that guarantees student learning.
- Every teacher and administrator will use a 21st Century assessment system to inform instruction and measure 21st Century knowledge, skills, performance, and dispositions.
- Every education professional will receive preparation in the interconnectedness of the world with knowledge and skills, including language study.
- Every education professional will have 21st Century preparation and access to ongoing high quality professional development aligned with State Board of Education priorities.
- Every educational professional uses data to inform decision.

Objective 2.4 Provide resources and guidance to ensure an understanding and demonstration of high ethical standards in use of technological resources for all network users

Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
2.4.1 Provide Professional Learning on Acceptable Use Policies and Guidelines	Policies, Acceptable Use Policy, Instructional Technology Facilitators, System Operators	CTO, Assistant CTO-Operations, Assistant CTO-Instruction, School-based System Operator	\$12,000.00	In-kind	August 2009 Evaluate Each June 2009-2013 Ending June 2013	Signed AUP by all network users housed at schools	
2.4.2 Provide an annual review of the copyright and intellectual property standards, and other policies related to media services	AUP, NCWISE requirements, Professional Learning Staff meetings, Media Coordinator, IMPACT, DPI Resources, Pinnacle Leaders	Director of Student Support Services, Media Coordinators	\$4,000.00	In-kind	August 2009 Evaluate Each June 2009-2013 Ending June 2013	Meeting agenda	

NC public school students will be healthy and responsible: Current Situation Narrative

Each school implements a Safe Schools Plan. Communication is key in all Safe School Plans. Gaston County Schools utilizes NTI Connect-ED which assists the district to efficiently improve student safety, parental involvement, staff communications, and student attendance. NTI Connect-ED employs an easy-to-use interface and state-of-the-art technology to enable the district to distribute thousands of personalized voice communications to parents and staff within minutes at up to six phone numbers and two e-mail addresses per student. This enables the school and the district to communicate as quickly as possible regarding safety.

The table below indicates safe school components and supporting technologies.

Safe Schools Components	Supporting Technology
School Campus Security	Hallway and Parking Lot Cameras, Metal Detectors (Wands and Walk-through), Systems for Lock Down, Fire Drills, Tornado Drills, School Resource Officers, Computer Login for Visitors at Various Schools, Sign-in and Sign-out in Offices, NTI Connect-ED Communications, IP Access for 911 Emergencies for Local Police, Employee Badges, Two Way Communication Devices, Call button in classrooms
School Bus Security	Bus Surveillance Cameras, TIMS Bus Information, Cell Phones, Lead Bus Drivers have E-mail
Staff ID Systems	Computer Generated Identification Badges
Student Information/Tracking Systems	NCWise, Point of Sale
Internet and E-Mail Filtering	Content Filter—8e6, Juniper (Firewall), Spam Sentinel Scan Mail, and Anti-Virus for E-mail, Symantec for Servers and Desktops
Communication Devices	Intercom, Phone System, Cell Phone, Two-Way Radio, Fax Machine, E-mail, System Log Server for Monitoring Firewall Attempts, Cacti—Server Status Notifications
Website Use	Lotus Notes Work Order Database for Repairs, Electronic spreadsheets, Technology Purchase Approval, e-Procurement, HRMS, Workshop Registration, Web-based Work Order System for Technology, Web-based

	Technology Inventory, Substitute system, Online Board Policies, Silence Hurts—Anonymous Notification of Suspected School Violence, Lotus Notes Database for Emergency Plans Handbook
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Telephones are not available in all classrooms throughout the system. Some schools have telephones that enable the teachers to contact the office. Several schools have classrooms equipped with telephones that provide outside connectivity. Classrooms will have intercom access and/or walkie talkies to and from the office areas for emergencies and communications. All high schools and middle schools are equipped with electronic surveillance systems that allow office staff to simultaneously view parking lots, hallways, stairwells, and other less visible areas. All buses are equipped with video surveillance systems that allow administrators to review incidents that occur while buses are in transit.

The Child Nutrition Department utilizes the Point of Sale and FARMA to track free and reduced lunch. The School Nutrition website located at http://www.gaston.k12.nc.us/departments/nutrition/cafe_prepay.htm provides an easy to use school meal payment process. Participation is voluntary and students may enroll at any time. Another alternative is Direct Withdrawal, which is a reliable and simple way to pay for the child’s meals. A computerized account provides students and parents the ability to check lunch balances. Parents may also add money on the student lunch account online. Touch screens and key pads are used for students to login their lunch code. All personal information is stored in a secure, offline database and is accessed only to process payments and send payment confirmation. Ordering from the central kitchen is managed through the Internet. School Nutrition also has remote management of cafeteria machines. All cafeteria managers have e-mail.

Health Services also uses technology to ensure healthy students. All school nurses have laptops and provide a website for community information related to Health Services. Physical education classes in elementary schools use technology software to track physical fitness. At many schools teachers of physical education classes teach students to create databases and track their own physical fitness.

Strong community and family support is recognized in the numerous after-school activities throughout the district. Communities in Schools (CIS), enables after-school opportunities through the YMCA, church sponsored activities, and Boys and Girls Clubs. The Boys and Girls Clubs have sites in Gastonia and Lowell with computer labs so students may do research and complete homework assignments. The Boys and Girls Clubs have purchased laptops for after-school programs at middle schools. Many different organizations, including faith-based groups, are in collaboration with the district to provide quality after-school programs that meet the needs of the students and families in the community. Many after-school programs are also provided to allow students and parents access to technology. Funds available through the district have provided laptops at homeless centers to help students and parents. Parent Specialists at identified Title I

schools track the parent involvement through technology. Schools have a family fun night or a parents' night that engage the students and parents in learning activities. Some schools also open labs to students and parents before and after school to enable research, help with homework, and assist with job searches. Businesses contribute by providing incentives to teachers and students. GEAR Up is a program at an identified middle and high schools in the same feeder area in the district. The program targets the at-risk students to provide support and encouragement to stay in school and pursue post high school learning opportunities.

NC WISE, the web based student management system, is used daily by teachers and administrators. The district just completed the first full year of implementing NC Wise. Infrastructure and access is in place to support the system. School personnel are trained in building reports that allow examination of discipline data in many ways. NCWise is used to track student discipline. Central office personnel regularly monitor discipline data for discrepancies and problems that may need addressing at the school or district level. Technology resources are provided at all locations for immediate retrieval and data entry.

Gaston County Schools provides flexible access in most of the media centers to allow students access to resources before or after school hours. Other schools offer flexible hours in the media centers so that students may complete school assignments and projects using technology. Some schools schedule night hours to allow students use of computer labs. Many of the resources that teachers and students need are web-based. Parents and students complete surveys, using the Zarca Survey software, that provide information regarding school safety and access to technology.

PTA/PTOs have access to networked computers at the schools. Users may be setup at the individual school site and all users must read and sign an Acceptable Use Policy before accessing the school network. Desktop security policies designate levels of access on the school network to maintain network security

All classrooms have a minimum of one modern networked computer with Internet access. All students and teachers have a home directory on the school or building server that stores resources and data files. Students have access to files on a Share directory and teachers have access to files on both a Share and a Teacher directory. This enables students and teachers to collaborate and share resources.

The district provides EasyTech for all 2nd through 8th grade students. EasyTech is a web-based resource that is aligned to the NCSCoS and teaches technology skills in an integrated manner. Discovery Education's United Streaming is also provided for all K through 12th grade teachers and students in the district. Classworks is available at all middle schools and five of the identified high schools participating in the smaller learning community grant. Students and parents have access to the web-based Accelerated Reader and STAR Reading for reports. This ensures availability for all students to have equitable access to all tests, and communication between teachers and parents regarding student reading progress. Other resources are level specific or site-based. Students and

teachers have access to web resources available from DPI such as NCWISE Owl, e-Bistro, Kaleidoscope, LEARN NC, etc.

Communication is provided to the community and parents through a district web-site. Various departments have websites that are extensions of the district web-site and maintain information and resources pertinent to each department. Beginning in October 2008, schools and teachers will be provided with web-page designed templates specific for each individual. These templates will enable all teachers to communicate information and provide resources for students, parents, and community.

Gaston County Schools presently provides e-mail accounts for all teachers. Teachers use the web-based Lotus Notes version called iNotes, available from any Internet-capable computer. Teachers use accounts to keep in touch with students, other teachers, administrators, parents, and others in the Gaston County Schools community. Currently, students who need access to e-mail are using the free version of Gagle.net. Only one school, Highland School of Technology, pays for the subscription version.

Most schools in the district have access to Channel 21, which is the broadcast channel for the school district. Teachers and parents subscribing to Time Warner Cable have access to Channel 21 news and information. Each school appoints a representative to serve as the news and information contact who provides the Chief Communications Officer with information for the newspapers, news channels, Board Briefs, Applebits (district newspaper), and Channel 21.

There is Student Code of Conduct for elementary, middle, and high schools that is approved by the Board of Education. The Student Code of Conduct must be reviewed by students and students must sign that the teachers have informed them of the Student Code of Conduct. Students must be informed of and sign the district Acceptable Use Policy that includes the following:

- Internet and the Educational Program - Policy Code 3230/7370
- Student Network and Internet Acceptable Use Guidelines
- Web Publishing - Policy Code 3280/7385
- Student Network and Internet Acceptable Use Policy Agreement

Staff Acceptable Use Policy includes:

- Internet and the Educational Program - Policy Code 3230/7370
- Network and Internet Acceptable Use Guidelines
- Electronic Mail - Policy Code 7380
- Electronic Mail Guidelines and Procedures
- Network Security - Policy Code 3231/7371
- Network Security Regulations, Standards and Guidelines
- NC WISE ID, Password and Workstation - Policy Code 7375
- NC WISE ID, Password and Workstation Guidelines
- Acceptable Use Agreement

Staff must sign a new AUP each year.

NCWISE user training stresses the fact that data in the program is subject to subpoena and that notes and other data entry must meet professional standards.

Media coordinators and/or system operators review policies to ensure ethical and personal responsibilities.

Policies and guidelines allow students to have access to Web 2.0 resources. Students have access to websites that encourage blogging, podcasting, vodcasting, and other 21st Century resources and tools. Students have access to websites that enable collaboration with students in classrooms in other schools, districts, countries. Web resources are provided that promote global awareness in alignment with the NCSCoS.

Nurses and psychologists have laptops that enable connectivity at the schools. Nurses are equipped with pagers so they are always accessible to schools. Many of the schools also have computers for agency partners. A Memorandum of Understanding has been developed with outside agencies so that access to resources is available in order for them to provide adequate services within the schools.

**NC public school students will be healthy and responsible.
Strategic Technology Plan**

Include at least one strategy or objective that includes the following:

1. School campus security (video, alarms, metal detectors, etc.)
2. School bus security (video, radios, cell phones, etc.)
3. Student and Staff ID systems
4. Student Information/Tracking Systems (SIMS/NCWISE, nutrition, etc.)
5. Internet and email filtering/security
6. Classroom telephone systems and other communications devices
7. Technology used to educate, monitor and maintain healthy student lifestyles
8. Policy and procedures to address global, ethical and responsible
9. Website use (district, school and classroom)
10. Flexible access to resources
11. Equitable access to resources
12. Ethical and personal responsibility

Strategic Priority 3: NC public school students will be healthy and responsible.*							
Strategic Goal: (Please check.)							
<input checked="" type="checkbox"/> Every learning environment will be inviting, respectful, supportive, inclusive, and flexible for student success. <input checked="" type="checkbox"/> Every school provides an environment in which each child has positive, nurturing relationships with caring adults. <input type="checkbox"/> Every school promotes a healthy, active lifestyle where students are encouraged to make responsible choices. <input type="checkbox"/> Every school focuses on developing strong student character, personal responsibility, and community/world involvement. <input type="checkbox"/> Every school reflects a culture of learning that empowers and prepares students to be life-long learners.							
3.1 Objective: Improve school and bus security							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
3.1.1 Provide employee identification badges	Badges, camera	Director of Human Resources	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Badges	

3.1.2 Provide city and county police with emergency virtual private network (VPN) access	Police, Bandwidth	CTO, Assistant CTO-Operations	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	List of IP Addresses provided to police dept.	
3.1.3 Continue to provide network filtering and blocking software to monitor for student Internet safety	Filtering software, Juniper Firewall, Technical Training	CTO, Assistant CTO-Operations	\$7,000.00 Hardware Training \$5,000.00 \$4,000.00 Content Filter Software	Local In-kind Local	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Reports generated from 8e6 for blocked sites	
3.1.4 To continue to use TIMS (Transportation Information Management System) for demographics and safe bus routes	Server, Maintenance on Server	Executive Director Auxiliary Services, Director of Transportation	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Bus Routes	
3.1.5 Deploy surveillance cameras in halls, playgrounds, and parking lots	Cameras and computer equipment and software	Executive Director Auxiliary Services	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Number of cameras purchased and installed	
3.1.6 Obtain feedback from schools that are implementing student ID badges	School contact, hardware required, cost per school	Executive Director Auxiliary Services	N/A	N/A	Beginning September 2009 Evaluate June 2010 Ending June 2010	Recommendation for Student ID at other or all schools	

3.1.7 Purchase hardware and software to support student IDs	Hardware, Software, Personnel, Technology Support	Executive Director Auxiliary Services	N/A	N/A	Beginning July 2010 Evaluate Each June 2011-2013 Ending June 2013	Purchase Orders, Student ID badges	
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Strategic Priority 3: NC public school students will be healthy and responsible.*

- Strategic Goal: (Please check.)
- Every learning environment will be inviting, respectful, supportive, inclusive, and flexible for student success.
 - Every school provides an environment in which each child has positive, nurturing relationships with caring adults.
 - Every school promotes a healthy, active lifestyle where students are encouraged to make responsible choices.
 - Every school focuses on developing strong student character, personal responsibility, and community/world involvement.
 - Every school reflects a culture of learning that empowers and prepares students to be life-long learners.

Objective 3.2: Improve communication and communication systems

Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
3.2.1 Provide district communication through Channel 21	Equipment, Personnel	Chief Communication Officer (CCO)	N/A	N/A	Beginning July 2009 Evaluate each June 2009-2013 Ending June 2013	Channel 21 broadcasts	
3.2.2 Continue to provide web-site templates for district, departments, schools, and classrooms	SharePoint Software, SharePoint Licenses Servers Instructional Technology Facilitators, Pinnacle Leaders, Web managers	CTO, Assistant, CTO-Instruction, Assistant CTO-Operations, Distance/Online Learning Coordinator, Lotus Notes Administrator	\$75,000.00 2009-2010 Licenses \$75,000.00 2010-2011 \$225,000.00 2011-2013	State State State	Beginning July 2009 Evaluate June 2009-2013 Ending 2013	Purchase Orders Websites	
3.2.3 Implement a portal for teacher and student access to resources 24 hours a day	SharePoint Software, SharePoint Licenses Servers Instructional Technology Facilitators, Pinnacle Leaders, Web managers, Media Coordinators	CTO, Assistant, CTO-Instruction, Assistant CTO-Operations, Distance/Online Learning Coordinator, Lotus Notes Administrator, Director of Media and Special Services	\$25,000.00 Stipends \$20,000.00 Professional Learning \$10,000.00 Training for Support and Maintaining Portal	State State State	Beginning July 2009 Evaluate June 2009-2013 Ending 2013	Professional Learning Logs, Portal	

Strategic Priority 3: NC public school students will be healthy and responsible.*

Strategic Goal: (Please check.)

- Every learning environment will be inviting, respectful, supportive, inclusive, and flexible for student success.
- Every school provides an environment in which each child has positive, nurturing relationships with caring adults.
- Every school promotes a healthy, active lifestyle where students are encouraged to make responsible choices.
- Every school focuses on developing strong student character, personal responsibility, and community/world involvement.
- Every school reflects a culture of learning that empowers and prepares students to be life-long learners.

Objective 3.3: Ensure network and user security

Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results 2007
3.3.1 Evaluate and revise technology policies and guidelines to address 21 st Century learning environments and security	Policies, Guidelines	Board Of Education, Superintendent, CTO, Assistant CTO-Instruction, Assistant CTO-Operations	N/A	N/A	Beginning June 2009 Evaluate Each June 2009-2013 Ending June 2013	Policies and Guidelines	
3.3.2 Enforce measures to ensure network security and privacy of student data	Screen Savers, Network Logins and password, NC WISE ID and Passwords, Network Security Policies and NC WISE ID User Name and Passwords, System operator training, Data Networks Training	Chief Accountability Officer (CAO), CTO, CTO-Operations, Technicians	N/A	N/A	Beginning July 2009 Evaluate Each June 2009-2013 Ending June 2013	Screen savers on image, Passwords required for network access	
3.3.3 Review AUP and copyright and media policies with students	Policies, Guidelines, AUP, Student Code of Conduct	Administrators	N/A	N/A	Beginning August 2009 Evaluate Each June 2009-2013 Ending June 2013	Signed AUPs	

3.3.4 Continue to provide filtering devices and software to ensure privacy, protect data, and prohibit access to questionable content	Content Filter, Spam filter, Logins and passwords	CTO, Assistant CTO-Operations	Budget in strategy 3.1.4	State	Beginning July 2009 Evaluate Each June 2009-2013 Ending June 2013	Reports	
3.3.5 Investigate strategies for securing mobile computing devices	Wireless security software, hardware, sniffers, wireless/mobile device, detection device	CTO, Assistant CTO-Operations, LAN/WAN Engineer	\$10,000.00 Conferences, Training	State	Beginning July 2009 Evaluate June 2010 Ending June 2010	Recommendations	
3.3.6 Implement strategies for securing mobile computing devices	Wireless security software, hardware, sniffers, wireless/mobile device, detection device	CTO, Assistant CTO-Operations, LAN/WAN Engineer	\$100,000.00	State	Beginning July 2010 Evaluate June 2011 Ending June 2011	Purchase Order	

Leadership will guide innovation in NC public schools: Current Situation Narrative

Gaston County School district is moving to the professional learning community (PLC) model. During the summer of 2008, seventeen schools were trained to begin implementation of PLC. Administrators are also participating in a district PLC. Schools in the district are various levels of implementation in regards to IMPACT. Middle and high schools employ flexible scheduling which promotes cooperative planning among teachers and staff. Elementary schools are at various degrees of implementation. IMPACT is discussed at school sites. Two middle schools are implementing the IMPACT model. The schools are in year two of implementation. Teachers, administrators, and staff are participating in collaborative planning meetings to use data and resources to improve student learning. Both middle schools have a full-time media coordinator, full-time media assistant, and full-time technology facilitator. Funds are used from EETT for professional learning and technology resources needed to support the program. At district meetings, media coordinators are made aware of resources and tools that can be integrated into the content areas to promote international issues and global awareness. Media coordinators and technology facilitators are constantly exploring ideas, resources, and teaching methods that will prepare our students for a globally competitive environment.

Gaston County Schools' Strategic Plan reflects all "Future Ready Goals". The strategic plan process introduced the Future Ready Goals to all teachers and the student advisory committee. School Improvement Plans use data to address the Future Ready Goals to prepare NC students to be global learners, 21st century professionals, and 21st century systems. District administrators use web-based QuickPlace to post documents for principals, teachers, and parents. A Leadership Summit is provided annually for principals and assistant principals that focus on changes to meet Future Ready Goals. Book studies (The World is Flat, My Iceberg is Melting) reflect global changes related to education. The Board of Education's and superintendent's initiatives reflect Future Ready Goals. The initiatives are technology immersed in science classrooms in middle schools, web-based reading assessment and diagnostics for K-2, and continue support of small learning communities in high schools. The district has increased personnel at elementary schools and high schools to support these initiatives. Professional learning in use of data, technology-based resources such as Classworks, Accelerated Reader, STAR Reader, and formative assessment is provided to teachers and support staff.

Technology systems are constantly and continually evaluated to support changes in a global and 21st Century environment. Funds are requested to support changes for educational environments for students, teachers, parents, and community. Policies and guidelines are reviewed annually to ensure access to needed resources.

Leadership encourages and supports the distance learning (video conferencing) and online learning (NCVPS, Learn and Earn Online). Other resources such as Skype (talking from computer to computer), video conferencing nationally and internationally, e-Pals, Web 2.0 tools to connect with other students, and educational gaming are explored and used. Beginning in 2008-2009, schools and teachers will be provided

webpage templates that are easy to use in order for them to communicate with parents and the community. Implementation of a portal is planned to enable employees and students continuous access to resources and data. The portal will be setup and piloted in 2008-2009.

Policies and guidelines have been reviewed and evaluated to support global learning and Web 2.0 tools. Infrastructure and equipment is constantly upgraded to support 21st Century systems. The district connected to NCREN to enable access to Web 2.0 resources and expand bandwidth. Technology facilitators and media coordinators attend conference and workshop to keep abreast of resources, methods, best practices related to curriculum and Future Ready Goals.

Gaston County School district obtained the district-wide Southern Association accreditation. Many of the administrators participated in meeting and professional learning opportunity from APQC for improved district accountability. APQC provides a report which benchmarks data-driven decision process in exemplary districts with our district to help improve processes. Seventy school districts participate in this process. The strategic plan and school improvement plan process requires participants to monitor the strategies at each benchmark date and to report results and make changes to strategies based on the data.

District principals can apply and participate in PEP (Principal's Education Program). Assistant principals are provided with professional learning provided by Professional Learning Department throughout the year. Gaston County Schools encourages principal internships for students preparing for the principal administrative role. The district supports college and universities courses offered on school and district sites. Information regarding advanced degrees is shared throughout the district. Teachers are encouraged to participate in projects such as Pinnacle and TRICKS where skills are increased and lead to advancement opportunities.

Gaston County School district has infrastructure and hardware that enable teachers to have access to online courses and professional development. LEARN NC is used as a resource for professional learning with a focus on adolescent literacy strategies in the content areas. Teachers may also select other online courses that impact their content area. The district subscribes to PD360 and Discovery Education's United Streaming. Both web-based tools provide professional development resources for administrators to support teaching and learning strategies. Gaston County Schools partnered with Gaston College to offer the Teaching and Learning Conference which assists teachers in their quest to become 21st Century professionals. Blogging, podcasting, DPI and web-based resources, and other 21st Century tools are demonstrated and modeled in classrooms. Instructional technology facilitators offer these courses and provide continuous and ongoing support throughout the year. The district also has two computer labs available for professional learning. Gaston County Schools is also establishing professional learning communities within schools to support growth opportunities for teachers. Technology "Lunch and Learn" workshops, which focus on technology strategies, are offered to administrative assistants.

Distance learning (videoconferencing) classrooms are also used to support professional learning throughout the district. There is one distance learning classroom at all high schools, one at the Ruth Angel Department of Exceptional Children, one at the Linda Rader Staff Development Center, and one in the Board room at the Central Office. These classrooms enable teachers to attend classes and meetings at the school or location within the feeder area or near their home.

The district uses an online workshop and conference registration system. The registration system connects to the human resources database to automatically track and report renewal credits. There is also an electronic evaluation in the database and workshop participants must evaluate the courses before the credits are transferred to their records. The automated registration system allows the district to easily track the number and types of courses offered.

Each school uses data to determine strategies for school improvement which determine instructional technology and media resources that need to be obtained. The School Improvement Team at each school creates the plan of action for the school and how monetary resources will be allocated. Input is provided from the stakeholders at the school. The school media and technology committee makes recommendations based on data and the school improvement plan.

The district has a media advisory committee that meets quarterly. The district also has a technology committee that meets to evaluate the technology plan. Both media and technology presentation are made to the Board of Education. The Board also may receive information about media and technology from the Superintendent. Beginning in 2008-2009, the district has established a Media and Technology Advisory Committee (MTAC). The committee chairs are the Chief Technology Officer and the Director of Media and Special Programs. Members include media coordinators, technology facilitators, system operators, teachers, students, and parents. The MTAC will meet quarterly. Agenda items at the meetings will focus on Future Ready Goals and how media and technology provide a support system for all facets of education within the district. Recommendations will be made to supervisors regarding presentations to the Board of Education. Channel 21 and the website will be used to promote and inform the stakeholders.

Communities in Schools (CIS), enables after-school opportunities through the YMCA, church sponsored activities, Boys and Girls Clubs, and GEAR Up. Mentors from businesses and community work in the schools daily with students. Each year the mentors are recognized for their numerous contributions to students in Gaston County Schools. The mentor program also provides scholarships for students. The Gaston County Association of Educational Office Professionals (GCAEOP) does service projects to provide scholarships to students. The organization provides professional learning for administrative assistants in the district. Gaston College and the Gaston County Chamber partnered with the school district to provide quarterly sessions on the school district's initiatives. Technology was the focus at several of the meetings. The Ron Ensley

Foundation Grants award teachers funds to purchase technology and other educational resources for educational initiatives within their classrooms. The Gaston Gazette also partners with the school district to provide the opening school luncheon to promote the newspaper in the classroom. Schools also establish partnerships with local community businesses. Glenn Foundation enables teachers and media coordinators to obtain grants for resources in classrooms and media centers. These partnerships support the schools in a variety of ways including mentoring, resources, teacher support, and technology.

Business partnerships provide mentors for students at schools. During 2007-2008, mentors volunteered numerous hours at the school. Business partnerships also provide resources for schools such as SmartBoards, computers, books, school supplies and other resources requested by the individual schools.

**Leadership will guide innovation in NC public schools.
Strategic Technology Plan**

Include at least one strategy or objective that includes the following:

1. Leadership enabling teaching and learning collaborative projects
2. Media and Technology Advisory Committee
3. Leadership communication tools and venues
4. Leadership created professional growth opportunities
5. Partnerships
6. Process for addressing ongoing change

Strategic Priority 4: Leadership will guide innovation in NC public schools.*							
Strategic Goal: (Please check.)							
<input checked="" type="checkbox"/> School professionals will collaborate with national and international partners to discover innovative transformational strategies that will facilitate change, remove barriers for 21st Century learning, and understand global connections.							
<input checked="" type="checkbox"/> School leaders will create a culture that embraces change and promotes dynamic continuous improvement.							
<input checked="" type="checkbox"/> Educational professionals will make decisions in collaboration with parents, students, businesses, education institutions, and faith-based and other community and civic organizations to impact student success.							
<input type="checkbox"/> The public school professionals will collaborate with community colleges and public and private universities and colleges to provide enhanced educational opportunities for students.							
Objective 4.1 Use a variety of communication tools and venues							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
4.1.1 Support QuickPlace sites as a means for administrative and school communications	QuickPlace, QuickPlace Server,	Lotus Notes Administrator	\$1,000.00 \$5,000.00	Local Local	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	QuickPlace sites	

4.1.2 Provide access to data and resources on the district network anytime and any place	Internet Access	CTO, Assistant CTO-Instruction, Assistant CTO-Operations, LAN/WAN Engineer, Lotus Notes Administrator	N/A	N/A	Beginning July 2010 Evaluate June 2011-2013 Ending July 2013	Syslog	
4.1.3 Support and maintain district website and school websites	Website, servers, Webmaster, School web managers	CTO, Webmaster School Web Managers, Executive Director of Student Services	\$25,000.00 Licenses \$10,000.00 Professional Learning	Local In-kind	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	Website	
4.1.4 Provide NIE Connect-ED to communicate with employees, parents, and community	Web-based Connect-ED	CCO	N/A	N/A	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	Log of calls	
4.1.5 Provide distance learning (videoconferencing) equipment and archiving capabilities	Distance Learning Equipment, Accordent Archiving System, SANStorage	CTO, Assistant CTO-Operations, LAN/WAN Engineer, Distance Online Learning Coordinator	\$100,000.00 Equipment Maintenance Contracts \$5,000.00 Professional Learning \$2,500.00 Stipends	State, Local In-kind State	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	Sample of archived presentations	
4.1.6 Provide opportunities for parent and community input	Quarterly district-wide parent advisory, School PTO meetings, Community events	CCO, Administrators	N/A	N/A	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	Master calendar	

4.1.7 Implement a district-wide Media and Technology Committee (MTAC)	Members of MTAC	Director of Media Services and Special Programs, CTO	N/A	N/A	Beginning August 2009 Evaluate and Ending July 2010	Meeting dates and agendas	
4.1.8 Implement a district-wide SharePoint message board system that will enable teachers to share lessons and teaching strategies	SharePoint servers, message board moderators	SharePoint Administrator, Technology Facilitators	N/A	N/A	Beginning August 2009 Evaluate and Ending July 2010	Message board review and usage logs.	

Strategic Priority 4: Leadership will guide innovation in NC public schools.*							
Strategic Goal: (Please check.)							
<input type="checkbox"/> School professionals will collaborate with national and international partners to discover innovative transformational strategies that will facilitate change, remove barriers for 21st Century learning, and understand global connections.							
<input checked="" type="checkbox"/> School leaders will create a culture that embraces change and promotes dynamic continuous improvement.							
<input checked="" type="checkbox"/> Educational professionals will make decisions in collaboration with parents, students, businesses, education institutions, and faith-based and other community and civic organizations to impact student success.							
<input checked="" type="checkbox"/> The public school professionals will collaborate with community colleges and public and private universities and colleges to provide enhanced educational opportunities for students.							
Objective 4.2 Provide continuous growth opportunities for employees, parents, and students.							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
4.2.1 Implement PLCs	Professional Learning Department, Resources, Consultants, Professional Learning (Training)	Professional Learning Department	N/A	N/A	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	Professional Learning Logs	
4.2.2 Provide Administrative professional learning opportunities	Administrative Summit, Principals Meeting, Assistant Principals Meeting, Book Studies, Leadership Team Meetings, PD360	Superintendent Deputy Superintendents of Elementary and Secondary, Professional Learning Department	N/A	N/A	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	Meeting Dates, Workshop registrations	

4.2.3 Provide NCVPS, Learn and Earn, Huskins courses, early college	NCVPS, Learn and Earn, Huskins courses, Teachers, Distance Online Learning Facilitator, Guidance Counselors, Support hardware, software and infrastructure	CTO, Assistant CTO-Instruction, Assistant CTO-Operations, Distance Online Learning Coordinator, Director of School Counseling	N/A	N/A	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	Number of student enrolled, List of courses offered	
4.2.4 Provide funding for technology facilitators and media coordinators to attend conferences and workshops	Media coordinators, technology facilitators,	CTO, Director of Media and Support Services	\$10,000.00 Conferences	State, EETT	Beginning July 2009 Evaluate June 2010-2013 Ending July 2013	List of Conferences, Professional learning logs	

**NC public schools will be governed and supported by 21st Century systems:
Current Situation Narrative**

According to the North Carolina Department of Public Instruction’s Annual Media and Technology Report (AMTR), Technology Support Services has the following positions to serve fifty-three schools, six administrative building, 80 servers and six virtual servers, and approximately 10,349 desktops and laptops.

Title	Number
Chief Technology Officer (CTO)	1
Assistant CTO-Operations	1
Assistant CTO-Instruction	1
Director of Media Services and Special Programs	1
Lotus Notes Administrator/Webmaster	1
LAN/WAN Engineer	1
Distance/Online Learning Coordinator	1
Network Systems Technician	1
Instructional Technology Facilitators	10
Administrative Assistants	3
Tech III Technicians	4
Tech II Technicians	2

The Highland School of Technology has an in-house network and systems administrator. One elementary school has an instructional technology facilitator. Some of the elementary schools assign a teacher assistant to the computer lab. In the other schools, the classroom teacher is responsible for taking the students to the computer lab and facilitating instruction.

According to the data reported from the Department of Public Instruction’s AMTR for 2007-2008, Gaston County Schools has 100% of the instructional computers connected to the network and Internet. Gaston County Schools has a student to computer ratio and Internet connected computer ratio of 4 to 1. The same report indicated that Gaston County has 26.17% of state recommended technical support in place. In addition, Gaston County Schools employs only 10.8% of state-recommended instructional technology personnel. We have 86.25% of Media personnel in place.

Gaston County Schools is very fortunate to have 130 Pinnacle Leaders to support technology instruction and integration. Additionally, the Career-Technical Education (CTE) Department has personnel at middle and high schools to integrate technology-based career exploration curricula. There are eight instructional technology facilitators that in the high school feeder areas. Two middle schools implementing IMPACT have each have a full-time instructional technology facilitators.

Local funding for Gaston County Schools' technology is approximately \$1.3 million dollars. These funds are used for recurring expenses such as Internet, e-mail, anti-virus software, and maintenance on infrastructure, and support for administrative hardware and software. The state fund for technology, PRC 15, has been approximately \$400,000.00 with additional \$600,000.00 from Capital funds. During 2007-2008, the state provided LEAs with connectivity funds in the amount of \$191,000.00. Connectivity funds were based on 89% of the 35% that was not reimbursed from the Federal E-Rate program. Funds were used for backbone infrastructure initiatives related to connectivity. Gaston County Schools has applied for priority one E-Rate which provides 68% reimbursement of the cost for Local Area Network (LAN) and Wide Area Network (WAN) connectivity and telephones. E-Rate enables 90% identified Free and Reduced Lunch schools to receive switches, wiring infrastructure and wireless connectivity. Other state money supports instructional initiatives such as computer and/or hardware repair, contract services, and professional development. For the previous six years, Gaston County has received Title II, Part D, Enhancing Education Through Technology (EETT). State PRC15 funds are used to support the EETT project.

The chart below indicates possible funds available at the beginning of the 2008-2009 school year.

Funding Source	Potential Funds/September 2008	Use of Funds
Federal—E-Rate	\$641,306.80 Priority I	68% for Telecommunications and Telephones, Emergency infrastructure needs such as firewall, content filter, switches, wiring
Federal-EETT	\$63,000.00	Professional Development, Stipends for Workshops, Travel, Hardware and Software, 21 st Century tools such as Smart Boards, wireless slates, document cameras, student response systems
State	\$220,254.00 (To Date)	Professional Development Courses and Training, Pinnacle Leaders Hardware and Software, Contract Services for Professional Development, Distance Learning Instruction and Hardware, Instructional software, Repair contract, contract services
State Capital	\$600,000.00	EasyTech Software, United Streaming, Novell Licenses, 21 st Century Science Classrooms, Wiring, Hardware, Software
Local	\$1,362,744.00	E-mail clients, Anti-virus software, Anti-virus for E-mail, Spam

		software, Security—Back-up tapes, AS400 Maintenance, AS400 Programmer, 8e6 Content Filter, State PC Usage, Telecommunications, Advertising for Request for Proposals, Office supplies, Local travel for technicians, server maintenance contracts, Hardware repair contract, Professional Development, Local E-Rate Matching Dollars, etc.
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To ensure that the network environment is secure, the following measures have been taken:

- Web filtering through 8e6 content web filtering
- District-wide anti-virus protection using Symantec AntiVirus software
- Spybot spyware removal tool on workstations
- Individual login and password for all Gaston County Schools’ network users
- Desktop restrictions to prevent unauthorized installation of key loggers and rogue programs
- Private IP addressing setup protected by a Juniper SSG-320 Firewall
- Optimize network monitoring tools including Packeteer and Cacti to monitor and restrict rogue programs
- Two layers of E-mail SPAM and virus removal using SpamSentinel (applicaton based) and a Barracuda 600 (appliance based)
- Increased security for AS400 access to human resource data and financial data.

Gaston County Schools has policies and guidelines in place to ensure a safe network and provide security for users and data. Outside access to the network is limited and secure. All users must sign an Acceptable Use Agreement. Policies and guidelines are located in Appendix A and posted on the Gaston County Schools’ website.

Gaston County Schools utilizes a MetroEthernet environment that provides connectivity at 10 MB to all elementary schools and a 100 MB environment to all middle and high schools. Three of the six administrative sites are connected at 10 MB and the other three are connected at 100 MB. All schools and administrative sites are connected back to the Gaston County Schools’ Technology Support Services building via three 500 MB vlan connections. All district sites then access the Internet through a 100 MB content-filtered connection to the Internet. Gaston County Schools monitors the LAN and WAN using Packeteer and Cacti and prioritizes traffic if necessary. Sample graphs of network monitoring for 2008 – 2009 are shown in Appendix C.

All LEA’s are in the process of connecting to the NCREN backbone. With Gaston County in Phase I, we have the NCREN equipment and Internet link established. Once finished, this will provide Gaston County and all North Carolina LEA’s with a dedicated 100 Meg link directly to DPI and ITS. This ensures all traffic local to North Carolina education based entities route directly to NCREN.

Funding and budgets are inadequate to provide a replacement cycle or Total Cost of Ownership; therefore, as computers go out of warranty, repair contracts will increase. Due to overcrowded schools, closets are being turned into classrooms and mobile units are being added. This results in an on-going need for wiring and for wireless access. Mandated initiatives by the district and state also require additional access. Schools need projection devices, printers, and laptops. With district-wide needs for adequate network wiring, a large Bond project was passed in 2001. We are now in phase III and once the final 8 schools are completed, we will have four connections or drops per classroom, 32 connections in labs, 10-15 connections in media centers, 2 connections in each office, and 1 wireless access point in the auditorium or presentation area such as the gym. As the district completes the Bond technology project, it is evident that additional access and technology is needed to meet Future Ready Goals. Schools are wired to plan for wireless connections in the future. The minimum standard for wiring is CAT 6 which will allow a Gigabit to the desktop.

The district technology department plans and identifies cycles for hardware and software replacement. Initiatives such as changing server operating systems, generating a universal image use of open source applications are researched. Professional development for technicians and technical support is critical. Open source, due to flat budgets, is a viable option for maintaining effectiveness and efficiency. Currently, Gaston County Schools uses open source such as Cacti notification for server status and telecommunication status, a syslog server to identify who is accessing networks. Instructional open source resources used are Audacity Skype, Open Office, Firefox Internet browser, and PhotoStory.

The Gaston County School system provides camera surveillance for all middle and high schools which identified administrators and local police monitor. The 911 wireless access for schools is checked frequently to ensure access in the event of a crisis. Doors are provided with keypads. Telephones have voice mail so that parents and others may leave messages with teachers and staff to avoid interruptions during the school day. Cameras on buses are used to monitor student behavior. Walkie talkies are available at schools for quick access for emergencies and other needs. Blackberries are available to personnel in the technology department to provide efficient and effective operations. The Superintendent, the Cabinet, and Executive Directors also have Blackberries to allow for quick communication and response.

Lotus Notes is used for employee e-mail. Students use the free version of Gagggle.net with the exception of Highland School of Technology who purchases Gagggle.net for all students. All school servers have a share drive for all school users and a teacher share drive for teachers with access to only faculty and staff. Policies are used on the Novell networks to determine level of access. QuickPlace is used for administrative and school document creation and sharing as well as meeting agendas and minutes. QuickPlace serves as a tool to house resources for administrators, teachers, and identified groups. Administrators and teachers have access to NCWISE tools and resources for collecting data and tracking students. DASH, a component of the data warehouse, is used to collect data for data-driven decision making to improve teaching and learning. All users within Gaston County Schools are encouraged to use Web 2.0 tools such as wikis, discussion boards, and blogs. Web 2.0 resources are used in learning environment as well as administratively.

Since NC Wise has only been fully implemented for year, we are just beginning to use the NC WISE data capabilities. The Accountability Staff provides saved Ad Hoc Exports for use by data managers and others. Each month the staff meets with data managers and ensures that they run appropriate Reporting Hub reports for use in monitoring EC suspensions, student attendance and other important areas. We will be using these features much more extensively in the coming year as we train "data gurus" at each school to provide data for analysis in such areas as Annual Yearly Progress (AYP), teacher grading practices, discipline, test results and many other areas. The data gurus are often learning coaches, so they will also guide the sessions in terms of data which will prove useful in guiding instructional practices.

NC public schools will be governed and supported by 21st Century systems.

Strategic Technology Plan

Include at least one strategy or objective that includes the following:

1. Policy and policy management
2. Budget
3. Personnel
4. Security
5. Administrative Applications
6. Hardware
7. Infrastructure-School Local Area Networks and District Wide Area Networks
8. Communication and collaboration tools

Goal 5: NC public schools will be governed and supported by 21st Century systems.*							
Strategic Goal: (Please check.)							
<input type="checkbox"/> Processes are in place for financial planning and budgeting that focuses on resource attainment and alignment with priorities to maximize student achievement.							
<input checked="" type="checkbox"/> Twenty-first century technology and learning tools are available and are supported by school facilities that have the capacity for 21st Century learning.							
<input type="checkbox"/> Information and fiscal accountability systems are capable of collecting relevant data and reporting strategic and operational results.							
<input type="checkbox"/> Procedures are in place to support and sanction schools that are not meeting state standards for student achievement.							
Objective 5.1 Support access to 21 st Century systems							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
5.1.1 Provide a portal for document sharing	Portal, servers, Professional learning	CTO, Assistant CTO-Operations, Assistant CTO-Instruction	\$15,000.00	Local, State	Beginning July 2010 Evaluate 2011-2013 Ending July 2013	Portal	
5.1.2 Review existing policies, guidelines, and procedures to determine areas of inadequacies	Local Policy Manual, Committee review of policies and guidelines	Local Board of Education, Superintendent, CTO	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Number of policy meetings	

5.1.3 Continue to upgrade technology to support administrative programs such as NC WISE, AS400, HRMS, Online staff development, e-Procurement, Schooltime, Technology Purchase Approval, Lotus Notes e-mail and databases, Financial printing	Computer hardware, Software	CTO, Assistant CTO-Operations	Programmer \$90,000.00 Contractor \$9,000.00 Lotus Notes \$12,000 Schooltime \$300.00 Financial Software \$29,000.00 Financial Printing \$15,500.00	Local Local Local Local Local	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Print screens from user applications	
5.1.4 Continue to maintain and provide Internet and wide area network connectivity	Metro Ethernet connectivity	CTO, Assistant CTO-Operations	\$700,000.00	Local, E-Rate	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Log down time for Internet	
5.1.5 Install new SAN for SharePoint.	Two engineers, SAN cabinet.	CTO, Assistant CTO-Operations	\$10,000.00	State	Beginning July 2009 Evaluate and ending June 2010	Purchase orders	
5.1.6 Determine and implement new Operating System on district and school Novell servers	Technicians, LAN/WAN Engineer, Conferences, Training	CTO, Assistant CTO-Operations	\$10,000.00 Conferences, workshops \$100,000 Operating System \$5,000.00 Training for technicians	State, Local State In-Kind	Beginning July 2009 Evaluate June 2010-2011 Ending June 2012	New Operating System selected and installed	

5.1.7 Symantec Anti-Virus upgrade to handle district clients and future server OS. Software training.	Technicians and LAN/WAN Engineer.	CTO, Assistant CTO-Operations	\$20,000.00 \$5,000.00 Training for technician	Local In-Kind	Beginning October 2009 Evaluate and Ending June 2010	Purchase order	
5.1.8 Research and conduct feasibility of district conversion to IP Telephony	IP Telephony Documents, Feasibility Study, Conference and workshops	CTO, Assistant CTO-Operations, LAN/WAN Engineer	\$10,000.00 Conferences, \$5,000.00 Feasibility Study	State, Local State, Connectivity	Beginning July 2009 Evaluate and Ending July 2010	Recommendation to Cabinet	
5.1.9 Hire technician to implement and manage conversion and connection to IP Telephony	Salary	Superintendent, CTO	N/A	N/A	Beginning July 2010 Ongoing	Personnel Activity Report	
5.1.10 Implement conversion to IP Telephony	Infrastructure, Switches, Servers, Request for Proposal, Professional Learning	CTO, Assistant CTO-Operations, LAN/WAN Engineer, IP Telephony Technician	\$175,000.00	E-Rate-Federal, State, Local	Beginning July 2010 Evaluate June 2010, 2011, 2012, 2013 Ending June 2013	Purchase Orders, Professional Learning Logs, RFP	
5.1.11 Implement a new telephone/cell phone/Blackberry work order system	Work Order System Consultants Professional Learning	CTO, Assistant CTO-Operations, LAN/WAN Engineer, IP Telephony Technician	\$50,000.00 Work Order System \$5,000.00 Professional Learning	State, Local State, Local	Beginning July 2009 Evaluate June 2010-2013 Ending June 2013	Work Order System, Professional Learning logs	
5.1.12 Implement a server replacement cycle for elementary schools (11 schools each year 2009, 2010, 2011)	Servers, Software, Contract services	CTO, Assistant CTO-Operations	\$60,000 Servers for 11 schools \$12,000 Engineering Services \$12,000 Server Training	State State State	Beginning July 2009 Evaluate and add 11 additional servers each year, 2010-2011 Ending June 2011	Purchase Orders, Servers installed and operating	

5.1.13 Continue to connect to a common educational backbone using a telecommunication circuit to enhance educational opportunities by the most effective means	NCREN, Technical Support, Personnel	CTO, Assistant CTO-Operations	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Cacti Report	
5.1.14 Maintain current phone system (land lines, cell phones, blackberries, pagers)	AT&T	CTO	\$900,000.00	Local, E-Rate	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Phone bills	
5.1.15 Provide Engineering Services	Vendor, Contract	CTO, Assistant CTO-Operations	\$275,000.00	Local	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Engineering Contract and Service Reports	
5.1.16 Continue to provide server resources and user logins	Netware	CTO, Assistant CTO-Operations	\$90,000.00 \$15,000.00 Training	Local State	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Logins	
5.1.17 Continue to provide Email virus and SPAM protection	SpamSentinel, Barracuda	CTO, Assistant CTO-Operations	\$31,000.00 SpamSentinel \$5,000.00 Barracuda	Local Local	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Purchase Orders	
5.1.18 Plan for implementation of single user login (identity management system) for the network and all applications	Research software applications to determine feasibility for single user login, identity management system	CTO, Assistant CTO-Operations, LAN/WAN Engineer	N/A	N/A	Beginning July 2009 Evaluate each June 2010 Ending June 2010	List of applications tested Recommendation	

5.1.19 Research wireless access for school campuses district wide	Wireless protocols	CTO, Assistant CTO-Operations	N/A	N/A	Beginning July 2009 Evaluate June 2010 Ending June 2010	Recommendation	
5.1.20 Connect to a common Educational Backbone using a telecommunications circuit to enhance educational opportunities by the most efficient means.	High speed connections to the North Carolina Research and Education Network (NCREN) Technical support personnel	CTO, Assistant CTO-Operations	\$25,000.00	State (school connectivity funds)	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Usage logs	

Goal 5: NC public schools will be governed and supported by 21st Century systems.*

Strategic Goal: (Please check.)

- Processes are in place for financial planning and budgeting that focuses on resource attainment and alignment with priorities to maximize student achievement.
- Twenty-first century technology and learning tools are available and are supported by school facilities that have the capacity for 21st Century learning.
- Information and fiscal accountability systems are capable of collecting relevant data and reporting strategic and operational results.
- Procedures are in place to support and sanction schools that are not meeting state standards for student achievement.

Objective 5.2: Secure adequate funding to fully implement the technology plan

Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
5.2.1 Prioritize funding needs	School Media and Technology Advisory, List of funding requests	Board of Education, Superintendent, Principals, Other administrators	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Prioritized list of funding needs	
5.2.2 Prepare and submit a technology budget	School Media and Technology Advisory, List of funding requests	Board of Education, Superintendent, Principals, Other administrators	N/A	N/A	Beginning December 2009-2012 Ending April 2010-2013	Approved budget	
5.2.3 Prepare a long-range continuum for Total Cost of Ownership and future budgets	Budget, TCO	CTO, Superintendent, Board of Education	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Long-range TCO	

Goal 5: NC public schools will be governed and supported by 21st Century systems.*

- Strategic Goal: (Please check.)
- Processes are in place for financial planning and budgeting that focuses on resource attainment and alignment with priorities to maximize student achievement.
 - Twenty-first century technology and learning tools are available and are supported by school facilities that have the capacity for 21st Century learning.
 - Information and fiscal accountability systems are capable of collecting relevant data and reporting strategic and operational results.
 - Procedures are in place to support and sanction schools that are not meeting state standards for student achievement.

Objective: 5.3 Secure funding for adequate media and technology personnel to ensure successful program implementation

Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
5.3 1 Present AMTR District Personnel Ranking Reports to Board of Education to acquire state recommended media and technology instructional positions	IMPACT Guidelines, NC State Technology Plan	Board of Education, Superintendent, Human Resource, Finance, other administrators	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	AMTR	
5.3 2 Present AMTR District Personnel Ranking Report for technology to Board of Education in order acquire state recommended technical positions	IMPACT, NC State Technology Plan	Board of Education, Superintendent, Human Resource, Finance, other administrators, Camp Price-DPI	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	AMTR	
5.3.3 Hire a technician to manage , coordinate and maintain IP Telephony	Technician	Superintendent, CTO	\$60,000.00	Local State	Beginning July 2009 Evaluate June 2010 Ending June 2010	PARs for Hiring	
5.3.4 Hire 1 instructional technology facilitator to support 6 new schools	NC State Technology Plan	Superintendent CTO DPI	\$60,000.00	Local/State	Beginning July 2011 Evaluate each June 2012 Ending June 2012	PARs for Hiring	

5.3.5 Hire 1 instructional technology facilitator to provide one for each middle school to support online testing, such as the writing test, computer skills test, i-Search reference project, project based learning, science classrooms, and 21 st Century initiatives	NC State Technology Plan	Superintendent CTO DPI	\$60,000.00	Local/State	Beginning July 2009 Evaluate each June 2010 Ending June 2010	PARs for Hiring	
5.3.6 Hire 9 Tech I Support for high schools (8 existing high schools and 1 new high school)	NC State Technology Plan	Superintendent CTO	\$198,552.00	Local/State	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	PARs for Hiring	
5.3.7 Hire 6 Tech I Support for Middle Schools (Half-time at each middle school)	NC State Technology Plan	Superintendent CTO	\$149,000.00	Local/State	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	PARs for Hiring	
5.3.8 Continue to advocate for state recommended media/technology personnel based on AMTR results	AMTR IMPACT NC State Technology Plan	CTO	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013	AMTR, Budget Requests	

Goal 5: NC public schools will be governed and supported by 21st Century systems.*							
Strategic Goal: (Please check.)							
<input type="checkbox"/> Processes are in place for financial planning and budgeting that focuses on resource attainment and alignment with priorities to maximize student achievement. <input checked="" type="checkbox"/> Twenty-first century technology and learning tools are available and are supported by school facilities that have the capacity for 21st Century learning. <input type="checkbox"/> Information and fiscal accountability systems are capable of collecting relevant data and reporting strategic and operational results. <input checked="" type="checkbox"/> Procedures are in place to support and sanction schools that are not meeting state standards for student achievement.							
Objective: 5.4 Maintain and utilize administrative systems							
Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
5.4.1 Continue to utilize technology based administrative programs such as e-Procurement, Annual Leave Requests, Technology Purchase Approval, AS400 Spreadsheets, HRMS, Schooltime, Online Staff Development Registration,	e-Procurement, Annual Leave Requests, Technology Purchase Approval, AS400 Spreadsheets, HRMS, Schooltime, Online Staff Development Registration, Consultants	Executive Director of Business Services, CTO, Assistant CTO-Operations	N/A	N/A	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Amount of purchases through e-procurement	
5.4.2 Continue training personnel in the use of administrative applications	Trainer, Handbook, Computer access	NCDPI, Executive Director of Business Services, Chief Accountability Officer	\$5,000.00	In-Kind	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Course offerings	
5.4.3 Upgrade software for increased efficiency and productivity.	Software upgrades, Schedules and timeline for upgrades	Chief Technology Officer, Assistant Chiefs— Instruction and Operations,	\$1,000,000.00	Local, State, Federal	Beginning July 2009 Evaluate each June 2010-2013	Purchase orders, Installation timeline	

		Instruction, Technicians Technology Facilitators			Ending June 2013		
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Goal 5: NC public schools will be governed and supported by 21st Century systems.*

- Strategic Goal: (Please check.)
- Processes are in place for financial planning and budgeting that focuses on resource attainment and alignment with priorities to maximize student achievement.
 - Twenty-first century technology and learning tools are available and are supported by school facilities that have the capacity for 21st Century learning.
 - Information and fiscal accountability systems are capable of collecting relevant data and reporting strategic and operational results.
 - Procedures are in place to support and sanction schools that are not meeting state standards for student achievement.

Objective: 5.5 Secure adequate hardware to fully implement the media and technology program

Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Funding Sources	Time-line (Proposed Beginning & Ending dates)	Method of Evaluation	Evaluation Results
5.5.1 Increase technology budget annually to replace legacy equipment and support 21 st Century initiatives	Funding, Software, Hardware, Infrastructure	Superintendent, CTO, Board of Education	\$500,000.00 each year	Local	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Budget, Number of computers purchased	
5.5.2 Continue to implement web-based inventory for asset management	Web-based inventory, Process for asset management, Technicians, Network Systems Technician	CTO, Assistant CTO-Operations	\$15,000.00	Local	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Inventory	
5.5.3 Research and investigate small computing devices such as small laptops, cell phones,	Technicians, Recommended tools, Instructional Technology Facilitators	CTO, Assistant CTO-Operations	N/A	N/A	Beginning July 2009 Evaluate each June 2010 Ending June 2010	Recommendation	

handhelds, etc.							
5.5.4 Provide adequate infrastructure to support local area networks and wide area network	Servers, Switches, Wiring, Maintenance, Training for Technicians and schools, LAN/WAN Engineer	Board of Education, Superintendent, Consultants, CTO, Assistant CTO-Operations	\$600,000.00 Training \$20,000.00 \$10,000.00 System Operator Training	Matching E-Rate Funds State In-kind	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Infrastructure purchases	
5.5.5 Maintain and repair existing equipment	Repair contract, hardware, software	CTO, Assistant CTO-Operations	\$180,000.00	Local	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Repair contract, work orders completed	
5.5.6 Seek funding for TCO to replace and recycle hardware	Various hardware	CTO, Assistant CTO-Operations	\$500,000.00	State	Beginning July 2009 Evaluate each June 2010-2013 Ending June 2013	Number of computers replaced--AMTR	

Technology Staff Development and Training

Gaston County Schools has been and hopes to continue to be in the forefront for providing quality professional learning and training that addresses the initiatives of the district. Gaston County Schools' teachers and administrators adhere to the North Carolina technology standards which are the International Society of Technology in Education's (ISTE) National Educational Technology Standards (NETS) for Administrators and NETS for Teachers (www.iste.org). Gaston County Schools' Board of Education requires certified teachers in the district to have two technology continuing education credits (CEUs) for each renewal cycle. As a result, technology professional learning addresses and will continue to address state standards as we prepare our teachers and students. Technology professional learning offered in Gaston County Schools is research-based and follows the guidelines of the National Staff Development Council (NSDC) and No Child Left Behind.

Professional Learning offerings in the district are designed to improve teaching and learning. Training on resources, hardware and software is provided for schools on a district-wide, school and/or special group level. Additional professional learning is provided by the instructional technology facilitators to their feeder school sites based on the school's needs as described in their individual school improvement plans. Technology-based programs such as Pinnacle Leaders and T.R.I.C.K.S. are models that reflect research-based programs and focus on integration. Professional learning is offered on Web 2.0 tools such as pod casting, wikis, and blogging as well as 21st century tools including interactive white boards, wireless slates, and student response systems.

A variety of staff development and training is provided for all departments and personnel. Monthly Lunch and Learn sessions offer central office employees, certified and non-certified alike, an opportunity to spend their lunch hour learning how to use various technologies available in the district that will enhance their professional productivity. Central Office personnel are surveyed at the beginning of each school year regarding areas they need training in, topics that receive the most votes become the focus of professional learning at the Lunch and Learn sessions. In addition, various departments request professional learning based on new hardware and software acquisitions for professional productivity.

Beginning in 2005, Gaston County Schools hosted the first Teaching and Learning Conference. A local conference put on by our Professional Learning department, provides district teachers and certified employees two days of workshops aligned to district initiatives and all content areas. Technology plays an important role in this conference. Technology related sessions, either skill or integration based are offered throughout the conference. This year, Gaston County Schools partnered with our local community college to host the conference.

A web-based staff development registration was implemented in 2005 and continues to be used with district personnel. Teachers can view professional learning offerings and register for those that interest them. Teachers also have 24/7 access to their renewal credits and can monitor their progress each renewal cycle. This system also provides an easy method for teachers to apply for renewal credit from outside sources such as graduate courses or conferences they attend.

Between 20 and 30% of actual funds received in the technology budget are spent on professional development. Technology Support Services has been flat budgeted for the past four years. The 2008-09 funds were cut by 10% over the previous years' allotment. Gaston County Schools' technology budget, including all state, local, and federal funding is approximately 2.3 million dollars each year. Of this, between \$400,000.00 and \$500,000.00 is spent on professional learning (including real and in-kind dollars).

Infrastructure/Connectivity Component

Gaston County Schools' infrastructure and connectivity adheres to the State Information Technology Services (ITS) technical standards and statements of direction. ITS serves as a planning guide for our district for continued improvement. As technology is ever-changing, the need to continually address and evaluate hardware configurations, infrastructure/connectivity, security, technical staffing, and total cost of ownership is an ongoing process. As a result of the evaluation process, Gaston County is constantly upgrading the infrastructure to provide connectivity that addresses all district initiatives.

With flat local budgets and staffing, Technology Support Services is constantly researching and implementing cost effective measures to help ensure network security as well as efficient technology support.

Hardware configuration

Gaston County Schools continues to evaluate workstation and laptop hardware to ensure that students and teachers have access to modern instructional equipment. All instructional and administrative areas currently have a Pentium III or higher processor workstation with at least 512 MB of memory or higher. All computers are covered under a hardware repair contract and are serviced to ensure maximum performance. The workstations are also "re-imaged" on a regular basis to ensure proper operating system performance.

Infrastructure/connectivity (See diagrams in Appendix C)

Gaston County Schools utilizes a MetroEthernet environment that provides connectivity at 10 MB to all elementary schools and a 100 MB environment to all middle and high schools. All schools are connected back to the Gaston County Schools Technology Support Services building via three 500 MB vlan connections. All schools then access the Internet through a 100 MB content filtered connection to the Internet. Traffic accessing the Internet is also prioritized using a Packetshaper device and monitored through the use of Cacti. The Gaston County Schools Wide Area Network is protected by a Juniper SSG-320 firewall and all internal traffic is assigned private Internet protocol addresses. By the end of this year, we will have a second operational 100 Meg connection to NCREN for DPI network traffic.

Security

Gaston County Schools utilizes a Juniper SSG-320 firewall that blocks malicious incoming traffic and performs deep inspection for packet analysis and intrusion prevention. All firewall blocks are logged for future review and analysis. Also utilized is a packetshaper to disallow programs that can cause damage to Local Area and Wide Area Networks and assign priority to certain traffic such as DNS or web requests. All workstations and laptops are required to have the Symantec anti-virus program that is centrally monitored. All workstations and laptops also have the Spybot program to remove dangerous spyware. All remote access via VPN to the district is controlled by a Cisco VPN Concentrator and

monitored by the Cacti server for attempts to access internal resources. All wireless equipment on the Gaston County Schools' network is encrypted using 128 bit encryption and requires a key to be entered.

Policies, guidelines and procedures

The district has technology-related policies, guidelines, and procedures in place to address the general statutes as required by law. Policies, guidelines, and procedures are reviewed on an annual basis. Administrators are informed of existing policies, guidelines, and procedures on an annual basis. All employees and students participate in awareness training of existing policies, guidelines, and procedures.

Appendix A

Gaston County Schools Strategic Technology Plan Policy, Procedure, & Guidelines Implementation Chart

Policies, Procedures, & Guidelines (Policies should be translated into predominant languages of students and parents)	LEA Policy Code or Procedure	LEA Date of Adoption, Implementation or Revision
<i>Policies Required</i>		
A. Materials Selection Policy (GS §115c-98(b))	3200	
B. Disposal of Equipment / Replacement of Obsolete Equipment (GS §115c-518)	9400, 9500	9500-Revised 6/19/06
C. Hardware and Software Procurement (GS § 115c-522, 115c-522.1)	8675	Revised 6/19/06
D. Copyright Policy (PL §94-553, 90 Stat. 2541)	3240	
E. Acceptable Use Policy (PL §106-554)	3230	6/21/04; Revised 7/05
F. Equipment/Materials Donation Policy (GS §115C-518)	8215	6/21/04; Revised 7/05
G. Data Privacy Policy (20 U.S.C. § 1232g; 34 CFR Part 99 (FERPA))	3470, 7380, 6120, 4230	7380 – Adopted 6/21/04 6120 – Revised 6/19/06 4230 – Revised 6/04/07
H. Inventory Control Policy (GS §115c-539, 115c-102.6A-C(5))	9500(B), 6410	9500 – Revised 6/19/06
I. Access to Services Policy (GS §115c-106)	3220	6/21/04
J. Student Discipline and Liability Policy (GS § 115C-391, 115C-398)	4300, 4320, 4381	4381 – Revised 6/04/07
K. Remote Access Policy (GS §147-33.111)	3231/7371	7/18/05
L. Virus Protection Policy (GS §147-33.111)	3231/7371	7/18/05
M. NC WISE ID and Password Workstation Policy (GS § 147-33.111)	7375	7/18/05
N. Security Awareness Policy (GS §147-33.111)	9220, 3231/7371	
O. Network Security Policy (SBE EEO-C-018, SB 991, 2004)	3231/7371	7/18/05
P. Advertising and Commercialism Policy (GS §115c-98)	8550	
<i>Procedures</i>		
A. Hardware and Software Deployment		7/2005

B. Equipment maintenance and repairs		7/2005
C. Outdated Resources and Equipment Replacement		7/2005
D. Disaster Recovery of Data and Hardware		7/2005
E. Administration of Online Courses		7/2005; Revised 3/06; 6/07; 7/08
F. Other(s) (as needed by LEA)		
Hardware, Software, and Infrastructure Procurement		6/2005
Administration of Distance Learning Courses to Students		7/2005; Revised 3/06; 6/07; 7/08
Guidelines		
A. Policy Translation		Follow State Requirements
B. Web Site Development Policy	3280/7385	6/21/04; Revised 7/05/05
Web Publishing Guidelines		6/21/04; Revised 6/05; 7/06;
C. Instructional Use of Videos		Included
D. Development of Online Resources	3280	7/05/05
E. Other(s) (as needed by LEA)		
Staff Network and Internet Acceptable Use Guidelines		6/04; Revised 7/06; 7/08
Student Network and Internet Acceptable Use Guidelines		6/04; Revised 7/06; 7/08
Electronic Mail Guidelines and Procedures		6/04; Revised 6/05; 7/06; 7/07
Technology Donation Guidelines		7/05; Revised 7/06; 7/07; 7/08
Network Security Regulations, Standards and Guidelines		7/05; Revised 7/06
NC Wise ID, Password and Workstation Guidelines		7/05

Appendix B
The Technology Plan Budget

See spreadsheets attached

Appendix C.

Network Diagrams

See diagrams attached