www.chesterfieldschools.org

Technology Plan
7/1/2017-6/30/2020

Dr. J. Harrison Goodwin, Superintendent
Mr. Chandar Anderson, Assistant Superintendent
Dr. Tammy M. Haile, Executive Director, Information Technology
Mrs. Wendy Folsom, Executive Director, Curriculum & Instruction
Mr. Chris Price, Executive Director, Administration & Student Services
Mr. Brad Willard, Chief Financial Officer

401 West Boulevard Chesterfield, SC 29709
843-623-2175 (voice) 843-623-3434 (fax)

TABLE OF CONTENTS

COVER PAGE

Executive Summary 4-6

District Profile 6-10

District Vision and Mission Statement 10

Strategic Goals 10-11

Early Technology Beginnings 11-12

District Needs Assessment 13-14

Wide Area Network Configuration 15

District Philosophy 16

PLANS FOR THE FIVE INDIVIDUAL TECHNOLOGY DIMENSIONS

Technology Dimension 1: Learners and Their Environment

- Goal 16
- Snapshot of Current Technology Use 16-17
- Operational Plan
  - I. Objectives and Strategies 17-18
  - II. Action List 18-19
  - III. Implementation Actions Steps 19
  - IV. Funding Considerations 19-20
  - V. Evaluation of Objectives 20

Technology Dimension 2: Professional Capacity

- Goal 20
- Snapshot of Current Technology Use 21
- Operational Plan
  - I. Objectives and Strategies 21-23
  - II. Action List 23
  - III. Implementation Action Steps 23-24
  - IV. Funding Considerations 24-25
  - V. Evaluation of Objectives 25

Technology Dimension 3: Instructional Capacity
Goal 25
Snapshot of Current Technology Use 25-26
Operational Plan
I. Objectives and Strategies 26-27
II. Action List 27
III. Implementation Actions Steps 27-28
IV. Funding Considerations 28
V. Evaluation of Objectives 28-29

Technology Dimension 4: Community Connections
Goal 30
Snapshot of Current Technology Use 30
Operational Plan
I. Objectives and Strategies 31-32
II. Action List 32
III. Implementation Action Steps 32-33
IV. Funding Consideration 33-34
V. Evaluation of Objectives 34-35

Technology Dimension 5: Support Capacity
Goal 36
Snapshot of Current Technology Use 36
Operational Plan
I. Objectives and Strategies 37-39
II. Action List 40-41
III. Implementation Action Steps 41
IV. Funding Considerations 42-43
V. Evaluation of Objectives 43-44
Cumulative Targets and Benchmarks 44-45
Acknowledgement 46
Bibliography
Required Appendixes

Appendix 1 48
Appendix 2: 48
Appendix 3: 49
Appendix 4: 49-50
Appendix 5: 51-54
Annual Technology Update 55
Signature Page 56

EXECUTIVE SUMMARY

Chesterfield County School District is helping all students develop the world class skills and life and career characteristics outlined in the Profile of the South Carolina Graduate by providing a variety of learning opportunities for students to cultivate the social and academic skills needed. We expect excellence in academics, arts and athletics. Through these avenues, students excel and gain valuable life tools to be college and career ready. With this in mind, Chesterfield County School District in collaboration with district staff, teachers, and the community has developed a comprehensive technology plan to prepare students for the twenty-first century. Infusing technology into the instructional program is a key element of the district's technology plan.

Our 17 schools are committed to continuous learning through ongoing professional development to include technology. We have focused our efforts in improving our technology infrastructure, increasing our bandwidth, and providing a district wide wireless overlay by taking advantage of eRate funding. While we have enjoyed a successful school year, Chesterfield County School district will continue to strive for even more excellence.

When the FCC adopted the eRate modernization order in 2014 to focus on the largest and most urgent need – closing the Wi-Fi gap - and made the E-rate application process and other E-rate processes fast, simple and efficient, Chesterfield County School District took advantage of the changes and solicited qualified proposals from offerors to position the District to meet the increasing demands of 21st century objectives in 2015. As the Chesterfield County School District holds ambitious technology initiatives in its sights for 21st century learning, it was necessary to upgrade each of the 16 schools' infrastructure to ensure readiness to handle the increased technological load. Before the district considered putting every student on its network, we needed to upgrade connectivity inside all

of our schools. At the time, the current switching environment would not have supported district initiatives for wireless upgrades and 1:1 and/or BYOD. We also wanted to expand our few shared wireless access points in the district to an entire district wireless overlay via the E-rate program with the intent to provide Wi-Fi to our 7,300 students. In late February 2016 we received word that USAC had approved both of our funding requests for infrastructure and wireless access points. We wanted to ensure that our core network switches could meet the demands of increased network traffic so we opted to be prepared for future growth; bandwidth and uptime to handle hundreds of devices on our network will be monitored to know when to request additional bandwidth from the state. Web filtering is absolutely essential in our environment; we will do our research and make sure our current web content filter can handle the amount of additional traffic generated for a 1:1 deployment. All of these details will play a crucial role in making our 1:1 program a success; however, the absolute most important thing about a 1:1 program is making sure the faculty and administration are well prepared and motivated to use the program to everyone's advantage. We had our first technology showcase in January 2017 and invited stakeholders to hear presentations from three technology vendors. A team of individuals from the district will be attending a national technology conference to learn and collaborate together to determine best practices for 21st century learning. We are excited about the exciting opportunities ahead for technology integration in Chesterfield County School District.

DISTRICT PROFILE

Chesterfield County School District (CCSD) is located in the northeastern region of South Carolina near the North Carolina state line. According to the 2012 Census, Chesterfield County's population is 46,103 with a racial composition of 64.9% White; 32.5% African American; 0.7% American Indian/Alaska Native; 0.4 % Asian; 1.6% Two or More Races, and 3.7% Hispanic or Latina. Chesterfield County covers a total of 805.7 square miles of which 799 square miles are land and 7.2 square miles are water with 58 residents per square mile as compared to the state population density average of 157.1 per square mile. The county is home to the Carolina Sandhills National Wildlife Refuge, located four miles north of McBee on U.S. Highway 1. The refuge encompasses 45,348 acres of the county. The county is comprised of 26% urban areas and 74% rural areas. A variety of industries are represented within the county providing employment. These industries include manufacturing 23.3%, education, health and social services 20.3% and retail trade 14.4%. Major employers in the county include Schaeffler Group USA, Inc. INA, Wal-Mart, Conbraco Industries, A.O. Smith Water Products, and G.M. Tucker Lumber Companies, LLC. Schaeffler Group USA, Inc. INA, a bearing manufacturer is currently the largest employer in the county with 1200 employees. The median household income is $31,279, with 24.5% of the population living below the poverty level which is above the state average poverty level of 17.6%. Of the adults 25 years or older within the county 25.1% have less that a high school diploma compared to the state average of 13.41%. Chesterfield is the county seat and has a population of 1,450, with a poverty level of 34.7%.

Number of schools in the district	**17**
Number of students enrolled in the district	**7,284**
Number of students eligible for free and reduced lunches (Chesterfield participates in the Community Eligibility Program)	**3,529**
Number of English as a Second Language (ESL) students	**239**
Number of dropouts (most recent update but may go down by December 2016 with final information is due)	**51**
Graduation rate	**89.3%**
District E-Rate discount	**83%**

Chesterfield County School District serves approximately 7,284 students in seventeen schools. The district configuration includes two primary schools, seven elementary schools, three middle schools, four high schools and one alternative school. Of the seventeen schools, nine qualify for Title 1 funding. Students from throughout the district may participate in various programs such as special services and gifted/talented. The high school curriculum includes college prep, honors, AP, dual credit, and Career and Technology Education (CTE). The middle school curriculum incorporates cooperative learning, whole language, and other traditional teaching strategies in all subject areas. A variety of exploratory courses are offered - keyboarding, art, music, instrumental band, physical education, and career exploration. Elementary schools utilize a variety of research-based curriculums and strategies to meet the needs of all students of varying ages and developmental levels. Teachers use effective strategies to deliver content mandated by the South Carolina state curriculum standards. Each grade level embraces a philosophy of moving students gradually from a very concrete, hands-on approach to more abstract ideas. A number of schools offer afterschool tutorial and supplemental programs throughout the county.

Chesterfield County School District Demographics

Chesterfield County School District serves the municipalities of Cheraw, Chesterfield, Jefferson, McBee, Mount Croghan, Pageland, Patrick and Ruby as well as the communities of Middendorf and Cash. The enrollment in Chesterfield County School District has fallen over the past five years from 8,040 in 2008 to 7,266 in 2013, resulting in a total loss of 774 students. CCSD currently provides services for exactly 7,284 students grades PreK-12 in seventeen schools:

Cheraw Primary School (CPS) – grades PK-2 enrollment of 506 students.
Petersburg Primary (PPS) – grades PK-2 enrollment of 453 students.
Cheraw Intermediate School (CIS) – grades 3-5 enrollment of 510 students.
Edwards Elementary School (EES) – grades PK-5 enrollment of 534.
Jefferson Elementary School (JES) – grades PK-5 enrollment of 363.
McBee Elementary School (MES) – grades PK-6 enrollment of 434.
Pageland Elementary School (PES) – grades 3-5 enrollment of 416.
Plainview Elementary School (PVE) – grades PK-6 enrollment of 174.
Ruby Elementary School (RES) – grades PK-5 enrollment of 267.
Chesterfield Ruby Middle School (CRMS) – grades 6-8 enrollment of 364.
Long Middle School (LMS) – grades 6-8 enrollment of 437.
New Heights Middle School (NHMS) –grades 6-8 enrollment of 485.
McBee High School (MHS) –grades 7-12 enrollment of 497.
Central High School (CNHS) – grades 9-12 enrollment of 622.
Cheraw High School (CHS) – grades 9-12 enrollment of 706.
Chesterfield High School (CRHS) – grades 9-12 enrollment of 516.
Palmetto Learning Center (PLC) – grades 6-12 alternative school.

The racial/ethnic configuration in CCSD is 53% White, 37.5% African American, 5% Hispanic/Latino, 4% Two or More Races and 0 .5% Asian. According to the South Carolina Department of Education the 2013 poverty index for Chesterfield County School District is 82.8 %, ranking 34th in the state. Currently 52.51% of the students within the district qualify

for subsidized meals. At this time, there are 239 students identified as English for Speakers of Other Languages with the district. Ten percent are identified as Students with Disabilities.

Chesterfield County School District is one of the largest government employers within the county with over 1000 employees including 600 certified teachers. According to the 2016 District Report Card, approximately 61.8% of the classroom teachers hold advanced degrees and 99.2% are "highly qualified" according to South Carolina guidelines. The teacher attendance rate was 96.9% with the average salary for a teacher in Chesterfield County at $47,208.

Unique Features and Challenges Associated with the Community

Reduced funding from the state, economic recession, and declining enrollment creates challenges for CCSD in meeting the needs of our students. According to the 2011-2012 South Carolina State Department Data report, Chesterfield County School District's per-pupil cost total for this reporting period was $9,678, which indicated that our district was ranked 60th in the state. In 2010-2011 CCSD implemented a number of administrative changes to offset budget deficits as well as "freeze" administrative salary and "freeze" all teacher salary step increases. Additional budget cuts from the state level forced the district to absorb a 12% cut from the budget and reduce the number of working retirees at this time. As a result of these general fund deletions and decreases in funding the district continues to overcome the economic downturn from the 2010-2011 school year. In June 2012, Dr. Harrison Goodwin was named Superintendent of Chesterfield County School District. The district is continuing to make adjustments to create a more stable ground and to have an adequate fund balance.

Recruiting and retaining highly qualified teachers is a challenge as well. CCSD is working to create a professional learning community that is more aligned to rigorous standards-based curriculum, research-based instructional strategies, extensive professional development, and a comprehensive assessment system that aligns with "Best Practices". The district focuses on the effectiveness of these components, as well as the alignment and articulation across grade levels.

While challenges exist in our district such as loss of industry across the attendance area, budget crisis, poverty and being located in rural community, we are making progress. We will continue to set high expectations and achieve success with our desire to become a more student centered district.

System's Purpose

Chesterfield County School District strives to be a system of distinction not only in student achievement, but also of district operations. In order to create this system of distinction, it is imperative that a mutual vision and common values are encompassed by all individuals, based on the needs of the children, and is in the best interest of the community. The district is at the forefront of educational innovation through the restructuring initiatives taking place in the educational community today. Chesterfield County School District is in the midst of great and exciting educational progress.

DISTRICT MISSION & VISION STATEMENTS

Mission

The mission of Chesterfield County School District is to prepare all students to be productive citizens in a changing society by continuously improving and implementing educational processes with ongoing community support.

Vision

We envision a school district with high expectations and support structures that encourage all students to learn and apply this learning throughout life.

STRATEGIC GOALS

According to the 2011/12 to 2015/16 District Strategic Plan Annual Update for year 2012/2013 assurances were given that the superintendent, attest that the district complies with all applicable requirements. The strategic plan is guided by three areas according to the Needs Assessment:

Student Achievement (K-2, 3-8 and 9-12), Teacher/Administrator Quality and School Climate. A full viewing of Chesterfield County School District's Strategic Plan can be found at http://www.chesterfieldschools.org/apps/pages/index.jsp?uREC_ID=271352&type=d&pREC_ID=607589.

These goals are connected with definite strategies which are not the summation of the district's focus but do reveal major areas and initiatives that are critical to the success of Chesterfield County School District. As operational goals and plans evolve over time, it is critical that the district continue to build upon the accomplishments of the past and address the matters needing attention so that each student can attain his or her maximum potential.

Early Technology Beginnings

In 1983, Chesterfield County placed computers in three schools to address largely administrative tasks. By 1988, nearly 200 computers were in use in all 15 district schools for both instructional and administrative purposes. In 1991 local area networks were completed at all district sites and a functional wide area network was in use in 1998.

In subsequent years, LAN and WAN infrastructure has been significantly enhanced and today more than 3,000 computers are in daily use by virtually all students, teachers, administrators and support staff.

In 1991, the district began an ambitious staff development program. Teachers enrolled in a graduate course developed by the district in which they built a multimedia computer from components parts, learning basic operating concepts and were provided software and skills and then relocated the computer to their classroom to utilize this equipment in daily instructional application. The technology department has since developed over forty classes and workshops to provide additional and focused training for all staff in the effective and efficient use of this technology.

Throughout this effort of over two decades, the district has drawn upon the resources and support of the community in furthering the integration and impact of technology upon the teaching and learning process. The following plan builds upon this tradition of growth, innovation and creativity in securing adequate technology, training and support to ensure that technology

remains a viable component in the district's effort to enhance student achievement and manage the educational process.

The plan addresses five core technology dimensions with the primary goal for each dimension as follows:

Technology Dimension 1: Learners and Their Environment
Goal: Embed digital information systems into research-proven instructional strategies so that our students achieve technological literacy, attain 21st century skills, and meet the state's academic standards.

Technology Dimension 2: Professional capacity
Goal: Provide curriculum development and professional development/training to increase the technical competency of all South Carolina educators so that research-proven strategies and the effective integration of instructional technology system can continue to increase student achievement. This includes assistive technology.

Technology Dimension 3: Instructional Capacity
Goal: Use current and emerging technology to create learner-centered instructional environments that enhance academic achievement.

Technology Dimension 4: Community Connections
Goal: Use Technology, including assistive technology, and digital information system to maximize community involvement and community partnerships and so increase student achievement.

Technology Dimension 5: Support Capacity
Goal: Expand and support technology resources to assist educators and learners in attaining 21st century skills and meeting the state academic standards.

Each of these goals is followed by recommended implementation strategies and considerations that reflect aspects of the particular core dimension. Provided at the end of the five "dimensions" sections in the document is a cumulative list of benchmarks that are designed to enable the district to validate progress.

District Needs Assessment

Current Needs Assessment

The district has determined eight specific areas of need in addressing the implementation of this plan:

1) Expansion of the "technology infused classroom" model to include 1:1
2) Upgrade of WAN 1GB circuits to 4GB and upgrade of 250MB Internet circuit to 850MB.
3) Implementation of an "equipment replacement/refresh" schedule throughout the district – replace workstations, servers, switches and routers every 4 years.
4) Continuation of the "first responders" program providing support to all classroom teachers.
5) Continued expansion of the staff development offerings and training efforts developed by the technology department to meet specific district needs – both graduate course and workshops to be offered on-site and without cost.
6) Secure sources of adequate and sustained funding – E-Rate, grant and general fund.
7) Employ adequate technology staff to manage continued program growth – additional technical and clerical staff for user support.
8) Continue community outreach and education to maintain support – greater parental involvement.

Current Inventory

- WAN connecting 19 district LANs at 250 MB out to the Internet
- 91 servers, 4000 network nodes and more than 1000 users
- More than 3,000 multimedia desktop computers and 800 printers
- 500 laptop computers
- 420 LCD projectors
- 411 interactive whiteboards (Smart and Promethean)
- 219 document cameras
- 18 ActivPanels
- Software in use on network: SATPrep, USATestPrep, Piney Mountain Learning Styles, Automated Accounting 8, Active Prep Assessment, CheckPro, ExamPro, Career Ready 101, Exam View, MicroPace Pro, Cengage MicroType 6.0, Edison EdWare 10.6, Google Chrome, SAM, Scholastic Keys, Finale, Orchard Learning Systems, SAT Coach, KCA Keyboarding, PLATO Learning Systems, Renaissance Place, SCOIS, Fitness Gram, Enrich, MAP Testing & Lockdown Browser, DRC Insight Online Learning System, McGraw Hill TABE Adult Ed, SNAP, GIFT, ACTWARE 1000, File System Factory, Adobe Creative Suite 6, Adobe Acrobat Reader DC 2015, Adobe Flash Player 19, Adobe Shockwave 12.2, AB Tutor, Microsoft Office 2010, Microsoft Office 2013, Microsoft Office 2016, Microsoft OneDrive for Business, NCS Mentor, IE 10.0, Foxfire, Chrome, iBoss-Go Live

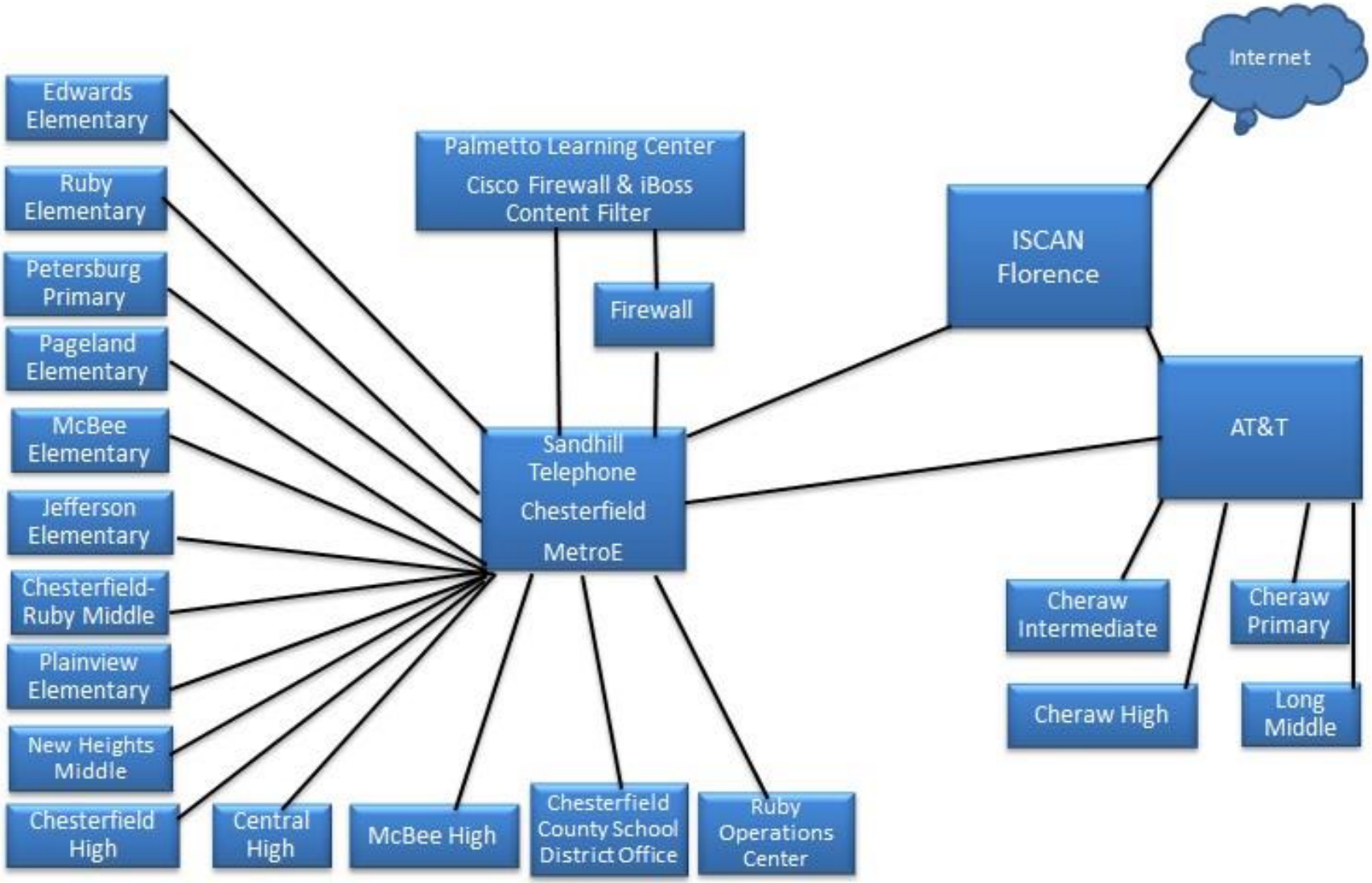
Campus, Microsoft EndPoint AntiVirus, Spectrum, EPES Accounting, IDMaker-ID Printshop, SUNS, PowerSchool, Destiny Circulation and Destiny Textbook, NWEA Lockdown Browser, PJLM Print Audit 6, Promethean ActivInspire, SMART Education Software, SMART Education Notebook, Solidworks 2015, SoftPlan 2016, Sun Java 8.5.1

Current Technology Support Strategies

- Centralized help desk
- One network administrator
- Two network engineers
- One computer technician
- One Student Information System Administrator
- One Student Information System Specialist
- One Technology Integration Specialist (new position for 2016-17)
- Trained staff in schools supporting specific applications and offering staff development
- District planning and implementation team

Chesterfield County School District

Wide Area Network Configuration



District Philosophy

We believe:

- All students are capable of learning if a variety of instructional approaches are used to support their learning efforts.
- Parents should take an active and supportive role in their child's education.
- Students are unique and have special talents.
- Cultural diversity is an asset and should be celebrated with respect and dignity.
- Everyone has a right to learn in a safe environment and a positive climate.
- Successful schools have effective communication.
- Students should be responsible for their own actions and share in a responsibility for their own learning.
- Current technology should be accessible to all students.
- Character development should be integrated throughout the curriculum.
- Members of the community should share in the responsibility of learning.
- Faculty and staff should have high expectations for all students.

District Mission Statement

The mission of Chesterfield County School District is to prepare all students to be productive citizens in a changing society by continuously implementing educational processes with ongoing community support.

Dimension 1: Learners and Their Environment

Goal: Chesterfield County School District will embed digital information systems into research-proven instructional strategies so that our students achieve technological literacy, attain 21st century skills, and meet the state's academic standards.

Snapshot of Current Technology Use:

The district is in the process of identifying key components of a "technology infused classroom" and installing these technology enhancements in each instructional classroom.

Over 450 classrooms have already been equipped with ceiling mounted projectors, interactive whiteboards, most with document cameras, and ETV signal conversion for projection. Additionally, all students and staff presently have available:

- Internet access in all classrooms
- Computer labs at each school
- Technology managed media centers
- WAN connecting all schools with 250MB circuits with 4 GB circuit at the Main MDF for school district
- Network based software supporting instructional delivery: Renaissance Place, SAT Prep, Plato, Odyssey Compass Learning
- Network based software supporting management of instruction: PowerSchool, Destiny Circulation and Textbook, MAPS, FitnessGram, Enrich

Objectives	Strategies
1.1 Students will engage in authentic learning activities that are aligned with state standards and that integrate technology, including assistive technology, into the core content.	A. Develop technology-enhanced learning activities aligned with state standards in the content areas. B. Create and maintain student technology portfolios documenting grade-level-appropriate technology competencies.
1.2 The school district and the school will provide students with an enhanced learning environment through technological tools, including assistive technology, that are designed to promote high academic achievement.	A. Establish school and community learning environments that enable students to use technology for real-world problem. B. Adopt grade level appropriate technology standards and integrate them into the curriculum to prepare students to function in an information-rich global society C. Adopt grade level appropriate technology standards and integrate them into the curriculum to enable students to fully participate in today's information-rich global society.
1.3 Students will select the appropriate tools to complete authentic, real-life multidisciplinary tasks and will demonstrate technology competence by the end of the	A. Create and use lesson activities in which students employ a variety of technology tools, including assistive technology, to complete authentic multidisciplinary tasks.

	eighth grade.	B. Provide all students, including those with special needs, access to a range of high and low technology solutions, including software, peripherals, and other tools to increase student communications, participation, and collaboration. C. Measure student technology proficiency by using surveys and performance-based assessments.
1.4	Students will use digital information systems to acquire and demonstrate communication, collaboration, and engagement skills that are aligned with state standards across the curriculum and will thereby increase their level of academic achievement.	A. Recognize and promote best practices that successfully integrate technology, including assistive technology, into the curriculum. B. Conduct student projects that will yield sustained, engaged learning and collaboration in the core content areas. C. Provide appropriate accommodations for students with special needs when needed, including standardized tests, using technology. D. Provide opportunities and resources to districts and schools to facilitate the development and implementation of effective communication and collaboration skills using technology in the core content areas E. Have students present their collaborative projects to identified audiences

Action List:

The district will employ current, research-based findings to equip classrooms with appropriate technology to support the instructional program.

CCSD will provide access to effective, research-based assistive technologies including software, peripherals and other tools to increase student communication, collaboration and engagement that will support inclusion of students with disabilities in the core content areas at all grade levels.

The district will establish grade level appropriate technology standards and competencies for all student based on ISTE NETS-S and will further establish minimum requirements for student portfolios that document student progress in achieving these standards.

The district will develop strategies to ensure that school improvement plans address the use of technology, including assistive technology, to support a shared learning environment.

The district will complete initial and on-going assessments to measure the increased availability of technology opportunities and resources.

The district will complete initial and follow-up assessments to ensure that the use of technology, including assistive technology, is effective in enhancing student learning.

The district will identify "best practices" related to technology integration used both within and outside the district and disseminate these practices via on-line resources.

Both the district and schools will develop methods of recognizing student technology achievement, including the use of assistive technology.

Implementation Action Steps:

The district will:

- Assign network engineers to offer guidance and support to all schools.
- Provide support and guidance for teachers to ensure that lesson plans and activities incorporate a variety of technologies in ways that make them accessible to individuals with special needs.
- Offer professional development courses and activities using innovative delivery strategies.
- Offer support to classroom teachers in the development of lesson plans that incorporate a variety of technologies into authentic multidisciplinary tasks.
- Recognize and publicize exemplary uses of technology by teachers and students.
- Encourage home and community involvement in the public school system by enhanced use of electronic communication and other media.

The schools will:

- Implement an on-line system for displaying exemplary student work and recognizing significant student achievements.
- Provide access to technology resources, including assistive technology, during non-traditional school hours.
- Include goals and strategies for technology, including assistive technology, development in school improvement plans.
- Encourage home and community involvement in the public school system through the use of electronic communications and other media.

Funding Considerations:

District:

- Technology professional development
- Technology course development

- Technology staff
- Recognition programs
- Teacher and student portfolio materials
- Technology resources to support standards-based learning across the curriculum.

Schools:

- Technology professional development
- Technology course development
- Technology staff
- Recognition programs
- Teacher and student portfolio materials
- Technology resources to support standards-based learning across the curriculum.

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

Objectives	Possible Baseline Data	Possible Data Source
1.1	State achievement test scores District Report Cards Technology surveys School Technology & Improvement Plans District, School and Community Surveys Student competency surveys	Statewide achievement test scores District Report Cards Technology surveys Observations & interviews Anecdotal records Documented access to online resources Listing of recognition programs
1.2		
1.3		
1.4		

Dimension 2: Professional Capacity

Goal: Chesterfield County School District will provide curriculum development and professional development/training to increase the technical competency of all South Carolina educators so that research-proven strategies and the effective integration of instructional technology systems can continue to increase student achievement. This includes assistive technology.

Snapshot of Current Technology Use:

The district presently utilizes a variety of curriculum and professional development strategies such as graduate courses taught at neighboring colleges and universities as well as on-site offerings including Promethean Board and Office 365 staff development. On-line technology courses are coordinated through the district's IT Department and both students and staff now have access to Lynda.com, an online platform that offers 24/7 access to many software programs. Schools are also offered informal and on-going activities utilizing district technology staff or vendors in enhancing staff technology competencies.

Objectives	Strategies
2.1 The school district will collaborate in planning for professional development, ensuring that teachers and district staff and trained to embed technology into instruction and learning, including assistive technology.	A. Develop and submit a technology plan that (1) is directed by the district's technology leadership, (2) is designed for each school in the district as applicable, and (3) calls for site * based input from technology committees or teams in each building. B. Include in the district technology plan the training needed for school and district staff to evaluate software in order to make decisions that ensure the promotion of higher order thinking skills for all students, including those with special needs. C. Include in the district technology plan the training needed to ensure the accessibility of electronic and information technology to students with special needs.
2.2 The school district will provide schools with information and training in technology integration so that teachers can use research based best-practice instructional methods throughout the curriculum.	A. Continue to offer professional development activities and training in a variety of way (i.e., on-site, off-site, on-line, self-paced, and combinations of these methods) to address the technology needs of staff, paying special attention to high* need to schools and schools serving economically disadvantaged populations, including students with special needs B. Increase the availability of technology professional development tools to teachers: access to laptop computers and presentation devices, Internet access at the classroom level, interactive on-line access to state curriculum standards and lesson plans, access to Web-based training opportunities, and access to state-of-the art training centers in their particular geographic areas. C. Provide professional development opportunities focused

	on aligning state technology standards with state academic content standards. D. Develop an extensive statewide network of professional development providers who have the skills and experience necessary to prepare teacher for effective technology use. E. Develop alliances with subject, grade, or position-specific professional organization to promote technology integration throughout the K-12 curriculum
2.3 The school district will provide the schools with full-time multidimensional technology leadership whose focus is to ensure that technology is making a significant instructional and administrative impact for students, teachers, and administrators.	A. Require that technology coaches provide direct training and consultation to teachers in their classrooms, with special emphasis on helping administrators, teachers, and students meet the state-recommended technology standards (ISTE NETS-A, ISTE NETS-T, ISTE NETS-S) as well as helping students to meet the state's content standards in all areas. B. Continue to support school based first responders to assist with basic technology skills and the integration of the technology into classroom instruction.
2.4 The school district will assess the overall effectiveness of processional development in the area of instructional technology standards and the impact of technology on student achievement.	A. Require minimum levels of teacher technology proficiency for replication and adaptation across the district B. Continue to incorporate instructional technology assessment into current teacher and administrator evaluation processes. C. Encourage teachers to create and maintain technology portfolios showing examples of their students' work and documenting the integration of technology in their classrooms D. Administer evaluations to determine the effectiveness and impact of the professional development offered to teachers and administrators
2.5 The school district will enable educators to achieve and demonstrate proficiency in integrating state-recommended instructional technology standards (ISTE NETS-A, ISTE NETS-S, and ISTE NETS-T) into their specific area of professional practice to increase student achievement.	A. Include in the district technology plan a professional development program that enables teachers to progress from their current levels of ability in using and integrating technology, including appropriate assistive technology, to full proficiency. B. Update a district professional development program to aid the district in satisfying the requirement of the teacher technology proficiency proviso. C. Implement a district process that requires demonstration of proficiency in integrating instructional technology standards into instruction. D. Urge the General Assembly to amend the teacher technology proviso to require district and school

	administrators to demonstrate technology proficiencies based upon the state-recommended national standards for administrators (ISTE NETS-A) and ISTE standards for technology leaders.

Action List:

- CCSD will employ or appoint full-time leadership for the use of technology, to include assistive technology, in order to increase student achievement.
- The district will utilize the expertise of staff members and faculty in the schools.
- An assistive technology assessment team should be appointed by the district to ensure that the teachers of special needs students can make effective use of available technologies.
- The district will develop and submit every three years to the SDE a technology plan update that documents site-based input and includes a plan for professional development that outlines the technology education offerings an requirements, including assistive technology.
- District and school administrators should submit to their supervisors an annual professional development plan that includes technology goals aligned with state ISTE NETS-A and that is reviewed as part of the administrator's annual evaluation.
- The district will provide training to district and building-level administrators so that they can effectively assess a teacher's ability to integrate technology, including assistive technology, into the curriculum.
- The district will provide training for assistive technology teams in assistive technology assessment, options and curriculum integration.
- CCSD will provide training for teachers in using assistive technology tools
- The district will provide training in the evaluation of software in order to make decision to ensure the promotion of higher-order thinking skills for all students, including those with special needs.
- CCSD will provide training in accessibility issues involving applicable state and federal legislation.
- The district will encourage teachers maintain portfolios that include sample lesson plans demonstrating technology integration across core content areas in alignment with state academic standards.

Implementation Action Steps:

The district will:

- Submit a technology plan, including a professional development plan, to the SDE Office of Technology for approval.
- Administer a district technology professional development assessment to administrators and teachers to evaluate current training need areas and to create the district technology professional development plan based upon these current needs.
- Offer ongoing, sustained professional development activities.
- Initiate partnership with community entities to create greater access to technology, including assistive technology, and a community learning environment.
- Administer needs assessment to identify areas of weakness and follow up with assessments that measure the impact of professional development in technology.
- Evaluate and adjust technology professional development plans as indicated by needs assessments.

The schools will:

- Submit a technology plan, including a professional development plan, to the local district office.
- Administer needs assessments to identify areas of weakness and follow up with assessments that measure the impact of professional development in technology.
- Monitor and adjust professional development in technology as indicated by needs assessments.

Funding Considerations:

District:

- Development of professional development plans
- Committee development of district and school technology plans
- Professional development needs assessment tools
- Evaluation tools to measure the impact and effectiveness of technology professional development
- High-quality, sustained professional development programs offered via innovative delivery methods
- Evaluation experts to demonstrate the impact of programs and initiatives
- Review of scientifically based research

Schools:

- Committee development of district and school technology plans
- Professional development needs assessment tools

- Evaluation tools to measure the impact and effectiveness of technology professional development
- High-quality, sustained professional development program offered via innovative delivery methods
- Evaluation experts to demonstrate the impact of programs and initiatives
- Review of scientifically based research

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

Objectives	Possible Baseline Data	Possible Data Sources
2.1	Statewide achievement test scores District Report Card Professional Development surveys School Technology and Improvement plans SCTLC on-line resources Technology assessments	Statewide achievement test scores District Report Card Professional Development tracking and surveys Observations and interviews Anecdotal records Documented access to on-line resources Workshop/In-service participation records Technology assessments
2.2		
2.3		
2.4		
2.5		

Dimension 3: Instructional Capacity

Goal: Chesterfield County School District will use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement.

Snapshot of Current Technology Use:

> The district presently supports a robust, switched wide area network and twenty-one local area networks connected via 4 GB Backbone to all locations and 250 MB out to the Internet featuring:

- Internet access in all classrooms with filtering, anti-virus protection and hard drive protection
- More than 60 computer labs distributed among the district's sixteen schools
- 450 classrooms presently equipped with ceiling mounted projectors, interactive whiteboards, most document cameras, enhanced audio systems and laptops.
- A variety of computer peripherals available for use at each school including digital cameras, digital scanners, scan converters, etc.
- Access to a wide variety of server-based instructional resources and administrative tools
- Email accounts for all teachers, administrators, and students.

Objectives	Strategies
3.1 The school district and the schools will provide teachers with the technology resources, include assistive technology, necessary to increase academic achievement by engaging students in active learning.	A. Provide teachers with access to knowledgeable personnel, productivity tools, on-line services, media-based instructional materials, and primary sources of data in settings that enrich that extend teaching goals.
3.2 The school district will provide and support variety of multimedia equipment and software for and learning.	A. Establish a system for identifying, specifying, prioritizing, and managing equipment for multimedia development in support of curricular and professional development using ISTE Technology Support Index as a guide. B. Communicate via the district technology plan a vision for multimedia infrastructure designed to support.
3.3 The school district and the schools will provide students with access to current and emerging technology resources that will extend their learning beyond the traditional classroom setting and schedule.	A. Provide students with access to technology, on-line and media-based instructional materials, allowing them to select appropriate tools that will enrich and extend their learning.
3.4 The district will develop a technology framework for local assessment and planning that addresses the step necessary to create a technology-rich environment which fosters increased achievement by all students, including those with special needs.	A. Facilitate the use of technologies to support and enhance instructional methods (including the use of hardware, software, and assistive technology) that develop higher-level thinking, decision-making, and problem solving skills B. Ensure that curricular design, instructional strategies, and learning environments integrate appropriate

	technologies (including the range of assistive technology options) to significantly impact teaching and learning

Action List:

- The district will conduct technology planning meetings to address curricular design, the instructional needs of all teachers, instructional strategies, and appropriate learning environments
- CCSD will conduct technology planning meetings to address the inclusion of appropriate assistive technology into curricular design, instructional strategies and the learning environment of both the general student population and special needs student.
- The district will pursue funding opportunities such as grants to provide funds to acquire and maintain hardware and software for use in classroom instruction.
- CCSD will pursue funding opportunities such as grants to acquire and maintain assistive technology for use in classroom instruction and home access where appropriate.

Implementation Action Steps:

The district will:

- Conduct technology curriculum planning meetings.
- Include an instructional technology plan and an assistive technology plan to be submitted for approval to the SDE Office of Technology.
- Create methods of gauging technology readiness.
- Create a committee to oversee the evaluation of software and hardware for desirable student outcomes and standardization of selection/implementation where appropriate based upon scientific research real-world applications.
- Designate technology leaders.
- Participate in ongoing, sustained professional development activities and maintain a log for each course, workshop, in-service or event for portfolio inclusion.
- Initiate partnerships with community entities to create greater access to technology and a community learning environment.
- Pursue funding opportunities such as grants to acquire and maintain hardware, instructional software and assistive technology.

- Pursue the delivery of courses for students and professional development courses for teachers via innovative methods.

The schools will:

- Conduct technology curriculum planning meetings.
- Submit a technology plan, including a professional development plan to the district.
- Interview students to assess information literacy and the integration of technology into the learning environment.

Funding Considerations:

District:

- Committee development of district and school technology plans
- Evaluation tools to measure the impact and effectiveness of technology professional development
- Evaluation experts to demonstrate the impact of programs and initiatives
- Review of scientifically based research
- Distance learning and on-line learning applications
- Professional development

Schools:

- Committee development of district and school technology plans
- School technology first responders implementation
- Professional development needs assessment tools
- Evaluation tools to measure the impact and effectiveness of technology professional development
- Evaluation experts to demonstrate the impact of programs an initiatives
- Review of scientifically based research
- Professional development

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

Objectives	Possible Baseline Data	Possible Data Sources
3.1 3.2 3.3 3.4	Statewide achievement test scores District Report Card Technology readiness and access surveys Teacher Technology Proficiency Proviso forms School Technology and Improvement plans Documentation of innovative professional development offerings Technology assessments	Statewide achievement test scores District Report Card Technology readiness and access surveys Observations and interviews Teacher Technology Proficiency Proviso forms Anecdotal records Documented access to on-line resources Workshop/In-service participation records Technology assessments

Dimension 4: Community Connections

Goals: Chesterfield County School District uses technology, including assistive technology and digital information systems to maximize community involvement and community partnerships and to increase student achievement.

Snapshot of Current Technology:

The district presently seeks community involvement through:

- Providing access through district and school web portals, School Messenger, and automated email contacts.
- Extended media center hours, evening activities, Saturday Academies and on-line resources beyond the normal school day.
- Each school in the district maintains a school-business partnership with three or more local businesses to share ideas and seek support for mutual academic interests.
- The district maintains a close and mutually beneficial relationship with the technology staff of the local technical college as well as numerous state agencies providing support for technology issues.
- On several occasions the district has developed consortium agreements with surrounding districts in applying for and administering grant funding.
- The district's Adult Education program provides many opportunities for technology collaboration in the development and delivery of technology-rich instruction.
- The district works with Northeastern Technical College in providing dual credit classes for students, professional development opportunities for teachers and collaboration on grants and projects.
- Several schools have approached local businesses and industries with proposals for monetary support of technology initiatives and have been successful in gaining support.

Objectives	Strategies
4.1 The school district will ensure that all their buildings remain linked by the Internet to the State Library's DISCUS database and to the Web sites of universities, museums, and other institutions to facilitate virtual communication between home, school, and community.	A. Host an electronic list through the district Web portal for schools and community entitles interested in collaborative initiatives
4.2 The school district will establish community technology partnership and collaborations by providing tools, resources, and training that support student transition, achievement, and outcome. (The term community includes parents, businesses, state and local agencies, non-profit groups, and institutions of higher education.)	A. Write community-collaborative technology grant to develop and fund the use of technology to improve teaching and learning B. Form district-community partnership to provide students with real-world experiences in the use of technology. C. Form district-community partnership to facilitate the use of technology, including assistive technology, in the public schools and to improve outcomes for students transitioning from school to work or higher education. D. Form district-community partnerships to help research and evaluate school and district technology projects E. Provide recognition/reward programs and/or incentives for partnerships showing impact
4.3 The school district and the schools will fully utilize all available resources by fostering collaboration and cooperation among state-supported organizations, institutions, and initiatives	A. Partner with other school district as well as community entities to collaborate in order to provide assistive technology demonstration, loan, and assessment for students with special needs B. Identify all of the organizations, institutions, and initiatives in the state that are currently focused on instructional technology applications.

4.4 The school district will provide after-hour training and community access to labs, media centers, and classrooms.	A. Create opportunities for access to facilities for after-hours assistive technology training for students, parents, teachers, and community members B. Create and publish flexible schedule of after-hour technology access and training for students, parents, teachers, and community members

Action List:

- The district and each school will initiate and increase community collaborations that gives students, teachers and members of the local community increased access to and training in technology, including assistive technology.
- The district and school will publish school lab schedules showing after-hours technology access and training.
- The district will maintain logs of professional development, community offerings and internship opportunities in technology.
- The district will publicize successful collaborations with outside entities in the demonstration, loan and assessment of assistive technology.
- The district will publicize successful technology grant applications on the Internet for others to use as models.
- The district will develop lists of possible partner organizations, institutions and initiatives.
- District surveys will provide information leading to increased access and use of school facilities for after-hours technology training.
- The district will develop flexible technology training schedules.

Implementation Action Steps:

The district will:

- Submit a technology plan, including a professional development plan, to the SDE Office of Technology for approval.

- Encourage flexible lab, media center and classroom hours among schools, including opportunities for community members to see and try assistive technology.

- Initiate partnerships with community entities to research technology projects.

- Include members of the community in writing technology grants to develop and fund better teaching and learning through technology, including assistive technology.

- Utilize the district's web site to publicize a list of volunteers for possible technology partnerships.

- Measure access and use of the schools' technology facilities.

The schools will:

- Submit a technology plan, including a professional development plan, to the district.

- Distribute parent and community information through report cards.

- Develop, implement and publicize flexible lab, media center and classroom hours, including opportunities for community members to see and try assistive technology.

- Initiate partnerships with community entities to create greater access to technology and a community learning environment.

- Initiate partnerships with community entities to research technology projects.

- Include members of the community in writing technology grants to develop and fund better teaching and learning through technology, including assistive technology.

Funding Considerations:

District:

- Evaluation experts to help show the impact of community programs and initiatives.

- High quality, sustained community training technology programs offered via innovative delivery methods

- Community and apprentice internships

- Facility operation beyond the regular school day

- District survey administration, collection and analysis, and reporting.
- Grant-writing experts and workshops.

Schools:

- Evaluation experts to help show the impact of community programs and initiatives.
- High quality, sustained community training technology programs offered via innovative delivery methods.
- Community internships.
- Facility operation beyond the regular school day.
- School survey administration, collection and analysis, and reporting.

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

Objectives	Possible Baseline Data	Possible Data Sources
4.1 4.2	Statewide achievement test scores Community Technology Access survey Lab, media center and classroom schedules CCSD Technology Counts survey School Technology and Improvement plans Documentation of offerings provided via	Statewide achievement test scores Community Technology Access survey Lab, media center and classroom schedules CCSD Technology Counts survey School Technology and Improvement plans Documentation of offerings provided via innovative delivery methods

	innovative delivery methods	Observations and interviews District and school web site information District and school lists of grants and community partnerships

Dimension 5: Support Capacity

Goal: Chesterfield County School District will expand and support technology resources to assist educators and learners in attaining 21st century skills and meeting the state academic standards.

Snapshot of Current Technology Use:

The district presently supports technology through:

- Offering a robust selection of in-service and training activities administered by the technology department to address the specific needs of classroom teachers and administrators in fully and effectively utilizing the available technology resources.

- Maintaining a well-developed network infrastructure with a variety of network-based resources, email and web server. Network downtime is minimal with many maintenance procedures conducted during non-school hours.

- For 2016-17, the technology department has added one new position: Technology Integration Specialist. As technology changes the way schools operate and impacts the student-learning environment, the Technology Integration Specialist will assist to coordinate, implement program specific hardware/software, and provide teacher training and curriculum support for Career and Technical Education with an emphasis in middle and high schools.

- Through a responsive system of direct technical support, one network administrator and three engineers are available to assist technology users with hardware and software problems.

Objectives	Strategies
5.1 The school district will ensure that their schools have an integrated, secure network infrastructure with dynamic bandwidth capacity to support fully converged networks that allow for communication, data collection and distribution, and distance learning.	A. Ensure the installation, maintenance, and support of multimedia-capable teacher stations in classrooms including computer-attached projectors to support large-group instruction B. Install and maintain networks, virus protection, and Internet filtering according to industry standards by implementing systemic, state-of-the-art network security tools at all levels of access to LANs, WANs, and other networks C. Establish a system for identifying, specifying, prioritizing, and managing equipment for multimedia development in direct support of curricular and professional development objectives D. Assess LAN/WAN technology currently implemented to determine bandwidth and infrastructure needs E. Implement a district network management tool that performs automated software installation F. Communicate in the district technology plan a vision for multimedia infrastructure designed to support instruction G. Use bundled distribution packages as a primary means of distribution to manage fully converged networks
5.2 The school district will implement an obsolescence and upgrade plan to replace and recycle equipment and software	A. Ensure that the obsolescence and upgrade plans are included in the district technology plan.

5.3 The school district will ensure that all students, including those with special needs, and teachers have access to digital information resources.	A. Conduct needs assessments, (1) to identify required network components, workstations, and other devices needed for network access, including assistive technology devices, and (2) to identify and evaluate software applications required to meet academic needs as well as peripherals and other resources required to create universal access to network resources B. Seek school and district funding from available local, state, and federal sources, including E-rate, grants, and bonds C. Create a district strategic plan for acquiring and implementing the technology, including assistive technology, that is required to provide universal access to network resources D. Develop the district strategic plan with input from all segments of the school community- students, teachers, therapists, administrators, parents, community members, community agencies, and local businesses- and include in the plan a mechanism for review and revision as needed E. Maintain a technology inventory that includes the status of current network/Internet access, workstations and other devices available for access, software applications available for addressing state academic standards, peripherals, and other factors related to universal access to

	network resources
5.4 The school district will have qualified technical staff	A. Develop district-side minimum staffing requirements and job descriptions, with a state-guided salary schedule for the positions of networking engineer, computer technician, and executive director of information technology B. Provide state-level network support for district engineers. C. Appoint a district technology director who will lead a committee in identifying and evaluating network management tools that will meet the needs of the district and all schools.
5.5 The district will implement a disaster recovery plan for all points of failure, in LANs and WANs, including redundant data storage, robust automated backup, and immediate hardware recovery.	A. Ensure all schools will have electrical distribution systems that provide isolated circuits in all classrooms and redundant power sources for mission-critical equipment.
	B. Implement a district management application that monitors bandwidth on the LAN and WAN and provides network failure alarms that can be accessed remotely. C. Ensure that disaster recovery plans are included in the district technology plan.

Action List:

- CCSD will have access to a database with a complete technology inventory, including assistive technology, showing the type of equipment/device, its location, its use, peripherals to which it has access, applications to which it has access, and other relevant information.
- The district will maintain a needs-assessment document showing technology-based resources and applications required to address the mission of the district, including networking, hardware/devices, and software applications as well as assistive technology
- CCSD will include in their local budgets line items for technology, including assistive technology, with sufficient funding to implement the designated strategies.
- The district will publish a procedure for the perpetual review of equipment used in multimedia development processes. Reviews should quantify equipment and processes by their impact on teaching and learning.
- CCSD will maintain a strategic plan for acquiring and implementing technology, including assistive technology, for universal access to network resources. This document should show the strategies for addressing the identified needs, the persons responsible for addressing and completing each strategy, and the resources/funds necessary to fully implement the strategies.
- The district technology plans will include a strategic vision for building a multimedia infrastructure to support instruction.
- District technology plans should include a disaster recovery plan.
- District technology plans should include obsolescence and upgrade plan, including strategies to refurbish, resell, recycle, or donate obsolete devices.
- District policies outlined in district technology plans should include security accountability, virus protection, and Internet filtering guidelines.
- District technology plans should provide for outlets and amperage for meeting industry standards and building codes.
- CCSD will use professional discussion groups to share the results of their research about the implementation of integrated network infrastructures and bundled distribution practices.
- The district will have records to show that they have assessed their current LAN/WAN technology.
- District network managers will provide the district office with quarterly reports of statistics on bandwidth utilization.
- CCSD will use the SDE Technology Counts on-line survey to report on their use of network management tools.

- The district will ensure that new school construction provides for isolated power in each classroom, computer lab, telecommunications closet, and work area.
- CCSD will provide UPS (uninterruptible power supply) systems for all critical equipment.
- The district will use the minimum staffing and salary requirements for the positions specified in objective 4.3.
- CCSD will have a network manager in place.
- The district should establish network security support within the Office of Technology.
- District staff, teachers, and students should be aware of basic Web accessibility guidelines when designing Web pages.
- The district will designate a Web accessibility resource person to coordinate training and information sharing among district personnel.

Implementation Action Steps:

The district will:

- Maintain technology inventories, including assistive technology
- Conduct needs assessments to identify required technology, including assistive technology
- Create a strategic technology plan that includes strategies for acquiring, managing, and implementing required technology, including assistive technology
- Implement a district disaster recovery plan and an obsolescence and upgrade plan Seek funding from local, state, and federal sources
- Encourage and publicize flexible access schedules Create a vision for a multimedia infrastructure
- Encourage schools to provide multimedia-capable workstations Research and implement an integrated network infrastructure
- Use bundled distribution packages to manage fully converged networks Install and maintain secure networks
- Employ staff for adequate network maintenance and support
- Implement a district management application that monitors bandwidth on the LAN and WAN
- Ensure that schools have adequate electrical distribution systems
- Publish procedures and schedules for review of equipment and software used in multimedia development including rubrics for judging impact on teaching and learning
- Provide schools with the necessary guidance and training in creating Web pages to ensure that electronic information is accessible to students and teachers with special needs

The schools will:

- Create a strategic technology plan that includes strategies for acquiring and implementing required technology, including assistive technology
- Seek funding from local, state, and federal sources
- Create flexible schedules for access to technology Provide multimedia-capable workstations
- Install and maintain secure networks
- Employ staff for adequate network maintenance and support
- Provide adequate electrical distribution systems

Funding Considerations:

District:

- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources [Consortium for School Networking]
- Consortium for School Networking's (CoSN) TCO tool available on-line at http://www.cosn.org/
- Technology committee meetings to develop products such as the multimedia infrastructure plan and the disaster recovery plan
- Materials to publish an updated technology plan
- Multimedia teacher workstations including LCD projectors, interactive whiteboards, document cameras and enhanced classroom audio
- Hardware and software to secure all LANs and WANs to comply with district, state, and industry standards
- Technology director, networking engineer, and networking technicians
- Equipment inventory assessment program
- Isolated circuit plan
- Support planning
- Technology needs assessments and surveys

Schools:

- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources Consortium for School Networking's TCO tool available on-line as mentioned above
- Technology committee meetings to develop products such as the multimedia infrastructure plan and the disaster recovery plan

- Materials to publish an updated technology plan Multimedia teacher workstations including data projectors
- Hardware and software to secure all LANs and WANs to comply with district, state, and industry standards
- Support planning
- Technology needs assessments and surveys

Evaluation of Objectives

The district will employ a variety of evaluation measures as outlined below to determine the scope and effectiveness of its efforts in addressing this goal and its objectives

Objectives	Possible Baseline Data	Possible Data Sources
5.1	Statewide achievement test scores District Report Cards	Statewide achievement test scores District Report Cards
5.2	Professional development tracking and surveys District, school and community surveys CCSD Technology Counts survey	Professional development tracking and surveys District, school and community surveys School Technology and Improvement plans
5.3	Documentation of offerings provided via innovative delivery methods School Technology and Improvement plans	Documented access to technology resources CCSD Technology Counts survey
5.4	Documented access to technology resources Technology needs assessment	Documentation of offerings provided via innovative delivery methods Observations and interviews
5.5	Budget data	Technology needs assessment

5.6	State personnel reports	Budget data State personnel reports

CUMULATIVE TARGETS AND BENCHMARKS

Learners and Their Environment

- Ninety percent of the district's students will have documentation for their acquisition of grade-level appropriate competencies as well as their use of digital information systems to complete authentic tasks.
- Ninety percent of the district's students will possess effective communication skills and technology literacy as evidenced by teacher and student technology portfolios and by presentations at technology conferences and fairs.

Professional Capacity

- Ninety-five percent of the district's teachers will possess technology proficiency as evidenced by teacher technology proficiency assurance forms. Ninety-five percent of the district's teachers will also document proficiency by keeping a journal of course experiences, interacting with the school technology coach, and integrating technology into the teaching of the state curriculum standards.

Instructional Capacity

- Ninety percent of teachers will integrate technology and 21st century skills into their teaching of the South Carolina academic standards as evidenced by the technology proficiency assurance forms and teacher portfolios.
- Eighty percent of students will meet the information literacy and technology skills for their grade level as found on the performance matrix for information literacy and technology education.

Community Connections

- The district will report active community collaborations that result in better teacher and student access to technology, better teacher and student use of technology, more teachers and student real-world experiences in technology-related fields, more research

and evaluation of technology projects, and more community collaboration technology grants submitted and dollars funded.

- The district will have a community partnership that provides research and evaluation for a district's major (school-wide or larger) technology projects.
- The district will establish and maintain a K-12 educational portal that lists willing community participants and partners who can provide services to supplement the curriculum.
- The districts will provide and document professional development training in how to access and use available community resources. Results will be reported through the SCDE online professional development tracking system.
- The district's elementary, middle, and high schools will provide access to technology-related facilities after hours for parents, teachers, and community members.

Support Capacity

- The school district will include in their technology plan an assessment of their current technology needs, their current technology inventory, and their current technology support strategies using ISTE standards as their guide.

Acknowledgements

The following individuals contributed to this planning process and were instrumental in the preparation of this document:

Brad Willard, Chief Financial Officer
Wendy Folsom, Executive Director of Curr. & Instr.
Debbie Huntley, Media Specialist
Karen E. Sharper Ellerbe, Assistant Principal
Regina Johnson, Teacher
Crystal Douglas, Tech Integration Specialist
Jack Johnson, Computer Technician
Scott Vincent, Sr. Network Admin
Chris Carter, Network Engineer
Michael Maguire, Network Engineer
Dr. Jason Bryant, Principal
Cheryl Alley, SIS Specialist
Mary Crouse, SIS Administrator
Dr. Candace Hoffman, Director of Federal Programs
Aleisha Ainsworth, Media Specialist
Thomas C. Brewer, Lead Teacher, Alternative School
Dennis McDaniel, Principal
Chris Price, Executive Director of Student Services
Marla Hamilton, Director of Adult Education
Dr. Harrison Goodwin, Superintendent
Chandar Anderson, Assistant Superintendent
Ronnie Campbell, Chesterfield Chamber/Business Owner
Kim Burch, School Board Member/Economic Dev
Glenn Gulledge, Entrepreneur
Sheriff Jay Brooks, Chesterfield County
Dr. Tammy M. Haile, Executive Director of Information Technology/Career &Technology Ed

BIBLIOGRAPHY

South Carolina State Technology Plan 2009-2013: Digital Resources Enabling Achievement.

Total document available on-line at http://ed.sc.gov/agency/programs-service_s/185/

Chesterfield County School District Technology Plan 2009-13.

Document is available at the district office or school media centers.

Technology in Schools (National Center for Education Statistics)

https://nces.ed.gov/pubs2003/tech_schools/chapter1

National Education Technology Plan for the Department of Education.

https://tech.ed.gov/netp/

Appendix 1: Every Student Succeeds Act

https://www.ed.gov/esea

Appendix 2: Teacher Technology Proficiency Proviso Professional Development Plan

History

The district began an ambitious teacher technology training program in 1996 by developing and offering free of charge a graduate credit course which offered most teachers their first experience with computer technology. Participant teachers addressed the five skill areas below and, as a part of the course, built a multimedia computer from its component parts and relocated this equipment to their classroom to support the instructional program. Since 1997 over 700 teachers have successfully completed this course which required that they:

- Demonstrate a basic, working knowledge of the Windows environment with the ability to manage files and media
- Demonstrate proficiency in the use of Microsoft Word in the creation of documents appropriate to instructional applications and also demonstrate a familiarity with other "productivity tools" such as MS Excel, Access, PowerPoint, Publisher, FrontPage, etc.
- Demonstrate knowledge of and the ability to effectively use a district-provided GroupWise email account.
- Demonstrate the ability to use a browser; access the internet; search, locate and evaluate appropriate digital instructional resources and incorporate these resources into daily instruction.
- Demonstrate knowledge of district technology use expectations to include appropriate issues of law, ethics and courtesy.

In 2005 the district began certifying teachers under the legislature's Teacher Technology Proviso as "technology proficient" if they met these five expectations.

Appendix 3: Acceptable Use Policy

Students and Staff

The Chesterfield County School District Acceptable Use Policies can be found at the following URL: Acceptable Use Policy for Students and Staff: http://it.chesterfieldschools.org/

Appendix 4: How E-Rate Areas Have Been Addressed

When the FCC adopted the eRate modernization order in 2014 to focus on the largest and most urgent need – closing the Wi-Fi gap - and made the E-rate application process and other E-rate processes fast, simple and efficient, Chesterfield County School District took advantage of the changes and solicited qualified proposals from offerors to position the District to meet the increasing demands of 21st century objectives in 2015. As the Chesterfield County School District holds ambitious technology initiatives in its sights for 21st century learning, it was necessary to upgrade each of the 16 schools' infrastructure to ensure readiness to handle the increased technological load. Before the district considered putting every student on its network, we needed to upgrade connectivity inside all of our schools. At the time, the current switching environment would not have supported district initiatives for wireless upgrades and 1:1 and/or BYOD. We also wanted to expand our few shared wireless access points in the district to an entire district wireless overlay via the E-rate program with the intent to provide Wi-Fi to our 7,300 students. In late February 2016 we received word that USAC had approved both of our funding requests for infrastructure and wireless access points. We wanted to ensure that our core network switches could meet the demands of increased network traffic so we opted to be prepared for future growth; bandwidth and uptime to handle hundreds of devices on our network will be monitored to know when to request additional bandwidth from the state. Web filtering is

absolutely essential in our environment; we will do our research and make sure our current web content filter can handle the amount of additional traffic generated for a 1:1 deployment. All of these details will play a crucial role in making our 1:1 program a success; however, the absolute most important thing about a 1:1 program is making sure the faculty and administration are well prepared and motivated to use the program to everyone's advantage. We had our first technology showcase in January 2017 and invited stakeholders to hear presentations from three technology vendors. A team of individuals from the district will be attending a national technology conference to learn and collaborate together to determine best practices for 21st century learning. We are excited about the exciting opportunities ahead for technology integration in Chesterfield County School District.

Services and Components No Longer Eligible for Support (Effective Funding Year 2015)

Category Two (Priority One)	Category Two (Priority Two)
Services and telephone components that were listed as eligible in the former Priority One category: • 900/976 call blocking • Custom calling services • Direct inward dialing • Directory assistance charges • Email • Inside wire maintenance plans • Paging • Text messaging • Voice mail • Web hosting	Components included in these former Priority Two entries: • Circuit Cards/Components • Data Protection (all except for firewall and uninterruptible power supply/battery back-up) • Interfaces, Gateways, Antennas (other than as specified in this Order) • Servers (other than servers necessary for caching) • Software (other than the software that supports eligible broadband internal connections) • Storage Devices • Telephone Components • Video Components • Voice/video IP components (that had been listed in the Data Distribution entry)

Eligible voice services are subject to an annual 20 percentage point phase down of E-rate support beginning in funding year 2015, as described in the *E-rate Modernization Order*. The reduced discount rate for voice services will apply to all applicants and all costs for the provision of telephone services and circuit capacity dedicated to providing voice services.

Appendix 5: Chesterfield County School Current and Upcoming District Budget Years

Budgeted Technology Funds for 2016-17

Revenues		Expenditures	
Local General Fund *(Staff)*	314,500	Tech Department Salaries	314,500
General Fund Salary Matching & Benefits	120,700	Tech Department Matching & Benefits	120,700
		Staff Development Expenses & Comm	21,500
General Fund Supplies & Equipment	297,500	Hardware Purchases General Fund	180,000
General Fund Telecom Expenses	50,000	Software/Software Licensing/Purchased Services	246,000
E-Rate Telecom Reimbursement	120,000		
Capital Transfers	130,000	E-Rate Proj (District Portion) Capital	130,000
		Supplies	20,000
Totals	$1,032,700	$1,032,700	

Projected Technology Funds for 2017-18

Revenues		Expenditures	
Local General Fund *(Staff)*	322,362	Tech Department Salaries	322,362
General Fund Salary Matching & Benefits	127,942	Tech Department Matching & Benefits	127,942
		Staff Development Expenses & Comm	21,500
General Fund Supplies & Equipment	318,500	Hardware Purchases General Fund	189,000
General Fund Telecom Expenses	50,000	Software/Software Licensing/Purchased Services	246,000
E-Rate Telecom Reimbursement	110,000		
Capital Transfers	130,000	E-Rate Proj (District Portion) Capital	130,000
		Supplies	22,000
Totals	$1,058,804	$1,058,804	

Projected Technology Funds for 2018-19

Revenues		Expenditures	
Local General Fund *(Staff)*	327,197	Tech Department Salaries	327,197
General Fund Salary Matching & Benefits	138,177	Tech Department Matching & Benefits	138,177
		Staff Development Expenses & Comm	21,715
General Fund Supplies & Equipment	321,895	Hardware Purchases General Fund	192,780
General Fund Telecom Expenses	50,000	Software/Software Licensing/Purchased Services	246,000
E-Rate Telecom Reimbursement	95,000		
Capital Transfers	150,000	E-Rate Proj (District Portion) Capital	130,000
		Supplies	26,400
Totals	$1,082,269	$1,082,269	

Projected Budgeted Technology Funds for 2019-20

Revenues		Expenditures	
Local General Fund *(Staff)*	333,740	Tech Department Salaries	333,740
General Fund Salary Matching & Benefits	143,704	Tech Department Matching & Benefits	143,704
		Staff Development Expenses & Comm	21,715
General Fund Supplies & Equipment	320,355	Hardware Purchases General Fund	192,780
General Fund Telecom Expenses	50,000	Software/Software Licensing/Purchased Services	246,000
E-Rate Telecom Reimbursement	85,500		
Capital Transfers	150,000	E-Rate Proj (District Portion) Capital	115,000
		Supplies	30,360
Totals	$1,083,299	$1,083,299	

Annual Technology Plan Update
Chesterfield County School District October 2016

Planned Activities for 2016-17

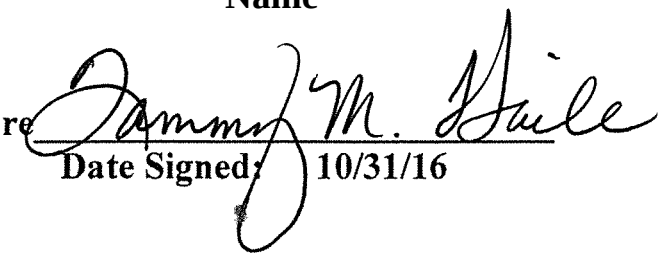
When the FCC adopted the eRate modernization order in 2014 to focus on the largest and most urgent need – closing the Wi-Fi gap - and made the E-rate application process and other E-rate processes fast, simple and efficient, Chesterfield County School District took advantage of the changes and solicited qualified proposals from offerors to position the District to meet the increasing demands of 21st century objectives in 2015. As the Chesterfield County School District holds ambitious technology initiatives in its sights for 21st century learning, it was necessary to upgrade each of the 16 schools' infrastructure to ensure readiness to handle the increased technological load. Before the district considered putting every student on its network, we needed to upgrade connectivity inside all of our schools. At the time, the current switching environment would not have supported district initiatives for wireless upgrades and 1:1 and/or BYOD. We also wanted to expand our few shared wireless access points in the district to an entire district wireless overlay via the E-rate program with the intent to provide Wi-Fi to our 7,300 students.

In late February 2016 we received word that USAC had approved both of our funding requests for infrastructure and wireless access points. We wanted to ensure that our core network switches could meet the demands of increased network traffic so we opted to be prepared for future growth; bandwidth and uptime to handle hundreds of devices on our network will be monitored to know when to request additional bandwidth from the state. Web filtering is absolutely essential in our environment; we will do our research and make sure our current web content filter can handle the amount of additional traffic generated for a 1:1 deployment. All of these details will play a crucial role in making our 1:1 program a success; however, the absolute most important thing about a 1:1 program is making sure the faculty and administration are well prepared and motivated to use the program to everyone's advantage. We had our first technology showcase in January 2017 and invited stakeholders to hear presentations from three technology vendors. A team of individuals from the district will be attending a national technology conference to learn and collaborate together to determine best practices for 21st century learning. We are excited about the exciting opportunities ahead for technology integration in Chesterfield County School District.

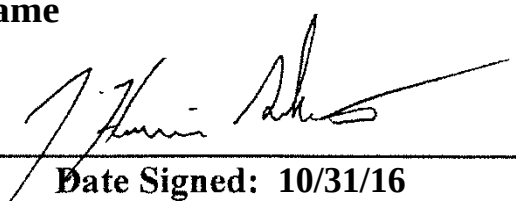
As a note, in 2014, we installed a generator to keep the Core MDF for Chesterfield County School District always connected to the Cloud for high availability. For those classrooms that do not have Promethean interactive whiteboards, we will continue our efforts to install these boards as well as provide initial and ongoing training for teachers in their effective use.

I verify that all above components for the Chesterfield County School District technology plan have been addressed.

Executive Director of Information Technology: Dr. Tammy M. Haile
Name

Executive Director of IT's Signature 
Date Signed: 10/31/16

Superintendent's Name: Dr. Harrison Goodwin
Name

Superintendent's Signature 
Date Signed: 10/31/16