SOUTH CAROLINA K-12 SCHOOL TECHNOLOGY INITIATIVE

2019-20 PROGRESS REPORT

CONTENT. CONNECTIVITY. TRAINING. SECURITY.

Much has been accomplished in the effort to transition K-12 education in South Carolina into the digitally connected era, yet much remains to be done. Achieving this goal requires bold educational and technological initiatives as well as steadfast programmatic and budgetary support from our state's leadership.

TABLE OF CONTENTS

ABOUT THE INITIATIVE

The South Carolina K-12 School Technology Initiative was founded in 1996, as part of the General Assembly's proactive approach to addressing technology infrastructure, connectivity and education in schools throughout the Palmetto State.

The Initiative, steered by a unique public/private partnership, guides the distribution of funds appropriated by the Governor and General Assembly. These funds collectively help to meet our schools' needs for software, hardware, connectivity, digital content, instructional technologies, cybersecurity protection and professional development opportunities. Initiative partners include:

- ▶ SC Department of Administration
- ▶ SC Department of Education
- ▶ SC Education Oversight Committee
- ▶ SC Educational Television
- ▶ SC State Library
- ▶ AT&T
- ▶ SC Telecommunications & Broadband Assoc.

The K-12 School Technology Initiative is extremely proud of its progress in the development and implementation of educational technology as well as the strides that have been made in providing infrastructure initiatives designed to produce more successful students in South Carolina.

It is our hope that South Carolina's leaders will continue their history of using the K-12 School Technology Initiative to guide the provisioning of high-quality, information-rich education for all students.

ABOUT THE INITIATIVE

INITIATIVE PARTNERS

▶ SC Department of Administration
  1200 Senate Street
  Columbia, SC 29201
  Phone: 803-734-8120
  Website: admin.sc.gov

▶ SC Department of Education
  1429 Senate Street
  Columbia, SC 29201
  Phone: 803-734-8500
  Website: ed.sc.gov

▶ SC Education Oversight Committee
  P.O. Box 11867
  Columbia, SC 29211
  Phone: 734-6148
  Website: eoc.sc.gov

▶ SC Educational Television
  1041 George Rogers Blvd.
  Columbia, SC 29201
  Phone: 803-737-3200
  Website: scetv.org

▶ SC State Library
  1500 Senate Street
  Columbia, SC 29201
  Phone: 803-734-8666
  Website: statelibrary.sc.gov

▶ AT&T
  1441 Main Street, Suite 305
  Columbia, SC 29201
  Phone: 803-401-2206
  Website: att.com

▶ SC Telecommunications & Broadband Assoc.
  1122 Lady Street, Suite 840
  Columbia, SC 29201
  Phone: 803-779-7282
  Website: sctba.org

ABOUT THE INITIATIVE

INITIATIVE PRINCIPALS & COMMITTEE CHAIR

- ▶ SC Department of Administration
  Marcia Adams, Executive Director

- ▶ SC Department of Education
  Molly Spearman, State Superintendent of Education

- ▶ SC Education Oversight Committee
  Matthew Ferguson, Executive Director

- ▶ SC Educational Television
  Anthony Padgett, President and Chief Executive Officer

- ▶ SC State Library
  Leesa Aiken, Director

- ▶ AT&T
  Jane Sosebee, President, AT&T South Carolina

- ▶ SC Telecommunications & Broadband Assoc.
  Nola Armstrong, Executive Director

- ▶ Committee Chairperson
  Keith Osman, Director, Division of Technology Operations

WHO DOES THE K-12 SCHOOL TECHNOLOGY INITIATIVE SERVE?

81
School Districts

1,266
Public Schools

201
Public Libraries

51,607
Instructional Staff

782,638
School Students

5,210,095
State Citizens

1
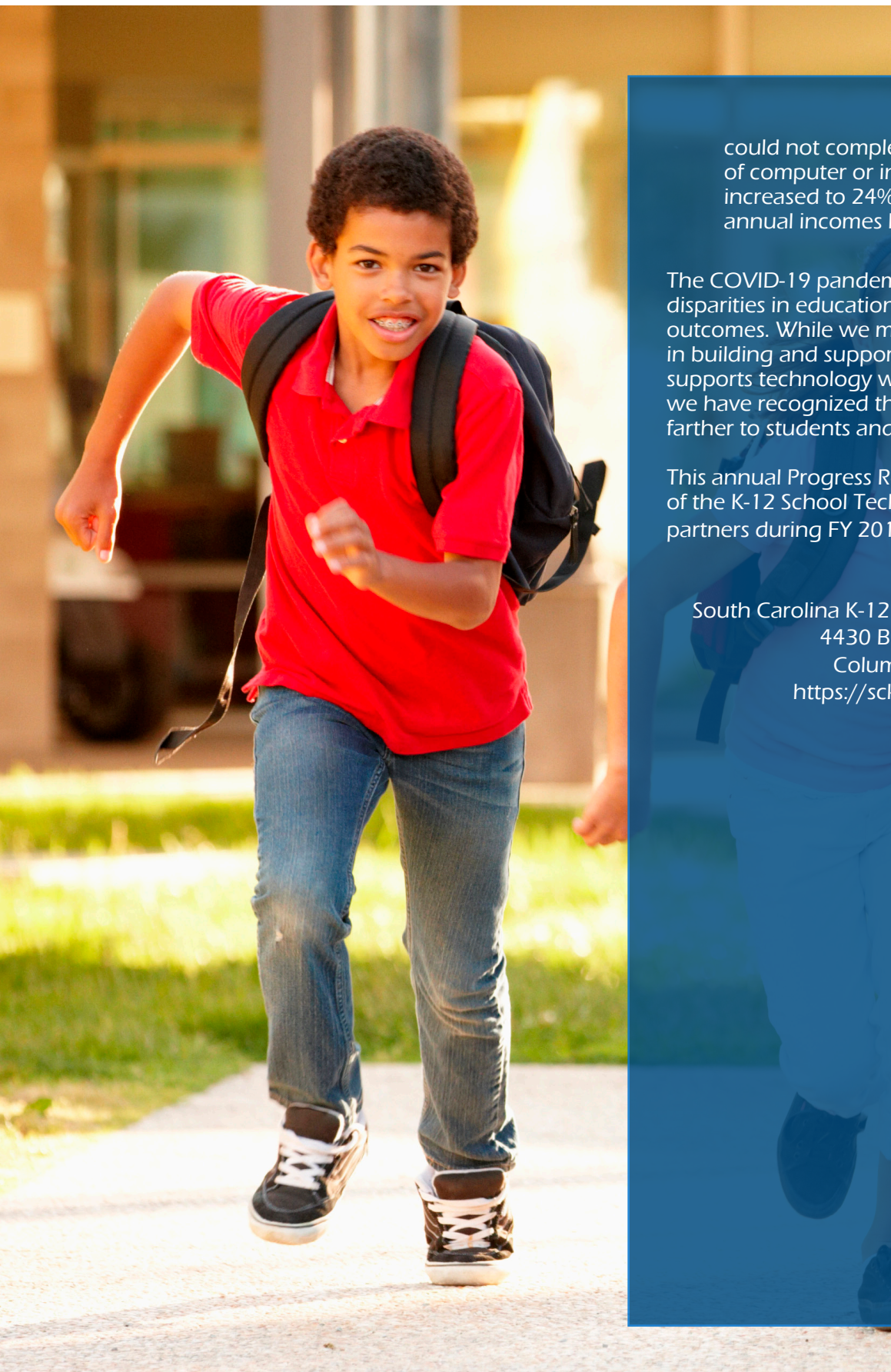South Carolina

EXECUTIVE SUMMARY

The impact of the COVID-19 pandemic on public schools during the 2019-20 school year was staggering. Over 55 million students in public and private schools were impacted nationally. All of the nation's schools shut down in-person learning in mid-March, and only a few states have experimented with opening classroom doors since then.

When the pandemic caused the closure of all South Carolina public schools in March 2020, with 30% of the school year remaining, educators quickly put necessary plans into action to ensure that children would continue to receive instruction, even without the benefit of face-to-face instruction and traditional brick and mortar classrooms. Students began learning through prepared packets of work, online lessons, and some received a blended dose of both.

One thing that was learned during this time, is that the classroom connectivity gap in schools nationally had effectively closed. Programs like the South Carolina K-12 School Technology Initiative — a public-private partnership dedicated to providing network and internet connectivity to every teacher and every student in every public school and to every public library in every county in South Carolina — were working. More than 99% of schools nationwide had access to fast and reliable internet, making online learning an option for students.

However, with school buildings closed due to the pandemic, it became clear that more than 9 million students do not have internet access at home. According to a 2018 study from the Pew Research Center:

➤ 15% of U.S. households with school-age children did not have a high-speed internet connection at home.

➤ 35% of U.S. households with school-age children and annual income below $30,000 did not have a high-speed internet connection at home

➤ 17% of teens ages 13 to 17 often or sometimes

could not complete homework due to a lack of computer or internet at home. This amount increased to 24% for teens in homes with annual incomes below $30,000.

The COVID-19 pandemic exacerbated existing disparities in educational opportunities and outcomes. While we may have made headway in building and supporting an infrastructure that supports technology within schools and libraries, we have recognized that the digital divide reaches farther to students and families within their homes.

This annual Progress Report documents the activities of the K-12 School Technology Initiative and its partners during FY 2019-20.

South Carolina K-12 School Technology Initiative
4430 Broad River Road
Columbia, SC 29210
https://sck12techinit.sc.gov/

STUDENT LEARNING AND CLASSROOM TECHNOLOGY

South Carolina Technology Plan Goal:
All districts across the state of South Carolina are striving to improve student learning through technology.

Partner Efforts to Support the Goal:
The partners that make up the K-12 School Technology Initiative strive to ensure that every public school student in South Carolina — regardless of location or background — is afforded the technology, infrastructure and educational content necessary to graduate with the world class knowledge, skills and characteristics as defined by the Profile of the South Carolina Graduate.

Initiative partners also offer a wide array of invaluable, standards-based digital learning resources to educators and students. Such resources have helped change the ways in which educational content is provided in South Carolina. Together, these efforts, programs and collections — as well as many others detailed in this report — help provide the content, hardware and infrastructure necessary for our students to be successful in the 21st century.

The partners that make up the K-12 School Technology Initiative engage in a wide variety of activities and programs designed to improve student learning through technology. Such activities and programs are detailed throughout this section of the 2019-20 Progress Report.

STUDENT LEARNING & CLASSROOM TECHNOLOGY

DISCUS

Discus – South Carolina's Virtual Library is the "information place" for all South Carolinians. Discus, which stands for Digital Information for South Carolina Users, provides free access to an electronic library that's available on a 24/7 basis.

Administered by the South Carolina State Library (State Library) and supported by the South Carolina K-12 School Technology Initiative, these vital resources align with state curriculum standards by providing access to thousands of videos, career information, professional and scholarly journals, educator tools, e-books, primary sources, test preparation tools, and much more. The mobile friendly website is used by parents, educators, and students of all ages to safely learn and develop research skills free from outside distractions including advertisements and unreliable websites.

Discus helps ensure a level playing field for all South Carolina students by providing access to high-quality scholarly information needed for success. The collection includes a wide range of subjects that are essential to the Profile of the South Carolina Graduate, including science, math, reading, literary studies, health, technology, social issues, and the many cultures of the world.

Discus utilizes EZproxy, a state-of-the-art central authentication solution that provides seamless access for residents, thereby automatically granting access without the need for usernames, passwords or other credentials. The 97% authentication rate ensures equal access to quality information to support intellectual growth, education, economic development, and improve the quality of life for all residents.

Discus Content Changes

In the 2019-20 school year, the State Library – with funding assistance from the K-12 School Technology Initiative – was able to secure three new resources for the Discus collection; World Almanac for Kids Elementary, World Almanac for Kids, and Writer's Reference Center. These cloud-based research databases provide articles, videos, science experiments, games, maps and educator resources covering all topics. Research databases for elementary and middle school students are frequently requested by educators and these databases help fill those requests.

The World Almanac for Kids Elementary database, designed for students in second grade through fifth grade, provides easy navigation with large images, interesting and entertaining content to help develop research and writing skills, and a variety of popular topics such as animals, explorers, math and weather.

The World Almanac for Kids database, designed for students in sixth grade through ninth grade, includes primary U.S. sources, while its debate and financial literacy topics assist students with the development of critical thinking and problem-solving skills.

The Writer's Reference Center database is designed for middle school students through adulthood and provides a wide variety of tools related to grammar, style and research.

In addition, eight EBSCO Reference eBook collections were added to the Discus discovery tools, subject pages and appropriate grade level pages. These collections, consisting of more than 2,000 eBooks, supplement the current EBSCO offerings with collections supporting history, science, literature and health. Several databases

also received interface updates including Learn360, the Gale In Context suite, and Britannica Fundamentals. These enhancements are designed to increase access to library resources and have a greater impact on student success.

Discus Usage

During the first three quarters of FY 2019-20, South Carolinians retrieved 12,399,280 items using Discus databases, the majority of these by the K-12 community. This 12% increase compared to the previous year includes Britannica (up 23%), EBSCO (up 34%), Infobase (up 47%), and ProQuest (up 7%).

While many resources had increases in usage, two in particular stood out: Magic School Bus and Learn360. Magic School Bus increased 197% from year one to year two, while Learn360 views increased 107%. In the first three quarters of FY 2019-20, there were 162,025 videos watched in Magic School Bus and 582,893 items used in Learn360, which indicates the passion educators have for these resources.
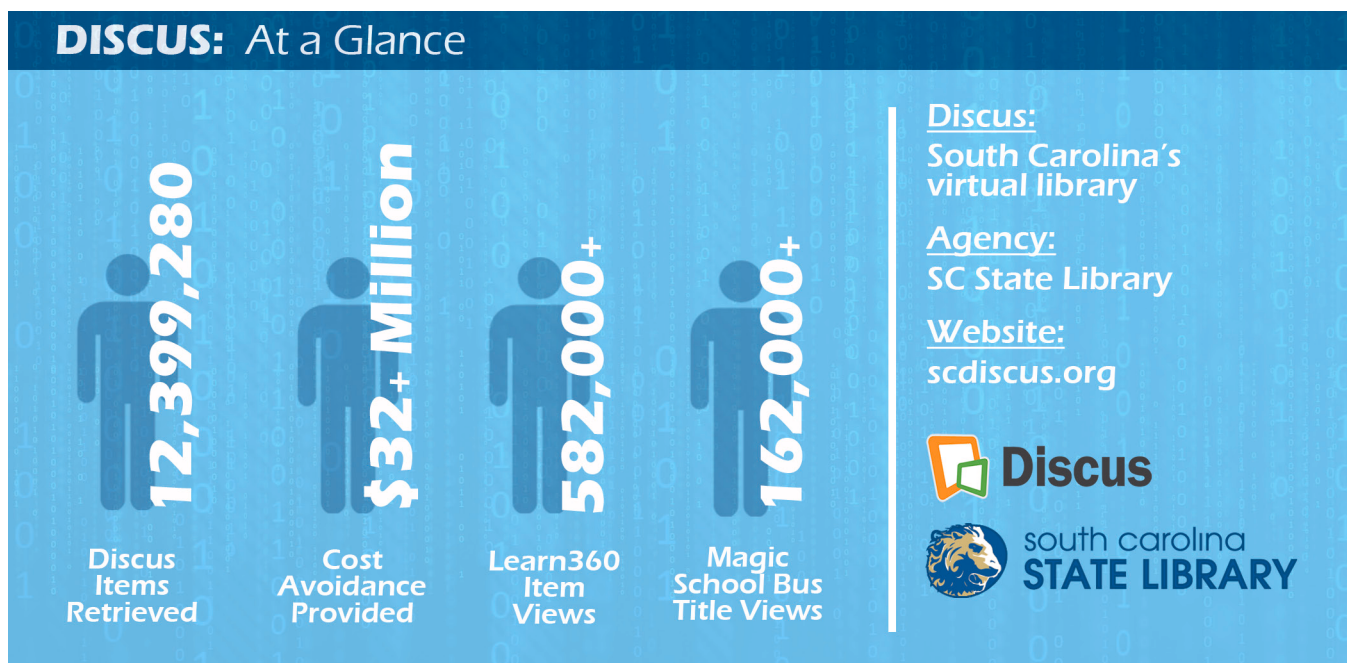
With the assistance of the K-12 School Technology Initiative, Learn360 was added in 2018. This multimedia database for pre-K through 12th grade contains 178,000 full-length videos, images, audio files, interactives, maps and science experiments from more than 200 top educational producers. Subject areas offered through this resource include language arts, mathematics, science, social studies, health, world languages, technical and vocational education, as well as music and dance. Adding Magic School Bus has also proven to be extremely valuable as Ms. Frizzle's exploration of science makes learning enjoyable.

It should be noted that usage for BrainPOP Jr. declined significantly due to changes in the company's reporting algorithms. Usage was previously determined by the number of logins; however, it has now been changed to the number of activities including movies, quizzes, concept maps and games. The improved reporting should provide more accurate statistics moving forward. Usage for TumbleBooks Library also decreased primarily due to a collection of math books being removed from the subscription. In addition, the Gale Cengage suite of databases saw a slight usage decline compared to previous quarters.

Discus Return on Investment

Each database offered through Discus is carefully

DISCUS: At a Glance

12,399,280
Discus Items Retrieved

$32+ Million
Cost Avoidance Provided

582,000+
Learn360 Item Views

162,000+
Magic School Bus Title Views

Discus:
South Carolina's virtual library

Agency:
SC State Library

Website:
scdiscus.org

Discus

south carolina STATE LIBRARY

evaluated and chosen to align with South Carolina curriculum standards for all grade levels. Resource usage is monitored, and the collection is regularly evaluated for redundancy or potential gaps and the necessity of each resource in relation to the State Library's mission. In addition to aiding South Carolina learners, Discus is instrumental for educators by providing professional journals, lesson plans, classroom activities and other teaching tools.

The State Library negotiates with vendor partners when purchasing statewide subscriptions to get the best rate possible. As a result, millions of dollars are saved each year by bundling packages of resources that are beneficial to the public, all grade levels, and academic institutions. The licensing agreements are studied to ensure a fair price along with ample technical and marketing support.

The State Library conferred with each vendor partner to determine the cost avoidance for each K-12 school district, academic institution, and public library if each were required to purchase access separately. This amount was determined to be in excess of $32 million. This estimate assumes library systems and school districts have the technical infrastructure such as hardware, software and digital bandwidth for videos, animated books and download features. Discus database license costs budgeted for FY 2019-20 were $2,738,576, proving that the return on investment for Discus is excellent from both a learning perspective and cost efficiency, with all state funding for Discus going directly to database acquisition.

For Additional Information

To learn more about the State Library's Discus, please visit www.scdiscus.org.

SCETV EDUCATION SERVICES

South Carolina Educational Television's (SCETV) Education Services delivers a wide range of high-quality digital learning content for students and educators. Additionally, SCETV provides professional development and curriculum support

designed to support personalized, collaborative learning experiences. As part of this effort, SCETV creates, organizes and distributes educational content to support pre-K-12 student needs, while also providing a variety of online and face-to-face professional development opportunities for teachers, staff and administrators.

Over the past two decades, funding from the K-12 School Technology Initiative has been used to help provide resources used extensively by pre-K-12 children throughout the state. This funding has helped support SCETV's on-demand multimedia curriculum resource sites, including such highly regarded sites as Knowitall, PBS Learning Media and LearningWhy.

Knowitall

Knowitall.org, a long-standing service offered by SCETV, is a free online collection of original and engaging educational resources designed specifically for classroom use. Many of the assets are standards-based and include cross-curricular lessons and assessments.

In 2015, SCETV began an extensive overhaul of the site in an effort to make it more mobile friendly. Due to these efforts, and the transition of services funded by the K-12 School Technology Initiative, Knowitall was upgraded in the summer of 2015. Since that time, Knowitall has expanded to contain more than 9,000 multimedia resources, including:

- ▶ 4,821 mobile friendly videos.
- ▶ 1,333 audio resources.
- ▶ 1,787 photos.
- ▶ 286 photo galleries.
- ▶ 369 documents.
- ▶ 134 interactives.

Knowitall content continues to grow as well. On average, there are approximately 15,000 pages views each month on Knowitall, with peak usage at nearly 20,000 during the months of remote learning.

During the 2019-20 academic year, funding from

the K-12 School Technology Initiative supported the development of Let's Go! CAREERS, a new series that promotes the virtual exploration of occupations in a variety of career clusters. Initial content highlights occupations in manufacturing, public safety, transportation, distribution and logistics.

Along with the rich resources provided through Let's Go CAREERS, new content was also produced for the History in a Nutshell series. Segments on topics such as the Flu Pandemic of 1918, the Space Race, and World War I were extremely popular among educators during remote learning precipitated by the coronavirus pandemic. Other Knowitall.org content includes short digital features of the 2020 South Carolina African American History Calendar honorees in partnership with the South Carolina Department of Education.

Further, as a result of initiative funding, SCETV was able to align all appropriate Knowitall assets to the new 2020 social studies state standards. These assets include programming such as Beyond Barbados: The Carolina Connection, a new SCETV-produced documentary that was segmented for classroom use along with standard-aligned curriculum. Segmented clips are housed on Knowitall and were used as the backdrop for educator workshops on a variety of cultural topics. This style of workshops was new for the agency and serves as a good model for the creation of collaborative digital content rooted in social studies and ELA standards.

PBS LearningMedia

In addition to Knowitall.org, SCETV is expanding access to web resources through the continued utilization of PBS LearningMedia. In 2019-20, South Carolina PBS's LearningMedia library included more than 100,000 multimedia resources for pre-K-12 educators boasting an average of 12,156 users and 39,634-page views per month from South Carolina. During most months, both of these data points are well above the national average. At peak usage during the past year, there were 26,520 users and 108,498-page views. Training on PBS Learning Media

is incorporated into customized workshops designed for educators across the state.

LearninngWhy

Training is also made available on SCETV's newest resource, LearningWhy. Created in 2017, LearningWhy houses innovative lessons that specifically address the instructional needs of schools initiating 1:1 technology environments. The project-based and one-on-one lessons are produced by SCETV and qualified partners, including the Arts in Basic Curriculum Project, local school districts, the National Heritage Corridor, the South Carolina Fire Academy and the National Parks Service. LearningWhy lessons are searchable by state curriculum standards and taxonomies, and include step-by-step progressions, assessments and all the media and content links needed for teaching to standards.

A total of 116 new lessons were added during 2019-20 academic year, and there are currently 5,011 users registered to access LearningWhy. Over the past year, particularly during the period of extended remote learning, approximately 95% of traffic to the site was from new users. The amount of page sessions increased by nearly 60% from the previous academic year.

Expanded Access for Educators

Access to web resources like Knowitall, PBS LearningMedia and LearningWhy is expanded to educators across the state through the recent addition of free Wi-Fi devices to select education facilities within Sprint's coverage areas. For many years, SCETV's statewide distribution to schools was conducted through an instructional television fixed service (ITFS) closed-circuit educational broadcast system. To make spectrum more digitally compliant, the Federal Communications Commission enforced new regulations in 2005 for ITFS systems, creating the Educational Broadband Service (EBS). This development gave SCETV the opportunity to lease the state's EBS channels through a state contract with Sprint.

The resulting contract, established in 2017, has

allowed SCETV to issue 271 free Wi-Fi devices to date as gateways to broadband internet to applicable early childhood educators and other educational organizations, including after-school programs. SCETV bundles Wi-Fi access with its quality professional development and content funded by the K-12 School Technology Initiative. The project helps close the digital divide in South Carolina while preparing early learning students for reading and STEM skills before and after school. The initiative also supports the work of SCETV to engage parents and caregivers. To date, nearly 1,000 teachers, parents and students have received training as a result of the work in this area. The program continues to grow each year.

SCETV Survey Efforts

All of the aforementioned services are continuously evaluated for effectiveness and efficiency. In order to ensure that SCETV remains responsive to the needs of the educational community, SCETV surveys teachers, staff and administrators to help identify gaps and gauge the use of educational services and technology use in schools.

This year, 2,370 respondents participated in the annual survey, representing public schools, private schools, charter schools, home schools,

childcare centers, adult education centers and higher education institutions. Approximately 85% of participants that utilized SCETV educational resources and services indicated that they helped to improve student engagement in the classroom.

A mid-year survey was also administered asking educators specific questions about Knowitall and LearningWhy use. A total of 332 respondents participated in this research effort. Results indicated that most users (73%) are very satisfied with the instructional value and grade-level offerings from Knowitall and LearningWhy.

Most resources from both sites were used to create instructional materials (42.98%) and/or for inclusion in student learning activities (70.66%). Responses gave insight into additional content needs and ways SCETV could continue to enhance both sites. All survey results are paramount in assisting SCETV with ensuring that services align not only with the needs of educators, but with the tenets outlined in the Profile of the South Carolina Graduate.

For Additional Information

To learn more about South Carolina Educational Television and the resources it has to offer, please visit www.scetv.org.

SCETV EDUCATION SERVICES: At a Glance

9,000+ — Knowitall Multimedia Resources

100,000+ — PBS Learning Media Resources

500+ — Learning-Why Lesson Plans

Agency: SCETV

Website: scetv.org

Knowitall.org

PBS LearningMedia

LEARNING WHY

SOUTH CAROLINA etv

STUDY SC

StudySC, created in 2010 by the South Carolina State Library, is an educational resource designed to provide online content in support of state-specific curriculum standards. This easy-to-navigate, popular tool is a portal to vetted information for students and educators. The concept for StudySC emerged from feedback indicating the need for a comprehensive portal to assist in locating age-appropriate information for third and eighth grade students studying South Carolina history.

This student-friendly resource is organized by grade level and subject area and provides state-related online resources for homework and project assistance. Links to high-quality websites, multimedia content and Discus articles are researched and vetted before being added.

A wide variety of subjects are included in StudySC for elementary, middle and high school students. Subjects include government, culture, history, environment and geography, as well as famous South Carolinians. In addition, each new 2019-20 South Carolina Book Award nominee was added with a description, cover image and vetted links to author biographies, book reviews, NoveList information, and other appropriate educational content.

For educators, over 640 South Carolina-related lesson plans are searchable by subject, grade level or keyword. These lesson plans are created by a variety of educational institutions such as the National Park Service, South Carolina Educational Television, South Carolina Department of Health and Environmental Control, and South Carolina institutions of higher education.

StudySC's popularity with students and educators continues to rise. In FY 2019-20, the portal's usage included 41,301 sessions, a four percent increase of the previous year.

For Additional Information

To learn more about the State Library's StudySC, please visit www.studysc.org.

ACADEMIC COMPETENCY AND STANDARDS AUTHORING TOOL

During the 2018-19 academic year, the South Carolina Department of Education (SCDE) procured an academic competency and standards authoring tool (ACMT) with funding from the K-12 School Technology Initiative.

Because of this project, today SCDE is able to provide machine-readable standards with an interoperable foundation that can be loaded into a state-level learning object repository (LOR) and district learning management systems (LMS). This is a key component for providing direct access to state standards and the resources needed to facilitate remote K-12 learning opportunities in a digital ecosystem.

The ACMT tool has been developed and deployed. SCDE worked with LearningMate to build out the authoring platform and Competencies and Academic Standards Exchange (CASE) server.

SCDE has published the 2020 social studies standards and the 2015 English language arts standards on the CASE server in a machine-readable format. The CASE standard is being revised to support rich text publication. The math standards are under conversion to a machine-readable format and will be released soon.

For Additional Information

To learn more about the South Carolina Department of Education's Academic Competency and Standards Authoring tool, please visit standards.ed.sc.gov.

VIRTUAL SC

In 2007, the South Carolina Department of Education (SCDE) developed VirtualSC, the state's virtual school program. Since that time, VirtualSC has become an invaluable resource by offering online courses for credit, free-of-charge to all South Carolina students.

Rise in Popularity

The virtual school program has become increasingly popular since its inception and has now grown to the fifth largest state virtual school program in the nation based on the number of student enrollments according to the latest Keeping Pace with K-12 Online Learning Report.

VirtualSC courses, available to any public, private, home schooled or adult education student in the state, are provided via an online learning management system, Moodle. Registration for these courses takes place in the program's recently implemented student information system, Genius.

Teachers remain in contact with their students through a variety of methods, such as via telephone, web conferencing and instant messaging systems like Skype. Live lessons are conducted for some courses, such as world language courses, utilizing BlackBoard Collaborate and Jigsaw virtual classrooms.

To help ensure course offerings meet quality, design and academic standards, SCDE's Office of Virtual Education developed a curriculum team. The curriculum team, which consists of several instructional designers, a media team, a curriculum coordinator and a program coordinator, is responsible for new course design and development, course reviews and revision, and media development for interactive learning objects within new and existing courses.

VirtualSC continues to align all courses to the Quality Matters (QM) framework to ensure accessibility standards are met and external review guidelines are followed. In 2019-20, the curriculum team completed an internal review of all extant VirtualSC courses. Data from this review was used to create a multiyear course development, revision and review plan with the goal of having all courses externally reviewed and certified by Quality Matters. This year, VirtualSC received Quality Matters certification for three additional courses: Government CP, English 2 Honors and Music Appreciation, bringing the total number of certified courses to four.

The curriculum team also supports several other virtual academic resources for students, including test preparation for AP, SAT, ACT, Elementary Keyboarding and EdReady Skills Recovery resources.

Courses offered through this program are taught by state-certified teachers who have demonstrated expertise in their individual subject areas. All VirtualSC full-time teachers hold a rating of "highly qualified" in their subject area by the SCDE. In addition to their outstanding credentials, all full-time and part-time teachers must undergo in-service online professional development training to teach with the program.

VirtualSC consisted of 43 full-time teachers for the academic year, in addition to 100 part-time instructors, to teach the courses offered through the program. The number of full-time and part-time teachers has consistently grown over the past due to the increased student demand for courses.

VirtualSC Enrollments

The popularity of the VirtualSC program continues to grow. During the 2019-20 school year, the program included 46,849 student enrollments. These enrollments included students from the following:

- ▶ 347 schools.
- ▶ 84 public school districts and special schools.
- ▶ 26 home school associations.
- ▶ 84 private schools.
- ▶ 23 adult education centers.

The program had a successful course completion rate of 88% for the school year. Despite the lack of new funding for the program, the program still saw an increase of 2% in student enrollments from the 2018-19 school year.

In addition to the 46,849 student enrollments served in high school level courses taught by VirtualSC teachers, the program also served an additional 86,781 elementary school students in

grades K-6 through its free blended elementary keyboarding course offered in 39 school districts across the state.

VirtualSC Course Offerings

VirtualSC offered courses in 10 subject areas including the following:

- ▶ Career and technology education.
- ▶ English and language arts.
- ▶ Health and physical education.
- ▶ Mathematics.
- ▶ Science.
- ▶ Social studies.
- ▶ Visual and performing arts.
- ▶ World languages.
- ▶ Skills recovery and test preparation.

The program offered 88 diverse courses of varying levels, including advanced placement, honors, college preparatory and credit recovery classes.
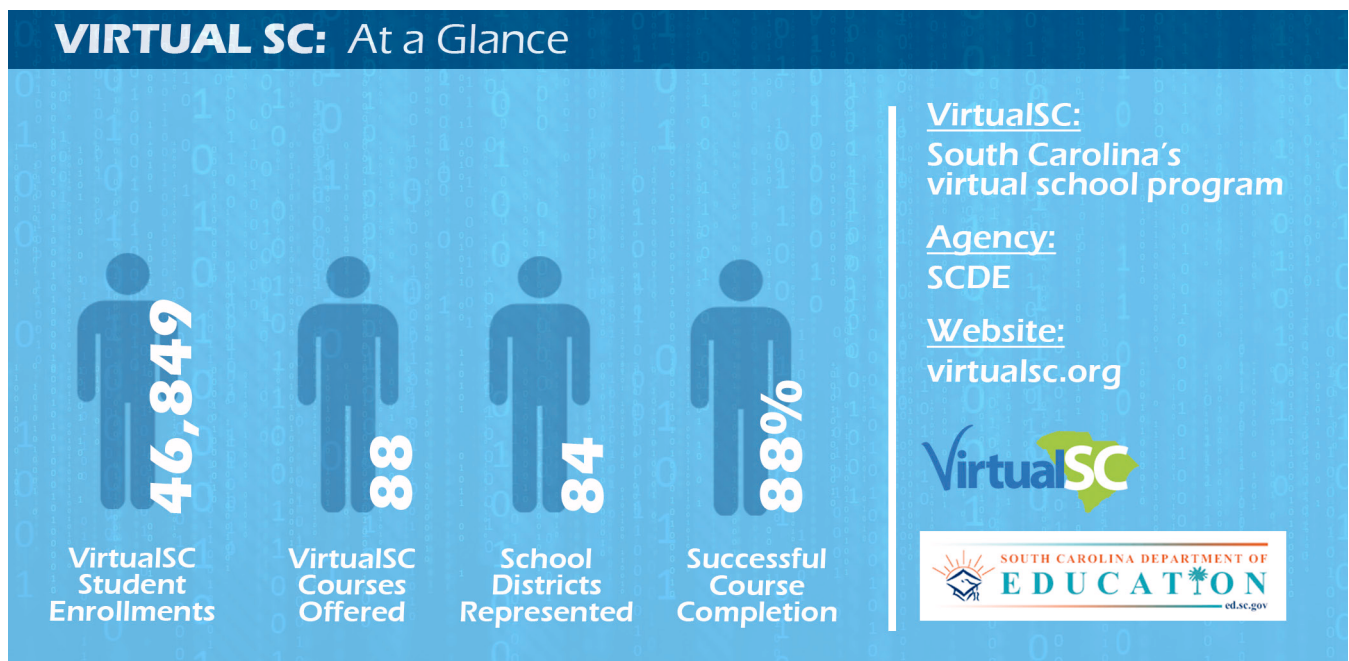
In addition to courses in the core content areas of English, mathematics, science and social studies, VirtualSC offered courses in four languages —

Spanish, Latin, German and French — as well as a variety of electives in such popular career majors as health occupations, family and consumer science and business education.

During the 2019-20 school year, VirtualSC added several new course options for students and continued to seek feedback from stakeholders on additional course needs. Some of the new high school credit courses created include: Fundamentals of Computing, Discovering Computer Science and AP Research, as well as new versions of Algebra 1 CP, Probability and Statistics CP, Sociology CP, Credit Recovery Chemistry and Credit Recovery Algebra 2.

VirtualSC Partnerships

As in previous years, VirtualSC has continued to partner directly with schools to offer its Virtual Learning Labs in an effort to help schools fulfill several needs resulting from budget cuts, reduced funding and teaching vacancies at smaller schools across the state. Through these learning labs, schools are provided a standards-based virtual course as well as a highly qualified state certified teacher who meets virtually – utilizing a robot – with students during a set period of the school day to provide instruction.

VIRTUAL SC: At a Glance

46,849
VirtualSC Student Enrollments

88
VirtualSC Courses Offered

84
School Districts Represented

88%
Successful Course Completion

VirtualSC:
South Carolina's virtual school program

Agency:
SCDE

Website:
virtualsc.org

VirtualSC

SOUTH CAROLINA DEPARTMENT OF
EDUCATION
ed.sc.gov

The Virtual Learning Lab program went through an extensive review in early 2019 to determine program improvements. Some of the changes implemented during the 2019-20 school year included: more live meetings between the teacher and students either physically or virtually, a catalog of courses that can be offered in this format, enhanced parent communication, open houses and expanded implementation discussions with the partner school. In the 2019-20 school year, the Virtual Learning Lab pilot program served 65 students through offering Virtual Learning Labs to one school with a focus on improving outcomes and expanding options for students.

VirtualSC also continued to expand its flexible Franchise Program to schools and districts across the state. This program allows schools to use VirtualSC developed course content, the program's learning management system, Moodle, and its student information system.

VirtualSC developed and began offering the Franchise Program to districts during the 2014-15 school year with one pilot district, Aiken County Public School District. During the 2019-20 school year, the Franchise Program expanded from 15 to 22 franchises, serving 6,628 student enrollments with an overall success rate of 80%. Participating school districts included:

- ▶ Aiken County Public Schools.
- ▶ Anderson School District One.
- ▶ Berkeley County School District.
- ▶ Charleston County School District.
- ▶ Chester County School District.
- ▶ Colleton County School District.
- ▶ Department of Juvenile Justice.
- ▶ Dorchester School District Four.
- ▶ Edgefield County School District.
- ▶ Florence 1 Schools.
- ▶ Greenville School District.
- ▶ Greenwood School District 50.
- ▶ Greenwood County School District 52.
- ▶ Laurens County School District 55.

- ▶ Lexington School District 1.
- ▶ Lexington School District 4.
- ▶ Pee Dee Math, Science and Technology Academy.
- ▶ Pickens County School District.
- ▶ School District of Oconee County.
- ▶ Williston School District 29.

Each of the districts use its VirtualSC franchise in a slightly different way to fit its own unique needs and meet a specific district purpose. As an example, Greenville County School District utilizes the Franchise Program to offer content recovery options to their students while several other districts utilize the program to offer options to their alternative schools or adult education programs.

As part of the program's strategic planning, a Student Advisory Board and School Advisory Board was developed in 2019. Both boards met throughout the year to discuss programmatic changes, program policies, courses and many other topics to assist the program with making strategic program changes to ensure the program is meeting the needs of all stakeholders. The two advisory boards convened several times throughout the 2019-20 school year and action was taken on a wide variety of topics based on their feedback.

VirtualSC will be expanding and implementing a plethora of ways to ensure that students obtain world class knowledge and skills, as well as the life and career characteristics needed to be academically successful in the 21st century while supporting the Profile of the South Carolina Graduate.

VirtualSC Support During COVID-19

As a result of the prolonged school closures due to the COVID-19 pandemic, VirtualSC quickly pivoted to offer several options to support schools and students. In an effort to provide support to teachers statewide, who were quickly moving to online instruction with their students, VirtualSC developed a resources page to provide

several guides to support teachers that were experiencing virtual instruction for the first time. The guides, developed by VirtualSC, included Delivering Effective Digital Instruction, Tools for Supporting Digital Learning and Supporting Digital Learners. In addition, VirtualSC teachers and staff held a live webinar and support session that was open to all teachers. Approximately 250 teachers across the state participated in the VirtualSC live event.

In addition to support for teachers, VirtualSC also implemented an additional Spring Fast Track semester that offered both Economics and Government for seniors who needed those courses to graduate. Many school districts offer these course options to seniors during the fourth nine weeks of school; however, this was not a possible option for some schools due to the closures. The added semester ran through the month of April and concluded for all students in May. Despite the fast-paced nature of the course, 100% of the students enrolled passed the course and earned the credits required for high school graduation.

Lastly, VirtualSC opened Credit Recovery course enrollments earlier to allow seniors the opportunity to earn the credit prior to graduation while their schools were closed. Credit Recovery enrollment opportunities began in April and ran throughout the summer with courses starting as early as April 2020.

VirtualSC will continue to expand opportunities to support teachers and students across South Carolina to assist with the state's response to COVID-19. VirtualSC has the experience to provide a variety of support — as outlined by the AccelerateEd Task Force — to meet the needs of schools and students statewide.

For Additional Information

To learn more about SCDE's VirtualSC, please visit virtualsc.org.

INFRASTRUCTURE AND SECURITY

South Carolina Technology Plan Goal:
Provide a robust, secure and cost-effective technical infrastructure that improves equitable access to appropriate technologies for all schools in South Carolina.

Partner Efforts to Support the Goal:
The networks that connect us — whether in our school, libraries or home — are arguably the most mission-critical infrastructure in today's public education system. As such, the partners of the South Carolina K-12 School Technology Initiative assist the state's public schools and libraries in providing the necessary technology tools and resources to help ensure a robust, secure and cost-effective infrastructure.

The partners that make up the K-12 School Technology Initiative engage in a wide variety of activities and programs designed to improve infrastructure and security. Such activities and programs are detailed throughout this section of the 2019-20 Progress Report.

EXPANSION OF HIGH-SPEED BROADBAND INFRASTRUCTURE

The South Carolina Department of Administration (Admin) works to expand network connectivity of the state's K-12 public schools and libraries. The focus of this effort is to provide a stronger technology foundation for K-12 students, teachers and library patrons as they acquire the skills needed to prepare for 21st century emerging educational technologies and job opportunities.

As a direct outcome of this effort, fiber-based high-capacity broadband connectivity continues to be expanded on a statewide basis among school and library entities.

Internet connectivity for South Carolina's public schools and libraries has seen tremendous growth over this time. As evidence of this fact, since June 2015, the number of districts with 1,000 Mbps or more bandwidth has grown from 22 to 55.

Bandwidth Usage

As of FY 2019-20, school districts accounted for nearly 169 Gbps of internet bandwidth capacity, including 6.35 Gbps to library systems and 10.11 Gbps to charter schools. While the average library system and charter school had roughly 147 Mbps of internet bandwidth capacity, the average school district in South Carolina had a capacity of 2,230 Mbps.

Looking ahead, the K-12 School Technology Initiative will need to consider the network connectivity needs of schools and libraries over the next decade and set forth new connectivity goals that support the Initiative's vision.

Category Two Funding

In FY 2019–20, Admin received $2.7 million from the K-12 School Technology Initiative for the Category Two (C2) E-Rate State Match Program. The program reimbursed school districts, library systems and charter schools for the non-discounted share of their FY 2019-20 Category Two E-Rate applications.

The reimbursed funds were reinvested by the beneficiary to continue to upgrade network infrastructure. The program provided funding to 25 library systems, 13 charter schools, 25 plaintiff school districts and 31 non-plaintiff school districts.

SCHOOLS AND LIBRARIES E-RATE PROGRAM

Since 1998, the Schools and Libraries E-Rate Program has proved to be transformational for education technology in public schools and libraries across South Carolina. Today the support provided by this program is being utilized by the South Carolina Department of Administration (Admin) to acquire broadband services for the state's public K-12 school and library network participants.

Admin is also responsible for the administration of the South Carolina E-Rate Consortium (Consortium) which includes 80 school districts, 61 charter and special schools and 40 library systems. As of FY 2018-19, the Consortium is one of the largest E-Rate consortia in the United States with a total funding request amount of $20 million. The Consortium prepares and files annual applications for network connectivity on behalf of the majority of the state's public schools and libraries, removing the administrative burden on those organizations.

In addition, the Consortium staff assists school districts and libraries with navigating the complex process of filing their own E-Rate applications. Such assistance is provided through the K-12 School Technology Initiative website with current program news, resources and deadlines. Assistance is also provided through a series of live training sessions held in multiple locations throughout the state.

To support the Consortium, Admin manages funding from the K-12 School Technology Initiative that is used to pay service providers who supply internet access to connect public schools and libraries with wide area network (WAN) services. These high-speed networks are being built to meet the ever-expanding needs of students, teachers and library patrons for enriching content.

The funding support offered by the Schools and Libraries E-Rate program is essential to the continued expansion of education technology in districts and libraries throughout the state.
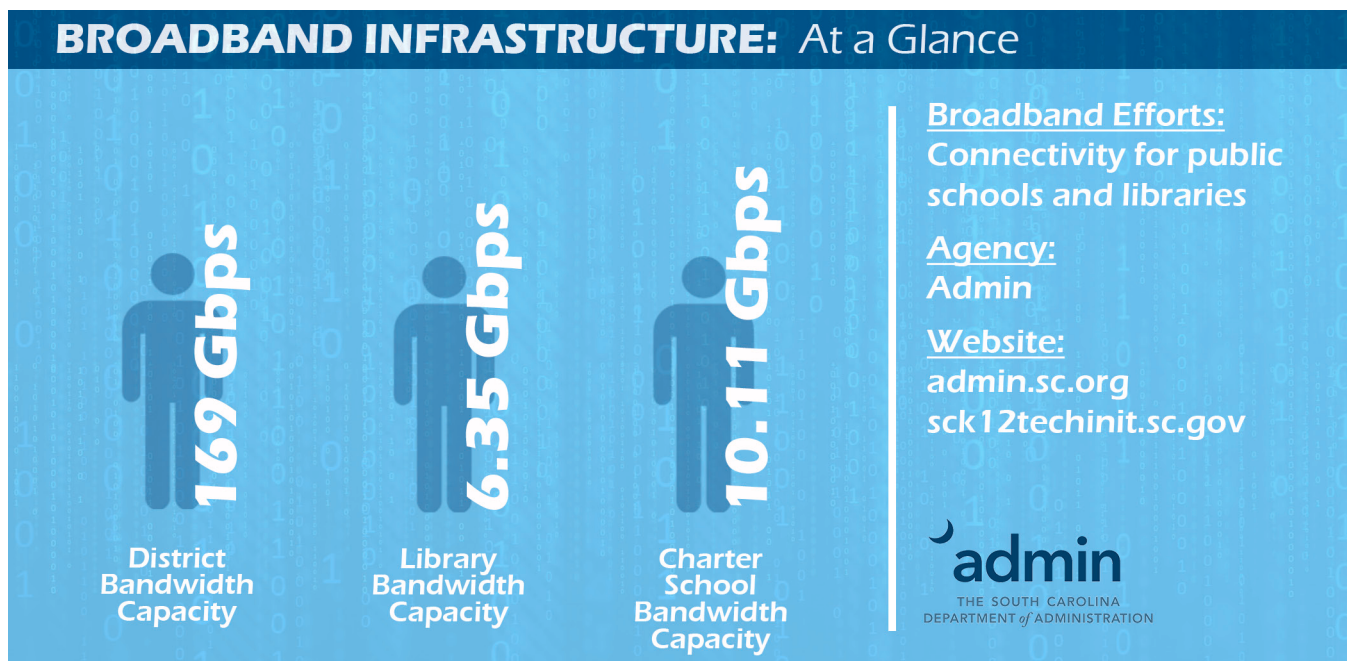
E-Rate Program Trends

Schools and libraries in South Carolina have been able to fund drastic improvements to network infrastructure. Such improvements have been possible due in part to the Schools and Libraries E-Rate Program's Category Two (C2) funding mechanism.

In FY 2019-20, 56 South Carolina school districts, 25 library systems and 13 charter schools requested over $15.4 million in reimbursements for Category Two products and services such as routers, switches and other internal connections. Of the $15.4 million requested, $14.8 million has been approved for funding. In May 2020, those school districts and library systems were disbursed $7.4 million in reimbursements from the E-Rate program.

The amount of reimbursements disbursed to school districts and library systems for FY 2019-20 will continue to rise well into 2021, as districts and libraries continue to submit invoices to the E-Rate program for payment. If all $14.8 million in requested funds are ultimately disbursed to school districts and library systems, the value of the products and services would exceed $21.7 million, which includes the reimbursed funds and the cost share funds from school districts.

When comparing the FY 2018-19 and FY 2019-20 Category Two E-Rate filing data, several program trends were identified that should be noted. First, the number of libraries participating in the C2

BROADBAND INFRASTRUCTURE: At a Glance

169 Gbps
District Bandwidth Capacity

6.35 Gbps
Library Bandwidth Capacity

10.11 Gbps
Charter School Bandwidth Capacity

Broadband Efforts:
Connectivity for public schools and libraries

Agency:
Admin

Website:
admin.sc.org
sck12techinit.sc.gov

admin
THE SOUTH CAROLINA
DEPARTMENT of ADMINISTRATION

E-Rate program increased from 12 to 25.

Secondly, applicants requested over $6.8 million more C2 funds in FY 2019-20 than in the previous year. As such, applicants were much more successful in seeing their E-Rate applications approved resulting in an E-Rate Efficiency Factor of 94%. This rate far exceeded the prior year's factor of 85%. It should also be noted that E-Rate program rules allow applicants to invoice as late as two years after the funding year, which will cause these figures to change over time.

With the goal to reach 100% E-Rate Efficiency Factor, the Consortium and the K-12 School Technology Initiative must continue to provide additional opportunities for E-Rate training for school districts and library systems.

For Additional Information

To learn more about the E-Rate program, please visit sck12techinit.sc.gov/e-rate/program-information.

VALUE OF STATE MASTER CONTRACTS

In many states, school districts and library systems don't have a statewide E-Rate consortium that provides broadband connectivity services, files required documentation, and coordinates service ordering on their behalf. In this scenario, these schools and libraries must devote more personnel to procurement, E-Rate compliance, and ultimately pay more for those broadband connectivity services.

Fortunately, schools and libraries in South Carolina benefit from the avoided administrative burden of filing for E-Rate discounts on broadband connectivity and very low costs for those services through state term procurement.

Reduced Costs, Increased Capacity

In January 2019, Admin awarded a seven-year state master contract for network services to AT&T. Most notably, the new state master contract lowers the cost for wide area network (WAN) circuits by 29%. These new, lower rates went into effect July 2020. Additionally, the new contract provides circuit bandwidth capacity speeds of 15 Gbps and 20 Gbps to schools and libraries for the first time. These new, high capacity circuits will allow the state's largest school districts to continue to grow their networks.

Cost savings from state master contracts fuels internet and WAN bandwidth capacity increases and, in many cases, lowers the cost shares for South Carolina E-Rate Consortium members. The Consortium is able to provide higher circuit bandwidth on best-in-class service for a fraction of the cost of similar services a decade ago.

INTERNET SECURITY PROTECTION

In an effort to help the state's schools and libraries combat the increased number and complexity of malware, ransomware and other advanced security threats, the K-12 School Technology Initiative provides Cisco Umbrella to districts, library systems and charter schools.

Cisco Umbrella is an industry leading, cloud-based, internet security product which complements the school or library's current internet security measures. Specifically, Cisco Umbrella leverages its constantly updated list of known domain named server (DNS) security threats with internet security policies providing drastically improved defense and user-friendly experience.

It is important to note that South Carolina is the only state which provides Cisco Umbrella internet security services to all public-school districts, library systems and charter schools through a coordinated statewide effort.

Cisco Umbrella Usage

In total, 156 school districts, library systems and charter schools are currently using Cisco Umbrella.

Between Nov. 1, 2019, and May 15, 2020, over 56.8 billion queries from South Carolina's schools
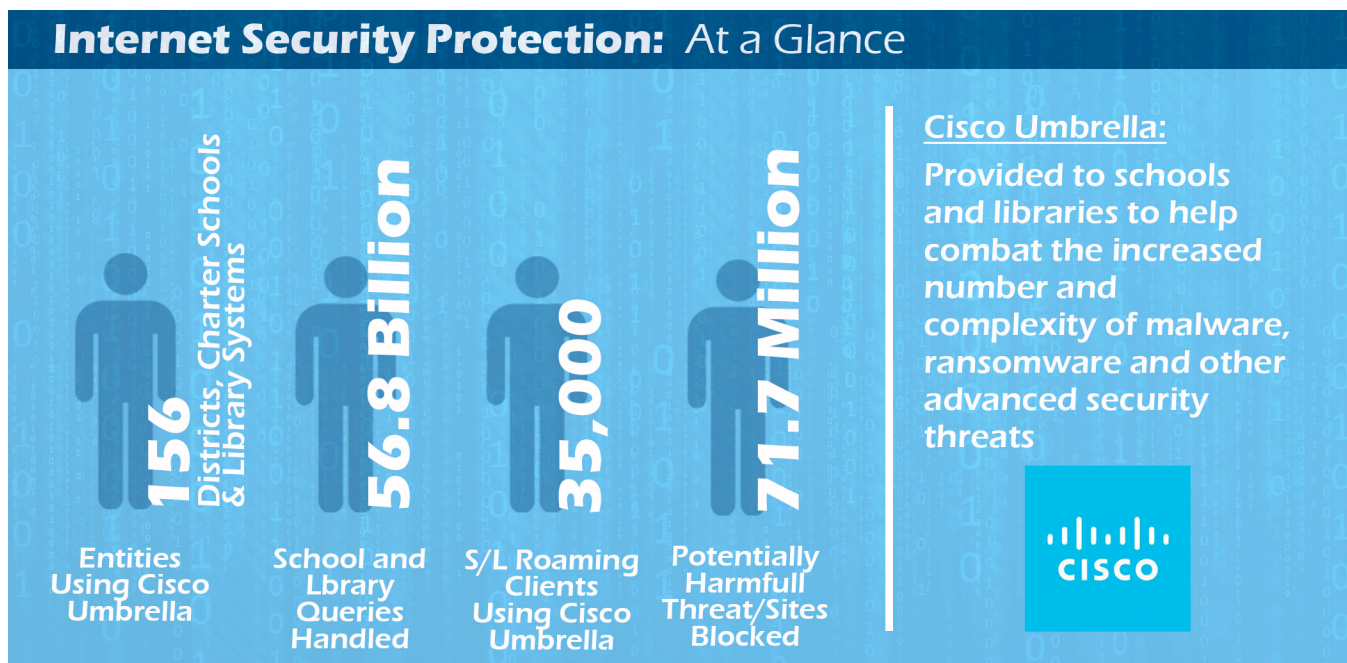
and libraries were handled by Cisco Umbrella. Of those queries, Cisco Umbrella blocked 71.7 million security threats and potentially harmful or inappropriate websites. Additionally, South Carolina schools and libraries have over 35,000 roaming clients, such as laptops, smartphones and other devices, which use the school or library's network using Cisco Umbrella's internet security features.

DISTRICT BACKUP RECOVERY SERVICES INFRASTRUCTURE

The South Carolina Department of Education (SCDE) provides data backup services using an Avamar Data Domain Backup/Recovery system. The system has 82 terabytes (TB) of usable storage and is located in Columbia, South Carolina.

SCDE also provided funding to procure Meraki communication devices needed for school districts to participate in this service. The response from districts to this shared services offering has been greater than expected. Originally, small school districts were targeted for this initiative; however, as of May 2020, SCDE is providing data backup for 11 school districts of various sizes and is actively working to onboard four more.

Of the 11 school districts implemented to date, SCDE is backing up 65 servers and 51TB of data. Some school districts are backing up a portion of their data while others are using the service to back up all their data. SCDE will continue to review current storage resources as usage continues to grow.

Internet Security Protection: At a Glance

156
Districts, Charter Schools & Library Systems
Entities Using Cisco Umbrella

56.8 Billion
School and Lbrary Queries Handled

35,000
S/L Roaming Clients Using Cisco Umbrella

71.7 Million
Potentially Harmfull Threat/Sites Blocked

Cisco Umbrella:
Provided to schools and libraries to help combat the increased number and complexity of malware, ransomware and other advanced security threats

CISCO

PROFESSIONAL DEVELOPMENT

<u>South Carolina Technology Plan Goal:</u>
Improve teacher and administrator integration technology in the classroom, administration and overall learning process.

<u>Partner Efforts to Support the Goal:</u>
The partners that make up the South Carolina K-12 School Technology Initiative are committed to improving the integration of technology in the classroom and in the overall learning process. Professional development for classroom teachers and school-level leaders is critical to ensuring that technology is imbedded in student learning.

The 21st century teacher must serve as both an educator and as a classroom technology facilitator. In this role, a teacher is not only a primary source of instruction, but also a technology facilitator, assisting students in identifying and making the best use of the myriad online resources at their disposal.

The partners that make up the K-12 School Technology Initiative engage in a wide variety of activities and programs designed to improve professional development. Such activities and programs are detailed throughout this section of the 2019-20 Progress Report.

SCETV TRAINING AND RECERTIFICATION EFFORTS

Meeting the needs of educators who affect learning each day in classrooms across the state is one of South Carolina Educational Television's (SCETV) top priorities.

SCETV has historically committed to serving South Carolina's districts, schools and educators by providing free professional development sessions on a variety of teaching and learning topics, including how to effectively integrate SCETV resources into instruction. Typically, sessions are hosted in a face-to-face or blended format, reaching approximately 5,000 persons each year. Sessions are hosted locally in districts, at SCETV, and at numerous education-related conferences around the state.

During the 2019-20 academic year, SCETV reimagined training efforts hosting its inaugural 21st Century Learners Week which featured national, regional and local leaders in the field of teaching and learning.

Additional reimagination came in response to the COVID-19 pandemic, prompting SCETV to create a new virtual professional development initiative during the last half of the year. As a result, the agency was able to continue the provision of quality professional development workshops, expanding the professional development reach to service 9,184 educators for the entire year.

Transitioning to a virtual environment provided an opportunity to increase the frequency of sessions, as well as the scope of topics covered. SCETV partnered with multiple agencies to offer new training sessions addressing multiple curriculum areas. Evaluation results from the annual survey of educational services show

that 96% of attendees found the presenters knowledgeable and the sessions valuable in supporting their respective roles.

The free professional development sessions offered through SCETV are complemented by recertification courses available for certificate renewal and graduate-level credit. Courses are made available directly through SCETV, PBS TeacherLine Southeast and TeacherStep (Converse College).

Through a centralized web site, educators can not only search courses by curriculum interest, professional development and credit needed, they can also readily find out if courses qualify for technology credit. Some courses qualify for Read to Succeed credit, while others place emphasis on topics such as assessment, early childhood pedagogy, digital storytelling, project-based learning and flipped classrooms. The completion of each term yields an overwhelming majority of positive feedback from participants.

For Additional Information

To learn more about SCETV's free professional development sessions and the SCETV Teacher Recertification Courses, please visit scetv.org/professional-development.

DISCUS PROFESSIONAL DEVELOPMENT

Discus Professional Development, offered through the South Carolina State Library, provides online and on-site presentations and training opportunities for educators, librarians, students and homeschool families. Session topics covered through these opportunities included civil rights, careers, literacy, financial management, cultural studies and South Carolina

history. In addition, several new topics were discussed, including advanced searching, STEM content and interactive tools for educators.

Discus Professional Development Offerings

The wide variety of training venues provided the opportunity to reach many audiences including parents, students and new educators to the electronic resources in Discus. These trainings also remind veteran educators of revamped resources and recent additions as well as the many tools found within the databases.

Educators had access to 52 online Discus training sessions and recordings and 58 live presentations, with 2,301 participants. In addition, exhibit booths at nine local and statewide conferences further extended the Discus message to 2,272 booth visitors.

Discus presented at statewide conferences, school district professional development days, public library staff development days, adult education centers, master's level children's literature classes and technology fairs. Presentations were made to the following groups:

- ▶ South Carolina Independent School Association (SCISA).
- ▶ South Carolina Association for School Librarians (SCASL).
- ▶ South Carolina Council on Social Studies (SCCSS).
- ▶ South Carolina EdTech.
- ▶ South Carolina Public Charter School Alliance.
- ▶ South Carolina Teachers of English.

eLearning Pilot Program

The State Library and Discus also provided support for the second year of the eLearning pilot program. This statewide eLearning initiative was constructed and implemented by the South Carolina Education Oversight Committee for alternative methods of instruction for school

makeup days.

A Discus overview was provided to all of the new districts as well as individual, personalized district-wide training sessions. The trainings demonstrated how Discus can be used both inside and outside of the classroom and can be integrated into many learning management systems.

In addition, a high school peer-to-peer collaborative video was created with South Florence High School. Why Choose Discus: Students Speak Out! is the first in a planned series of collaborative projects with educators to provide another voice explaining the benefits of using Discus for research and citations.

To view this video, please visit https://youtu.be/cWrGrRluy6E.

COLLABORATION OPPORTUNITIES

South Carolina Technology Plan Goal:
Identify innovative ways for state agencies, local school districts, schools, families, and local businesses to collaborate to enhance the learning experiences for the students of South Carolina.

Partner Efforts to Support the Goal:
The South Carolina K-12 School Technology Initiative's partners are committed to finding unique and innovative ways to collaborate with the state's public schools and libraries, families, agencies and businesses to further develop the educational opportunities provided to students through technology.

The partners that make up the K-12 School Technology Initiative engage in a wide variety of activities and programs designed to improve collaboration opportunities. Such activities and programs are detailed throughout this section of the 2019-20 Progress Report.

COLLABORATION OPPORTUNITIES

SCETV PUBLIC AWARENESS EFFORTS

In an effort to help inform citizens about the availability of educational programs, services and technologies, South Carolina Educational Television (SCETV) and South Carolina Public Radio share stories of projects that serve to address the needs of the state's educational community.

Content broadcast through SCETV's television and radio mediums provide case studies and best practices for use throughout the state. Several national and statewide television series and educational specials — including SCETV's Palmetto Scene, Carolina Classrooms, Walter Edgar's Journal, South Carolina A-Z, and Science Friday — are broadcast and streamed for use in schools and classrooms, providing significant reach to both SCETV's television and radio audiences.

Carolina Classrooms

SCETV's Carolina Classrooms, a school-year series designed for teachers, educators and parents, features educational initiatives in South Carolina schools. The most recent season highlighted a variety of topics including college and career readiness, science education, school climate and workforce development. State and local educators, as well as policy and business leaders, participated in efforts to inform stakeholders about a diverse number of topics impacting South Carolina education.

Promotion of Carolina Classrooms and other aforementioned programs is provided through a variety of platforms, including the SCETV Press Room, educational websites and broadcast interstitials. Further, education outreach efforts take place consistently throughout the year through staff participation in K-12 conferences, community engagement events, presentations and the submission of awards.

Recently, SCETV created an advisory group of educators from across the state to assist the station in increasing awareness of educational resources and services. Further, this group will help to identify gaps among available resources.
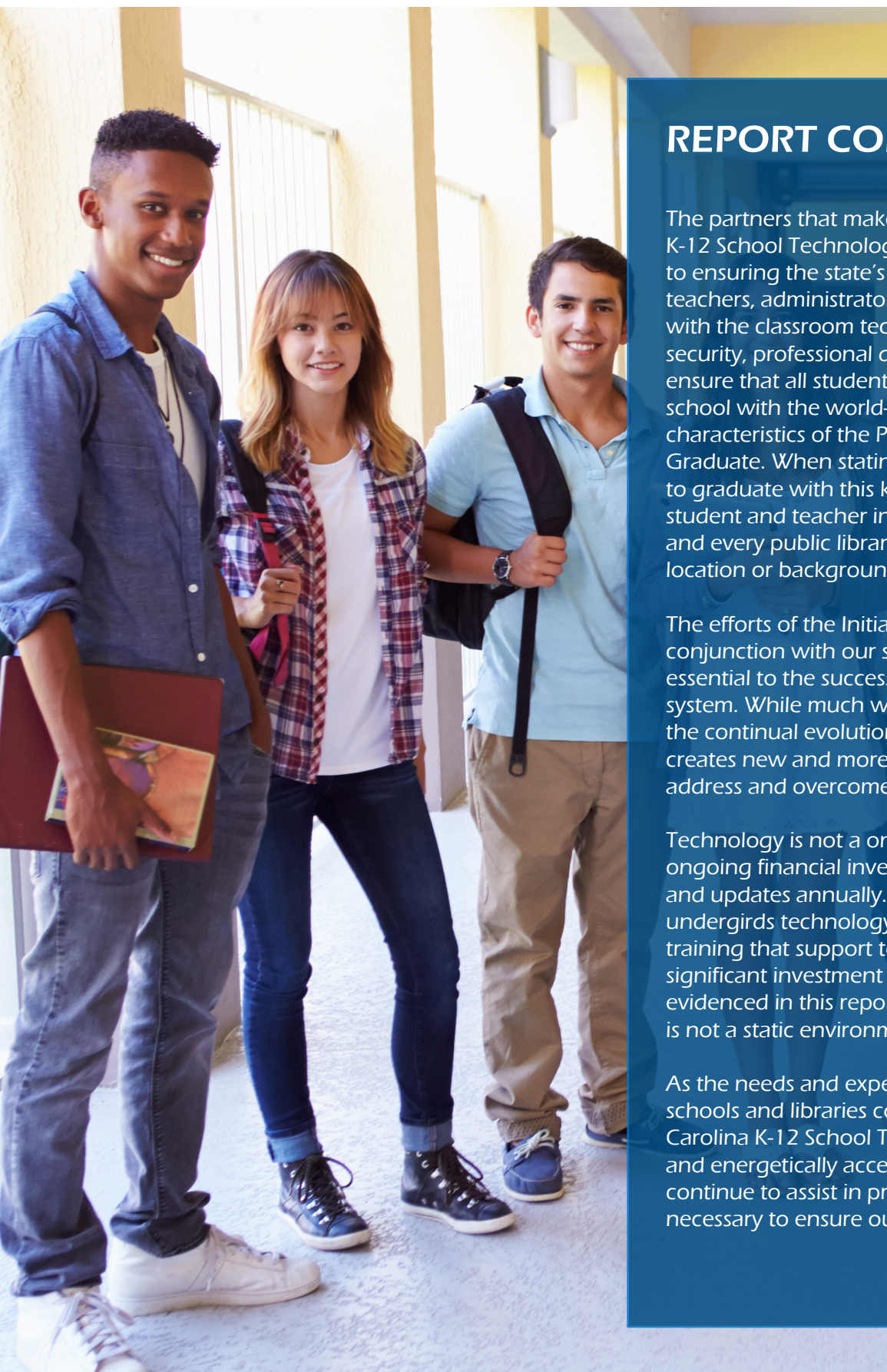
SCETV Education Newsletter, Guest Blog and Social Media

Throughout the year, SCETV provides an education-related newsletter in collaboration with the South Carolina Education Oversight Committee (EOC) and the South Carolina Department of Education (SCDE) for the promotion of SCETV education features. The monthly newsletter is designed for pre-K-12 administrators, teachers and staff, to assist in informing teachers of timely resources and services.

Additionally, SCETV has a monthly Educator blog which features perspectives on a variety of topics from educators across the state. Further, SCETV also uses social media including Facebook, Twitter, Instagram, Pinterest and YouTube to engage the education community.

For Additional Information

To learn more about SCETV's educational initiatives, visit scetv.org/education.

REPORT CONCLUSION

The partners that make up the South Carolina K-12 School Technology Initiative are dedicated to ensuring the state's public school students, teachers, administrators and libraries are provided with the classroom technology, infrastructure, security, professional development and resources to ensure that all students graduate from public high school with the world-class knowledge, skills and characteristics of the Profile of the South Carolina Graduate. When stating the desire for "all" students to graduate with this knowledge, this means every student and teacher in every public-school classroom and every public library, regardless of physical location or background.

The efforts of the Initiative's partners, working in conjunction with our schools and libraries, are essential to the success of the state's public education system. While much was accomplished in FY 2019-20, the continual evolution of educational technology creates new and more complicated challenges to address and overcome.

Technology is not a one-time expense but rather an ongoing financial investment that requires purchases and updates annually. The infrastructure that undergirds technology and the devices, software and training that support teachers and students requires significant investment of time and resources. As evidenced in this report, our public education system is not a static environment.

As the needs and expectations associated with schools and libraries continue to evolve, the South Carolina K-12 School Technology Initiative willingly and energetically accepts these challenges and will continue to assist in providing the tools and resources necessary to ensure our students success.

FY 2019-20 K-12 School Technology Initiative Budget

Base Appropriation: School Technology	$12,271,826
Total Appropriations :	**$12,271,826**
Proviso 1.70 Funds--Withheld by Education from Appropriations	($350,000)
Carry Forward:	
State Library	$0
SCETV	$0
SCDE	$0
Department of Administration	$0
Total Carry Forward :	**$0**
Total Available Funds:	$11,921,826
E-Rate Funds (Estimated)	$19,949,382
Total Funds Anticipated:	$31,871,208
Total Budget Requested:	$31,871,208
Net Remaining Funds:	**$0**

Priority	Principals Budget Requests	Budget Requests	School Technology Appropriation	E-Rate Funds (Estimated)	Approved Budgets
	Non Discretionary				
	DEPARTMENT of ADMINISTRATION				
1	Network Connectivity Costs	$27,646,958	$7,697,576	$19,949,382	**$27,646,958**
2	E-Rate Field Training and Outreach	$9,600	$9,600		**$9,600**
3	DNS-based Internet Security License Renewal	$1,061,500	$1,061,500		**$1,061,500**
4	Infrastructure Upgrades Schools & Libraries*	$2,779,580	$2,779,580		**$2,779,580**
	Total:	**$31,497,638**	**$11,548,256**	**$19,949,382**	**$31,497,638**
	Total Non Discretionary:	**$31,497,638**	**$11,548,256**	**$19,949,382**	**$31,497,638**
	Total Available Budget	**$373,570**	**$373,570**		**$ 373,570**
	Discretionary				
	DEPARTMENT of ADMINISTRATION				
1	Non-E-Rate Network Infrastructure Match	$139,000	$139,000		**$139,000**
	Total:	**$139,000**	**$139,000**		**$139,000**
	STATE LIBRARY				
1	World Almanac for Kids	$91,020	$91,020		**$91,020**
	Total:	**$91,020**	**$91,020**		**$91,020**
	SCDE				
1	School District Web Site Hosting and Support	$0	$0		**$0**
	Total:	**$0**	**$0**		**$0**
	SCETV				
1	Knowitall.org and LearningWhy content upgrades	$143,550	$143,550		**$143,550**
	Total:	**$143,550**	**$143,550**		**$143,550**
	Total before Carry forward	**$31,871,208**	**$11,921,826**	**$19,949,382**	**$31,871,208**
	Total Carry Forward From Previous year:	**$0**			**$0**
	Budget Surplus/Shortfall	**$0**	**$0**		**$0**
	Grand Total for a Balanced Budget:	**$31,871,208**	**$11,921,826**	**$19,949,382**	**$31,871,208**
		$0	**Budget Available**		

* Committee funding will be leveraged with the Category 2 federal share, FY 2019-20 financial impact will be $17.1 million.

DISCUS: At a Glance

12,399,280
Discus Items Retrieved

$32+ Million
Cost Avoidance Provided

582,000+
Learn360 Item Views

162,000+
Magic School Bus Title Views

Discus:
South Carolina's virtual library

Agency:
SC State Library

Website:
scdiscus.org

Discus

south carolina STATE LIBRARY

SCETV EDUCATION SERVICES: At a Glance

9,000+
Knowitall Multimedia Resources

100,000+
PBS Learning Media Resources

500+
Learning-Why Lesson Plans

Agency:
SCETV

Website:
scetv.org

Knowitall.org

LEARNING WHY

PBS LearningMedia

SOUTH CAROLINA etv

VIRTUAL SC: At a Glance

46,849
VirtualSC Student Enrollments

88
VirtualSC Courses Offered

84
School Districts Represented

88%
Successful Course Completion

VirtualSC:
South Carolina's virtual school program

Agency:
SCDE

Website:
virtualsc.org

VirtualSC

SOUTH CAROLINA DEPARTMENT OF EDUCATION
ed.sc.gov

BROADBAND INFRASTRUCTURE: At a Glance

169 Gbps
District Bandwidth Capacity

6.35 Gbps
Library Bandwidth Capacity

10.11 Gbps
Charter School Bandwidth Capacity

Broadband Efforts:
Connectivity for public schools and libraries

Agency:
Admin

Website:
admin.sc.org
sck12techinit.sc.gov

admin
THE SOUTH CAROLINA
DEPARTMENT of ADMINISTRATION

Internet Security Protection: At a Glance

156 Districts, Charter Schools & Library Systems
Entities Using Cisco Umbrella

56.8 Billion
School and Lbrary Queries Handled

35,000
S/L Roaming Clients Using Cisco Umbrella

71.7 Million
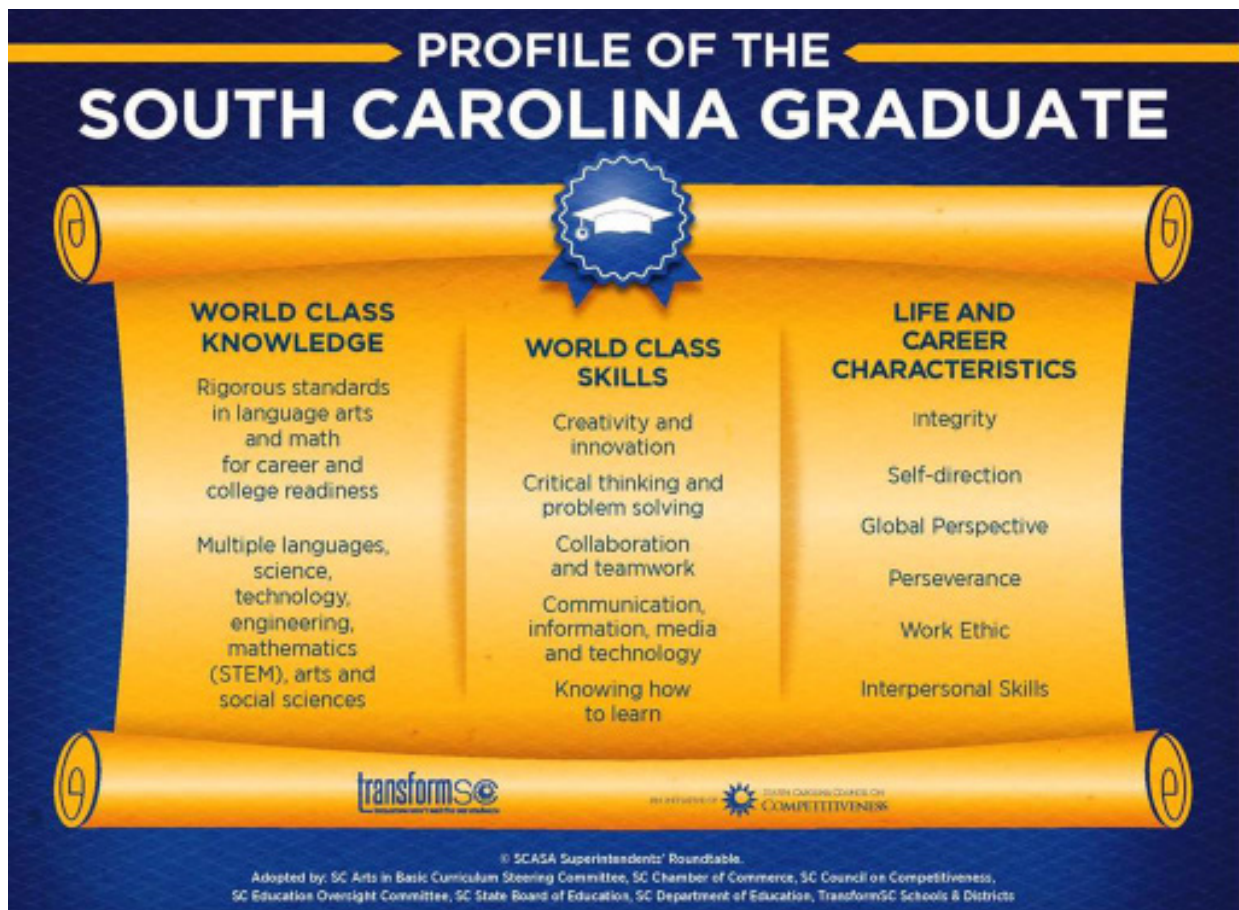Potentially Harmfull Threat/Sites Blocked

Cisco Umbrella:

Provided to schools and libraries to help combat the increased number and complexity of malware, ransomware and other advanced security threats

CISCO

The Profile of the South Carolina Graduate is designed to identify the knowledge, skills and characteristics high school graduates should possess in order to be prepared for success as they enter college or pursue a career. The profile is intended to guide all that is done in support of college and career-readiness.

PROFILE OF THE SOUTH CAROLINA GRADUATE

WORLD CLASS KNOWLEDGE

Rigorous standards in language arts and math for career and college readiness

Multiple languages, science, technology, engineering, mathematics (STEM), arts and social sciences

WORLD CLASS SKILLS

Creativity and innovation

Critical thinking and problem solving

Collaboration and teamwork

Communication, information, media and technology

Knowing how to learn

LIFE AND CAREER CHARACTERISTICS

Integrity

Self-direction

Global Perspective

Perseverance

Work Ethic

Interpersonal Skills

transformSC

COMPETITIVENESS

© SCASA Superintendents' Roundtable.
Adopted by: SC Arts in Basic Curriculum Steering Committee, SC Chamber of Commerce, SC Council on Competitiveness, SC Education Oversight Committee, SC State Board of Education, SC Department of Education, TransformSC Schools & Districts

1996-97

- ▶ The General Assembly created the K–12 School Technology Initiative (Initiative).
- ▶ The Initiative began funding two-way video projects across South Carolina.

1997-98

- ▶ The Initiative distributed over $12 million to districts for local IT implementation.
- ▶ South Carolina Educational Television (SCETV) began digitizing its video resources for school use.
- ▶ South Carolina was recognized by the Educational Testing Service as one of five states to provide telecommunications access in all schools.

1998-99

- ▶ South Carolina received over $26 million in E-Rate funding.
- ▶ The Initiative began distributing funding for IT professional development and implementation to districts, sending over $16 million statewide.
- ▶ Eighty-six percent of schools were equipped with satellite dishes to receive education programming, compared to 29 percent nationally.
- ▶ Sixty-seven percent of classrooms were connected to local-area computer networks, compared to 53 percent nationally.
- ▶ Technology Counts '98 reported South Carolina was one of only five states to provide internet access to 100 percent of schools.

1999-2000

- ▶ South Carolina received over $42 million in E-Rate funding.
- ▶ The South Carolina State Library's (State Library) Discus website was launched.

- ▶ The student-information collection system, Schools Administrative Student Information (SASIxp), was provided free to all districts.
- ▶ 100 percent of all state K-12 schools have digital satellite reception.

2000-01

- ▶ South Carolina received over $52 million in E-Rate funding.
- ▶ State K–12 appropriations for educational technology increased to over $40 million.

2001-02

- ▶ South Carolina received over $44 million in E-Rate funding.
- ▶ The Initiative provided over $18 million to districts for local technology and training.
- ▶ The Initiative provided $400,000 for training of district technology support personnel.
- ▶ The General Assembly passed the Teacher Technology Proficiency Proviso.
- ▶ SCETV's Knowitall.org was launched.
- ▶ SCETV's Distance Education Learning Centers were operational in all school districts.

2002-03

- ▶ Initiative funding decreased to a five-year low of $19 million.

2003-04

- ▶ The student-information collection system SASIxp was implemented in all districts.
- ▶ The Division of State Information Technology (DSIT) filed E-Rate Discount Program calculations for all schools and districts, resulting in over $49 million in discount payments.
- ▶ The South Carolina Department of Education (SCDE) released its State

Educational Technology Plan for 2003-08.

- ► Initiative funding supported 30 Technology Coaches.
- ► SCDE's South Carolina Online Professional Development (SCOPD) program was launched.

2004-05

- ► SCDE's ePortolio pilot was launched to assess teacher technology proficiency and provide information on professional development offerings.
- ► SCETV's internet video-on-demand service, StreamlineSC, was launched.

2005-06

- ► The General Assembly called for a feasibility study to investigate computer-based assessment in the state.
- ► SCETV's StreamlineSC reached 100 percent of the state's K–12 schools and had 1.3 million views within its first full year of operation.

2006-07

- ► SCDE launched its South Carolina Virtual School pilot program.
- ► SCETV's Knowitall.org launched two new sites, Knowitall Healthy! and Road Trip.

2007-08

- ► The State Library's Discus launched a redesigned website.
- ► The State Library began the implementation of SchoolRooms.
- ► The Initiative approved the implementation of a DSIT service for security/monitoring of K-12 internet bandwidth usage.

2008-09

- ► SCETV launched OnePlaceSC, its newest K-12 education web portal.
- ► SCETV launched Digital Education Services (DES) to transition existing analog and digital broadcasts to live and video

streaming on-demand systems.

2009-10

- ► SCDE released its State Educational Technology Plan for 2009-13.
- ► The State Library's Discus program launched SmartSearch.
- ► The State Library launched StudySC to provide multimedia content for homework, project and classroom assistance.
- ► DSIT, part of Admin's predecessor agency – the Budget and Control Board, filed E-Rate applications for network connectivity costs of $22.7 million in eligible services and received federal E-Rate reimbursements of $13.8 million.
- ► The Initiative published an updated internet policy to help ensure the equitable use of available funds to supply sufficient internet bandwidth to all districts.

2010-11

- ► SCETV's website "Web of Water," received the Corporation for Public Broadcasting (CPB) Innovation in Education Award.

2011-12

- ► SCETV launched PBS Learning Media.

2012-13

- ► SCETV added PBS LearningMedia, a media-on-demand service featuring PBS content.
- ► South Carolina Virtual School Program (SCVSP) legislation was amended to lift the credit limitations placed on students using the SCDE program.
- ► SCVSP partnered with schools to offer blended learning opportunities to help fulfill needs resulting from budget cuts, reduced funding and unfilled teaching vacancies at smaller schools.

2013-14

- ► SCVSP was officially rebranded and renamed VirtualSC by SCDE.
- ► SCETV launched ETV Teacher Courses to provide teachers the ability to easily search

and find relevant recertification credit information.

- ▶ SCETV began offering recertification courses using the blended "Using Video in the Classroom" curriculum.
- ▶ SCETV introduced a simplified and improved OnePlaceSC website.

2014-15

- ▶ SCETV aired its documentary titled "180 Days: Hartsville."
- ▶ SCETV began an extensive redesign of Knowitall.org and rebranded the service as Knowitall.org Media.
- ▶ DSIT's Bandwidth Monitoring Program deployed monitoring sensors in each public school district, as well as six charter schools and 42 public library systems, to ensure connectivity and internet bandwidth are best being used to serve the state's educational needs.
- ▶ The Initiative began a distributed denial of service (DDoS) Protection Service designed to help schools and libraries detect and mitigate the risks associated with this form of cyber-attack. The service is offered through an agreement between DSIT, Spirit Communications and AT&T.
- ▶ The Initiative, through DSIT, began a Security Training Voucher Program designed to enhance cyber and information security defense proficiencies among the state's public school districts.

2015-16

- ▶ SCETV offered a new Wi-Fi service to support reading and STEAM in pre-K-12 communities, increasing access to SCETV content to students before and after schools through Wi-Fi facility hotspots and quality professional development.
- ▶ SCETV launched its first station-branded public media application.

2016-17

- ▶ The Initiative's 2014-15 Progress Report received a 2016 Notable Document Award from the South Carolina State Library.
- ▶ SCETV launched LearningWhy, a new

innovative lessons website intended for 1:1 and project-based learning environments.

2017-18

- ▶ The Initiative's goal to increase external connections to schools to 100 kbps per student by 2017 is met with average internet service capacity among all schools totaling 226 kbps.
- ▶ South Carolina becomes the first state to provide Cisco Umbrella to all school districts, library systems and charter schools free of charge.
- ▶ SCETV won an AVA International Competition award for Let's Go!, part of Knowitall.org.

2018-19

- ▶ The State Library added Career Transitions, Learn360, Magic School Bus and AutoMate to Discus.
- ▶ The State Library announced several content additions and updates to StudySC including a new "Notable Women of South Carolina" page.
- ▶ SCDE procured an Academic Competency and Standards Authoring Tool which moves the creation and authoring of standards to an all-digital environment and publishes the standards in machine readable and human consumable formats.
- ▶ SCDE's VirtualSC became the fifth largest state virtual school program in the nation based on student enrollments.
- ▶ The South Carolina Department of Administration (Admin) awarded a network services contract to AT&T, lowering the cost for WAN circuits by 29 percent. The contract also provides circuit bandwidth capacity speeds of 15 Gbps and 20 Gbps to schools and libraries for the first time.
- ▶ Cisco Umbrella, provided through Admin, has been implemented by 156 school districts, library systems and charter schools.

2019-20

- ▶ SCETV received a Telly Award for Let's Go, a series available through KnowItAll.org that offers virtual reality tours of South Carolina's
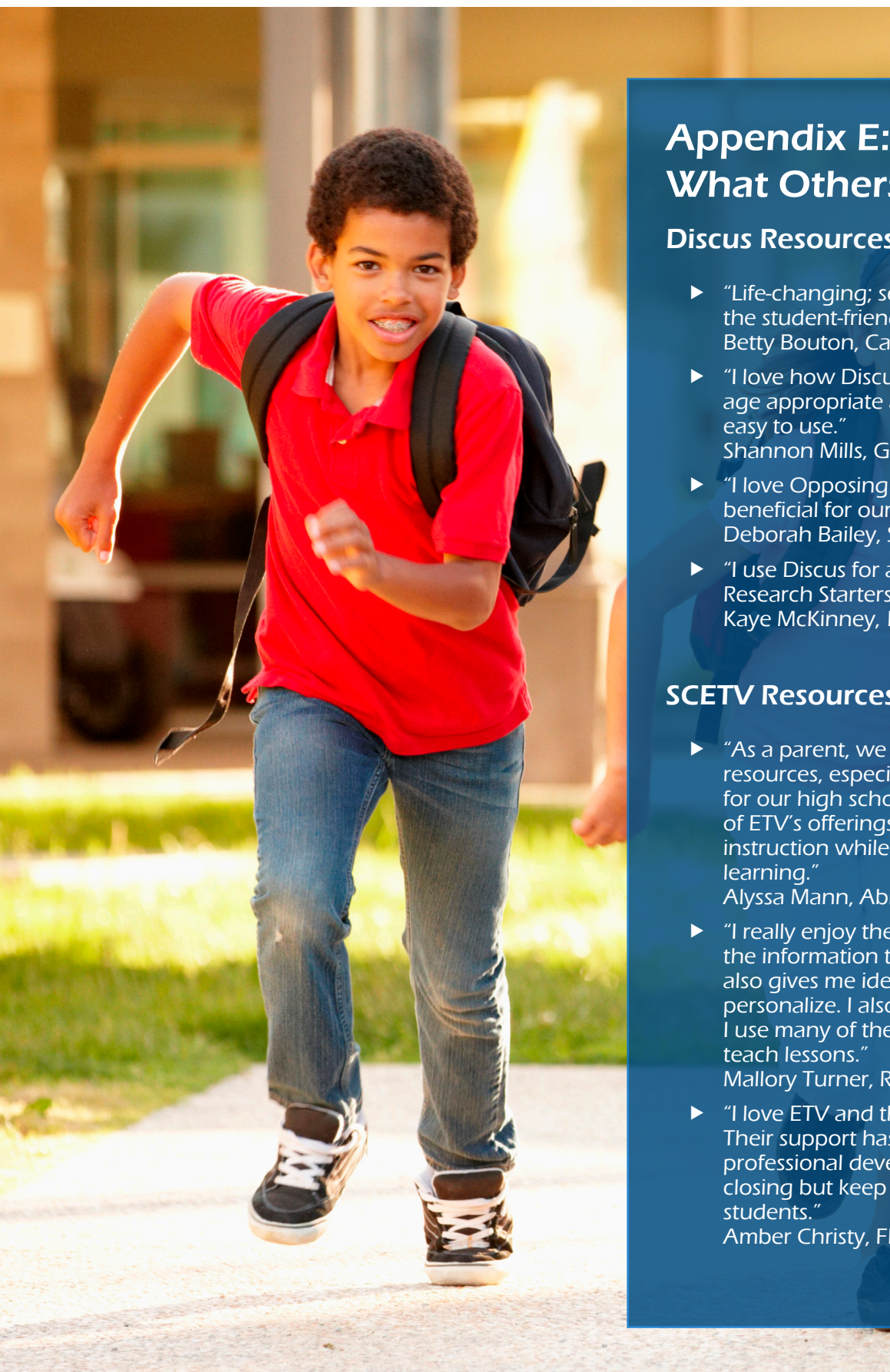
most historical sites.

▶ SCETV developed and began the implementation of a comprehensive workforce development plan, which included the launch of Let's Go Careers, a new series available through KnowItAll.org that provides 360-degree exploration of careers in high-demand job fields.

▶ SCETV developed a new eLearning site to support participants in the eLearning initiative. An evolving space, the content includes curated resources and self-paced modules from PBS Learning Media, Knowitall, and LearningWhy specific to online and blended learning.

▶ In response to the COVID-19 pandemic, SCETV launched a new At-Home Learning Initiative in partnership with the SC Department of Education. Through this initiative, many of ETV's online learning resources were made available via television broadcast. Additionally, new online learning activities and resources were developed to support educators and students. Some version of this initiative will continue for months to come.

Appendix E:
What Others Are Saying

Discus Resources

▶ "All my 3rd-5th grade students use Discus to do research throughout the year. That is the only place I let them use. Access to BrainPOP Jr., Magic School Bus and Learn360 are just AWESOME!"
Emilia Jackson, Lemaria Elementary

▶ "I use it for research for young learners. It is a safe and reliable database for them to use (1st - 5th grades."
Angela Bennett, Logan Elementary School

▶ "My favorite is CultureGrams. I do research projects with 3rd, 4th, and 5th grade. We research states and countries to generate PowerPoints students use to teach the class. We also use Discus Kids and Britannica Encyclopedia for research through the year."
Lisa Chapman, Belvedere Elementary School

▶ "I love teaching my students how to use Discus. My slogan is "we don't Google, we Discus!" We use Britannica Elementary for general information. Currently, we are using CultureGrams with 3,4, and 5th grade for our Amazing World unit where students visit a country from each continent."
Linda Lundeen, Oakwood-Windsor Elementary School

Appendix E:
What Others Are Saying

Discus Resources

▶ "Life-changing; school-quality resources with all the student-friendly tools."
Betty Bouton, Camp Road Middle School

▶ "I love how Discus is already vetted for students, age appropriate and once you use it awhile, it's easy to use."
Shannon Mills, Great Falls Middle High School

▶ "I love Opposing Viewpoints! It has been so beneficial for our argumentative essays!"
Deborah Bailey, Saluda High School

▶ "I use Discus for all of my research lessons - Research Starters are awesome!"
Kaye McKinney, Beaufort High School

SCETV Resources

▶ "As a parent, we depend on these types of resources, especially the online component for our high school kids. As a teacher, so many of ETV's offerings are used to support our instruction while at school and during distance learning."
Alyssa Mann, Abbeville County School District

▶ "I really enjoy the LearningWhy media. It has all the information that I need to teach a lesson. It also gives me ideas to teach lessons that I can personalize. I also enjoy the KnowItAll website. I use many of the resources off this website to teach lessons."
Mallory Turner, Richland School District Two

▶ "I love ETV and their resources provided. Their support has helped me not only gain professional development during the school closing but keep me motivated to assist students."
Amber Christy, Florence District One

Appendix E:
What Others Are Saying

SCETV Resources

▶ "KnowItAll is a great resource for middle school ELA, science and social studies projects."
Kathleen DuRant, Kershaw Co. School District

▶ "I really value how PBS Learning Media organizes the educational materials available from so many related sources into one place that is easy for me to search during instructional planning."
Elizabeth Thomas, Colleton Co. School District

▶ "Currently, I teach ESOL, but try to incorporate United States history as much as possible. The ease of using the Between the Waters site and its vast amount of information made it very interesting and a pleasure to use. I liked the coordination of the audio-visual (photos and videos) with the written explanations. This combining of different technologies makes for more interesting explanations than simply reading a book."
Joseph Nooft, Georgetown Co. School District

▶ As a citizen of South Carolina, I am impressed with the range and quality of SCETV learning opportunities for teachers and students. I am proud and pleased that our state has such dedicated and creative producers and professionals working on our behalf. Thank you to all SCETV personnel!
Paul Adams, Clemson University

▶ "I really like the virtual field trip options. Please keep them coming and sharing with teachers."
Lisa Lee, Lexington/Richland School District 5

South Carolina K-12 School Technology Initiative
4430 Broad River Road
Columbia, S.C. 29210
Website: sck12techinit.sc.gov