



RUSSELL COUNTY PUBLIC SCHOOLS

Excellence Through Education



Educational Technology Plan 2011-2016

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Executive Summary

Russell County Public Schools is a rural school division located in the heart of Southwest Virginia. Over the past several years Russell County has been fortunate to have two technology-based businesses arrive in our county. With the addition of Nothrop Grummun and CGI to our county, our school district has really focused on preparing students for a new and fundamentally different workforce based on emerging technological skills. We embrace our responsibility of ensuring that all students are equipped with the knowledge, skills, and motivation to realize their potential as leaders in a technologically rich, globally aware and environmentally sensitive society. New curriculum has also been added to ensure we graduate students prepared to earn employment at these new businesses.

We have worked closely with these new stakeholders, as well as other local businesses and our schools during the development of this plan. Our plan is aligned with the State Department's Educational Technology Plan for Virginia.

We adopted our goals based on the conceptual framework in the state plan which include:

- Accountability
- Support
- Professional Development
- Curriculum

These goals will be implemented, measured and updated over the duration of the plan. The school division's plan will include strategies that provide activities for staff and students in:

- **Application**-The school division will choose and apply the most appropriate innovative and creative technology for communicating and problem solving.
- **Tools**-The school division will choose tools that expand a student's capability and ones that students will encounter outside the school environment.
- **Results**-The school division will use data from assessment to drive the instructional program and ensure that teachers are addressing 21st century skills.

Vision

Education is the foundation and future for productive citizenship and economic growth. To assure that each child has the knowledge, skills, and abilities to equally participate in the 21st century, the following remain our vision to reach this goal:

- Teachers have the necessary information, training, and resources to effectively teach their students in this technologically-oriented society.
- Funding and time are available to provide the necessary staff development so that teachers can be actively involved in extensive and continuous training in the integration of technology into their daily classroom activities to effectively teach the children.
- Students have access to computers and other technology which is appropriately integrated with the curriculum in all subject areas.

This stands in support of the Russell County Schools' Vision Statement which reads "The Russell County School System will enable students to become productive life-**long learners and active participants in a world-wide community.**"

Mission

Russell County Public Schools will strive to maintain a leadership position in educational applications of technology. It will focus on equity of access to technology resources and will encourage academic excellence, development of critical thinking and problem-solving skills, quality of educational opportunity, staff development, and continuing research into innovative uses of technology to promote student achievement and empowered, lifelong learning.

Philosophy

Russell County Public Schools is committed to preparing every student to meet the requirements of the Virginia Standards of Learning (SOL) and to have students leave school with the knowledge and skills necessary to demonstrate success and proficiency in the use of technology. We believe that it is our responsibility to provide the equipment, the infrastructure, the technology programs, the opportunities, and the instruction to assist students in meeting these goals.

In order to provide the students the appropriate instruction and technology experiences, every teacher and employee must be knowledgeable in the use of technology. Various opportunities for teachers to obtain training in these skills will be provided through in-service from the Instructional Technology Resource Teachers, Information Technology Staff, and Student Information Coordinator (see Appendix 4 for job descriptions), classroom teachers, community members, universities and colleges, etc. Our ultimate goal is to provide knowledge that will enable Russell County Public Schools to use technology to enhance the learning opportunities of its students.

Summary of Connection to the Division's Mission

Russell County Public Schools will build on established technology infrastructure, programs and services to enhance teaching and learning to prepare students for the 21st Century. All children must have access to technology with integration into content areas. Availability of and access to appropriate technology is essential to developing the total child and preparing a student for lifelong learning. Students with adept skills in using computers and multimedia electronic resources in combination with good problem-solving skills are on a pathway to success.

Russell County Public Schools will continue to provide a classroom environment in which relevant and meaningful learning will occur. The integration of technology skills into all curricular areas and successful completion of state Standards of Learning will ensure a more appropriate educational experience for all students, K-12. The successful implementation of the division technology plan will help ensure that the Russell County Public Schools mission and board goals are achieved.

Technology use in Russell County Public Schools will mirror the focus areas of the new Virginia technology plan:

- **ENVIRONMENT** - Schools need to consider physical and virtual environments in new and innovative ways to support learning activities.
- **ENGAGEMENT** - Educators must employ multiple ways to engage students in learning through technology. This engagement should reflect student learning styles, cultural backgrounds, and personal interests.
- **APPLICATION** - Students need to understand the proper application of technology tools (i.e., choosing and applying the most appropriate technology for communicating and problem solving) and to be creative and innovative.
- **TOOLS** - Students should not use technology tools just to replicate paper-and-pencil activities. Tools should extend student capabilities to perform functions that would be difficult, if not impossible, without technology. Tools should be authentic—ones students will encounter in the non-school environment.
- **RESULTS** - Results are not just a matter of meeting accountability requirements but using data, including real-time assessments, to inform instruction. Teachers addressing 21st century skills and knowledge must employ intelligent assessments.

Summary of Work of the Planning Committee and its Benchmarks

2010-11 Technology Committee

Mike Puckett Division Superintendent	Tim Lovelace, Director of Technology	Brandon Vance, IT Department
Brian Sikes, IT Department	Nick Belcher, IT Department	Jamie Kiser, IT Department
Tabitha Long, ITRT Coordinator/Parent	Kathy Nunley, ITRT	Scotty Fletcher, Secondary Supervisor
Brenda Hess, Elementary Supervisor	Butch Kiser, Principal – Castlewood High School	Dennis Price, Assistant Principal – Lebanon Elementary
Brian Hooker, Principal – RCCTC/Parent	Bob Hillman, School Board Member – At Large	Dr. Kim Hooker, Principal – Castlewood Elementary School and Parent
Joey Long, Principal – Lebanon Middle School	Bryon Helton, Parent – Lebanon High School	Stephanie Buchanan, Business Teacher – Lebanon High School

The Technology Committee, with the help of our community, schools, and local industry developed the Russell County Public Schools' Educational Technology Plan for 2011-2016. The committee had as its resource the division's comprehensive plan to establish goals and benchmarks. Committee members include parents, School Board, administrators, teachers, ITRTs, and the technology department. The committee will meet at least once per year to update the plan and to evaluate successes and challenges.

Past meetings:

October 19, 2010

March 15, 2011

May 17, 2011

June 20, 21, 22 – 2011 (to finalize this plan)

Future planned meetings:

Annually, to check progress and adjust plan as needed.

We want to extend appreciation and gratitude to those who helped create our vision that students will become independent, life-long learners who will be able to effectively function in their global worlds.

Current Technology Status & Needs Assessment

Division Wide Area Network & Internet Access

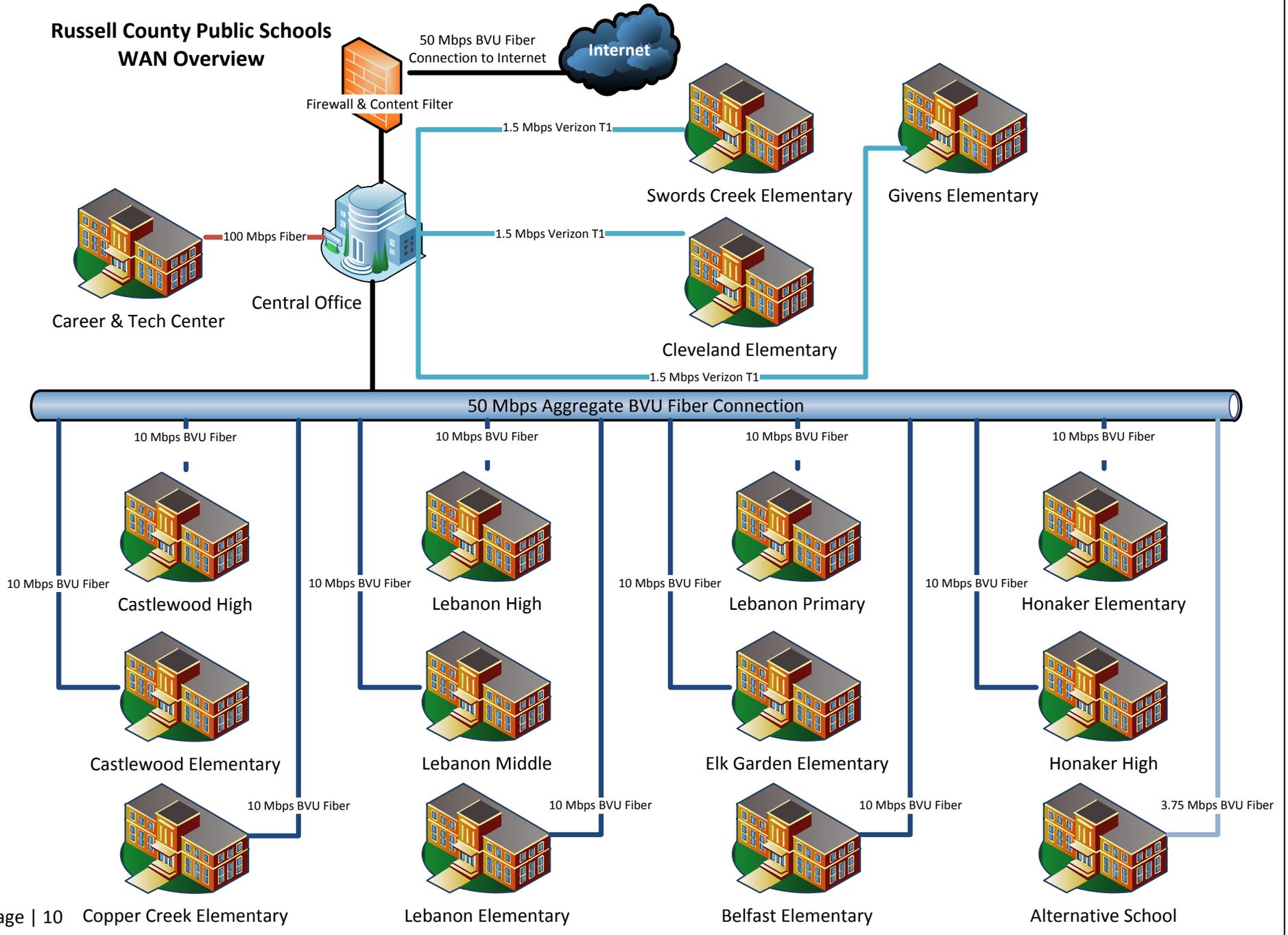
Russell County Public Schools has made significant progress in its network infrastructure; for a visual summary of the district's current network status please see the diagram on the next page. At the writing of the last technology plan the division had a decentralized network infrastructure that relied on cable modem technology and VPN tunnels to connect the schools back to the central office. Each building had its own connection to the Internet and required its own firewall and web filter. The maximum speed of the cable modems was 4Mbps at the high schools, 1.5 Mbps at the four larger middle/elementary schools, Central Office, and Career and Technology Center, and 256 Kbps at two small elementary schools. The total aggregate bandwidth was 6Mbps.

Currently Russell County Public Schools had a centralized network with all but four schools connecting back to the central office by a fiber optic metro area network provided by Bristol Virginia Utilities (BVU). Three schools not connected by fiber optics are connected by T1 connections due to the lack of fiber optic availability in their locations. The three T1 connected schools operate on synchronous 1.5 Mbps T1 connections provided by Verizon. The Career and Technology center is connected to the Central Office by a 100 Mbps fiber optic connection put in place by the division IT Department. The Alternative School is connected to the Central Office by a synchronous 3.75 Mbps BVU fiber optic connection. All other schools are connected to the Central Office by synchronous 10 Mbps BVU fiber optic connections. The total aggregate bandwidth of the fiber optic metro area network is 50 Mbps.

The division's centralized connection to the Internet is a 50 Mbps BVU fiber optic connection. The centralized nature of the network allows for the use of just one firewall and content filter. This make for a much easier to manage and less costly solution than each school having its own Internet connection, firewall, and content filter.

The district's future goals are to increase speed and availability of its metro area network. With the continued expansion of BVU's fiber optic network, the three schools currently connected by T1 connections are scheduled to be moved to the fiber optic metro area network. This will result in significant cost reduction and performance enhancement. Using a revised budget and the money save by eliminating the costly T1 connections the district will bring the 10 Mbps fiber optic connections up to 100 Mbps and the 50 Mbps aggregate speed up to 500 Mbps. The current 50 Mbps link to the Internet may also require upgrading; however, at this time there is still room for growth at the current bandwidth.

Russell County Public Schools WAN Overview



Servers and Hosted Services

Russell County Public Schools currently has over 50 physical and virtual servers providing a wide variety of services throughout the district. Over the past six years the district has transitioned away from Novell Netware to Microsoft Windows Server. All servers are at least Windows Server 2003 with 90% being Windows Server 2008 R2. Through the use of Active Directory and Group Policy the district has greatly increased the security and stability of its workstations, as well as, accelerated the deployment of many applications. With the availability of our high speed WAN and Internet, services such as web hosting and email have been moved from being hosted by external providers to being hosted internally. This has resulted in cost savings, better performance, and greater control.

At the central office the district hosts a web based student information system, Tyler Student Information System. The centralized, web based nature of the new SIS has resulted in fewer applications running on each school's local servers, higher availability, and less maintenance at the workstation and server level. The district wide database also allows for better reporting and greater transparency. Additionally the district hosts the school email and web servers at the central site. All schools now have their own webpage hosted at the district office as do some teachers. Moodle, a web based Course Management System, is also hosted at the district office. Bandwidth monitoring, hardware monitoring, IP address management, virus protection, work order, and system update services are also hosted at the central site.

Each school has at least one server on site hosting Active Directory, file sharing, print sharing, applications, and library automation software. At all high schools and some elementary schools proxy caching servers have been implemented. This has resulted in a 25% reduction in bandwidth consumption by serving redundant data from a local cache where implemented.

Future plans include implementing proxy caching servers at all sites to further improve bandwidth efficiency. The library automation system will be transitioned to a centralized web based system. More extensive use of Moodle is desired through further professional development and training. The district will also implement Microsoft SharePoint for managing and provisioning of intranet portals, extranets and websites, document management and file management, collaboration spaces, social networking tools, and enterprise search.

Classroom Hardware and Software Resources

Russell County Public Schools has approximately 1300 desktop, laptop, and thin client computers, creating a healthy 3:1 student to computer ratio. Each high school has three business labs and one open lab. All other schools have at least one lab with four of the larger

elementary schools having two. Every classroom has at least one computer with the majority of the computers running Windows 7 or Vista. The majority of classrooms are now equipped with mounted projectors and SMART Boards. All elementary schools use the web based Renaissance Place for Accelerated Reader and some elementary schools use additional features of Renaissance Place such as Accelerated Math, STAR Math, and STAR Reading. Audience response systems such as those provided by Turning Technology are also being implemented at several schools. All high schools teach the latest version of Office, Windows, and the Adobe Creative Suite. All high school also teach a digital input class where students are exposed to writing tablets, voice input, digital video cameras, PDAs and other cutting edge technologies. The division subscribes to United Streaming online video service and Interactive Achievement student assessment software. Some schools are also implementing iPods and iPads into their curriculum. Wireless network access is provided in various key areas through the buildings. All schools are currently equipped with a VoIP telephone system and the majority has a phone in every classroom. The central office staff can call directly into any room throughout the county and communicate using voice over IP on the metro area network without tying up any outside lines.

Future plans include improving the student to computer ratio to 2:1 and increasing the number of classrooms with SMART Board/Projector to 100%. The district will continue keep its workstation current with the latest versions of Office, Windows, and Creative Suite. Workstation will be installed with 64-bit versions of Windows to take advantage of greater RAM capabilities and to keep up with more intensive applications. Additional audience response systems will be implemented. Wireless network access will be expanded and upgraded. District use of student assessment software and audience response systems will lead to more targeted and effective teaching. The use of the collaborative features of SharePoint will encourage the sharing of ideas and resources throughout the county. A heavier emphasis will be placed on students creating rich, advanced, multimedia content through the use of more advanced tools such as the Adobe Creative Suite. The current VoIP telephone systems will be replaced with a district wide system that will allow any handset to have a VoIP conversation with any other handset in the district and video conferencing in select locations.

Technology Support Services

The district has increased its technology staff to three full time technicians and a director. The district has implemented an online work order system that receives and tracks work orders and inventories hardware and software. Each school has a technology facilitator who acts as a point of contact with the IT Department and enters work order into the districts online work order system. An ITRT department is now on staff to provide curriculum technology integration training and assistance to teachers. Through the use of remote access software the majority of software problems, installations, and upgrades can be solved remotely from a technician's

desk. Systems are in place to track bandwidth usage, distribute system and antivirus updates, and monitor the status and health of server and router hardware and utilization.

The district anticipates the need for an additional full time technician on staff to support the county's growing technology needs and to be able to realistically complete and maintain many of the goals of this technology plan. The implementation of out of band management of workstations is a planned project as well as hardware monitoring of workstations. The ITRT department will continue its mission of education and empowerment. A more centralized and managed solution to remote access to workstation is also desired. Bandwidth usage reports will become more detailed.

Needs Assessment Conclusions

Educational technology is a vital element toward ensuring that all students are equipped with proper 21st Century Skills upon graduation. For Russell County Public Schools to ensure that all students have the necessary skills, it is imperative to assess the needs in order to provide the best technological tools to support instructions. In developing the needs assessment, all stakeholders were included in the process. Various formal and informal assessments have occurred as planning of the Russell County Public Schools Educational Technology Plan has progressed. Meetings have been held at the district level with administrators and their staffs to determine the most beneficial approaches to assist schools with their instructional needs.

When new equipment or software is identified as a potential benefit, the Instructional Technology Department places the equipment/software in the classroom of a teacher known to be willing to try new tools. This provides assessment as to whether the said equipment/software should be adopted by the division. As a result, the division has been able to avoid technology purchases that would not benefit the curriculum.

The division's Instructional Technology Resource Teachers conduct assessments on a regular basis as a way to determine the best way to assist teachers with technology integration. The assessments help identify the level of technology use of teachers, so proper strategies can be used to help teachers integrate technology. These assessments also help identify the best technological tool to be used in a particular activity.

Other assessments, both formal, and informal:

- Question and answer sessions with school personnel to address relevant issues for technology planning and integration in the schools
- Formal surveys using Google Docs Form feature were administered to allow teachers to provide feedback on various technologies and tools.
- Continual communication among staffs and technology personnel to determine proper tools for different academic needs.
- Benchmark scores in Interactive Achievement
- Standards of Learning Tests

Some of the results from the various assessments conducted include the following:

- Teachers are recognizing the need for data disaggregation, and as a result request training on how to analyze test results from both Interactive Achievement and SOL testing.
- The following tools/software has the greatest need of professional development:
 - Moodle
 - Smart Boards
 - Classroom Response Systems

- Blogs
- Video Production with Flip Video and Camcorders
- Using the division email
- The majority of teachers indicated a document camera as the one piece of equipment they would like to incorporate into their classroom.
- Staffs indicated a desire for more locally offered professional development opportunities. Most are willing to stay after school for workshops as well as attending workshops in the summer.
- Less than 25% of teachers believe they are truly integrating technology into their curriculum.

Russell County Public Schools provides students and school staffs with more than adequate access to technology. Teachers, however, need more modeling of the technology to ensure its integration into the curriculum. The division must work to increase the comfort level of teachers in terms of using technology for instruction. Teachers recognize the need to equip our students with 21st Century Skills, and as a result have the desire to incorporate technology into the curriculum. Our focus remains one of ensuring that teachers have the resources, tools, and knowledge to provide relevant instruction to all students.

State Goals and Objectives with Local Strategies and Measures

Goal 1: Provide a safe, flexible, and effective learning environment for all students.

Objective 1.1: Deliver appropriate and challenging curricula through face-to-face, blended, and virtual learning environments.

Strategies	Measures
Expand virtual course enrollment through Virtual Virginia	Analyze student enrollment reports
Partner with Southwest Virginia Community College to provide dual enrollment courses	Analyze student enrollment reports
Increase the use of locally developed online course content (via Moodle) to include online coursework for students (homebound, alternative education, and regular education).	Evaluate the number of courses offered online via Moodle in the previous year versus current year.
Offer adaptive technologies to facilitate the learning environment of special needs students.	Compare before and after inventories of hardware and software for special needs students.

Objective 1.2: Provide the technical and human infrastructure necessary to support real, blended, and virtual learning environments.

Strategies	Measures
Continue to meet the SOQ requirement for staffing of Instructional Technology Resource Teacher	Staff Assignment Lists
Continue to meet the SOQ requirement for staffing of Technical Support positions	Staff Assignment Lists
Monitor bandwidth usage at schools	Analyze and adjust bandwidth usage as documented by Netflow Analyzer 7
Facilitate the implementation of wireless access to the Internet throughout each school.	Record wireless locations within each school as they are made available.
Maintain an online work order system to provide just-in-time maintenance for technological problems	Analyze work order lists

Objective 1.3: Provide high-quality professional development to help educators create, maintain, and work in a variety of learner-centered environments.

Strategies	Measures
Expand the use of online content delivery systems to include online professional development for teachers, administrators, and staff.	Examine the extent of online professional development being offered to teachers and staff.
Provide professional development opportunities throughout school year to promote technology integration.	Instructional Technology Department's Training Logs
Partner with local agencies, including but not limited to, CGI and Northrop Grumman to provide training to teachers on the importance of technology.	Evaluations of programs conducted
Use Title II Part D funds to cover cost of various professional development opportunities for teachers/administrators.	Maintain records of workshops paid using Title II, Part D funds

Goal 2: Engage students in meaningful curricular content through the purposeful and effective use of technology.

Objective 2.1: Support innovative professional development practices that promote strategic growth for all educators and collaboration with other educators, content experts, and students.

Strategies	Measures
Locally develop online professional development resources for teacher using Moodle	Evaluate the number of resources offered online via Moodle in the previous year versus current year.
Plan opportunities for teachers to meet to share technologies that are working in their classrooms.	Attendance logs of meetings
Offer hands-on training sessions for teachers once new technologies emerge to ensure they have knowledge of how to integrate the new technology.	Document training sessions. Observe technologies being used in classrooms

Objective 2.2: Actualize the ability of technology to individualize learning and provide equitable opportunities for all learners.

Strategies	Measures
Expand wireless LAN capability to every classroom	Document classrooms with wireless access
Continue to maintain online textbook login information to provide to students/parents for anytime access	Monitor Moodle page with login information to ensure accuracy
Integrate the use of handheld devices into all subject area curricula	Record number of handheld devices that are used
Differentiate instruction using various software, included but not limited to, Accelerated Reader/Math, Study Island, IXL, Education City	Analyze student data from the programs to monitor individualized learning.

Objective 2.3: Facilitate the implementation of high-quality Internet safety programs in schools.

Strategies	Measures
Ensure all students/parents understand the acceptable use policy as to specific guidelines for Internet use	Obtain signed AUP agreement annually-parent and student signature
Maintain Internet safety web page containing resources for teachers/students/parents	Instructional Technology Department will monitor sites listed on Internet safety web page
Provide Internet safety curriculum at all levels K-12	Document lessons and activities conducted for students and/or teachers throughout the year
Provide training to ITRT staff relating to relevant Internet safety issues so that these issues can be addressed within the schools	Document conference/workshop attendance

Goal 3: Afford students with opportunities to apply technology effectively to gain knowledge, develop skills, and create and distribute artifacts that reflect their understandings.

Objective 3.1: Provide and support professional development that increases the capacity of teachers to design and facilitate meaningful learning experiences, thereby encouraging students to create, problem-solve, communicate, collaborate, and use real-world skills by applying technology purposefully.

Strategies	Measures
Provide professional development workshops to assist teachers in developing technology-rich lesson plans	Document attendance at workshops Examine teacher lesson plans for proper technology integration activities
Develop mini-workshops/tutorials for teachers to practice with technology (Web 2.0) tools that can then be used by students in completing assignments.	Document attendance at workshops Survey students as to technology tools used for completing assignments
Offer assistance from ITRTs to support the teacher when integrating a new technology	Analyze ITRT time logs

Objective 3.2: Ensure that students, teachers, and administrators are ICT (Information & Communications Technology) literate.

Strategies	Measures
Maintain TSIP certification for all instructional personnel and administrators	Personnel Records
Provide Computer Applications class for incoming 8 th grade students to ensure adequate knowledge of technology	Student Information System Enrollment Records Analyze skills assessment given to 8 th grade students at end of course
Develop relevant workshops for administrators to ensure technology literacy	Documentation of workshops conducted and administrator attendance
Provide lab time for elementary students to introduce new technologies and ICT skills	Analyze master schedules to document lab time has been made available
Confirm that ICT standards are implemented in the classroom	Lesson Plan Analysis Teacher Observations

Objective 3.3: Implement technology-based formative assessments that produce further growth in content knowledge and skills development.

Strategies	Measures
Build benchmark tests in Interactive Achievement for pre and post testing in Math & Reading	Examine benchmark tests created
Conduct training on using Interactive Achievement to encourage teachers to use it for formative assessments	Document trainings Analyze IA use by teachers
Continue use of Accelerated Reading and Math in elementary grades as a formative assessment	Analyze scores and frequency of use

Goal 4: Provide students with access to authentic and appropriate tools to gain knowledge, develop skills, extend capabilities, and create and disseminate artifacts that demonstrate their understandings.

Objective 4.1: Provide resources and support to ensure that every student has access to a personal computing device.

Strategies	Measures
Facilitate the implementation of wireless access to the Internet throughout each school.	Record wireless locations within each school as they are made available.
Extend computer lab availability beyond normal school hours (before & after school)	Document and track time computer labs are available both before and after school
Purchase computers to reach a 2:1 student to computer ratio at each school	Compare number of computers by school to student enrollment
Provide laptops to homebound students on an as-needed basis	Document when laptops are provided

Objective 4.2: Provide technical and pedagogical support to ensure that students, teachers, and administrators can effectively access and use technology tools.

Strategies	Measures
Continue to meet the SOQ requirement for staffing of Instructional Resource Teacher	Staff Assignment Lists
Identify a technology facilitator within each school to ensure teachers & administrators have immediate tech support	Staff Assignment Lists
Maintain an online work order system to provide just-in-time maintenance for technological problems	Analyze work order lists
Provide current, personalized resources for teachers to promote technology integration into the curriculum	Verify web pages of resources are current and valid

Objective 4.3: Identify and disseminate information and resources that assist educators in selecting authentic and appropriate tools for all grade levels and curricular areas.

Strategies	Measures
Provide informational brochures for educators on new, emerging technologies and tools	Document distribution of brochures
Develop technology “teams” per school with goal of providing tools to teachers that are relevant for grade level and curriculum	Document meetings of technology team and resources shared to building teachers
Encourage staffs to subscribe to technology magazines (such as The Journal, Educational Technology) and join technology-based organizations (such as VSTE, ISTE)	Document subscriptions and organizations joined
ITRT Department will collaborate with Core Instructional Team to identify tools for all curriculum areas	Document meetings held and tools identified

Goal 5: Use technology to support a culture of data-driven decision making that relies upon data to evaluate and improve teaching and learning.

Objective 5.1: Use data to inform and adjust technical, pedagogical, and financial support.

Strategies	Measures
Disaggregate data from Interactive Achievement to determine division weakness in order to provide additional technological support	Interactive Achievement Data
Evaluate current programs and tools used throughout division to identify any gaps and overlaps	Analyze data collected on programs and tools

Objective 5.2: Provide support to help teachers disaggregate, interpret, and use data to plan, improve, and differentiate instruction.

Strategies	Measures
Provide training to teachers on disaggregating and interpreting SOL score data	Document attendance at trainings
Conduct workshops on interpreting Interactive Achievement Data for instructional planning and differentiation	Document attendance at workshops

Objective 5.3: Promote the use of technology to inform the design and implementation of next-generation standardized assessments.

Strategies	Measures
Develop and conduct projects at each grade level that promote 21 st Century Skills	Prepare rubric to evaluate effectiveness of projects
Provide Student Response Systems to schools to offer varied methods of assessment using technology	Inventory student response systems available at each school
Review & update current tools used for face-to-face, blended, and virtual learning environments.	Record current tools as obsolete tools are updated

Summary of Budget

2011-2012

Updated Yearly

Account	Budgeted Amount	Expenditures
State Technology Initiative	\$440,000	PC and printer purchases, LAN upkeep and upgrades, some Internet access, and Microsoft SLA for the Office Suite for entire county
High Speed Internet	\$120,000	50MBPS fiber to the Internet, and 10 MBPS fiber between schools
Computer Maintenance	\$45,000	Repair of existing computers not old enough to replace
Software	\$63,000	Online subscriptions to Education City, Interactive Achievement, and United Streaming
eRATE	\$160,000 (never budgeted, but this is the average yearly amount we receive)	Used for additional PC purchases and additional Internet bandwidth otherwise unaffordable
Staff Development	\$19,500	Technology Leadership Conference, VSTE, etc.
Tyler SIS Support and Training	\$22,000	Annual maintenance fee for Student Information System

Appendix 1

Timetable and Budget for goals, objectives, and strategies

Timetable and Budget

Objective	Strategies	Timetable	Budget Category
1.1: Deliver appropriate and challenging curricula through face-to-face, blended, and virtual learning environments.	Expand virtual course enrollment through Virtual Virginia	Annually	N/A
	Partner with Southwest Virginia Community College to provide dual enrollment courses	Annually	N/A
	Increase the use of locally developed online course content (via Moodle) to include online coursework for students (homebound, alternative education, and regular education).	Ongoing	SOL Technology Initiative for additional hardware.
	Offer adaptive technologies to facilitate the learning environment of special needs students.	Ongoing	Special Ed.
1.2: Provide the technical and human infrastructure necessary to support real, blended, and virtual learning environments.	Meet the SOQ requirement for staffing of Instructional Technology Resource Teacher	Annually	SOQ
	Meet the SOQ requirement for staffing of Technical Support positions	Annually	SOQ
	Monitor bandwidth usage at schools	Ongoing	SOL Tech. Initiative
	Facilitate the implementation of wireless access to the Internet throughout each school.	High School: by 2013 Middle School: by 2014 Elementary: by 2016	SOL Tech. Initiative
	Maintain an online work order system to provide just-in-time maintenance for technological problems	Ongoing	SOL Tech. Initiative
1.3: Provide high-quality professional development to help educators create, maintain, and work in a variety of learner-centered environments.	Expand the use of online content delivery systems to include online professional development for teachers, administrators, and staff.	Ongoing	N/A
	Provide professional development opportunities throughout school year to promote technology integration.	Annually	N/A
	Partner with local agencies, including but not limited to, CGI and Northrop Grumman to provide training to teachers on the importance of technology.	Ongoing	N/A
	Use Title II, Part D funds to cover cost of various professional development opportunities for teachers/administrators.	Ongoing	Title II, Part D
2.1: Support innovative professional development practices that promote strategic	Locally develop online professional development resources for teacher using Moodle	Ongoing	N/A
	Plan opportunities for teachers to meet to share technologies that are working in their classrooms.	Annually	N/A

Objective	Strategies	Timetable	Budget Category
growth for all educators and collaboration with other educators, content experts, and students.	Offer hands-on training sessions for teachers once new technologies emerge to ensure they have knowledge of how to integrate the new technology.	Ongoing	N/A
2.2: Actualize the ability of technology to individualize learning and provide equitable opportunities for all learners.	Expand wireless LAN capability to every classroom	High School: 2013 Middle School: 2014 Elementary: 2016	SOL Tech. Initiative
	Continue to maintain online textbook login information to provide to students/parents for anytime access	Annually	N/A
	Integrate the use of handheld devices into all subject area curricula	High School: 2012 Middle School: 2014 Elementary: 2016	SOL Tech. Initiative
	Differentiate instruction using various software, included but not limited to, Accelerated Reader/Math, Study Island, IXL, Education City	Ongoing	N/A
2.3: Facilitate the implementation of high-quality Internet safety programs in schools.	Ensure all students/parents understand the acceptable use policy as to specific guidelines for Internet use	Fall 2011 Annually thereafter	N/A
	Maintain Internet safety web page containing resources for teachers/students/parents	Ongoing	N/A
	Provide Internet safety curriculum at all levels K-12	Spring 2012 Spring Annually thereafter	N/A
	Provide training to ITRT staff relating to relevant Internet safety issues so that these issues can be addressed within the schools	Fall 2011 Annually thereafter	SOL Tech. Initiative (Local Match)
3.1: Provide and support professional development that increases the capacity of teachers to design and facilitate meaningful	Provide professional development workshops to assist teachers in developing technology-rich lesson plans	Ongoing	N/A
	Develop mini-workshops/tutorials for teachers to practice with technology (Web 2.0) tools that can then be used by students in completing assignments.	Ongoing	N/A

Objective	Strategies	Timetable	Budget Category
learning experiences, thereby encouraging students to create, problem-solve, communicate, collaborate, and use real-world skills by applying technology purposefully.	Offer assistance from ITRTs to support the teacher when integrating a new technology	Ongoing on as needed basis	N/A
3.2: Ensure that students, teachers, and administrators are ICT (Information & Communications Technology) literate.	Maintain TSIP certification for all instructional personnel and administrators	Annually	Title I professional development funds
	Provide Computer Applications class for incoming 8 th grade students to ensure adequate knowledge of technology	Fall 2011 Fall Annually thereafter	N/A
	Develop relevant workshops for administrators to ensure technology literacy	Ongoing	N/A
	Provide lab time for elementary students to introduce new technologies and ICT skills	2011-12 School Year Annually thereafter	N/A
	Confirm that ICT standards are implemented in the classroom	Ongoing	N/A
3.3: Implement technology-based formative assessments that produce further growth in content knowledge and skills development.	Build benchmark tests in Interactive Achievement for pre and post testing in Math & Reading	Fall 2011 Fall Annually thereafter	N/A
	Conduct training on using Interactive Achievement to encourage teachers to use it for formative assessments	Ongoing on as-needed basis	N/A
	Continue use of Accelerated Reading and Math in elementary grades as a formative assessment	Ongoing Annually	N/A
4.1: Provide resources and support to ensure that every student has access to a personal computing device.	Facilitate the implementation of wireless access to the Internet throughout each school.	High School: 2013 Middle School: 2014 Elementary: 2016	SOL Technology Initiative
	Extend computer lab availability beyond normal school hours (before & after school)	Fall 2011	N/A
	Purchase computers to reach a 2:1 student to computer ratio at each school	High School: 2012 Middle School: 2013 Elementary: 2014	SOL Technology Initiative
	Provide laptops to homebound students on an as-needed basis	Ongoing on as-needed basis	SOL Technology Initiative

Objective	Strategies	Timetable	Budget Category
4.2: Provide technical and pedagogical support to ensure that students, teachers, and administrators can effectively access and use technology tools.	Continue to meet the SOQ requirement for staffing of Instructional Resource Teacher	Annually	SOQ
	Identify a technology facilitator within each school to ensure teachers & administrators have immediate tech support	Annually	Local Funds
	Maintain an online work order system to provide just-in-time maintenance for technological problems	Ongoing	SOL Technology Initiative
	Provide current, personalized resources for teachers to promote technology integration into the curriculum	Ongoing	N/A
4.3: Identify and disseminate information and resources that assist educators in selecting authentic and appropriate tools for all grade levels and curricular areas.	Provide informational brochures for educators on new, emerging technologies and tools	Ongoing as technologies emerge	Local Funds
	Develop technology "teams" per school with goal of providing tools to teachers that are relevant for grade level and curriculum	Fall 2012	N/A
	Encourage staffs to subscribe to technology magazines (such as The Journal, Educational Technology) and join technology-based organizations (such as VSTE, ISTE)	Ongoing	N/A
	ITRT Department will collaborate with Core Instructional Team to identify tools for all curriculum areas	Annually	N/A
5.1: Use data to inform and adjust technical, pedagogical, and financial support.	Disaggregate data from Interactive Achievement to determine division weakness in order to provide additional technological support	Fall 2011 Annually thereafter	N/A
	Evaluate current programs and tools used throughout division to identify any gaps and overlaps	Fall 2011	N/A
5.2: Provide support to help teachers disaggregate, interpret, and use data to plan, improve, and differentiate instruction.	Provide training to teachers on disaggregating and interpreting SOL score data	Spring 2012	N/A
	Conduct workshops on interpreting Interactive Achievement Data for instructional planning and differentiation	Ongoing on as-needed basis	N/A
5.3: Promote the use of technology to inform the design and implementation of next-generation standardized assessments.	Develop and conduct projects at each grade level that promote 21 st Century Skills	Development 2011-12 Deploy 2012-13	N/A
	Provide Student Response Systems to schools to offer varied methods of assessment using technology	Fall 2011	21 st Century Funding
	Review & update current tools used for face-to-face, blended, and virtual learning environments.	Ongoing	SOL Technology Initiative

Appendix 2

Acceptable Use Policy (AUP)

RUSSELL COUNTY PUBLIC SCHOOLS INTERNET/NETWORK ACCEPTABLE USE POLICY

INSTRUCTIONAL PHILOSOPHY

To enhance the instructional program, Russell County Public Schools has established Internet access for the county's schools. This provides the opportunity for accessing worldwide resources and promotes educational excellence as outlined in Education Goals 2000 goals and strategies. By being connected to millions of computers and users through Internet and video conferencing, users have access to a wealth of educational and useful information.

All use of the Internet must be in support of education and research and be consistent with the educational objectives of Russell County Public Schools. Students and staff members will have access and training to use the Internet. The specifics of access, i.e., time frame, place, and accessibility, will be governed by individual schools.

Please be aware that although this Acceptable Use Policy provides guidelines for appropriate Internet use, there may be unacceptable material available through this service. The site administrators/teachers will make determinations as to whether specific uses of the network are consistent with the Russell County Acceptable Use Policy.

ACCEPTABLE AND UNACCEPTABLE USES OF THE INTERNET

ACCEPTABLE USES

The following actions constitute **acceptable** use of the Internet initiated from any school:

- a. Researching assigned classroom projects.
- b. Accessing and exchanging information.
- c. Using the Internet solely for educational purposes.

UNACCEPTABLE USES

The following actions constitute **unacceptable** use of the Internet initiated from any school:

- a. Using the Internet illegally in ways that violate federal, state, or local laws or statutes.
- b. Using the Internet for commercial purposes.
- c. Using the Internet for political lobbying.
- d. Changing any computer file that does not belong to the user.
- e. Posting, sending, or receiving copyrighted materials without permission.
- f. Using another person's password.
- g. Any misuse of pictures published on Russell County Public Schools websites. This includes copying, altering, publicly displaying, downloading, printing, or any action considered offensive.
- h. Using Internet access for viewing, sending or retrieving pornographic material.
- i. Circumventing security measures on school or remote computers or networks.

- j. Attempting to gain access to another's resources, programs, or data.
- k. Vandalizing, which is defined as any malicious attempt to harm or destroy data of another user on the Internet, and includes the uploading or creation of computer viruses.
- l. Using hate mail, harassment, discriminatory remarks, or other antisocial behavior on the network (including any message with profanity, obscene comments, sexually explicit material, or expressions of bigotry or hate).
- m. Off-campus Internet use that causes or creates a significant risk of causing on-campus disruption.
- n. Use of web sites that sell term papers or book reports.

NETWORK ETIQUETTE

- a. Monitoring of ALL on-line activity can be performed by Technology Services if deemed necessary by school system administration.
- b. You should not reveal your personal address/phone numbers or those of other students or colleagues.
- c. Programs that provide services that allow for the download of audio/video files, on-line instant messaging, and on-line gaming are prohibited.

DISCLAIMER ABSOLVING THE SCHOOL DIVISION

Russell County Public Schools makes no warranties of any kind, whether expressed or implied, for the service it is providing and will not be responsible for any damages suffered (including loss of data resulting from delays, non-deliveries, missed-deliveries, or service interruptions caused by negligence, errors, or omissions). Use of any information obtained via Russell County Public Schools' Internet access is at the user's own risk. Russell County Public Schools is not responsible for the accuracy or quality of information obtained.

STATE AND NATIONAL TELECOMMUNICATION RULES AND REGULATIONS

Transmissions of material in violation of any U.S. or state regulation is prohibited. Prohibitions include, but are not limited to, copyrighted material, threatening or obscene material, or material protected by trade secret. Use for commercial acts is not fair use of the Internet. Copyright laws on Internet apply to the same extent as those in non-electronic form. The ALA guidelines may be accessed at www.ala.org/washoff/dmguide.html. If a student's or teacher's work is published on a website, that work must be copyrighted or permission must be received by the child's parents to publish that work.

RESPONSIBILITIES OF EDUCATORS, PARENTS, AND STUDENTS

EDUCATORS

When using the Internet for class activities, teachers will select material appropriate to the age of the students and relevant to the course objectives. In order to determine the appropriateness of the material accessed through the sites, the teacher will preview the materials and sites planned for use. Teachers will provide guidelines and lists of resources to assist their students in channeling their research activities effectively and properly. Teachers will assist their students in developing the skills to ascertain the truthfulness of information, distinguish fact from opinion, and engage in discussions about controversial issues, while demonstrating tolerance and respect for those who hold divergent views.

PARENTS

The Internet is a global network that will provide students with access to a wide range of information, thus enabling the student to communicate with people throughout the world. However, on a global network it is impossible to control effectively the content of data, and an industrious user may discover controversial material. It is the user's responsibility not to initiate access to such material. Russell County Public Schools will attempt to block sites that are deemed inappropriate in the school environment and staff will supervise the student use of the Internet. Russell County Public Schools cannot, however, guarantee that a student will not gain access to inappropriate material that one would consider objectionable. The Russell County Acceptable Use Policy restricts access to material that is inappropriate in the school environment. Although staff will supervise student's use of the Internet, the Russell County Public Schools cannot guarantee that a student will not gain access to inappropriate material. There may be additional kinds of material on the Internet that are not in accord with particular family values. Parents are encouraged to take the opportunity to have a discussion with their child (ren) about their own family values and expectations as to how these values should guide their child (ren)'s activities while on the Internet. Russell County Public Schools supports and respects each family's right to decide whether or not to apply for access.

STUDENTS

Students are responsible for good behavior on school computer networks just as they are in the classroom, cafeteria, or the school hallway. General school rules for behavior and communication apply. A student's activities while using the Internet in school must be in support of education and research and consistent with educational objectives. Before a student is permitted to use the Internet, he/she must agree to comply with the Acceptable Use Policy of the Russell County Public Schools. **Each student must have on file in his/her school office a Student User Agreement and Parent Permission Form.**

If a student mistakenly accesses inappropriate information, he/she should immediately tell the teacher or other district employee or other person designated by the school. This will protect him/her against a claim of intentional violation of this policy.

CONSEQUENCES OF INAPPROPRIATE NETWORK USE

If there is reasonable suspicion that any student has violated his/her agreement to abide by the Acceptable Use Policy, school disciplinary code, or the state or federal law, the following actions will be taken:

1. The first offense will result in the loss of use of network access and account privileges for a period of not less than one week with parent notification explaining the circumstances. Each adult working with the student within the building or county will also be notified of the

disciplinary action taken.

2. Repeated or severe infractions of the agreement may result in permanent termination of network access and account privileges with notification of the child's parents and every educator who works with that student within the building and county.
3. Any offense may result in a three-day suspension and the possibility of legal action. The school's administration holds the right to govern the disciplinary actions associated with inappropriate network use.
4. In addition, Russell County Public Schools reserves the right to charge the student/parent for any malicious damages to the network hardware or software.

If there is reasonable suspicion that any employee has violated his/her agreement to abide by the Acceptable Use Policy, the school disciplinary code or the law, the violation will be handled in accordance with the Russell County Policy Manual (following due process guidelines).

ACCEPTABLE USE POLICY Addendum: Internet Publishing

A. IN GENERAL

The administration of Russell County Public Schools determined it is desirable for the school division, as well as, individual schools to have a presence on the Internet by publishing their own web page. This is similar to publishing a newspaper with text and/or pictures. Just as anyone may read an article in a newspaper, anyone with access to a computer and the Internet may read our web pages.

Russell County Schools has adopted an Internet Publishing Policy, which is a set of guidelines governing what may and may not be included on school web pages. The guidelines are outlined below. In accordance with this policy, neither a photograph of a student nor any example of his/her work may be added to the web page without prior consent from a parent or legal guardian.

B. LOCATION OF WEB PAGE FILES

- All school web pages must reside on the Russell County Public Schools Internet Server

C. CONTENT OF SCHOOL WEB PAGES

- Information and links on Russell County Public School web pages are limited to:
- General information of interest to students, parents, teachers, administrators, and community members.
- Activities of school sponsored organizations
- Curriculum and instructional material

D. PERSONAL INFORMATION

- Web pages may contain the first and last name of a student and his/her club or class affiliation or award.
- Web pages may contain the image of a student that allows identification by reasonable means provided proper consent is obtained.
- No personal information displayed on a web page may be more specific than allowed by this policy.

E. STUDENT WORK

- Web pages may include student work provided the work relates to a class project or other school related activity and provided proper consent was obtained. Examples of student work include poems, short stories, and works of art.
- School web pages are public documents welcoming the outside world to the school. The information included on the web pages must support the educational goals of the school system. The web page's main purpose is to introduce outside visitors to the school, its programs, and the achievements of the students. We hope our web pages will meet these criteria and that you will allow your child's picture or work to be included.

***RUSSELL COUNTY INTERNET
ACCEPTABLE USE POLICY
PHOTOGRAPH OR WORK PUBLICATION***

*(Please complete **only one** section below and return this complete page to your student's school.)*

I do **not** grant permission for _____'s photograph or work to be published on the web pages on the Internet as outlined in the Acceptable Use Policy Publishing Addendum.

Parent/Guardian's Signature
Student's Signature
Date

I grant permission for _____'s photograph or work to be published on the web pages on the Internet as outlined in the Acceptable Use Policy Publishing Addendum.

Parent/Guardian's Signature
Student's Signature
Date

STUDENT ACCEPTABLE USE AGREEMENT

As the parent of legal guardian of the minor student signing below, I grant permission for my son or daughter to access networked computer services such as computerized encyclopedias or electronic magazine data and the Internet. I understand that some materials on the Internet may be objectionable, but accept the responsibility for guidance of Internet use, i.e. setting and conveying standards for my daughter or son to follow when selecting, sharing, or exploring information and media.

Parent or Guardian's Name (Please Print)

Parent or Guardian's Signature

Date

I understand and will abide by the above Acceptable Use Agreement. I further understand that any violation of the regulations set forth in this Acceptable Use Policy is unethical and may constitute a criminal offense. Should I commit any violation, I accept the consequences as defined in this policy.

User Name (Please Print)

User Signature

Date

Appendix 3

Summary of Internet Safety Program

Internet Safety Summary

Russell County Public Schools is grounded in the belief that all students must be equipped with 21st Century tools and skills. The division has the responsibility of ensuring that students graduate with these skills. Collaboration and communication among all stakeholders-schools, teachers, students, parents, community members-is imperative for achieving this goal.

An important part of the necessary 21st Century skills is appropriate Internet use. Russell County Public Schools provides Internet Safety education based on the guidelines set forth by the Virginia Department of Education in *Guidelines and Resources for Internet Safety in Schools*. Internet safety is integrated into the K-12 curriculum using resources from these guidelines as well as additional resources deemed appropriate by the division. The Instructional Technology Department maintains a web page of Internet safety resources for teachers, parents, and students.

Our elementary students are taught Internet Safety utilizing Professor Garfield, NetSmartz and various other online learning sites. Eighth grade students complete the *Missing* simulation that is provided by Web Wise Kids. At the high school level, the Internet Safety component is built into the English Curriculum and/or business curriculum. All students must read, understand, and sign the Russell County Public Schools' Acceptable Use Policy (AUP).

Teachers are provided with Internet safety training by the Instructional Technology Department to keep them informed of emerging technologies, trends, and issues relating to keeping students safe online. Teachers are encouraged to recognize "teachable moments" relating to Internet safety. The division's Acceptable Use Policy (AUP) contains specific guidelines for proper Internet use. All staff is required to sign and adhere to the policy.

Parents and community members are offered Internet Safety Workshops throughout the school year as well. These workshops are developed and implemented by the Instructional Technology Department. Individual schools promote Internet safety in various ways – newsletters, open house presentations, school website, classroom newsletters, etc.

The Internet Safety Curriculum will be reviewed annually by an Internet Safety Committee. This committee will work closely with the Instructional Technology Department. Schools will provide documentation for their implementation of the Internet safety curriculum. The documentation will be

completed by using the form developed by the Internet Safety Committee and Instructional Technology Department. Revisions will be made as necessary to remain current in terms of technological trends and issues relating to Internet safety. Changes will also be made as needed to ensure the effectiveness of the Internet safety curriculum as suggested by each school's documentation.

Russell County Public Schools maintains a focus of equipping students with the necessary 21st Century skills to be successful in the future. Providing a safe learning environment and proper Internet safety training is imperative to achieving this goal. The division strives to support students in their academic endeavors and encourages them to utilize Web 2.0 tools in a safe, secure manner to experience SOL and academic success.

Appendix 4

Technology Job Descriptions

TECHNOLOGY DEPARTMENT

<p>TIM LOVELACE Director of Technology</p>	<p>BRIAN SIKES Technology Technician</p>
<p>Computer Technology Parent Notification System Consultant Telephone and Voice Mail Systems Intercom Systems Network Cabling Internet Access Policy Manual on Website E-rate Online SOL Testing Blue Ridge Public Television Title II Part D Grant Southwest VA Public Education Tech. Consortium SVETN</p>	<p>Windows Servers (web, e-mail, TEMS, Moodle, & All Schools) Troubleshooting and configuring Cisco switches and routers PC repair, maintenance, and upgrades Telephones and Voice Mail Systems Maintain Homework Hotline Software Upgrades Network Cabling Network Administration Computer lab setup and configuration Software evaluation and training County E-mail Administration Online SOL Testing</p>
<p>BRANDON VANCE Technology Technician</p>	<p>NICK BELCHER Technology Technician</p>
<p>Troubleshooting and configuring Cisco switches and routers PC repair, maintenance, and upgrades Telephones and Voice Mail Systems Maintain Homework Hotline Software Upgrades Network Cabling Network Administration Computer lab setup and configuration Software evaluation and training County E-mail Administration Online SOL Testing</p>	<p>School System Website Administrator PC repair, maintenance, and upgrades Software Upgrades Network Cabling Network Administration Computer lab setup and configuration Software evaluation and training County E-mail Administration</p>
<p>JAMIE KISER Technology Technician</p>	
<p>PC repair, maintenance, and upgrades Software Upgrades Network troubleshooting and repair Computer lab setup and configuration Telephone system troubleshooting and repair</p>	

INSTRUCTIONAL TECHNOLOGY RESOURCE DEPARTMENT

TABITHA LONG
ITRT Coordinator

KATHY NUNLEY
Teacher Coordinator

Works with teachers and administration to integrate Technology
Assists with Curriculum and Content Development
Creates learning resources for teachers and staff
Participates in software selection and use
Algebra Readiness Initiative
Academic Calendar
Assists Testing Director with SOL online testing
School Beautiful Contest
Coordinator of Competitions: County Forensics,
Elementary County Science Fair, County Spelling, Bee, County Art Contest, and County
Track and Field Day
Natural Resources Festival
AG Day

Technology Integration
United Streaming Account
Manager
Maintain ITRT Website
Moodle Account
Manager/Trainer
Maintains Online Textbook
Database
Smart Board Setup and Training
Porta Portal Setup and Training
ROS Works Training
Software/Hardware Training
Team Teaching