



Nelson County Public Schools
84 Courthouse Square, P.O. Box 276
Lovingson, VA 22949
434-263-7100
www.nelson.k12.va.us

2010-2015

EDUCATIONAL TECHNOLOGY PLAN FOR NELSON COUNTY PUBLIC SCHOOLS



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2010-2015

Tech Plan Specific Goals

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

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

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

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.

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

Executive Summary

The following report contains our 2010-2015 Educational Technology Plan for Nelson County Public Schools.

We have demonstrated the **process** we used while developing this plan by:

1. explaining how our mission, vision, and strategic goals relate to the plan;
2. describing the work of our committee and the benchmarks used;
3. summarizing our process of evaluation/assessment and the planned update cycle for evaluating/assessing; and
4. providing conclusions from our Needs Assessment.

Also, we have supplied the **actions** we propose to use regarding this plan. Attached is the 2010-2015 Plan with our specific goals, objectives, and strategies.

Additionally, we have provided accompanying documentation in the appendices:

1. Timetable and Budget
2. Division Acceptable Use Policy (AUP)
3. Summary of Internet Safety Program for 2008-2010

Summary of Connections to the Vision, Mission, & Strategic Goal for our Division

Vision

**Empowering generations through
excellence in education**



Mission

**We educate students to become skilled,
responsible, productive and enlightened
citizens who contribute to society.**

Strategic Goal

**Our school division will graduate all
students, equip them with 21st Century skills, and
enable them to successfully transition into adult life
able to effectively function in a global society.**

Taking into consideration our vision, mission, and strategic goal for our school division, we are committed to providing the necessary elements to attain this goal for our students. We believe that in order to equip our students for the 21st century, there are creative skills, communication skills, and critical thinking skills that must be developed in our students. There are also life and career skills to be built. Technology skills are part of all of these skills and they need to be improved constantly. We understand the challenge in preparing our children in this rapidly changing world of technology. We realize that there is an excitement that technology automatically creates, and what better way to keep our children motivated to learn!

One of our specific objectives over the next five years is to provide every student with a technological device. This will give them the opportunity to take charge of their own learning and offer them easy access to the technological world. It will also assist the teachers to be more efficient as they instruct the students day to day.

We also recognize the significance of strong technological skills for our educators themselves. It is the mission of our staff to provide the leadership and service support to insure that the vision of the 21st century learning environment is a reality. Therefore, another one of our specific objectives is to continuously offer quality professional development to foster effective technological learning environments.

To meet the vision, mission, and strategic goal for our division, there will be a continuous infusion of technological thought, material, and support to allow an equitable growth towards a new paradigm of teaching and learning that ensures 21st century skill acquisition via 21st century infrastructure and support.

Technology Committee Members
2010

- **Debbie Apperson-Computer Applications Teacher**
- **Randi Chapman-English Teacher**
- **Susan Huffman-Library Media Specialist**
- **Shannon Irvin-Assistant Superintendent-Administration**
- **Joe Dan Johnson-Technology Director and Chairman**
- **Stacey Johnson-Library Media Specialist**
- **Jane Raup-Library Media Specialist**
- **Kevin Rose-Technology Teacher**
- **Jessica Thompson-Computer Lab Assistant**
- **Jo Ann Wagner-Assistant Superintendent-Instruction**
- **Christina Wiley-Elementary Teacher**
- **Clay Stewart - community member & owner/operator of Stewart Computer Services)**
- **Kathryn Byrd-Colbert (parent)**

Summary of Work of the Planning Committee

2009-2010 School Year

During the second half of the 2009-2010 school year, at the Planning Committee meetings, our main goal was to plan, outline and distribute surveys. By May 10th, we had executed our plan and had tabulated the results of the surveys. We met on the following dates:

- February 8, 2010
- March 8, 2010
- April 12, 2010
- May 10, 2010

2010-2011 School Year

During the beginning of the 2010-2011 school year, our main goal was to take the information from the surveys, the goals of the division, and the needs of the students, and then develop the goals, objectives, strategies, and evaluation strategies for the Technology Plan. We met on the following dates:

- September 27, 2010
- October 11, 2010
- October 18, 2010
- November 1, 2010
- November 22, 2010



Summary of the Evaluation Process and Planned Update Cycle

Reports and Activities Due Annually

- Report of the number of students using computers in their classrooms regularly for instruction, blended instruction, and virtual instruction during the year.
- Report of the number of blended high school/college courses offered in the district.
- Report of the number of students attending the BRVGS.
- Report the number of students taking and receiving credit for virtual college or high school courses.
- Usage analysis determining frequency of access to web-based content, tools, or spaces.
- Report of the number and ratio of ITRT and technology staff in the district.
- Annual inventory and report of switches, routes, computers, access points, and bandwidth structure.
- Report of the number of students and grades with an internet ready 1-1 take home computing device.
- Report of Web 2.0 and beyond tools and applications provided for student/staff/community use on district computers and its network.
- Provide the URL of the district and school websites developed to link, house, or list support and training materials for staff, students, and community members.
- Report of the partner individuals and institutions providing professional development support, the number of individuals (staff) who participated, what programs were offered and their evaluation results.
- Report of district provided professional development and attendance.
- Certification of annual Internet Safety Training for staff.
- Report of the annual technology assessment surveys of staff and students.
- Report of the survey of staff professional development activities: live, blended, or virtual (web based included).
- Report of evidence on using technology to aid in differentiating instruction based on evaluation scores and reports.
- Report of the volume of electronic texts, videos, and audio books available or in use in classes or by students and staff.
- Report of Internet Safety programs, training, and materials available to staff, students, and the community.
- Report of analysis of shared document usage by staff and students.
- Report of staff status in meeting modified (updated) ICT standards in the district.
- Report of formative, benchmark, and final assessment (SOL) use across the district.
- Report and certification of intra & inter school and class collaboration across the district.
- Report of technology request responses.
- Review of the annual budget and expenditures.
- Report of staff, student, and community comments submitted to and state committees served on.
- Report of comments made to the state by staff, students, and community members; report will include those committee members serving on state and or federal committees.

Conclusion from Needs Assessment

TECHNOLOGY ASSESSMENT 2009-10 REVIEW

During the spring of the 2009-10 school year, we conducted a survey assessment of the entire faculty and staff of the Nelson County Public Schools. We also completed an observation and an anecdotal review of our student proficiency in 21st century technology skills.

We surveyed the faculty on their ability to utilize the hardware and software available to them. We wanted to examine how useful both hardware and software are in the classroom as well as in collaborative situations for students and staff. The survey items included whiteboards, wireless tablets, Google Apps, web site development, podcasting, advanced web searches, blogging, networked printer-copiers, Open Office, Microsoft Office, and a host of other topics.

We were able to identify areas of strengths and weaknesses for the staff of each of the schools. Each school determined the immediate list of professional development topics to be covered this school year (the first of the 2010-15 technology plan). The topics chosen reflect those skills that are required of students and staff. Also, there was consideration for certain topics based on the directed move to a one-to-one computing environment, with the inclusion of 21st century skills instruction in each school's classrooms. The core skills selected varied slightly by school and age group.

The survey provided a good starting point for directed professional development for technology infused classrooms. It will be followed this spring by a more formal assessment procedure. The annual professional development activities will be negotiated with each staff each year. These activities will be based upon the information gained in each annual evaluation and the assessment activities.

Also, we noted the similar strengths and weaknesses among the students. The direction for student skill improvement will come from the professional development provided to each staff. This way, we can insure that the individual staff members can teach and involve students in a 21st century technology infused environment.

Overall results in the 2009-10 assessment survey indicated that staff and students need directed work with some specific hardware equipment including wireless tablets and digital cameras. Also, there is a need for directed software topics; these include directed work with pod/vodcasting, blogging, wikis, video chat, movie maker, text to speech software use, and Google Apps for collaboration.

2010-2015 PLAN

Goals & Objectives with Local Strategies & 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.
 - Strategy 1.1.1: Continue the initiative to incorporate 1 computer to 1 student (1 to 1) which will facilitate face-to-face, virtual, and blended instructional opportunities.
 - ❖ Evaluation Strategy: Determine the number of students using computers during the school day in face-to-face, virtual, and blended instruction each school year via teacher/student surveys, observation, and computer/software usage logs.
 - Strategy 1.1.2: Continue discussions with PVCC (and others) to offer blended courses for HS and continue partnership with BRVGS.
 - ❖ Evaluation Strategy: Determine the number of blended courses offered to NCPS students.
 - Strategy 1.1.3: Continue/Extend our partnership with PVCC, Virtual VA and others for dual enrollment virtual classes.
 - ❖ Evaluation Strategy: Count the number of students taking online courses and the number of course completions as well as the number of courses selected each year.
 - Strategy 1.1.4: Explore offering High School credit courses delivered virtually through the Achievers' Lab or other staff monitored options.
 - ❖ Evaluation Strategy: Determine the number of high school students receiving credit from any accredited entity while attending NCPS schools.

- Strategy 1.1.5: Provide division-wide access to Web-based content, tools, and collaborative spaces through Google applications, such as: Google Docs, G-Mail, Google Sites, wiki-spaces, etc., to encourage active, collaborative, and meaningful educational exchanges and opportunities, both within the classrooms and beyond the confines of the classroom.
 - ❖ Evaluation Strategy: Analyze usage to determine frequency of access to Web-based content, tools, and collaborative spaces.
- Objective 1.2: Provide the technical and human infrastructure necessary to support face-to-face, blended, and virtual learning environments.
 - Strategy 1.2.1: Provide resources and support for at least one instructional technology resource teacher (ITRT) per 1,000 students. To assist teachers in integrating technology into teaching and learning, our goal will be to provide one ITRT/support position per school.
 - ❖ Evaluation Strategy: Describe the ratio of ITRT to students by school division.
 - Strategy 1.2.2: Provide resources and support for at least one technical support position per 1,000 students to ensure that technology and infrastructure is operational, secure, and properly maintained.
 - ❖ Evaluation Strategy: Describe the extent to which the actual count meets or exceeds the one technical support position per 1,000 student's guideline.
 - Strategy 1.2.3: Complete the upgrade of each school's internal connections to 1 GB with full switch upgrades and partner with the Nelson County Middle Mile Broadband Grant and/or other providers to ensure increased bandwidth capacity to meet growing demands.
 - ~~❖ Evaluation Strategy: Document the (installation) of all new switches at the 1 GB backbone level.~~
 - ❖ Evaluation Strategy: Document broadband capacity growth.
 - Strategy 1.2.4: Provide and continue to upgrade wireless access to the Internet in every school to blended "G & N" standards.

- ❖ Evaluation Strategy: Describe division level efforts to facilitate this objective.
 - ❖ Evaluation Strategy: Describe the extent to which wireless access has been implemented across the division.
- Strategy 1.2.5: Provide a 1-to-1 take-home electronic device to all instructional staff and students suitable for use in face-to-face, virtual, and blended instructional environments.
- ❖ Evaluation Strategy: Compare the number of students provided with 1-to-1 take home electronic devices with the total number of students each year.
- Strategy 1.2.6: Provide web based shared documents and environments via “Google” applications, email, wikis, sites, voice over IP applications, electronic lockers, and on-premises Internet connection opportunities to enable students to participate in meaningful face-to-face instruction, virtual instruction, or blended instruction as needed.
- ❖ Evaluation Strategy: List and describe the web 2.0 and beyond tools made available to all students in particular age groups and class groups as well as schools.
- Objective 1.3: Provide high-quality professional development to help educators create, maintain, and work in a variety of learner-centered environments.
 - Strategy 1.3.1: Identify, develop, disseminate, and maintain resources to support the use of technology in all curricula based on teacher-needs' assessments and observation via multiple media in face-to-face, virtual, and blended environments.
 - ❖ Evaluation Strategy: Document that an active website of identified resources is available to staff, note the number of resource requests received and filled, calculate the number of virtual resources accessed, and document trainings provided on identifying and using web 2.0 resources.
 - Strategy 1.3.2: Provide professional development focused on technology integration strategies and the development of teachers' and administrators' 21st century skills through in-house training and through public and private

partnerships including ISTE, Discovery Education, PBS, college classes, consultants.

- ❖ Evaluation Strategy: Document how the number and types of partnerships differ from previous years and the number of program participants.
 - ❖ Evaluation Strategy: Describe the types, quantity, and perceived quality of professional development provided by partnerships through formal evaluations.
 - ❖ Evaluation Strategy: Document the professional development program attendance.
- Strategy 1.3.3: Provide annually a selection of large group, small group, individual, and virtual training for staff in working in 1-to-1 and blended instructional environments.
- ❖ Evaluation Strategy: Determine the number of each type of training offered to staff and number who attend.
- Strategy 1.3.4: Annually provide internet safety training to all instructional staff to be taught to students.
- ❖ Evaluation Strategy: Document the training held with teachers.

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.
 - Strategy 2.1.1: Provide and/or facilitate innovative professional development that promotes collaboration. All staff will use Google Docs, Google Sites, Google Chat or another form of VOIP, Google Groups, or other district options for collaboration among staff members.
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- ❖ Evaluation Strategy: Document the types, scope, extent, attendance, and accessibility of the professional development offered.
 - ❖ Evaluation Strategy: Describe the professional development opportunities that require and promote collaboration among staff.

- Strategy 2.1.2: Facilitate the development and delivery of professional development opportunities that focus on effective technology use in specific core curricular areas and provide grade level targeted professional development based on assessed teacher skills and needs.
 - ❖ Evaluation Strategy: Compare assessed professional development needs from our annual needs assessment by grade, school, and curricular area with the programs prepared and delivered for those levels.
- Strategy 2.1.3: Encourage the use of professional development activities such as Webinars, online learning, college credit classes, etc., by staff to develop integrated technology skills, practices, and lessons.
 - ❖ Evaluation Strategy: Document the number of professional development activities.
- Objective 2.2: Actualize the ability of technology to individualize learning and provide equitable opportunities for all learners.
 - Strategy 2.2.1: Provide reasonable access to Internet-connected devices that offer students the flexibility to learn anytime, anywhere with the goal to provide 1-to-1 Internet-ready devices.
 - ❖ Evaluation Strategy: Document the number of students who have regular contact with Internet-ready devices and how many have take-home devices.
 - Strategy 2.2.2: Promote individual student learning based on achievement data, using curriculum combined with technology devices and software.
 - ❖ Evaluation Strategy: Document evidence of how technological tools and activities provide individual learning opportunities for students based on assessment data.
 - Strategy 2.2.3: Provide opportunities for individualized learning needs by utilizing electronic texts, interactive sites, and student search and material development to support the needs of all students including learners with special needs and/or talents.

- ❖ Evaluation Strategy: Document the number of electronic texts, books, videos, audio books, and support sites including translation sites available to students and teachers.
- Objective 2.3: Facilitate the implementation of high-quality Internet safety programs in schools.
 - Strategy 2.3.1: Provide support, material, and training to staff and parents to teach and encourage Internet safety in all places.
 - ❖ Evaluation Strategy: Describe the materials & document the training available to staff & parents to support Internet safety practices.
 - Strategy 2.3.2: Ensure that all staff present Internet safety information and lessons and practice Internet safety in their classes.
 - ❖ Evaluation Strategy: Document that all staff present Internet safety information in the integration of technology lessons in their classes by observation and record keeping.

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.
 - Strategy 3.1.1: Provide ongoing "just-in-time" professional development for teachers and administrators implementing technological infused instruction and pedagogical innovations that such actions as 1-to-1 technology encourage and demand.

- ❖ Evaluation Strategy: Document the ongoing professional development opportunities afforded to staff to meet identified needs and staff requests.
- ❖ Evaluation Strategy: Document the visioning and pedagogical activities engaged with staff over the infusion of technology into all grades and classes and who attended.

- Strategy 3.1.2: Enhance curricula using Internet resources and software including a full-district provided Google suite, open source materials, interactive web sites and new search and information tools that encourage creativity, collaboration and problem solving as well as student involvement in information gathering, and processing.
 - ❖ Evaluation Strategy: Document the use by staff and students of the Google suite of tools, interactive sites, and collaboration between staff and students via Google docs, email and other sources of collaborative efforts.
 - Objective 3.2: Ensure that students, teachers, and administrators are Internet Communication Technology (ICT) literate.
 - Strategy 3.2.1: Provide professional development to teachers, staff, and administrators that meet ICT literacy standards and require proof of mastery as determined by the technology planning documents and general practice.
 - ❖ Evaluation Strategy: Describe the ICT professional development offerings and resources available to all staff.
 - ❖ Evaluation Strategy: Record and report the annual ICT literacy status of staff.
 - Strategy 3.2.2: Staff will teach relevant technology skills to students, provide regular practice of those skills in practical curriculum activities, and annually evaluate student ICT literacy in grades 5, 8, and 11.
 - ❖ Evaluation Strategy: Annually test the ICT literacy of students in grades 5, 8, and 11.
 - Objective 3.3: Implement technology-based formative assessments that produce further growth in content knowledge and skills development.
 - Strategy 3.3.1: Continue to use Internet assessment tools such as Interactive Achievement (IA), interactive web sites, and teacher-developed technology activities to assess student content knowledge and skill development.
 - ❖ Evaluation Strategy: Report the formative and benchmark use of IA, document the use of software such as Study Island and Princeton Review, describe staff use of interactive sites and describe the use of teacher-developed technology-based assessments.
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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.
 - Strategy 4.1.1: Continue the effort to provide each student with a 1-to-1 take-home, Internet-ready device.
 - ❖ Evaluation Strategy: Count the number of students provided a 1-to-1 take-home Internet-ready device.
 - Strategy 4.1.2: Encourage teachers to provide opportunities for student use of technological tools and programs to interact within the community for learning activities including intra- and inter-school collaboration.
 - ❖ Evaluation Strategy: Document the intra- and inter-school collaboration activities and document student use of technology beyond the school day and facility.
- Objective 4.2: Provide technical and pedagogical support to ensure that students, teachers, and administrators can effectively access and use technology tools.
 - Strategy 4.2.1: Provide adequate technical support for maintaining:
 - the network,
 - teacher Internet devices and support devices,
 - student Internet-ready devices,
 - virtualized server and computer operations,
 - adequate numbers of technology support staff,
 - first responder training for ITRT and media specialists, and
 - response training for staff.
 - ❖ Evaluation Strategy: Annually count the number of technology support requests that take beyond 1 day, 3 days, or more than 1 week to correct.
 - ❖ Evaluation Strategy: Document resources made available to staff on line or via direction to the Internet for basic troubleshooting as well as the number of sessions of basic response training provided in in-service to staff.
 - ❖ Evaluation Strategy: Annually review the adequacy of command and control software to monitor and virtually manage district technology resources.

❖ Evaluation Strategy: Annually describe and evaluate the virtual server and computer infrastructure for redundancy and adequacy of operations.

- Strategy 4.2.2: Technology support staff, media specialists, administrators, other teachers and staff will provide ongoing high quality professional development and support in full technological immersion classrooms including:
 - instruction in a 1-to-1 environment through partnerships,
 - on-line and Internet resources such as YouTube and Teacher tube,
 - Discovery Education videos,
 - Google groups and teacher learning circles,
 - staff webinars, summer learning,
 - VOIP support conversations and instruction, and
 - personal and small group support.

❖ Evaluation Strategy: Annually survey the staff to determine needs and satisfaction with support.

- Strategy 4.2.3: Provide ongoing support to teachers in selecting, integrating, and evaluating the use of technology based tools in effective student instructional settings and in effective student use.

❖ Evaluation Strategy: Document student use of technology based tools in instructional settings and student success in evaluation processes.

❖ Evaluation Strategy: Document and describe support services, materials and resources provided to staff.

- 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.

- Strategy 4.3.1: Develop and maintain a NCPs Technology referral site/wiki that provides information on new technology tools and process, how to use them, and how to evaluate their use.

❖ Evaluation Strategy: List the URL of the site or wiki.

- Strategy 4.3.2: Implement projects to evaluate new technologies and resources as they become available using early adopters and volunteers.

- ❖ Evaluation Strategy: Detail new technologies or resources/process evaluated and adopted for use each year.

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 & adjust technical, pedagogical, & financial support.
 - Strategy 5.1.1: Use the available technology to review benchmark and formal assessment results for all students to determine areas of strength & weakness.
 - ❖ Evaluation Strategy: Describe the use of technology used to review benchmark and formal assessment results.
 - Strategy 5.1.2: Review the budget annually and adjust spending for new technology initiatives developed and implemented to meet identified needs.
 - ❖ Evaluation Strategy: Compare budget expenditures with identified and prioritized program needs.
- Objective 5.2: Provide support to help teachers disaggregate, interpret, and use data to plan, improve, and differentiate instruction.
 - Strategy 5.2.1: Provide disaggregation and assessment information and tools to teachers such as Interactive Achievement and detailed SOL results.
 - ❖ Evaluation Strategy: Document the availability and use of tools such as Interactive Achievement and detailed SOL records to teachers.
 - Strategy 5.2.2: Provide training to teachers to develop the skills and techniques to use disaggregated data to plan, improve, and differentiate instruction and learning opportunities.
 - ❖ Evaluation Strategy: Document online & face to face professional development opportunities offered to staff on how to disaggregate data to differentiate & effect instructional change based on the results.
- Objective 5.3: Promote the use of technology to inform the design and implementation of next-generation standardized assessments.
 - Strategy 5.3.1: Provide online standards testing.

- ❖ Evaluation Strategy: Document the percentage of tests given annually online versus on paper.
- Strategy 5.3.2: Encourage staff to comment to the state department of education and the federal department of education all concerns or thoughts on how to improve educational assessment.
 - ❖ Evaluation Strategy: Request staff to copy the district with relevant comments submitted electronically.

Appendix 1

Timetable for Goals, Objectives, Strategies and Measures

<u>Time Line</u>	<u>Strategy</u>	<u>Specifics</u>
2010-2011	1.1.1	By the end of 2010, we will have added 340 new netbooks and new laptops for all elementary teaching staff. We will place Tye River Elementary 5 th grade students in a 1-1 classroom with netbooks and 2 nd grade students with NComputing Extedia cards.
	1.2.1	We will be requesting two additional ITRT/technology positions for the 2011-2012 school year.
	1.2.3	We will have complete switch replacement in place by the end of 2010 and upgrade to 50mb or 100mb connection if contracts can be updated midyear under e-rate.
	1.2.6	We will provide to all K-12 students a Google docs account by November 2010. A “student Google apps” shortcut will be placed on the schools’ websites for log-ins from off-campus computers.
	1.3.2	We will provide ITRT classes for each school’s staff, a technology consultant for NMS preparing for 1-1 instruction, and continued access to Discovery Education for all staff.
	1.3.3	ITRT’s, other technology staff, and media specialists will provide large and small group or individual instructional support. Staff will be directed to YouTube and other sites and to virtual conferences. This is being done to support the preparation for 1-1 instruction in all schools.
	2.1.2	By the end of 2010, all schools will have selected the core skill areas to receive specific support for the year in the grade level and core curricular areas. This will enable ITRT and media specialists to deliver directed and targeted professional development based on the Spring 2010 Technology Survey of all staff.

<u>Time Line</u>	<u>Strategy</u>	<u>Specifics</u>
2010-2011 (Continued)	2.1.3	Technology staff and media specialists will continue to refer staff to webinars, virtual conferences, and other virtual training opportunities via individual e-mails, or each school's shared technology information site.
	2.2.1	By the end of the 2010-2011 school year, over 1800 internet connected computing devices will have been placed in use for the approximately 2100 staff and students to use while on campus. Each school has extended time after school hours with computers available to students.
	2.2.2	By the end of the 2010-2011 school year, all core instructional staff will have used benchmark data in conjunction with directed curriculum objectives and strategies that include technology usage (hardware and software) to remediate or direct instruction.
	3.2.1	Each school will have selected a series of required skills for staff developed from the Spring 2010 Technology Survey in conjunction with the identified skills list for 21 st century technology developed via our technology tools and activities list.
	3.2.2	A detailed evaluation of student ICT literacy will be done by the end of the 2010-2011 school year.
	4.2.1	Specific training will have been provided to all elementary staff on how to do basic setup and maintenance on their own computers by the end of 2010. Media specialists will have received at least 6 hours of basic response training by the end of the 2010-2011 school year.
	4.2.2	During the 2010-2011 school year, an ITRT will be assigned to work intensively with Tye River Elementary 5 th grade staff who are implementing 1-1 classroom environment. A consultant will provide in-service for Nelson Middle School staff preparing for implementation of 1-1 in 2011-2012.

<u>Time Line</u>	<u>Strategy</u>	<u>Specifics</u>
2010-2011 (Continued)	4.3.2	During the 2010-2011 school year, Tye River Elementary will implement a 1-1 classroom environment in the 5 th grade. New tools and applications have been assigned to staff and student computers for use and feedback.
	5.3.1	All applicable SOL tests will use online testing during the 2010-2011 school year.
2011-2012	1.1.1	4 th – 8 th grades will move into a transitional 1-1 classroom environment with the intent to move to a 1-1 take home internet-ready computing device by the second semester.
	1.2.1	We will be requesting additional ITRT/technology positions for the 2012-2013 school year as required to meet the 1 per school model.
	1.2.4	We will add smart controllerless intelligent “N” quality access points to each school to replace “G” access points.
	1.2.5	Please see 1.1.1 for details.
	1.3.1	The district-wide technology resource site will have been set up by the second semester and it will incorporate the materials from the individual school sites.
	1.3.2	Each staff member shall have been offered at least 6 hours of additional technology training via the named options by the end of the year.

<u>Time Line</u>	<u>Strategy</u>	<u>Specifics</u>
2011-2012 (Continued)	3.1.1	Individual sessions (via prepared, purchased, or locally developed online training) will be available to staff on topics selected for staff development by each school using the NCPS technology site.
	4.1.1	See 1.1.1 for details.
	4.1.2	All elementary classes will have attempted to do a cooperative activity with the other district elementary school by the end of the 2011-2012 school year. All middle and high school faculty will have been required to complete interactive on-line planning activities within the buildings or with another school staff member somewhere else in the world.
	4.3.1	See 1.3.1 for details.
	5.1.1	We will participate in the state initiative to match student and teacher data on longitudinal and horizontal student progress.
2012-2013	1.1.1	4th – 10th grades will move into a 1-1 classroom environment with 1-1 take home internet ready computing devices.
	4.1.2	All staff should have experienced at least one class where they have participated in a collaborative project with students who are enrolled in a program outside the school building. (Options included will be between the district schools, home schooled students, or school students in other school divisions.)

APPENDIX 2

ACCEPTABLE USE OF TECHNOLOGY POLICY

The Nelson County School System offers access to technology to all of its staff and students and special guests in order to provide the opportunity to improve academic achievement, to ensure that all are technologically literate and capable, and to integrate resources with teacher training and curriculum development to establish and encourage instructional methods that can be implemented as best practices for learning. Technology resources include, but are not limited to, computers, printers, software, online catalogs, network file servers, data files, a division-wide email system, a secure student email and digital locker system, and access to the Internet. Internet and computer network and non-network access is available to authorized students, teachers, and other staff. The school division provides technology for educational purposes.

Authorized Users

Prior to a student entering a Nelson County School for the first time and at the entry into grades K, 6, and 9 his or her parents (or the student if 18 years of age) must receive and sign an acknowledgement of this acceptable use policy. The school shall maintain an accurate record of who has returned the signed acknowledgement and shall respond to authorize or limit technology use accordingly. Employees of the Nelson County School System shall sign an acknowledgement of the Policy at the time of employment and when changes are made to this policy. The school and/ or office where the employee is assigned shall maintain an accurate record of these forms. The students and employees of Nelson County School System who have completed and signed the Acceptable Use Policy are the authorized users of the school division's technology resources.

Technology Privileges

Use of the Nelson County School System's Internet and technology infrastructure is a privilege, not a right. Inappropriate use will result in an immediate termination of access and other privileges relating to use. Inappropriate use may also result in disciplinary action (up to and including suspension or expulsion for students or suspension or dismissal for staff) as well as potential civil or criminal liability and prosecution. Administration, faculty or staff may request that the network systems administrator deny, revoke or suspend specific access as a result of a violation of this policy.

Violations

Use of technology resources to view, create or transmit any material in violation of any federal or state law is strictly prohibited. Also prohibited are the use or transmission of material protected by federal or state intellectual property laws, copyright materials, or licensed materials without written permission from the appropriate person or agency. Creating, using or transmitting threatening, harassing, obscene or pornographic material is not permissible and is a violation of school board policy and will result in disciplinary action.

In addition, users are prohibited from accessing or attempting access, using or attempting to use, the Internet or other computer network or non-network facilities for any other unauthorized purposes. This includes but is not limited to private commercial activities, introduction of viruses, and

manipulation or corruption of systems, files, and other related resources. Any illegal activities will be reported to the appropriate agencies.

Liability

The Nelson County School System cannot guarantee the availability of technology resources. The school division will not be responsible for any information that may be lost, damaged, or unavailable due to technical or other difficulties. The school division cannot ensure that all electronic transmissions are secure and private. The school division cannot guarantee the accuracy or quality of information obtained. Although all efforts to comply with state and federal internet site screening and protection are in place and active, the school division cannot guarantee completely that no illegal, defamatory, or potentially offensive materials may be viewed/retrieved by a user on our systems. Students, staff or family who become aware of such material, please contact school administration immediately.

Technology Use and Access

The school division will provide access to technology resources. Users should be aware that use of these resources may be monitored in order to provide an acceptable level of services to all users. Users should also be aware that data that resides on, or passes through, the school division's technology infrastructure is subject to review. All users are to utilize this system with integrity and responsibility. As these are district provided resources, users should not expect that files stored on the district resources or communications that pass through the system will be private.

Proper Use

The school division staff will provide an integrated program of instruction on proper use of technology resources, including areas of proper care of equipment, management of resources, search strategies, user safety, copyright laws, computer etiquette and the safe and acceptable use of internet resources. Students, staff and parents should know that proper internet filtering for differing age groups is in place and in use on all Nelson County Public Schools equipment and sites. Currently to ensure user safety and appropriate use of technology, we use a multiple layered approach to filtering including a commercial web filter and firewall for endpoint protection, commercial hardware and software processing protection and Gaggle filtered student e-mail. All students and staff should be aware that certain behaviors are against both school rules and the code of Virginia. These actions include using technology to: harass or bully (cyber bullying) anyone else – student or adult; sexting (sending inappropriate or nude pictures or videos of yourself or someone else over the phone or internet); identity theft (stealing or using someone else's name or computer log-in, email address, or other identifiers); and downloading copyrighted content from file sharing sites without paying for it. Any of these activities could lead to disciplinary action by the schools and/or referral to county and state legal authorities.

Internet Guidelines

Internet access will be based on the following guidelines:

- ***Elementary School*** (Grades K – 5) – Teachers will actively supervise student use of the Internet. Students will access Internet resources that the teacher has previously explored and selected. Teachers will make every effort to ensure that students are directed to sites that are only age and topic appropriate materials and resources. Students are responsible for following teacher directions, instruction and guidelines when using technology resources. At the elementary level our

technology curriculum includes five areas of study - basic operations and concepts, social and ethical issues, technology research tools, problem solving and decision making, and technology communication tools. Within these five components we cover a variety of objectives including keyboarding, using a digital camera, iPod, Flip camera, etc., word processing, proper usage of equipment in an ethical and safe manner, using technology as a reference tool , creating spreadsheets, data tables, graphs, and surveys, and creating/using communication tools appropriately.

- **Middle School** (Grades 6 – 8) – Teachers will supervise and model appropriate use of the Internet. Students will continue to have Internet access under the direct supervision of a teacher; however, students will, also, experience guided practice leading towards gaining skills to become an independent, responsible user of the Internet. Teachers will preview Internet sites before directing students to that site. Teachers will also make every effort to ensure that students are directed to age and topic appropriate materials and resources. As students will begin to have independent research and web exploration opportunities it becomes increasingly important for students to know and accept the responsibility for knowing and practicing the rules and safety procedures set out and taught by staff. By the completion of middle school, students will have begun independent use of the internet. In middle school, students are expected to use technology safely and wisely. Students learn how to protect their identity online, interact responsibly with other internet users, and how to respond if their rights are violated. Students use email and other communication media and must demonstrate proper online communication etiquette.
- **High School** (Grades 9 – 12) – Students will participate in independent Internet use with teachers assuming less of a monitoring role and more of an advisory role. Student responsibility for knowing and following school policy and procedures is at its height. In high school, students are expected to use technology safely and wisely. Students are reminded how to protect their identity online; interact responsibly with other internet users, and how to respond if their rights are violated. Students use email, Google documents, and other advanced collaborative tools regularly in their classes and are expected to begin to create content for presentation, posting, and sharing.

Web Pages

Use of the Nelson County School System’s Web server and resources shall promote educational excellence by facilitating resource sharing, innovation, and communication for the enhancement of the School Division’s mission. Items published on the Nelson County School’s web pages, wiki’s and logs shall be in accordance with applicable web site rules and guidelines. Each web page author with rights to publish a web page shall be responsible for ensuring that pages published within the school or department ‘s directory comply with this policy and applicable rules and guidelines and that all interactive web content is monitored for appropriateness. Schools and departments will develop pages that meet the requirements for the division web pages and use navigational strategies common to those used by effective web sites. The templates should provide a common, professional design. All web pages should contain only content appropriate and relevant to the mission of the school division. Web pages should not contain personal, non directory information so as to protect the rights and privacy of students and staff. School and department web sites should contain a faculty/staff directory with e-mail addresses and current assignments listed.

Technology Use

Users will use resources in a responsible, ethical, and legal manner. Users should not access, modify, or destroy other user's data without appropriate authorization. Users should not knowingly spread a computer virus, impersonate another user, violate copyright laws, install or use unauthorized software, damage or destroy resources, or intentionally offend, harass, or intimidate others.

Internet Access

Users will access the Internet under appropriate supervision while developing independent research and use skills. All students and staff should be aware that illegal or questionable searches or content is reported by our monitoring systems to the technology department. Users will view sites that relate to school-related assignments, activities or responsibilities or encourage student and/or staff interactions. Users should not use school technology resources to create, distribute, download, or view obscene, illegal, or inappropriate content. Users should immediately inform a staff member if they encounter material that is obscene, illegal, inappropriate, offensive, or otherwise makes them uncomfortable. Use of a proxy site or other such sites to circumvent our division web filtering software is grounds for disciplinary action and immediate loss of technology use privileges.

Electronic Mail

For personal safety reasons, when communicating electronically, students shall only use their first or called name. Full names, home phone numbers, addresses, or personal identifying information should not be revealed without written parental or teacher permission. The school division will provide access to electronic mail for all staff members. Sixth—twelfth grade students shall have access to a monitored and secure email, electronic locker and blog pages and other shared resources as designed by the school system. Students are responsible for the content they create, download, or share. Users should use electronic mail responsibly. Users should not create, distribute or forward offensive messages or messages that contain false information. Email between staff and students should use only student gagle email and staff members district account (xxx@nelson.k12.va.us) or the official account set up and maintained by the Nelson County Public Schools for staff and student use. Failure to do so could result in disciplinary action. The electronic mail system and all of its hardware, software, and data files is owned and controlled by the school system and is its property. **In order to protect the interests of the school system, its employees and students, the school system reserves the right to access and disclose, without prior notice or permission from the user, the contents of any account on its system.** Any suspicious message should either be immediately deleted or forwarded to the Technology Department. As many attachments include viruses or worms, users should never download any file attached to any Internet based message unless the user is certain of the message's authenticity and the nature of the files transmitted.

Network Use

Users will use resources responsibly. Users will not give out passwords or use anyone else's password or on-line identification. Those who do may face disciplinary actions and loss of technology privileges. Users should not disrupt network usage by others, should not monopolize technology resources, should not print excessively, and should not use excessive amounts of shared data storage space. Please be kind to other users and to the system itself. Users should immediately notify a staff

member or school administrator if they are the subject of harassment while using technology resources or if they witness inappropriate use of technology resources.

Violations of the Acceptable Use of Technology Policy can lead to any of the following disciplinary actions:

- * Student Conference
- * Loss of Computer Privileges
- * Conference with Parent or Guardian
- * Alternative School Program
- * Suspension
- * School Resource Officer/Law Enforcement Agency Involvement
- * Court Referral
- * Restitution
- * Community Service
- * Revocation of Computer Access and Use
- * Recommended Expulsion to the School Board

APPENDIX 3

(Summary of Internet Safety Program for 2008-2010 for Each Grade Level)

Based on our Acceptable Use of Technology Policy, the Nelson County Public Schools System has developed its own Internet Safety Program. Lessons are designed for each grade level of the students.

For Kindergarten through Fifth Grade, our Technology Curriculum examines the following topics:

- Basic Operations and Concepts – Students demonstrate knowledge of the nature and operations of technology systems and demonstrate proficiency in the use of technology.
- Social and Ethical Issues – Students practice responsible use of technological systems, information, and software.
- Technology Research Tools – Students use technology to locate, evaluate, and collect information from a variety of sources.
- Problem Solving and Decision Making Tools – Students use technological resources for solving problems and making informed decisions.
- Technology Communication Tools – Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

Additionally, a program was developed called, “Are You Safe - Internet Safety for Children”. This program used a combination of activities and lessons to help make children aware of the appropriate usage of the Internet. Another program that was used was called, “CyberSmart”. This was actually a program on the Internet and it offers activities and lessons for elementary students to reinforce internet safety.

For our middle school students, the main objectives that are taught are the following:

- Preventing, recognizing, and reporting cyber-bullying
- Protecting online identity, including password security
- Understanding and using proper e-mail etiquette
- Making smart decisions when using social media, such as blogs, chat, Twitter, and Facebook

Currently, the Netsmartz curriculum is being used; however, there is some investigation on some other curricula, such as Common Sense Media and CyberSmart. Teachers are continuously reviewing online the most up-to-date information on internet safety. There is also a section on internet safety available with the Virginia Department of Education on their web page that the teachers use.

For our high school students, the Internet Safety program included lessons in conjunction with English classes. Students are required to do a research paper or project in each grade level for the English curriculum requirements. This paper/project is supposed to include Internet Safety concepts. The topics for each grade level are as follows:

- Grade Nine – “Online Actions Have Offline Consequences”
- Grade Ten – “What is an Acceptable Use of Technology Policy?”
- Grade Eleven – “Who Me? The Internet Can HURT me?”
- Grade Twelve – “Hey, I’m Eighteen Now and I Could Teach It Myself – Telling a Story to Teach Adults About Internet Safety”
- Grade Twelve - Career/Tech Classes – Lessons in Internet Safety
- Grade Twelve – Sexting: A Mini WebQuest Lesson

Tech Budget
2011-15

<u>2013-14 STATE EQUIPMENT</u>		<u>SUPPORT SOFTWARE</u>		<u>PERIPHERIALS</u>		<u>SUPPLIES</u>		<u>CONNECTIONS & E-RATE</u>	
<u>GRANT</u>									
	\$184,800.00		\$50,000.00		\$20,000.00		\$10,000.00	current expenditure	\$24,242.40
40 LAPTOPS - \$550	-\$22,000.00	WEB FILTER		PROJECTORS - 12 @ \$480	-\$5,760.00	basic office materials	-\$2,500.00	75MB IP BANDWIDTH @ \$3985.00	
400 NETBOOKS - \$390	-\$156,000.00	ANTI-VIRUS		PRINTERS - 30 @ \$150	-\$4,500.00	hard drives- 10	-\$300.00	MONTHLY *.28	-\$13,389.60
1 VIRTUALIZING SERVER	-\$6,800.00	COMMAND & CONTROL				cables	-\$600.00	50mb private ethernet between schools	-\$17,263.68
	\$0.00		\$0.00		\$9,740.00	camera (flip/digital)	-\$2,300.00		
							\$4,300.00		-\$6,410.88
<u>2014-15 STATE EQUIPMENT</u>		<u>SUPPORT SOFTWARE</u>		<u>PERIPHERIALS</u>		<u>SUPPLIES</u>		<u>CONNECTIONS & E-RATE</u>	
<u>GRANT</u>									
	\$184,800.00		\$50,000.00		\$20,000.00		\$10,000.00	current expenditure	\$24,242.40
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1 VIRTUALIZING SERVER	-\$6,800.00	COMMAND & CONTROL						50mb private ethernet between schools	-\$17,263.68
	\$0.00		\$0.00		\$9,740.00		\$6,900.00		-\$6,410.88