Technology Plan

Nelson County School District

Bardstown, Kentucky



[http://nelson.kyschools.us](http://www.education.ky.gov)

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**Acknowledgments**

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# Executive Summary

Nelson County Schools believes that technology has the potential to transform education through learning at higher levels, individualizing instruction, and providing opportunities for continuous professional development by all staff.

We know that technology supports real-world learning, connects learners to experts and global communities, provides tools and resources to enhance learning, and enables students to utilize and analyze data for critical thinking and problem-solving skills necessary for preparation and acquisition of jobs in a changing world.

Most importantly, we must continually expand opportunities for teachers to become a part of the digital world of learning and teaching in online communities, to utilize data from assessment to accurately guide improvement of instruction, and to foster collaboration between technology and instructional leaders at every level. In addition, technology is a necessary tool of administrative and support personnel for data collection and analysis at building, district, and state levels.

As we prepare for the future teaching and learning with intelligent classroom components, online assessment, internet safety, digital citizenship, mobile devices, greater bandwidth, new and improved enterprise systems, availability and support of a computing environment with students and teachers utilizing their own computers on school networks, and improvement of communication through use of VOIP and wireless technology district wide, it is recognized that as our needs and priorities change, modifications will be reflected in the technology plan as an effort of continuous progress.

# Planning Process and Methodology

The technology plan is revisited and revised on a yearly basis. The Chief Information Officer and the Superintendent meet weekly to discuss general and specific goals for the district. The CIO and the Director of Technology meet frequently to discuss plans for the future of technology in the Nelson County Schools.

Once the plan is in a rough draft form, the School Technology Coordinators, Library Media Specialists, and Instructional Coaches are brought in to the discussion, and appropriate changes are made.

The Chief Information Officer continues to review the plan during the school year.

We have offered and will continue to offer 2 hour weekly training sessions for faculty to increase the level of technology awareness and expertise of the teachers. Throughout the year, training is available and active in the classroom setting. The high schools have implemented the use of personal devices on the school owned “guest” wireless network. Many teachers are using services such as SkyDrive, and Google Docs to enhance the collaborative nature of course projects. We have a free space for teachers to create their own classroom web sites, and many teaches have been trained and are using this resource, however, many more need to make a presence on the web. Interactive projection devices have been installed at Thomas Nelson High School, and teachers are using them daily, but most need more instruction to be able to utilize the full capabilities of the devices.

As we have gone through a large transition of key staff members with the technology department, some of the goals from the current year plan have not been met, or even approached. We have not yet implemented the Digital Drivers License program, and the CIO/TIS been not been able to visit every school building in the district on a two week rotating basis.

The Guest Wireless Network has been hit with so many devices that we need to expand the scope of IP addresses. Many who are trying to use the wireless network simply cannot connect because we have run out of “space”. The scope will be increased as soon as we can get a good amount of time without students in the buildings.

We are developing a Process Map for the purchase of new technology in the school system that will help to “standardize” the equipment that we use in the Nelson County Schools.

There is a need to create a Software Database that teachers may access and find out what other teachers in the district are doing.

We must promote and train teachers to utilize web sites that can be used to create online content for their students. We are working at making CK-12 the standard for the district, but are just getting this process started.

We must also work more at helping teachers learn how to use technology to communicate easily and often with parents and students.

# Current Technology and Resources

Data collected from the 2012 Technology Readiness Survey reflects the Nelson County Schools ADA enrollment of 4,375 and a total of 1,566 instructional devices.

* 996 student devices
* 570 teacher/administrator devices
* All but 3 of the current buildings utilize VOIP for the phone system. Old Kentucky Home Middle School, Cox’s Creek Elementary, and New Haven School use the old POTS lines.
* All Buildings are connected with a 1 Gigabyte Fiber connection that provides more than enough bandwidth for fast and clear communication within the school district.
* 10 of the 11 school buildings and the central office are outfitted with a stable Wi-Fi system that serves district owned devices on the secure network, along with personal devices on a guest network.
* Several of the computer labs are the NComputing solution that provides student work stations at approximately 1/3 the cost of traditional student work stations. We have enough NComputing devices to supply all computer labs in the district, and hope to deploy approximately 600 of the devices before the end of the school year.
* 90% of the classrooms include a projection system that the teachers use on a daily basis.
* There are 8 carts of Chromebooks (250 devices in all) in the district as a part of a pilot project to see how the devices can be used to enhance student learning.
* Administrators and Instructional Coaches have laptops that provide mobility and constant access to the district resources.
* The CIO/TIS provides training for teachers during and after school to help teachers use technology to enhance the learning experience for students.
* Many schools have Smart Boards and/or interactive projection systems that provide a rich learning environment on a constant basis within the classroom.
* Approximately 20% of all classrooms include student response systems that allow teachers and students to see immediate feedback from formative assessments. This also allows teachers to modify their lessons “on the fly” in order to best serve the students’ needs.
* Several schools are using internet communication tools such as Twitter, Facebook, Word Press, Weebly, Remind101, etc., to better communicate with students and parents about classroom activities, lessons, due dates, etc.
* Administration and Faculty utilize OneCall Now to communicate important information to families.

# Curriculum and Instructional Integration Goals

**Goal 1**

Provide access to a single, quality Learning Management System with seamless integration of cloud computing and collaboration resources for students and teachers.

**Action Plan: Projects/Activities**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Project/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Promote, train and encourage the use of Google Apps for Education and SkyDrive at the high school and middle school level. | Students receive consistent and immediate feedback on assignments and assessments through online collaboration with teachers and other students. | Online, shared documents that show evidence of use. Graphs provided by Google Apps in Education will show amount of use and collaboration. | Ongoing | Chief Information Officer, Instructional Coaches, Principals, Etc. | Local - free |
| Promote, train and encourage the use of Edmodo (Learning Management System), at the high school and middle school level. | Students have more opportunity for success in any subject with quick access to teachers and course materials. | Approximately 20% of the Teachers will set up and maintain at least one online course with students enrolled and active. | May, 2013 – May 2014 | Chief Information Officer, Instructional Coaches, Principals, Etc. | Local - free |

**Goal 2**

Teachers will be able to effectively enhance differentiated instruction as students utilize personal devices that can access the district wireless system.

**Action Plan: Strategies/Activities**

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| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Encourage and instruct students and teachers how to use personal devices within the district wireless network. | Students and teachers will be able to access information and activities that will extend and enhance daily classroom instruction. | Observation of student use during walk-through | August 2013 - ongoing | Chief Information Officer, Instructional Coaches, Principals, Etc. | Local or free utilities |

# Curriculum and Instructional Integration Goals – Evaluation

With the use of Edmodo, BYOT, Google Apps in Education, SkyDrive, etc., we are increasing the use of integrated technology within the classroom. With help from the Superintendent, COO, CIO, DTC, Principals, and Instructional Coaches, we are expanding classroom tools for teaching and learning. Teachers and students are using “cloud” computing to create and collaborate on new projects. During the last 6 months, approximately 700 collaborations have taken place, and 11,978 documents have been created in Google Docs. Professional Learning Communities are communicating more effectively with shared documents, and are able to access and process information, and work productively thru the use of Google Docs and SkyDrive. Teachers are helping students use personal devices to enhance their own education and to take ownership with their own learning. The fact that we have “maxed out” the guest network shows that more than 1700 personal devices are in use in our school district.

We must develop a tool to more effectively collect usable data for evaluation purposes.

# Student Technology Literacy Goals

**Goal 1**

Help students learn how to be proper digital citizens.

**Action Plan: Strategies/Activities**

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| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Students will take a “Digital Driver’s License” course and assessment. | Students will understand how to be responsible digital citizens while using technology. | By the end of September, 80% of high school students will have successfully earned their digital driver’s license. | August, 2013-ongoing | Chief Information Officer, Library Media Specialists, Classroom teachers, Director of Technology | Program is free |

# Student Technology Literacy Goals – Evaluation

Currently, the school district relies on teacher observation of student technology literacy goals. Our plan is to implement a “Digital Driver’s License” in order to teach students and teachers about digital citizenship and how it effects our lives daily. Passing the assessment piece that is included with this free online resource will require a score of 80 or above to allow participants to receive their “Digital Driver’s License”. Students will have limited access to internet resources until they successfully complete the program.

# Staff Training/Professional Development Goals

**Goal 1**

Provide Professional Development for all teachers.

**Action Plan: Strategies/Activities**

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| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Provide a weekly 2 hour Technology Professional Development session for teachers after school. | Teachers will learn how to more effectively utilize technology for and in their classrooms. | Sign in sheets, evidence from lesson plans, assignments, and assessments. | 2013-2014 school year | Chief Information Officer, Instructional Coaches |  |
| Visit each school in the district once every three weeks during the school day to provide embedded professional development, and model lessons using technology. | Teachers will be able to more effectively utilize technology to provide seamless integration into daily lessons. | Sign in sheets, observation of classroom activities, evidence from lesson plans, assignments, and assessments. | 2013-2014 School year. | Chief Information Officer |  |
| Visit faculty meetings on a regular basis to provide a “technology tidbit” for just a few minutes. | Expose teachers to cool tools that they will be able to use in the classroom. | CIO schedule | 2012-2013 school year | CIO |  |

**Goal 2**

Help teachers embed instructional strategies for promoting digital citizenship.

**Action Plan: Strategies/Activities**

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| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Provide professional development opportunities for teachers to learn how to promote responsible digital citizenship. | Teachers will better understand how to instruct students who have questions about technology, and will be able to model good digital citizenship. | Teacher achieves a score of 80 or better on all 5 digital citizenship goals. The teacher will then receive 2 hours of PD credit for successful completion. | August 2013 - ongoing | Chief Information Officer | Program is free |

**Goal 2**

Help Teachers learn how to utilize “Cloud” computing resources.

**Action Plan: Strategies/Activities**

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| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Provide after school, during school, in person, and Lync meetings providing training in Skydrive and Google Docs. | Teachers and students will be able to “streamline” learning activities and receive immediate feedback on their projects, etc. | Observation of Google Docs logs and Skydrive use. | August 2013 – ongoing | CIO, STC’s and Instructional Coaches |  |

# Staff Training/Professional Development Goals – Evaluation

1. The ability of staff in Nelson County Schools in the utilization of technology should be considered apprentice. We seek to increase the competencies in *all staff* to proficient and above through professional development activities and everyday classroom planning.
2. The training made available to staff shall include topics sought through surveys and those that will enhance and engage technology integration with both student and staff (teachers).
3. Training will be provided throughout the year in classroom settings, weekly after school workshops, off-site trainings that peaks the interest of staff and includes train-the-trainer modules. Training will be documented and audited by the district CIO/TIS.
4. The training provided will focus on collaborative, interdisciplinary work with technology, focusing on learning the technology tool well enough to make it a transparent tool for the desired instructional goal.
5. Technical staff will be committed to training opportunities that will enhance the skill level of current hardware and software technologies while also preparing for the readiness of integrating future technologies into the classroom.
6. School administrators and the CIO will continually and consistently evaluate the effect that the PD activities are having in the promotion of technology integration in the classroom and the effect on students to meet and surpass state academic standards.

## 

# Technology Goals

**Goal 1**

Help provide personal wireless devices for high school students (BYOT)

**Action Plan: Strategies/Activities**

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| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Start a community Re-purposing /donation program for personal devices. | Research, computation, writing, collaboration, etc. will be enhanced through technology | Students using school owned personal devices | August, 2013 – June, 2014 | CIO, Director of Technology, STC’s, Instructional Coaches, Principals | Local/Community |

**Goal 2**

Make the wireless system functional and transparent in every building.

**Action Plan: Strategies/Activities**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Maintain a system that provides quality and reliable wireless coverage for school owned and personal devices. | Students will be able to effectively utilize BYOT to enhance learning. Administrators and others will be able to access the network from anywhere in the school district. | Minimal reports of dropped wireless coverage. | 2013-2014 School year | District Technology Office | Local/KETS |

**Goal 3**

Provide “Cloud Computing” for teachers and students.

**Action Plan: Strategies/Activities**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Maintain Google Apps in Education for Nelson County Schools. | Teachers and students will be able to collaborate on large and small projects. | Google dashboard statistics. | 2013-2014 School Year. | CIO | Local (free) |
| Maintain a district website that will give teachers access to create a class web space for online agendas, assignments, announcements, etc. | Students have access to class resources 24/7 | Teacher constructed class web sites | 2013-2014 school year | CIO | Local |

**Goal 4**

Provide dependable communication tools for faculty, staff, and students

**Action Plan: Strategies/Activities**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Strategy/Activity | Instructional Outcome | Indicator | Timeline | Person(s) Responsible | Funding Source |
| Purchase and install Voice over Internet Protocol phones in OKHMS and Cox’s Creek Elementary | Through better and more dependable communication, parents can be included more often in the learning process for their children. | Phone system installed and in use. | 2013-2014 school year. | Director of Technology | Local and Federal funds. |

# Technology Goals – Evaluation

The CIO will survey and research the most effective practices for technology integration in schools.

The CIO will meet regularly with School Technology Coordinators to monitor and evaluate technology integration in each school. Discussions will also include new developments and opportunities to facilitate progress towards the school’s instructional and curriculum goals.

The Technology department will evaluate the distribution of technology in each school annually to ensure appropriate use, effectiveness, and equity of access.

# Budget Summary (several of these numbers are approximate)



# Budget Summary – Narrative

Our budget situation continues to be a problem. Nelson County is not alone in this; districts throughout the state are struggling to deal with shrinking budgets. We have tried to ensure that we have a solid infrastructure and that we maintain service level agreements on mission critical equipment. We do not have any new construction projects on the horizon which should help to reduce the load on an budget that continues to shrink from year to year; however, much of the equipment in the schools is old and past due for any reasonable expectancy of service.

Requests for funding through the Schools and Library program, also known as e-rate, have been sought to ease the financial burden. We continue to ask our vendors for competitive quotes on everyday technology purchases. We have a very knowledgeable staff and by utilizing their skills we have been able to support issues that arise from our phone system, network design, security system, interactive white boards, software development and much more, which has resulted in considerable savings to the district.

* During this current year, we have purchased N-Computing solutions for 600 workstations to replace all of the old student computer labs in the district. This initiative saved the district more than $250,000 over the cost of the traditional stand alone workstation option.
* The technology office is working to consolidate servers into virtual machines in order to save money on power consumption for servers and air conditioning.
* The district has purchased Chromebooks as a portable solution to computer labs. This solution cost less than half the amount it would cost if we had purchased regular laptops.
* In order to remove just one of the many barriers teachers must deal with day to day, we plan to provide new teacher workstations that will replace machines that are 5 or more years old or more.
* To continue to work on saving money, we plan to upgrade all phone systems to VOIP. The immediate cost is more than a regular POTS line, but the long term savings are significant, especially when you consider the erate funding available for the month to month cost.

Despite the tight budget, we continue to maintain a good technology offering for the staff and students of Nelson County. We will continue to seek opportunities for the best pricing and funding when and where available.