Technology Plan
Boone County Schools
Florence, Kentucky

ACHIEVING EXCELLENCE TOGETHER

www.boone.kyschools.us

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Acknowledgments

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Executive Summary

The Boone County Technology Plan focuses on the mission, vision and goals of the school district. The Technology Plan embraces and supports the Strategic Plan with all learners demonstrating 21st century skills and knowledge that will prepare them for success in college, career and life. By providing students and staff with accessible and effective technologies, all stakeholders will have the opportunity to develop job-embedded skills that enhance learning, increase productivity and prepare for the future. Pedagogy is the driver. Technology is the tool. With technology tools, teachers and students will experience innovative learning, content creation, and make real-world connections. In Boone County, we don't want to just use technology but use technology to create learning.

District Mission:
Representing and in partnership with our stakeholders, the Boone County School District recognizes that all children can learn and dedicates itself to providing a challenging educational environment that allows each student to achieve to his or her highest potential as a learner and citizen.

District Vision:
Every graduate college, career, and life ready.

Theory of Action:
If Boone County Schools operate as Professional Learning Communities (PLCs) focused on high quality instruction for the 21st century, then teaching, learning, and student performance will improve for every student, in every classroom, every day.

Goals:
- Student Empowerment – All students are involved in leadership skills/career skills development with a focus on hope/well-being/engagement and are engaged in authentic, personalized career exploration experiences.
- World-Class Education – All teachers use Understanding by Design framework and philosophy to plan units of instruction. Within UbD units of instruction, students are engaged in PBL/service learning experiences.
- Resource Optimization – All District departments and divisions engage in process and performance management measures to optimize resources, increasing efficiency and effectiveness. Virtual and blended course offerings, as well as flexible schedules will be in place to meet the diverse needs of students.

The Boone County School District is committed to being Future Ready as demonstrated by signing the Future Ready pledge. The district is committed to work with students, educators, and members of the community to become Future Ready by engaging in a wide range of activities such as:
- Fostering and leading a culture of digital learning within our schools
- Empowering educators through professional learning opportunities
- Accelerating progress toward universal access for all students to quality devices
- Providing access to quality digital content

Planning Process and Methodology

The district technology plan is a plan for continuous improvement, monitored progress, and an organized focus on goals for supporting instruction. The plan was developed and will be monitored by the District Technology Committee and District Administration and is a living document – evolving along with the technology and curriculum it supports. Effectiveness of the plan will be demonstrated by the knowledge of students graduating from Boone County Schools, as well as appropriate use, experiences, and seamless integration of technology by teachers.

Current Technology and Resources

The Technology Department consists of:

1 Director

1 Network Manager

1 Software Coordinator

4 Network Technicians

4 PC Technicians

2 Technology Resource Teachers

1 Secretary

This department supports 4 high schools, 5 middle schools, 14 elementary schools, 1 Alternative School, 1 Area Technology Center and multiple district wide departments and programs. Each school site has a School Technology Coordinator. All middle schools have Instructional Technology Assistants.

Boone County has a centralized data center, located at the district office, which includes:

- An Extreme S8 core switch chassis providing network WAN based services to all district campuses via managed fiber links
- A 2 GB connection to KDE
- Dell Compellent data storage array with 45 terabytes of raw storage
- 19 various standalone servers and 74 VMWare virtual servers which house all district hosted applications / services including network print services and IP based phone services
- 2 Extreme wireless controllers serving over 1800 wireless access points across the district campuses and providing wireless network connection to district owned and BYOT devices

Within the district, all locations are connected via 1GB fiber. Classrooms are connected to the LAN via 1GB switches. All 23 schools have wireless connectivity – with an access point in every classroom.

Data collected from the December 2016 Technology Readiness Survey indicates:

- 7125 elementary student devices
- 9293 middle/high student devices
- 3213 staff devices

The above devices include Windows, Mac, Chrome and Android operating systems.

3rd – 8th grades are 1:1 with Chromebooks.

Curriculum and Instructional Integration Goals

Goal 1

Instructional staff will provide support and training necessary for teachers to successfully integrate technology into instruction.

Action Plan: Projects/Activities

Strategy/ Activity	Instructional Outcome	Timeline	Person(s) Responsible	Funding Source
Identify and promote successful blended learning models and teacher leaders	Students and teachers will experience teaching and learning in a blended environment	7/1/17 - 6/30/18	Technology Resource Teachers, Instructional Coaches	KETS Local
Incorporate technology into instructional strategies and other best practices with a focus on the BYOT and 1:1 classroom	Students will have greater exposure to using technology to complete various tasks.	7/1/17 - 6/30/18	Technology Resource Teachers, Instructional Coaches	KETS Local
Expand learning opportunities that support the district's initiative of blended/virtual learning using Google Classroom, Canvas, Rosetta Stone and other district resources.	Students and teachers will have more opportunities to increase student engagement and differentiated learning.	7/1/17 - 6/30/18	Technology Resource Teachers, Instructional Coaches	Local
Provide examples of tools and implementation ideas that enhance and support collaboration, problem solving, and future ready students.	Students will have greater exposure to using technology to complete various tasks.	7/1/17 - 6/30/18	Technology Resource Teachers, Instructional Coaches	KETS Local
Teachers will advocate and provide opportunities for student to practice safe, legal and responsible use	Students will demonstrate personal responsibility for	7/1/17 - 6/30/18	Technology Resource Teachers, Instructional Coaches	Local

of information and technology	lifelong learning as responsible digital citizens.			
Provide Technology Resource Teachers	Increased technology integration in instruction; increased staff proficiency; on demand assistance	7/1/17 - 6/30/18	Director of Technology	Local

Goal 2

In alignment with state/district policies, we will address the need for awareness and integration of digital citizenship, Internet safety, and social media responsibilities and consequences for all students.

Action Plan: Strategies/Activities

Strategy/ Activity	Instructional Outcome	Timeline	Person(s) Responsible	Funding Source
Digital citizenship, Internet safety and social media lessons taught to all students in compliance with federal law, state and district policies.	Students will receive age/grade appropriate lesson on digital citizenship, Internet safety and social media. Students will better understand the responsibility and the consequences regarding digital citizenship, Internet safety, and social media.	7/1/17 - 6/30/18	Director of Technology, Building Principals, Technology Resource Teachers, Instructional Coaches	Local
Instructional resources include but are not limited to: CyberSmart Common Sense Media Web Wise Kids USA-SOS NetSmartz Webonauts Digital Driver's License	Use of instructional resources will support instruction of digital citizenship, Internet safety, and social media.	7/1/17 - 6/30/18	Technology Resource Teachers, Building Principals, Instructional Coaches	Local

Curriculum and Instructional Integration Goals – Evaluation

Monitoring and evaluating the technology plan is continuous. Regular reports on progress will be conveyed to the Chief Academic Officer/Deputy Superintendent and Assistant Superintendent of Learning Support Services.

Curriculum and Instructional Integration Goals will be evaluated by items such as, but not limited to:
- Increased use of technology in the classroom
- Board approved Technology Curriculum use and demonstration of skills with work samples
- Data from applications such as Compass Hybridge, Scientific Learning, keyboarding programs, Canvas, Google Classroom, Rosetta Stone
- School Technology Coordinator meetings
- District Technology Committee meetings
- Technology Department meetings
- Learning Support Staff meetings
- Requested trainings and training logs

Student Technology Literacy Goals

Goal 1

Use technology in the classroom to increase student engagement, assist in meeting the instructional needs of learners and providing a medium for expression and communication.

Action Plan: Strategies/Activities

Strategy/ Activity	Instructional Outcome	Timeline	Person(s) Responsible	Funding Source
Provide access to multiple technologies to support Project Based Learning, programming/coding, language acquisition, blended and online learning	Students will have more opportunities for critical thinking, creating content, and demonstrating knowledge. Teachers will be able to use technology tools to enhance learning, increase productivity, and promote creativity	7/1/17 – 6/30/18	Director of Technology Technology Resource Teachers; Instructional Coaches	KETS Local
Use the STLP program to provide opportunities through the use of technology	Motivate and advance the individual capabilities of students as technology instructional leaders	7/1/17 - 6/30/18	Technology Resource Teachers	KETS Local
Encourage proficient keyboarding instruction for students	Students will become more productive	7/1/17 - 6/30/18	Technology Resource Teachers; Instructional Coaches	KETS Local
Encourage teachers to advocate and provide opportunities for student to practice safe, legal and responsible use of information and technology	Students will demonstrate personal responsibility for lifelong learning	7/1/17 - 6/30/18	Technology Resource Teachers; Instructional Coaches	Local

Student Technology Literacy Goals – Evaluation

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Staff Training/Professional Development Goals

Goal 1

Job-embedded, standards-based, and program specific professional development will be provided by the Technology Resource Teachers and Instructional Coaches in an individual, small group, and/or large group setting.

Action Plan: Strategies/Activities

Strategy/ Activity	Instructional Outcome	Timeline	Person(s) Responsible	Funding Source
Provide training, assistance and support for software/tools for office staff, administrators, counselors and teachers	Increase student engagement and improve productivity and efficiency in the various software and instructional strategies.	7/1/17 - 6/30/18	Director of Technology, Technology Resource Teachers, Instructional Coaches	Local
Provide training, in a blended format, that includes social media, online collaboration, BYOT/1:1, ISTE Standards, Canvas, Google Classroom, Rosetta Stone	Future Ready students and staff with greater social media, language, and collaborative tool sets	7/1/17 - 6/30/18	Technology Resource Teachers	Local
Provide Infinite Campus grade book training and support for all teachers.	Improve teacher proficiency in electronic grade management; Update/Improve teacher skills as new features and enhancements are added to the Infinite Campus Grade book	7/1/17 - 6/30/18	Software Coordinator, Technology Resource Teachers	KETS Local
Use BrightBytes Data to determine staff professional development needs	Trainings will better meet individual teacher needs	7/1/17 - 6/30/18	Software Coordinator, Technology Resource Teachers, Instructional Coaches	KETS Local

Goal 2

Provide professional development opportunities for technology staff to improve their technical proficiency and ability to integrate technology into the curriculum.

Action Plan: Strategies/Activities

Strategy/ Activity	Instructional Outcome	Timeline	Person(s) Responsible	Funding Source
Monthly department meetings	Common planning across hardware and software; sharing of ideas; review of department procedures	7/1/17 - 6/30/18	Director of Technology	Local
Attend monthly, regional meetings	Sharing and acquiring new ideas; preparing for state initiatives	7/1/17 - 6/30/18	Director of Technology, Network Manager, Network Technicians, Technology Resource Teachers	Local
Support attendance at technology conferences, webinars and video conferencing opportunities	Acquire ideas for best practices in integration of technology to increase student achievement, engagement and support learning	7/1/17 - 6/30/18	Director of Technology, Network Manager, Software Coordinator, Technology Resource Teachers	Local

Staff Training/Professional Development Goals – Evaluation

Monitoring and evaluating the technology plan is continuous. Regular reports on progress will be conveyed to the Chief Academic Officer/Deputy Superintendent and Assistant Superintendent of Learning Support Services.

Staff Training/Professional Development Goals will be evaluated by items such as, but not limited to:

- Training logs and evaluations from before school, after school, planning time, and summer trainings
- Coordination of training topics with Instructional Coaches and Directors of Teaching and Learning
- Alignment of trainings to include Strategic Plan goals
- Review of BrightBytes Data at level meetings
- District Technology Committee meetings
- Learning Support Staff meetings

Technology Goals

Goal 1
Students and staff will have adequate and effective access to technology.

Action Plan: Strategies/Activities

Strategy/ Activity	Instructional Outcome	Timeline	Person(s) Responsible	Funding Source
Incorporate use of BYOT, 1:1 and interactive tools into classroom instruction	Students will be more active learners and producers of content and have greater understanding of tools to use for particular tasks	7/1/17 - 6/30/18	Technology Resource Teachers, Instructional Coaches	KETS Local
Work with School Technology Coordinators and Technology Committees to plan and implement long term vision for technology in their schools	Establishes a technical and instructional support system at the school level to assure the proper usage of technology by both teachers and students	7/1/17 - 6/30/18	Director of Technology, Network Manager, Technology Resource Teachers	KETS Local
Collaborate with school personnel, district personnel, and School Technology Coordinator to solve instructional and technical problems for the school	Establishes a technical and instructional support system at the school level to assure the proper usage of technology by both teachers and students	7/1/17 - 6/30/18	Director of Technology, Network Manager, Technology Resource Teachers	Local
Evaluate and recommend instructional software, websites, and other technological resources as needed by the schools	Establishes a technical and instructional support system at the school level to assure the proper usage of technology by both teachers and students	7/1/17 - 6/30/18	Technology Resource Teachers, Instructional Coaches	KETS Local

Provide students/ teachers 24/7 access to technology - including district purchased software/resources	Students will be able to use the available technology before, during and after school hours to complete learning activities	7/1/17 - 6/30/18	Director of Technology, Network Manager, Technology Resource Teachers	KETS Local
3rd and 6th grade Chromebooks replaced	1:1 student instructional access to technology	7/1/17 – 6/30/18	Director of Finance, Director of Technology, Principals	KETS Local

Goal 2

The Technology Department will develop procedures and communicate those procedures to ensure effective operation and maintenance of the network.

Action Plan: Strategies/Activities

Strategy/ Activity	Instructional Outcome	Timeline	Person(s) Responsible	Funding Source
Develop and update technology procedures	Better communication within and between the technology department and schools; consistent processes and data	7/1/17 - 6/30/18	Technology Department	Local
Maintain a Disaster Recovery Plan	Proper planning for establishing connectivity and service to schools and departments in the event of a crisis, emergency or disaster.	7/1/17 - 6/30/18	Technology Department	Local

Goal 3

The Technology Department will provide appropriate/timely support, maintain records, and ensure infrastructure supports current and future needs.

Action Plan: Strategies/Activities

Strategy/ Activity	Instructional Outcome	Timeline	Person(s) Responsible	Funding Source
Maintain proper network resources needed for providing, wifi access for personal and district owned devices	Effective training for teachers; anywhere, anytime access to the Internet and educational material	7/1/17 - 6/30/18	Network Manager, Technicians	Local
Upgrade network infrastructure at Central Office, Goodridge, Longbranch, Mann, Ockerman Elem and Stephens	Switch and routing switch installs that meet current and future demands	7/1/17 - 6/30/18	Network Manager, Technicians	Local
Support district wide VOIP phone system	Consistent communication and access both internally and externally	7/1/17 - 6/30/18	Director of Technology, Network Manager, Technicians	Local
Conduct quarterly School Technology Coordinator meetings	Consistent information shared to all schools; collaborative decision making	7/1/17 - 6/30/18	Director of Technology, Network Manager	Local
Continue Windows 10 preparation and testing with desktops and mobile devices	Provide access to latest instructional resources to meet the learning needs of students, productivity needs of staff	7/1/17 - 6/30/18	Technicians	KETS
Assist schools with a hardware replacement plan	Provide access to latest instructional resources to meet the learning needs of	7/1/17 - 6/30/18	Network Manager	KETS

	students, productivity needs of staff			
Maintain licensing/ inventory/fixed asset records	Software compliance; provide the ability to report and find equipment/ software as needed	7/1/17 - 6/30/18	Network Manager	Local
Year 2 implementation of existing fiber contract	Each school in Boone County will have a 1GB connection back to the Board of Education	7/1/17 – 6/30/18	Director of Technology Network Manager	Local

Technology Goals – Evaluation

Monitoring and evaluating the technology plan is continuous. Regular reports on progress will be conveyed to the Chief Operating Officer/Deputy Superintendent and Assistant Superintendent of Learning Support Services.

Technology Goals will be evaluated by items such as, but not limited to:

- Inventory
- Audits of building infrastructure
- SCCM training and implementation progress
- Data gathered from vendors and in-house pilot testing

Budget Summary

Acquired Technologies and Professional Development	Ed Tech Competitive Title IID	Ed Tech Formula Title IID	E-Rate	NCLB/other than Title IID	KETS	Other (Specify)
Best practices, integration of new technologies and learning opportunities						$15,500 Local
Infinite Campus						$135,000 Local
Hardware and software licensing/updates					$113,200	$201,200 Local
Replacement of workstations/mobile devices/printers for students, teachers, administrators					$661,051	
Teleco						$224,000 Local
Webhosting						$18,360 Local
Infrastructure Support						$271,000 Local
1:1 Chromebooks						$846,300 Local
Managed Fiber			$104,611			$70,000 Local
TOTAL			$104,611		$774,251	$1,781,360

Estimated amounts based upon historical Local and KETS funding.

Budget Summary – Narrative

Recurring fees for district wide computer software such as Compass Hybridge and Scientific Learning are paid from KETS funds.

KETS money is the primary source of funding for workstations/mobile devices/printers for students, teachers and administrators. We work with each school to develop a replacement cycle for workstations so they can better budget and plan for their expenses and needs.

Reimbursements from E-Rate fund infrastructure upgrades and replacement cycles.