Worcester Central School

District Technology Plan

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Worcester Central School Mission:

Worcester Central School strives to provide an environment that is positive and supportive of the needs of every child as he or she works to develop to their highest potential. The faculty and staff believe that all students can learn and achieve regardless of their previous performance, family background, socioeconomic status, race and/or gender. Further, in collaboration with parents, we have the responsibility to instill those values that society espouses; accountability, trust, respect, commitment and work ethic to name a few. Every student will leave Worcester with the ability to approach the demands that they will be faced with after graduation.

Worcester Central School Board of Education Core Beliefs:

- **Everyone will work together to support our students**
- **Everyone will strive to achieve at the highest levels**
- **Everyone will contribute and be accountable for success**

The Worcester administration, faculty and staff will demonstrate these core beliefs through the implementation of this Technology Plan.

Technology Committee Membership

William Diamond, District Superintendent
Jessie Westfall, Elementary Principal/CSE Chairperson
Kimberlea Curran, Secondary Principal/CSE Chairperson
Kyle Fabiano, Network Administrator
Elizabeth Perrillo, Parent, Community Member, Professional Development Coordinator
Sandra Knapp, Elementary S.T.E.M Teacher,
Joanna Rappleyea, Elementary Teacher
Members of the Student Technology Advisory Team

This committee meets regularly to monitor progress and evaluate the efficacy of the plan. The purpose of this committee is to steer technology integration at WCS in a direction that will create an engaging and robust learning environment for our students, leading to increased student performance.

Introduction

The Worcester Central School is located on a quaint Main Street in the middle of Worcester, NY, an Otsego County town with a population of approximately 2,200. Worcester is on the southeast border of the county and is located on the I-88 corridor equidistant between Cooperstown, Cobleskill and Oneonta. Worcester Central School presently serves approximately 370 students enrolled in grades Pre-K - 12. All students are housed in a recently renovated and restored historic building. The campus features the Dubois Auditorium, a new library-media center, new   science labs, state-of-the-art band and chorale rooms, renovated   classrooms, state-of-the-industry kitchen and serving areas and new athletic fields.

A rich and rigorous academic program includes a device for every student as well as Advanced Placement, College-in-High-School courses, Distance Learning technology and capability, elective courses in the Humanities, Math, Science, Business, Music and Art and   Career and Technical Education opportunities through the ONC BOCES. Co- and extra-curricular opportunities to participate in athletics, visual and performing arts and various clubs complete a comprehensive educational program.

WCS is a family of professionals and work together towards accomplishing common goals with the hopes of preparing every student for success beyond our walls. One of the most unique features of our district is that all staff feel personally invested in the growth of all students. WCS students are encouraged by their peers, their teachers, and a community that is proud of its school and its achievements.

We believe that educational technology plays an integral role in readiness for future success. In 2013, WCS implemented a significant technology initiative to address and support the evolving needs of our students and to ensure that they graduate college and career ready. To expose students to a variety of platforms and devices the district has invested in Chromebooks, Surface tablets, I-Pads, and continues to maintain and update existing laptops and desktops. Digitizing the classroom and the district is a significant technology goal. Both teachers and staff have been, and will continue to be, provided with professional development focused on the digital access of resources for students, parents, community members, and employees of the district. In addition, the district recognizes that ease-of-use is essential in ensuring that the focus in the classroom continues to be on content, rather than the device itself.

The WCS technology plan will serve as a guide for work toward fulfilling our district goals and ensuring that our faculty are prepared with the tools necessary to make meaningful connections between curriculum and technology.

Technology Vision

The Worcester Central School is fully engaged in an ambitious plan to update, improve, and expand educational technology use within our school community. Through the implementation of identified standards, combined with an established device-for-every-student program, students will begin working towards achieving tech literacy during their kindergarten year and will be fully prepared to innovatively solve problems and tackle 21st century tasks upon graduation from WCS.

Technology Mission

Technology is an important piece of our district's mission statement to ensure that, "...*Every student will leave Worcester with the ability to approach the demands that they will be faced with after graduation.*" To fulfill this mission we believe that students must gain exposure to a variety of different technologies and are prepared to tackle any challenges they may face regardless of the device being used.

Role of Technology

Technology plays a crucial role in each of the three major school district functions below:

- **Student Learning**
  - Foster Creativity and Innovation.
  - Encourage Communication and Collaboration.
  - Conduct research and enhance information fluency.
  - Build critical thinking and problem solving skills.
  - Engage students in experiences that will develop them into responsible digital citizens.
  - Apply skills that demonstrate their understanding of technology systems and concepts.

- **Teaching**
  - Technology will be used to digitize the learning environment.
  - Facilitate and inspire student learning and creativity.
  - Design digital age learning experiences and assessments.
  - Model digital age work and learning.
  - Promote and model digital citizenship and responsibility.
  - Participate in professional growth through learning communities, professional development, sharing technology expertise, and engaging in the many technology-themed professional development opportunities available at WCS.

- **Administration:** Technology will be used to support professional development, enhance communication, and assist in the budget development, payroll, purchasing, accounting and data coordination processes.

Technology Goals and Objectives

Just as technology is always changing, the WCS technology plan is flexible and will be monitored to evaluate its relevance, efficacy, and to ensure that it is aligned with our technology vision and mission. To ensure that we are meeting the needs of all students and that all learners find themselves in a learning environment in which they can flourish we will update the plan as needed.

Goal #1	Design Technology Standards and Student Outcomes
Goal #2	Technology to Support Teaching and Learning
Goal #3	Technology to Support Professional Development
Goal #4	Improve and Maintain Infrastructure and 1:1 Device Program
Goal #5	Establish Community Partnerships
Goal #6	Maximize Technology Resources and Use Plan
Goal #7	Monitor and Evaluate Technology
Goal #8	Manage and Minimize Risk
Goal #9	Prepare students and teachers for computer based testing (CBT)

Goal 1: Design Technology Standards and Student Outcomes

Objectives:
- Establish standards for student technology proficiency.
- Identify foundational applications for both elementary and secondary classrooms.
- Embed foundational application instruction into curriculum.
- Professional development to support implementation of standards.
- Incorporation of technology vocabulary into classrooms.
- Development of standards crosswalk aligned to NYS Teaching Standards.
- Students will learn and apply technology skills that will prepare them for college and career.

Goal 2: Technology to Support Teaching and Learning
Technology will be used to provide expanded learning and research opportunities and promote established standards. The use of technology will be curriculum-driven and equitably integrated.

Objectives:
- Faculty will continue to incorporate appropriate applications into their classrooms.
- Teachers will participate in professional growth opportunities that will expose them to new educational technologies.
- Support teachers in using technology to collect and evaluate data to drive instruction.

Goal 3: Technology to Support Professional Development
Targeted professional development will be designed to meet the varying skill levels of faculty and staff to facilitate the integration of technology into their curricula.

Objectives:
- New teacher technology orientation.
- Innovative instructional strategies that incorporate technology will be shared and promoted.
- Produce a technology Web site to share with faculty and staff model examples of some of the latest trends in educational technology and instructional/tutorial videos, and to promote professional development opportunities.
- Professional development journals will be maintained to monitor and evaluate progress and growth.

Goal 4: Improve and Maintain Infrastructure and 1:1 Device Program
WCS has a network infrastructure consisting of fiber optic, Ethernet, and wireless networks. Fiber optic cables connect the server room and three switch closets throughout the building. Desktop and peripheral devices are connected using Ethernet wiring and Wi-Fi is used to connect all mobile devices.

The district operates on a Microsoft Operating System platform. The primary domain controller is an HP server running Microsoft Server 2008 Enterprise software. This server also acts as a print server for all network printing functions. Data is backed up nightly through local backup solution and then is ported up to our off site cloud hosting.

High speed Internet is delivered to Worcester Central School from The South Central Regional Information Center via fiber optic and is distributed to the internal network after passing through the perimeter firewall. Internet content is filtered by GoGuardian, a cloud based web filter designed specifically for educational use. All district workstations and servers are further protected from threats by Avast Business Antivirus Software.

The telecommunications infrastructure at WCS provides for at least one phone in every classroom and office. All phones are able to access not only all other classrooms and offices but also outside lines by entering individual passwords provided to each staff member.

WCS utilizes Google as its email provider and operates under the domain "worcestercs.org". Using Google gives staff, faculty, and students access to Google applications such as Google drive, docs, sites, calendars, and many others. All faculty, staff, and students have email accounts. To minimize risk, students are currently only able to communicate within the worcestercs.org domain.

Objectives:
- Update firewall, switches, and other infrastructure to increase security, speed, and reliability of the network.
- Update wireless network to increase and maintain seamless coverage and speed throughout the building.
- Increase Internet speed to meet the growing use of cloud based applications.
- Use technology to ensure student and staff safety through the use of video cameras and other electronic security systems.
- Continue to research and deploy various devices for student and staff use such as desktop computers, laptops, I-Pads, Chromebooks and Surface tablets.
- Expand the use of virtual computers.
- Replace failing, obsolete, and unsupported equipment and applications to keep the districts hardware/software current.
- Research the benefits and risks of a "bring your own device" policy to allow students greater mobility and flexibility.

Goal 5: Establish Community Partnerships
The community plays an integral role in the successful implementation of the WCS district technology plan. Modeling responsible technology use at home will support the district in shaping responsible digital citizens.

Objectives:
- Student Tech Guru Desk at open houses and other high traffic school events. These students will support parents in accessing technology that will help them in monitoring and evaluating the academic growth of their student(s).
- Parenting in the Digital Age informational table will be available during high traffic school events.
- Technology night where students show off their work they have created using technology.
- Continue using school notification system to communicate important information to WCS families.
- Parent technology nights that focus on digital citizenship and internet safety.
- Expand use of social media as information exchange platform.

Goal 6: Maximize Technology Resources and Use
WCS understands that technology is constantly changing and in order to utilize technology efficiently we must continuously evaluate and update the devices and applications we use.

Objectives:
- Solicit input from teachers and students to determine appropriate devices. "One size does not fit all."
- Research, test, and implement new applications for teacher, student, and administrative use.
- Remain open to new ideas and embrace change.

Goal 7: Monitor and Evaluate Technology Plan
Evaluation of the WCS technology plan will be ongoing to ensure goals are being met, student growth is being achieved, and that the plan is aligned with our vision and mission. The technology committee will meet to discuss implementation of broad-range technology goals throughout the year. Evaluation will take place in several forms including teacher and student surveys, parent feedback, and teacher observations.

Objectives:
- Annual goal setting
- Faculty, staff, parent, and administration feedback.
- Semi-Annual Review

Goal 8: Manage and Minimize Risk
An overall goal of the technology department is to minimize risk while allowing students, faculty and staff to access necessary technologies. Regular and consistent assessment of all technology and applications will enable proper safeguards, policies, and procedures to be implemented and monitored.

Objectives:
- Review and renew support and licensing contracts.
- Ensure all devices receive necessary manufacturer's updates.
- Update firewall and antivirus protection regularly.
- Determine appropriate content and configure web filtering accordingly.
- Teach ethical and safe technology use to students, faculty, and staff.

Goal #9: Prepare students and teachers for computer based testing (CBT)
New York State is currently transitioning towards computer based testing for state assessments with a target date of spring 2018 when 3-8 exams must be completed electronically.

Objectives:
- Evaluate the minimum technology requirements for CBT and compare to our available resources.
- Provide professional development that will support teachers in preparing students for CBT.

Goal #10: Expand Distance Learning and On-Line Opportunities for

We recognize that distance learning and on-line platforms offer many opportunities for students to enroll in course offerings to which they would otherwise not have access.

Objectives:
- Attend regional distance learning meetings.
- Provide professional development for teachers on virtual field trips and videoconference collaborations.
- Train new distance learning teachers on how to digitize their resources allowing for a streamlined communication and feedback process for remote students.

Staff Development

Consistent and differentiated educational technology themed professional development (PD) has played an essential role in the implementation of the district's technology initiative to date. To effectively meet the varying needs of all teachers, a technology needs assessment is given in the beginning of the school year. The data gathered from this assessment drives the professional development goals for the year. This has allowed professional development to be tailored to meet the technology needs and skill levels of all teachers.

At WCS, professional development is facilitated by the Network Administrator, Professional Development Coordinator, BOCES Staff Development Specialists; teachers also have many opportunities to share their expertise with one another in a PD setting. Professional development is offered continuously throughout the year.

- Regular, scheduled monthly PD sessions.
- Student advisory team members available to staff.
- Individual instructional technology appointments with the Network Administrator, Professional Development Coordinator, and BOCES Staff Development Specialists, including modeling lessons and pushing into the classroom to co-teach with colleagues.
- Establish a PD library of tutorial videos.

Technology Funding

WCS is committed to consistent investments in technology to meet the evolving needs of students, faculty and staff. In addition to the funds outlined below, WCS will utilize an additional $164,182.03 allocated through The New York State Smart Bond Schools Act. These funds will be used to upgrade our existing network infrastructure of firewalls, switches and wireless access points to increase security, speed and reliability. WCS will also use Smart Bond Schools Act funds to purchase mobile devices, such as Chromebooks and laptops for student use, replace aging servers and wireless access points, and upgrade an inferior and failing, building security, camera surveillance system.

	2018-19 Projected	2017-18 Projected	2016-17 Budgeted	2015-16 Actual	2014-15 Actual
Salary	69,129	66,471	63,915	62,131	58,595
Equipment	6,490	6,240	6,000	5,128	9,303
Staff Development					
Contractual Expense	11,356	10,920	8,250	4,475	3,798
Supplies	11,536	10,920	10,500	4,246	12,225
State-aided Software	12,480	12,000	27,160	5,068	11,559

Inventory - July 1, 2017

Computing Devices

Type	#	Projected Replacement Date
Desk-top Computers/Virtual Machine	80	2018
Laptops/Virtual Machine	30	2019
Chromebooks	400	2019
Tablets (9" or greater / no access to external keyboard)	80	2018
Totals	**590**	

Peripheral Devices

Type	#	Projected Replacement Date
Document Cameras	48	2020
Flat-Panel Displays	5	2021
Interactive Projectors	12	2021
Interactive Whiteboards	13	2021
Multi-Function Printers	5	2019
Projectors	20	2019
Scanners	5	2019

Infrastructure

Type	#	Projected Replacement Date
Server	3	2017
Network Switches	15	2021
Wi-Fi Routers	40	2019

Evaluation of Plan

Monitoring and evaluating progress toward reaching the goals outlined in the WCS technology plan is an ongoing process. To ensure that we are fulfilling our technology mission, we will seek feedback from stakeholder groups by distributing surveys to faculty and students, conducting classroom observations, and encouraging community involvement.